Report to the Congress

of the Commission on the Role of Gold in the Domestic and International Monetary Systems

March 1982

Volume I

THE SECRETARY OF THE TREASURY
WASHINGTON 20220

March 31, 1982

To the Congress of the United States:

On behalf of my colleagues and myself, I submit herewith the Report of the Commission, established pursuant to Public Law 96-389, to conduct a study to assess and make recommendations with regard to the policy of the U.S. Government concerning the role of gold in the domestic and international monetary systems.

The specific findings and recommendations presented in this report represent in each case the views of the majority of the Commission, with an identification of minority views or recommendations where appropriate. As should be expected in a group of individuals with such diverse backgrounds, philosophies and responsibilities as the members of the Commission, there have been differing opinions regarding many if not all of the issues and questions raised by the Commission. Thus, not every member subscribes to each observation or conclusion contained in the report, but with this reservation and the specification of minority views, the report represents the product of the Commission as a whole.

In forwarding this report, we acknowledge the wide public interest in the issues examined by the Commission and are grateful for the cooperation the Commission received from many individuals in testifying before us and submitting written statements of view. The statements received by the Commission from the public, in response to its request for testimony and written views, are summarized in an annex to the report. The detailed records of all Commission proceedings, including meeting transcripts, written testimony, staff memoranda and all papers circulated to the Commission, are catalogued in an annex to the report and will be available for public inspection at the Treasury Department library, the National Archives and Records Service and the Library of Congress.

We hope that this report on the role of gold in the domestic and international monetary systems will be of help to the Congress and the public in evaluating the spectrum of proposals advanced with the objective of restoring greater monetary and economic stability in the United States, an objective we strongly support. We regard it as an honor and a pleasure to have had the opportunity to contribute in this capacity to the continuing effort to find solutions to the nation's economic problems.

Respectfully,

Donald T. Regan

Donald T. Regan

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ACKNOWLEDGMENT

The Members of the Commission express their sincere appreciation to Dr. Anna J. Schwartz for her assistance to the Commission in its examination of this important and complex subject. Her work in organizing the Commission's deliberations, in providing timely and expert analyses and in assisting the Commission in the preparation of this report demonstrated a high degree of professionalism and dedication, for which the Members are deeply grateful.

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Report of the Gold Commission

Introduction and Recommendations

Establishment of the Commission

We, the members of the Gold Commission, were appointed by Secretary of the Treasury Donald T. Regan on June 22, 1981, pursuant to section 10 of Public Law 96-389 (94 Stat. 1555), to "conduct a study to assess and make recommendations with regard to the policy of the U.S. Government concerning the role of gold in domestic and international monetary systems."* The Commission was directed to transmit its report to the Congress no later than October 7, 1981, one year after the date of enactment. Due to the change in Administration and the delay in appointment of members, it was not until July 16, 1981, that we met for the first time. We were in general agreement that a satisfactory report could not be prepared by the October 7 date. Accordingly, we requested an extension of the Commission's life. Legislation to that end was introduced to the Congress and enacted as P.L. 97-47 on September 30, 1981. The date for the report of the Commission was thereby changed to March 31, 1982.

Commission Meetings

We held 9 meetings, at two of which we heard testimony concerning gold from 23 witnesses, representing a wide spectrum of views on the potential roles of gold. They commented on the use and effectiveness of gold in past domestic and international monetary systems, and offered varying proposals for a restored role for gold, or favored the continuation of the present system with no role for gold. In addition to the hearings, the Treasury Department invited written statements on the role of gold from organizations and individuals. Summaries of the testimony we heard and of the statements submitted to us are reproduced in Annex B to the Report.

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*Congressman Chalmers P. Wylie -- Since many observers feel the Gold Commission became a "runaway" Commission in the Report, I would like to call special attention to the verbatim charge of Congress in creating the Commission. As the transcripts will show, many, many hours were spent debating issues which were extraneous to the Congressional assignment for the Gold Commission. The job assigned to the Gold Commission by Section 10(b) of Public Law 96-389 was as follows: "The Commission shall conduct a study to assess and make recommendations with regard to the policy of the United States Government concerning the role of gold in domestic and international monetary systems, and shall transmit to the Congress a report containing its findings and recommendations not later than one year after the date of enactment of this Act."

Contents of the Report

The body of our Report reflects the range of issues we discussed during our deliberations.

Chapter 1 surveys economic developments of recent years that were the background to the establishment of the Gold Commission.* A distinguishing feature of the period since the mid-1960s was rising and persistent inflation without precedent in peacetime in the United States. Public attention to the activities of the Commission reflects a desire for some institutional arrangements to ensure a reasonable approximation of price stability in an economy whose resources are relatively fully employed in a balanced and sustainable way. The chapter presents the factual record of the performance of the economy, and reviews explanations that have been offered to account for the lack of success of several attempts to curb inflation in the decade and a half from 1965.**

Chapter 2 examines the historical evidence on the experience of the United States with gold. In 1834, though legally on a bimetallic standard, de facto the United States adopted a gold standard. The chapter deals with successive changes since then in the character of our country's monetary system.

In Chapter 3, we explore the strengths and weaknesses of alternative monetary standards, including different versions of a gold standard, commodity standards other than gold, and the present inconvertible paper system. International aspects of the alternative standards receive attention.

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*Congressman Chalmers P. Wylie -- Chapter 1 surveyed economic developments from a monetarist perspective and did not emphasize adequately the role of Federal budget deficits and fiscal policy in creating the economic problems of the last fifteen years. Since section 3 of Public Law 96-389 specifically stated that "Congress reaffirms its commitment that beginning with Fiscal Year 1981, the total budget outlays of the Federal Government shall not exceed its receipts" this ommission of references as to the role of fiscal policy as a cause of inflation should not be overlooked. Indeed, the fact that the Federal Government is running a deficit of $100 billion while paying a comparable sum in interest on the total Federal debt detracts from the credibility and utility of this Report.

**Congressman Chalmers P. Wylie -- This chapter does not mention that the total Federal debt increased from $317 billion at the end of 1964 to $1,004 billion at the end of 1981. It also does not mention that the net interest paid by the United States Treasury on the total Federal debt in 1982 may well exceed 30 percent of the total Federal debt for 1964. In short, Chapter 1 does not present the factual record of budget deficits and thus does not adequately explain the performance of the economy during the last fifteen to twenty years.

In Chapter 4, we review the current role of gold and consider possible changes. In relation to domestic monetary arrangements, the changes would affect the conduct of Treasury or Federal Reserve operations or both. Such changes, if adopted, would also affect private sector conduct. In relation to the international monetary system, the changes would affect foreign exchange rate arrangements, the settlement of the balance of payments, and the International Monetary Fund.

For each possible change in the current role of gold, we discuss the main elements of the change, transitional problems, if any, potential legal and international implications, and assess the advantages or disadvantages it presents.

Chapter 4 also brings together material on the historical market for gold that was dominated by central banks until 1968, changes in the location and operation of gold markets since then, the allocation of the stock of gold between monetary and nonmonetary uses, determinants of the demand for and supply of gold, and approaches to the determination of the equilibrium price of gold. In addition, the chapter provides a retrospective view on the record of gold production over past centuries and its relation to trend movements in commodity prices. A statistical compendium gives time series of world and U.S. production and stocks of gold, world and U.S. industrial use of gold, and the nominal and real price of gold.

Aims of the Gold Commission

Part of our mandate is to assess the role of gold in the domestic and international monetary systems. Assessments differ among members of the Commission not only with respect to the costs and benefits in the past when our monetary system was linked to gold but also with respect to the prospective costs and benefits, were such a link restored. Given the size of the Commission that the Congress specified, and the diversity of our views, that result may not be surprising. We decided that the best service we could render the country would be to set forth in an objective way the complex issues involved and give a fair hearing to different points of view.

Another part of our mandate is to make recommendations. Though it became apparent to us during our deliberations that we would not be able to achieve a unanimous set of recommendations, on some issues, it was possible to form majorities. Even so, a majority vote in favor of a specific recommendation did not signify that all so voting had the same purposes and/or interpretations in mind. Moreover, if each of us had been reporting singly instead of as one of a body of colleagues, individual members would not necessarily have expressed themselves in precisely the way the recommendations are stated. Differences in wording, emphasis and perceptions would have been evident. In some instances our recommendations touch on technical matters, such as legal and tax considerations, that need to be studied more exhaustively than it has been possible for us to do. Such technical questions should be given attention in any Congressional hearings in connection with our recommendations.

Recommendations and Dissenting Views

We report our recommendations on the following subjects:

1. The program of Treasury medallion sales
2. Treasury issue of gold bullion coins
3. Treasury issue of gold-backed notes or bonds
4. The gold stock owned by the United States

    a. The public accounting for the gold stock
    b. The relationship between gold certificates held as an asset of the Federal Reserve System and the gold held by the Treasury
    c. The appropriate size of the gold stock
    d. The price at which to value the gold stock
    e. Managing the gold stock

5. Domestic monetary policy arrangements*
6. International monetary policy arrangements*

With respect to most of these subjects, we first present the range of views expressed in our deliberations, followed by the Commission's recommendation. Dissenting views are given in footnotes.

1. The program of Treasury medallion sales

In July 1980, the Treasury began the sale of half-ounce and one-ounce gold medallions in accordance with the American Arts Gold Medallion Act of November 10, 1978 (P.L. 95-630). The legislation provided that not less than 1 million ounces of gold be struck into medallions each year for a five-year period and sold to the public at a price covering the market value of their gold content plus all costs. A different American artist is commemorated on each of the two sizes of medallions. In 1980, Grant Wood was honored on the one-ounce and Marian Anderson on the one-half ounce medallion. In 1981, Mark Twain was honored on the one-ounce and Willa Cather on the one-half ounce medallion. Under the 1980 program covering the period July 15, 1980, through February 28, 1981, less than 300 thousand medallions of each size were sold, containing 434 thousand gold ounces. Under the 1981 program, from July 15, 1981, through March 5, 1982, about 60 thousand medallions of each size were sold, amounting to 95 thousand gold ounces.

The price of the medallions varies daily with the market price of their gold content, based on the settlement price at the end of the previous day for spot gold traded on the Commodity Exchange of New York, plus a surcharge in 1980 of $12 and in 1981 of $14 per ounce to cover

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*Congressman Chalmers P. Wylie -- Omission of the phrase "the role of gold in" before "monetary policy arrangements" in items 5 and 6 clearly was technically appropriate considering the material included in that section but inappropriate given the charge to the Commission by the Congress as to what should have been discussed.

Governor J. Charles Partee -- I wish to be associated with this view.

the cost of production and marketing. The surcharge averaged under three percent of the underlying gold price.

The Bureau of the Mint sells the medallions directly to purchasers through mail orders placed at U.S. post offices. Delivery is made within six weeks.

The Treasury Department is planning a simpler and wider distribution of the medallions to be introduced this year through a network of dealers. Although details are not yet finally decided, the expectation is that sales to dealers will be made on the basis of the daily New York gold price, plus a three percent markup to cover costs including publicity by the Mint. The dealers would add a comparable fee in selling to the public and develop a secondary market for the medallions.

Recommendation. The Gold Commission supports the improvement of the program of medallion sales along the general lines that the Treasury plans.*

2. Treasury issue of gold bullion coins

In addition to gold medallions we discussed proposals for a Treasury issue of gold bullion coins of specified weights to be offered to the public at a price near market value.

Among those who support the proposal, two conceptions of the character of the demand for such coins are evident. Some of us expect the demand for such coins to be an investment demand, similar to the demand for Krugerrands, Maple Leafs, Mexican pesos, and other foreign coins that have found a market in this country. Others expect the demand for such coins to be (or have the potential to be) a demand for their use as money. Their value would change from day to day as the value of the gold content of the coin fluctuated in the free gold market.

Some advocates of this proposal see such coins as facilitating development of a dual monetary system, which would impose an additional degree of discipline on discretionary operation of monetary policy.**

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*Governor J. Charles Partee -- The procedures by which gold medallions are marketed can be substantially improved as an interim measure, but the program should be discontinued when and if the Commission's gold coin recommendation is implemented.

Mr. Arthur J. Costamagna -- I voted for this recommendation on the understanding that the new program would not increase fees charged to the consumer.

**Congressman Henry S. Reuss -- I disagree. A dual monetary system would impose chaos, not discipline, on monetary policy.

Governor Henry C. Wallich wishes to be associated with Governor Partee's and Congressman Reuss' views above.

However, those opposing the proposal believe that ample supplies of gold in forms other than Treasury coins are available to satisfy the demand for gold in the private sector.*

So that the new issues may compete with foreign coins, some proponents advise that the former be designated legal tender and as coin of the realm bearing the great seal of the United States and the motto "In God We Trust." In addition, they advise that changes in the dollar value of these coins should be exempt from capital gains taxation.

A Treasury issue of gold bullion coins involves technical matters, on some of which the Commission has adopted recommendations. Congress should explore the following considerations more thoroughly than was possible in our deliberations.

(a) Consideration of a quantity limit on the issue of the coins. This reflects concern that the demand for the coins might exhaust the Treasury gold stock. One approach would be to specify a quantity limit in any legislation to permit coinage. An alternative means of limiting the demand would be to set a seignorage fee well in excess of costs of minting.** Some who believe the demand for coins would be a demand for money oppose a limit. They would view large scale demand as an indication of public dissatisfaction with the management of the (dollar) money supply and as leading to de facto establishment of a gold coin standard.*** According to this view, establishment of an arbitrary quantity limit or a high seignorage fee would interfere with this expression of public preferences. A few others of both persuasions

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*Congressmen Henry S. Reuss and Chalmers P. Wylie -- We find this sentence to be an inadequate summary of our views in opposing the gold bullion coin and refer the reader to our dissenting views for an authoritative statement of the harm for the economy if this proposal were to be enacted.

**Congressman Chalmers P. Wylie -- A little known fact about gold bullion coins and other gold coins is that the gold alloys used in coinage are several times harder than silver, nickel, and copper alloys. The consequence of this is that entirely different machinery has to be used for making gold coins than regular coins. This waste and cost should be avoided.

***Congressman Chalmers P. Wylie -- Inadequate demand for the gold medallions produced by the Treasury for the Arts Medallion program has left the Treasury with many millions of dollars of unsold medallions. Concern about waste in government forces me to caution readers about the fiscal perils of forcing the Mint to turn our official gold bullion into gold bullion coins when there isn't any evidence of enough demand to absorb the official medallions we have been producing for the public for several years. At least, the gold medallion program should be discontinued, if we are to start producing gold bullion coins in accordance with Commission's recommendation.

Governor Henry C. Wallich wishes to be associated with Congressman Wylie's view.

favor Treasury purchases of gold to replace gold it has coined.* Those who believe the demand for coins would be an investment demand assume that it would not be quantitatively significant, and on this ground would neither oppose nor support a legislated limit.

(b) Enabling legislation to mint coins. Section 5 of the Gold Reserve Act of 1934 (31 U.S.C. sec. 315b) prohibits the minting of United States gold coin.

(c) The implications of legal tender status for newly minted coins. Treasury Counsel prepared for us a statement on this matter related to U.S. currency (see Annex C). Legal tender status essentially requires that, in any contract that does not otherwise specify the means of payment, a debt can be discharged by the tendering of any form of U.S. legal tender, and the creditor must accept that form of payment in full discharge of the debt. However, whenever a contract specifies a specific means of payment, such as gold, and the debtor breaches that provision and is taken to court by the creditor, the court, as in most cases of contractual breach, normally awards damages rather than specific performance of the contract provision.

For some who regard the demand for coins to be an investment demand, legal tender status is an adornment for coins, but nevertheless a sine qua non for generating public acceptance of them.**

For some who regard the demand as a demand (or a potential demand) for money, the implications of legal tender status require further consideration.*** Legal tender status for gold coins could compel their acceptance by private creditors for debts or by the

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*Mr. Herbert J. Coyne -- While I do not believe using one to two million ounces of our gold stock for a gold coin program would make excessive inroads into these stocks, any open-ended production of coins could in effect amount to unlimited Treasury gold auctions. Clearly most Commission members do not desire this. Thus, I believe the Treasury should purchase gold in the open market to replace any larger amount of gold used in minting a U.S. gold coin or to refrain from minting any larger quantities.

**Congressman Chalmers P. Wylie -- I do not believe an adornment can be a sine qua non.

***Congressman Chalmers P. Wylie -- This will be our first coin without legal tender status. It should have legal tender status or not be called a coin.

I had the Congressional Research Service summarize the laws of Canada and South Africa pertaining to the legal tender status domestically of their own gold coins which are useable in commerce in their country of origin. Their experience should be considered in evaluating questions pertaining to legal tender status for the gold bullion coins. The summaries by CRS can be found in an appendix to the "Dissenting Views of Congressmen Henry S. Reuss and Chalmers P. Wylie."

Treasury in satisfaction of taxes. Formidable problems, involving potential profits and losses to private creditors and debtors, could arise in assigning gold coins legal tender status at a fluctuating market value.

(d) The implications of capital gains exemption for changes in the dollar value of coins (a background paper on capital gains taxes prepared by the Treasury is part of the permanent record of the Gold Commission). Advocating such exemption for coins but not for gold bullion holdings or, for that matter, not for productive investments overlooks the inducement the exemption would provide to shift from such other assets to coins. Those who support the exemption, however, regard it as essential to the use of the coins as money. Legislation to prohibit local government imposition of sales taxes would involve similar considerations. It would clearly also deprive the states of a source of revenue.*

(e) Issues by private mints. The majority of us oppose private minting of official United States coins. We regard the production of "official" coins of a country as a governmental function. The government in effect guarantees the weight and fineness of the "official" coins issued. Private firms are perfectly free to mint gold pieces of any shape and size, so long as they do not purport to be United States coins with a U.S. Government guarantee of weight and fineness. Permission for private firms to mint U.S. coins would open possibilities for fraud and could involve the Treasury in a new and costly regulatory and monitoring function. Problems would be compounded if the Treasury had a convertibility obligation or an obligation to accept the coins in payment of taxes.

(f) Convertibility at Treasury of gold bullion coins. Of those favoring issue of coins, about half support assumption by the Treasury of an obligation to stand ready to purchase coin offered to it at the market price ** on the day of redemption, the conversion producing potential profits (or losses) for the Treasury.

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*Congressman Henry S. Reuss -- An October 5, 1981, bill, S.1704, cosponsored by Senator Helms, provides for the minting of gold coins exempt from U.S. and state capital gains taxes -- exactly as in the Gold Commission's recommendation below, which is supported by all of the Reagan Administration's Gold Commission members. Senator Helms' National Congressional Club expended $4.5 million on the 1980 Reagan campaign (see Congressional Quarterly, March 6, 1982, pp. 499-505).

**Congressman Chalmers P. Wylie -- "Market price" is determined in unique ways for gold which should be studied carefully before obligating the Treasury to convertibility with its potential for losses to the Treasury.

Congressman Henry S. Reuss -- In other words, about one-third of the Commission supports this dangerous proposal which could provide exhorbitant trading profits to those foreign interests who fix the gold price.

Recommendation. We favor Treasury issue of gold bullion coins of specified weights, and without dollar denomination or legal tender status, to be manufactured from its existing stock of gold and to be sold at a small mark-up over the market value of the gold content, and recommend that the Congress implement this proposal. Furthermore, we recommend that the coins shall be exempt from capital gains taxes and that the coins shall be exempt from sales taxes.*

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*Congressmen Henry S. Reuss and Chalmers P. Wylie -- We object strongly to this recommendation and call the reader's attention to a statement of objection to the recommendation signed by 30 members (two-thirds) of the House Committee on Banking, Finance and Urban Affairs. The recommendation ignores national problems of diminishing incentives for productive investment in plant and equipment, of confusion over what is and is not money, and of depriving states of the revenue needed to cover obligations enhanced by Federal cutbacks.

Governor Henry C. Wallich -- I would not object to a gold coin issued with a mark-up at least equal to that applying to coins like the Maple Leaf and the Krugerrand, issued in limited quantities, and subject to capital gains tax. In the absence of these specifications, a gold coin could lead to excessive depletion of the Treasury gold stock and harmful diversion of resources to unproductive investment. I also oppose convertibility of the coin at the Treasury.

Governor Emmett J. Rice wishes to be associated with Mr. Wallich's view. With respect to convertibility, no support for convertibility at Treasury of gold bullion coins was ever explicitly voted for the record. An amendment by Congressman Reuss to include specific mention in the recommendation on the issue of gold coins that such coins should not be convertible into dollars on demand at the Treasury was voted down, but one cannot necessarily infer from this that those who rejected the Reuss amendment supported the assumption by the Treasury of an obligation to stand ready to purchase coin offered to it at the market price on the day of redemption.

Governor J. Charles Partee -- I seriously doubt that the proposed gold coin should be exempted from capital gains taxes. Careful and detailed study is needed, not only of the equity considerations involved in such singular treatment, but also of the possibilities for unwanted speculative maneuvers involving the new coin in conjunction with other forms of gold and precious metals holdings. Such uses could in fact destroy the coin's value as a monetary indicator.

Congressman Henry S. Reuss -- This tax exemption proposal was adopted at the February 12 Gold Commission meeting, 8-6. Jerry Jordan, who cast in person and by proxy the decisive votes in favor, has since testified that he was merely recommending that Congress "consider" the tax exemption question. (See transcripts, Joint Economic Committee, February 18; Gold Commission, March 8.)

Mr. Arthur J. Costamagna -- Since a majority (9 to 6) rejected the idea that "such a coin should not be convertible into dollars on demand at the Treasury," by implication, I believe, a majority favored convertibility or redeemability of the gold coins at the Treasury.

3. Treasury issue of gold-backed notes or bonds

Several witnesses at the hearings we conducted suggested that Treasury issue of gold-backed notes or bonds would be a means of introducing gold into our monetary system. A limited issue, for example, of five-year Treasury notes with interest and principal payable in grams or ounces of gold, would provide deferred claims on gold. Initially, according to the advocates, the yield spreads between gold and inconvertible dollar obligations of the same maturities might be wide. Success in restoring long-term confidence in monetary discipline would eventually narrow the yield spreads. At that time, full gold convertibility of all dollar obligations might be contemplated. These witnesses emphasized the savings on interest payments by the Treasury, assuming the price of gold remained stable or rose only moderately, and hence a positive effect on Federal budget deficits.

In our deliberations, it was noted by opponents of gold-backed Treasury securities that a gold-backed Treasury note or bond, if convertible at maturity at the market price of gold at the date of issue, would in effect be a warehouse certificate for gold. Such an instrument would provide the owner the same chance of gain or loss as owning gold, without his incurring the cost of storage and insurance. No obvious guideline exists for pricing the instrument. A Treasury issue of gold-backed notes or bonds, paying even a low rate of interest, would permit speculation on gold with a sweetener of a coupon. Such issues would be comparable to a bond convertible into the common stock of a corporation that has a low coupon because of the possibility of speculative gain. Purchase of Treasury gold-backed issues would indicate an expectation that the price of gold would rise. The Treasury would then be betting against the market, with no assurance of gain and a major risk of Treasury losses. From a debt management viewpoint, no need exists for gold-backed Treasury issues.

Recommendation. We oppose the issue of Treasury gold-backed notes or bonds.

4. The gold stock owned by the United States Government

As of the end of February 1982, the Treasury Department reported that it held 264 million troy ounces of gold. The bulk of the gold is

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*Continuation from previous page.

Mr. Herbert J. Coyne -- The majority recommendation was made under the misimpression that making the U.S. gold coin legal tender would have made it money of the realm and usable in the payment of debts. The purpose of designating a U.S. coin "legal tender" is to allow it to compete equally with the foreign coins that are currently supplying the U.S. market. Popular foreign coins are designated legal tender and therefore a U.S. coin must be similarly designated in order to be successful. I recommend that the U.S. Congress consider this market fact when designing the U.S. gold coin.

stored in mint depositories: Fort Knox, Kentucky, and West Point, New York; U.S. Assay Offices in New York and San Francisco; and the Denver and Philadelphia Mints. In addition, the Federal Reserve Bank of New York is the custodian of a part of the gold stock.

a. The public accounting for the gold stock

Citizens have written to us expressing concern about alleged unauthorized large withdrawals from gold depositories. They fear that the actual amounts held by the Government are less than are reported officially. Stories in the press also have referred to missing gold.

Public and Congressional inquiries relating to the accuracy of the accounting records and security of the gold stock were directed to the General Accounting Office (GAO) in the early 1970s. In response, the GAO conducted a partial audit of the gold stored at Fort Knox in September and October 1974. In its report on the audit, the GAO recommended cyclical audits of the gold in the custody of the Bureau of the Mint.

During fiscal 1975, at the direction of the Secretary of the Treasury, the Fiscal Assistant Secretary of the Treasury established the Committee for Continuing Audits of United States Government-owned Gold stored at various depositories, with the responsibility to conduct audits at appropriate intervals. The Committee consists of one representative each from the Bureau of the Mint, the Bureau of Government Financial Operations, and the Federal Reserve Bank of New York, with GAO representatives invited to observe the audits. As of February 1982, 80.5 percent of the U.S. Government-owned gold had been audited and verified. The continuing audit program is planned to provide a complete audit of all U.S. Government-owned gold by the end of the 10-year cycle in 1984.

The Treasury has provided us with a detailed statement of the results of the continuing audit (see Annex D). With one or two exceptions, we are satisfied with the Treasury's continuing audit, find it thorough, and believe it should allay any public concern with regard to the accuracy of the inventory, the related accounting records, and the internal controls governing the depositories. One of us, however, expressed a preference for a speedier completion of the audit.

One member is not satisfied with an audit that spans ten years and contends that 31 U.S.C. 354 appears to require annual audits of the gold inventory. He disputes the Treasury's view that a 100 percent audit in a single year is not feasible, since on its own estimate of manpower requirements, 26 men could do it. The Treasury has provided us with an opinion that 31 U.S.C. 354 requires not annual audits but annual settlements of account, which are being performed regularly in compliance with this provision.

Recommendation. We are satisfied that the Treasury is meeting the requirements of 31 U.S.C. 354 regarding annual settlements of account

and that the Treasury's continuing audit of the Government-owned gold stock provides an adequate basis for full verification of the accuracy of inventory records.*

b. The relationship between gold certificates held as an asset of the Federal Reserve System and the gold held by the Treasury

Some citizens have expressed the view that for the Treasury to claim ownership of the gold stock and the Federal Reserve System to show gold certificates as assets appears to be double-counting of the same asset.

The gold is the property of the U.S. Government. The certificates do not represent Federal Reserve ownership of the gold.

Gold certificates, which are valued at $42.22 per ounce of gold, and are a liability of the Treasury, are issued to the Federal Reserve by the Treasury against its gold holdings. The certificates represent a Federal Reserve claim on the assets of the Treasury, for which the Treasury has received a counterpart deposit in its account with the Federal Reserve.

All gold held by the Treasury has been monetized in this fashion. New gold certificate credits may be issued only if additional gold is acquired by the Treasury or the statutory price at which gold certificates may be issued is increased. Similarly, gold certificates must be retired by the Treasury upon the sale of gold, with a corresponding decline in the Treasury's deposit balance.

Recommendation. We believe that the Treasury and Federal Reserve are following appropriate procedures in reporting Federal Reserve claims on the Treasury represented by gold certificates and payable in dollars.

c. The appropriate size of the gold stock

At year-end 1949, the U.S. gold stock was a little over 700 million fine troy ounces. At year-end 1967, the stock was about 50 percent smaller -- 345 million ounces. As already noted, it is now 264 million ounces.

One question we discussed was the appropriate size of the gold stock -- a non-interest bearing asset of the Treasury. All of us agree that a zero stock is not the appropriate size and therefore oppose auction sales which are intended to dispose of Treasury holdings over some stated period of years.

A minority prefers that the Treasury maintain the stock at its present level as an important strategic and monetary resource. This

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*Congressman Ronald E. Paul -- The Treasury should assign adequate manpower to complete a 100 percent audit of the gold stock every year.

view is consistent with the belief that an increase in the monetary role of gold is not now timely but the stock should be held as a reserve for possible future use, should a restored role for gold then appear feasible, or against other contingencies. In support of this view, it was suggested to us that should an international monetary conference of free world nations be convened to recommend changes in the international monetary system, it would be useful for the United States to hold a substantial gold stock to influence possible future deliberations and to be in a strong position if gold's role were reestablished.

A variant of that view, held by the majority of us, is that some depletion of the gold stock, for example, for the issue of medallions or the recommended program of coinage, is acceptable but to a limited extent only.

Recommendation. We recommend that, while no precise level for the gold stock is necessarily "right," the Treasury retain the right to conduct sales of gold at its discretion, provided adequate levels are maintained for contingencies.*

d. The price at which to value the gold stock

The Treasury currently values the gold stock it holds at $42.22 per ounce. Since the free market in gold was established in 1968, the price has fluctuated between $35 and $850 per ounce. It has recently been priced at under $350 per ounce.

One argument for revaluing the gold stock at a price closer to the market price is that it would enable the Treasury to raise revenues by sale of part of its gold. The revenue could be used to retire debt, thus saving interest payments on outstanding Treasury securities, or to finance the current Federal budget deficit. All these objectives are attainable simply by selling gold at the market price, and so there is no cogency to this argument for revaluing the gold stock. The same comment applies to the suggestion that an advantage of an international agreement to value gold at the market price is that it might be a step toward gold becoming an accepted

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*Mr. Herbert J. Coyne -- I favor the recommendation that was initially voted for by a larger majority of Commission members than the one that was passed. I believe this first recommendation more closely represents the sentiments of the Commission: "We are opposed to auction sales of gold stock held by Treasury and recommend that under circumstances such as those that presently exist, the stock be maintained at its present size."

Governor Henry C. Wallich -- While I would not rule out the sale of the gold stock when a particular situation may urgently require it, as a general rule the Treasury should avoid sale of the gold stock. Under circumstances such as those that presently exist, the gold stock should be maintained at its present size.

Mr. Arthur J. Costamagna -- The Treasury should retain the right to conduct purchases and sales of gold at its discretion.

international medium for payment of balance of payments disequilibria, and that it could also be used for intervention purposes in foreign exchange markets to influence the exchange rate of the dollar.

Another argument is that it is unrealistic to value the gold stock at an outdated fixed price. Doing so distorts the true significance and cost of the U.S. gold asset position.

We regard the choice of a price at which to revalue gold reserve assets as independent of a decision on the price at which to restore a gold standard. One proposal was made during our deliberations for a gradual increase in the statutory price of gold to a price closer to the market price. The proposal was incidental to a plan to require gold certificate reserves be kept behind Federal Reserve notes. No other proposal with respect to the determination of a price at which to revalue gold reserve assets was brought to our attention.

Recommendation. The Commission recommends that the Treasury and the Federal Reserve conduct studies of issues that would be involved in a move towards valuing gold realistically, at something more closely approximating market prices. The change should be subject to the legislative constraint that the proceeds of this new valuation not be monetized by the Treasury or in any way used to enhance the government's spending power. The studies should develop a formula and timetable for valuing U.S. gold stocks in a manner realistically related to gold market value.*

e. Managing the gold stock

One general proposition that we examined is the desirability of finding constructive uses of the gold stock rather than keeping it immobile, as is currently the case. Specific suggestions we considered included:

(1) The United States should offer swaps, leases and make other commercial arrangements with respect to its gold stock in order to generate a modest revenue flow.

(2) If revalued, gold should be used for intervention purposes in foreign exchange markets and for the settlement of the balance of payments (see subject 4d. above).

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*Governor Henry C. Wallich -- Any revaluation of the gold stock carries with it the danger of an inflationary use, directly or indirectly, of the resulting gold profit. Repayment, from this source, of part of the Federal debt poses the same temptations as would a more direct use of the profit for government expenditure. Revaluation close to the present market price further raises the question of what should be done if the market price should fall below the official price.

Governor J. Charles Partee -- Any such study must give important weight to the need for retaining ample central bank flexibility in meeting the "lender of last resort" function while at the same time avoiding unwanted overall monetary expansion. This requires the maintenance of an adequate stock of portfolio assets that could be sold as any such loans are booked.

(3) The Federal Reserve System should engage in open market operations using gold as well as government securities.

In our discussion of the general proposition, it was noted that the proposed uses were not easy to assess and the advantage of turning to unconventional uses of gold was not obvious.

Moreover, if any of the suggested uses of gold yielded a profit, use of the profit to retire public debt or to spend it for budgetary purposes might encourage fiscal imprudence.

Recommendation. We do not favor unconventional uses of the gold stock, since the objectives sought by adding gold to the policy instruments of the monetary and fiscal authorities are attainable without such use and the side effects of so using gold may be undesirable. We do favor continued study of the role of gold in the monetary system and recommend that Congress hold hearings on the subject.*

5. Domestic monetary policy arrangements

Currently, transactions in gold are not used in the implementation of monetary policy by the Federal Reserve System. Gold certificates are carried as an asset of the Federal Reserve and therefore comprise one element in the sources of the monetary base. However, the Federal Reserve does not use its holdings of these certificates as a device for changing the base.

We considered a number of alternatives that would serve to reintroduce gold into our domestic monetary policy arrangements. The

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*Mr. Herbert J. Coyne -- The Federal Reserve and the Treasury should conduct studies to consider different ways in which gold can be used as a helpful policy instrument. It seems implausible to keep our vast stocks of gold completely idle, if worthwhile uses can be developed which do not entail depleting those stocks.

Governor Henry C. Wallich -- I do not favor unconventional uses of the gold stock and would regard continued study and Congressional hearings on the role of gold in the monetary system as an unproductive use of government resources and a potential source of market unsettlement.

Governor Emmett J. Rice -- I believe that little would be gained from further study of the role of gold in the monetary system. The Commission has examined a variety of possible roles for gold in the monetary system. The Commission's recommendations state that it sees no merit in issuing gold-backed bonds, does not favor unconventional uses of the gold stock, does not regard restoring a gold standard as a fruitful way to deal with inflation, and does not favor change in the usage of gold in exchange rate arrangements. It would appear inconsistent to reach these conclusions and then call for further study of presumably these same "roles."

Congressman Henry S. Reuss -- I agree with Governors Rice and Wallich.

objective would be to improve monetary control through the discipline of gold for the purpose of reducing inflation. Linking changes in the growth rate of money or of some component of money, such as Federal Reserve notes, or of bank reserves, to the change in the gold stock is one approach which was considered for imposing the discipline of gold.

One way to reintroduce gold would be to require the Federal Reserve System to maintain a minimum ratio between the U.S. Government's gold stock and the Federal Reserve monetary base (i.e., Federal Reserve notes plus bank reserves) or some monetary aggregate. A variant would fix upper and lower limits to the ratio, so that the System would be required to take expansionary actions when the ratio was at its upper limit, or contractionary actions when the ratio was at its lower limit. The gold cover requirement might be valued at the price of $42.22, or adjusted gradually, or allowed to fluctuate with market prices.

Along traditional gold-standard lines, the United States could define the dollar as a specified weight of gold (that is, fix the price of gold), set gold cover requirements for the Federal Reserve System, and allow the value of the gold stock to be determined by domestic and international gold flows. If the value of the gold stock rose through an inflow of gold, the Federal Reserve would be required to undertake actions to expand the money stock. If the value of the gold stock declined, it would be required to take contractionary actions.

Most members of the Commission believe that a return to the gold standard is not desirable. Even if that were not our view, for most of us there are two major problems in contemplating the feasibility of a return to a domestic gold standard. One is the absence of a sound guide on how to determine the fixed dollar price of gold at which resumption of a gold cover requirement could be introduced. The other one is the absence of a sound guide on the extent of feasible convertibility of domestic dollar obligations.

Since the decade of the 1970s, not only in the United States but also in other industrialized nations, monetary authorities have experimented with self-imposed rules of conduct of monetary policy, sometimes expressed as target rates of growth of money. Long-term monetary discipline, not linked to gold, has been the objective. A variant of this approach would impose such discipline by legislative prescription, that is, a monetary rule.

Although some objection was expressed to consideration of domestic monetary arrangements not linked to gold as overstepping the Gold Commission's mandate, in fact we discussed all the foregoing alternatives.* In addition, we considered continuation of our present

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*Governor Henry C. Wallich -- No data or studies were presented, however, for this part of our discussion, nor did the discussion cover such aspects as the definition of the money to be targeted, the

domestic monetary arrangements, under which the Federal Reserve exercises full discretion with respect to monetary actions and chooses the ranges of growth in a variety of monetary aggregates, which it believes appropriate to the economy's needs and proposes to seek, reporting to several Congressional committees both its plans and their results.

Recommendation. The Commission recommends that the Congress and the Federal Reserve study the merits of establishing a rule specifying that the growth of the nation's money supply be maintained at a steady rate which insures long-run price stability. In addition, the Commission concludes that, under present circumstances, restoring a gold standard does not appear to be a fruitful method for dealing with the continuing problem of inflation. The Congress and the Federal Reserve should study ways to improve the conduct of monetary policy, including such alternatives as adopting a monetary rule.*

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techniques by which such targeting would be conducted, nor the effects of stable money growth on prices, incomes, and employment.

Governors Partee and Rice wish to be associated with Governor Wallich's comment.

*Governor Henry C. Wallich -- The Commission's mandate was to assess "the role of gold in domestic and international monetary systems." The only part of the recommendation that focuses on gold, and with which I agree, is the conclusion that restoring the gold standard does not appear to be a fruitful method of dealing with the continuing problem of inflation. The remainder of the recommendation deals with aspects of economic policy that are outside the Commission's terms of reference, and I, therefore, oppose this recommendation.

Governors Partee and Rice and Congressman Wylie wish to be associated with Governor Wallich's view. Congressman Wylie raised a point of order against the first and third sentences as being not germane.

Congressman Henry S. Reuss -- Since the Gold Commission's jurisdiction (P.L. 96-389) is concerned only with "the role of gold," the first and third sentences in this recommendation, commenting about a monetary rule, are outside the Commission's jurisdiction. In addition, the first and third sentences are redundant.

Governor Emmett J. Rice -- Besides being outside the mandate of the Commission, this recommendation does not recognize that the Federal Reserve already specifies ranges for the annual growth of money and bank credit aggregates with a long-term objective of promoting sustainable economic growth in a noninflationary environment. Adoption of and adherence to a rigid rule of a predetermined percentage rate of monetary growth to be achieved (if at all possible) regardless of developments in the economy would likely lead, in my judgement, to price and output instability.

*(Continued)

Congressman Stephen L. Neal -- I offered the following resolution:

"Whereas the majority of those who supported the creation of the Gold Commission did so with the hope of finding a method for better insuring consistent and persistent price stability** and;

"Whereas the inflationary process is ultimately related to excessive growth in money*** and;

"Whereas it is clear that inflation cannot persist over the long run in the absence of excessive monetary growth then;

"The Commission recommends that the Congress by legislation establish a rule specifying that the growth of the nation's money supply be maintained at a steady rate which insures long-run price stability."****

The members were evenly split on the vote for the resolution.

**Congressman Chalmers P. Wylie -- The preamble to the resolution is not a correct statement. The reader is referred to the Congressional Record of September 18, 1980, pages H9136-7 for the entirety of the House debate establishing the Gold Commission. Neither the concept of inflation nor the phrase "price stability" were mentioned in connection with the establishment of the Gold Commission.

***Congressman Chalmers P. Wylie -- I would like the record to show that I feel that our inflation problems since about 1965 are ultimately related to excessive Federal spending and to persistent deficits in the Federal budgets, rather than "excessive growth in money," as the resolution states.

****Governor Henry C. Wallich -- I am opposed to this resolution because it is outside the mandate of the Commission. The Commission, moreover, did not have before it facts or analyses upon which to base a recommendation, nor did it discuss the merits of a rule for monetary policy. My effort to introduce material to document the instability of the velocity of circulation of money and, therefore, the unworkability of a rule, did not lead to discussion of this evidence. Establishment of a fixed rule for monetary policy would invite the danger of destabilizing output, employment, prices, and the international value of the dollar.

Congressman Stephen L. Neal -- The merits of a monetary rule regulating the growth of the money supply have already been extensively studied and debated. Moderate and steady growth of the money supply is necessary, over the long run, for price stability, low interest rates, robust productivity, and full employment. The monetary history of the past decade suggests the need for a legislated rule to enforce monetary restraint. We need to enact such a rule, not endlessly debate its merits. Accordingly, I proposed the resolution quoted above, on which the Commission is evenly split. While I support the recommendation finally adopted by the Commission, I

6. International monetary policy arrangements

We discussed a number of aspects of international monetary arrangements during our deliberations.

Under present conditions, the exchange rate of the dollar is determined in foreign exchange markets by the demand for and supply of dollars and also by the demand for and the supply of other currencies. The foreign exchange value of the dollar floats, changing from day to day as market influences (or government interventions) determine.

Adopting a gold standard with a fixed price of gold in terms of dollars would fix exchange rates between the dollar and the currencies of those of the United States' trading partners that also fixed the price of gold in terms of their currencies. Those who support a system of fixed parities argue that it facilitates international trade and finance and, along with convertibility of the U.S. dollar to gold, would promote the goal of internal price stability.

Under present conditions, deficits or surpluses may be observed in our balance of payments, and the deficits or surpluses are settled in dollars automatically. Even though dollars are not convertible into gold at a fixed price, they are convertible into U.S. goods and services including gold at market prices. Other countries and their residents continue to use dollars as an intervention currency in foreign exchange markets, in payments and receipts for international transactions, and as a reserve asset. We do not use our gold in payments and receipts for international transactions and neither do our trading partners.

Most of us believe that even if other countries with substantial gold stocks and the major gold-producing countries were to agree with us on a restoration of an international gold standard, the United States -- and the system as a whole -- would confront an as yet unsolved problem of the vast quantity of dollars world-wide with potential claims to gold convertibility. We are not in fact aware of international interest in restoring a gold standard. Indeed, a number of foreign officials have expressed negative views towards a gold standard.

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think that, by recommending more study rather than outright enactment of a monetary rule, we missed a golden opportunity to help secure long-term price stability, low interest rates and high employment. I intend to continue my efforts to enact a monetary rule through legislation.

Mr. Lewis E. Lehrman -- I favor the restoration of a gold standard with a fixed price of gold. It is the means to achieve discipline in the U.S. monetary base which will then increase or decrease with gold purchases and sales by the monetary authorities.

One other question we discussed was the desirability of taking steps to seek a restitution of the gold that the United States and other member countries subscribed to the International Monetary Fund (IMF). The United States would be entitled to buy up to 23.6 million ounces of gold from the IMF at SDR 35, or approximately $40, per ounce at time of writing, if by an 85 percent vote of the IMF membership a decision were taken to sell gold for currency to members of the IMF in proportion to their IMF quotas as of August 1975.

The argument for such a restitution of IMF gold to its members is that currently gold has no central role in the international monetary system and no longer serves as the common denominator of a par value system or as the unit of value of the SDR; its official price has been abolished; members of the IMF have no obligation to use gold in transactions with the IMF; and the IMF is prohibited from accepting gold unless approved by an 85 percent vote of its members. The 1976-80 program of IMF gold sales also attests to the intention to establish a diminished role for gold in IMF resources.

The argument against seeking such gold restitution by the IMF is essentially the same one that underlies the belief that the United States should retain significant gold holdings. If gold is an important strategic and monetary resource for the United States, it should also be so regarded by the international community, and retained by the IMF for possible use in various contingencies.

Recommendation 1. We favor no change in the flexible exchange rate system. In addition, we favor no change in the usage of gold in the operation of the present exchange rate arrangements.*

Recommendation 2. We oppose action by the United States to seek a restitution of IMF gold to member countries.**

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*Congressman Chalmers P. Wylie -- I raised a point of order against references to the flexible exchange rate system since the House of Representatives made no reference to that subject in its charge to the Gold Commission. It is not germane to the report.

Congressman Henry S. Reuss and Governor Partee wish to be associated with Congressman Wylie's comment.

Mr. Lewis E. Lehrman -- I support fixed exchange rates for the U.S. dollar to be introduced at the earliest possible date.

**Congressman Ronald E. Paul -- I support steps to seek a restitution of IMF gold to member countries. I would use the additions to U.S. gold stocks for coinage by the U.S. Treasury.

Conclusion

In presenting our report, we are conscious of the complexity of an attempt to define what the role of gold should be in the domestic and international monetary systems.

The majority of us at this time favor essentially no change in the present role of gold. Yet, we are not prepared to rule out that an enlarged role for gold may emerge at some future date. If reasonable price stability and confidence in our currency are not restored in the years ahead, we believe that those who advocate an immediate return to gold will grow in numbers and political influence.* If there is success in restoring price stability and confidence in our currency, tighter linkage of our monetary system to gold may well become supererogatory.

The minority of us who regard gold as the only real money the world has ever known have placed our views on record: the only way price stability can be restored here (indeed, in the world) is by making the dollar (and other national currencies) convertible into gold. Linking money to gold domestically and internationally will solve the problem of inflation, high interest rates, and budget deficits.

We have made no attempt to conceal the divisions among us. In that respect, our views probably represent the range of opinions held by the country at large. We hope, nevertheless, that our report will make a contribution to public understanding of the important issues involved. In that event, the time we have devoted to preparatory study before our meetings and to the deliberations themselves will have been well spent.**

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*Congressman Henry S. Reuss -- I doubt it. More likely, those who advocate sensible fiscal, monetary, and anti-inflation policies "will grow in numbers and political influence."

**Mr. Arthur J. Costamagna -- Within three to five years, a new gold commission should be appointed to review the effects of the foregoing recommendations and Congressional implementation thereof, and to make their own recommendations at that time.

Chapter 1

Background to the Establishment of the Gold Commission*

The focus of this chapter is the period before October 1980 when the provision to create the Gold Commission was enacted. That provision was a product of growing concern in many quarters in this country over the persistence and acceleration of inflation here since 1964.** Many citizens believe that an expanded and more explicit role restored to gold in the U.S. monetary system is the solution to the problem of inflation, arguing that it will both promote monetary and fiscal discipline and reduce inflationary expectations.***

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*Governor Henry C. Wallich -- I dissociate myself from what seems to me a not sufficiently balanced and excessively monetarist interpretation of inflation.

Congressman Henry S. Reuss -- I associate myself with Governor Wallich.

**Congressman Chalmers P. Wylie -- This paragraph is in error, and this chapter should have been omitted from the Report of the Gold Commission. The Congressional Record of September 18, 1980 pp. H9136-7 records the brief discussion between Representatives Paul and Neal prior to the unanimous consent acceptance of Representative Paul's amendment which created the Gold Commission. The word "inflation" was not used even once during the entirety of the consideration of the amendment in the House of Representatives which created the Gold Commission.

Congressman Henry S. Reuss -- The Gold Commission was established as part of a legislative compromise to secure passage of a needed International Monetary Fund quota extension. It had nothing to do with concern about inflation, a fact which is reflected in the Commission's recommendations, which are irrelevant to the problem of inflation.

***Congressman Henry S. Reuss -- Very few citizens believe an expanded and restored role for gold would serve any useful purpose. But those few do have the wherewithal to make themselves heard.

The Record of Inflation

Inflation may be defined as a sustained rise in the price level.[1] It can be observed in the pattern of behavior of both the price deflator implicit in GNP and the consumer price index presented in Chart 1-1. The rate of increase in the deflator rose from less than 1 percent per year in 1961 to 9 percent in 1980, while the rate of increase in the consumer price index rose from 1 percent to 11 percent in the same period. We report the movements of the consumer price index since they are the measure of inflation with which the public is most familiar. However, there are well-known biases in this measure, particularly the effect of housing mortgage costs, that may overstate the degree of inflation in the economy.[2] The rate of price increase was not steady but ratcheted upwards with fluctuations in economic activity.

Economists are divided on the root causes of inflation. Some attribute it to excessive wage demands fostered by aggressive unions, profit-push pricing by monopolistic firms, random factors like poor agricultural harvests, and institutional and sociological patterns, each of greater or lesser importance in specific inflationary episodes. Other economists regard inflation as primarily a monetary phenomenon, explained by monetary growth in excess of the long-run trend of real output growth. They recognize, however, that other factors may temporarily affect the inflation rate independent of the rate of monetary growth.* No one has stated these propositions more lucidly than Chairman Paul A. Volcker of the Board of Governors of the Federal Reserve System who observed on February 1, 1980:[3]

> "Our policy, viewed in a long-term perspective, rests on a very simple premise -- that the inflationary process is ultimately related to excessive growth in money and credit. This

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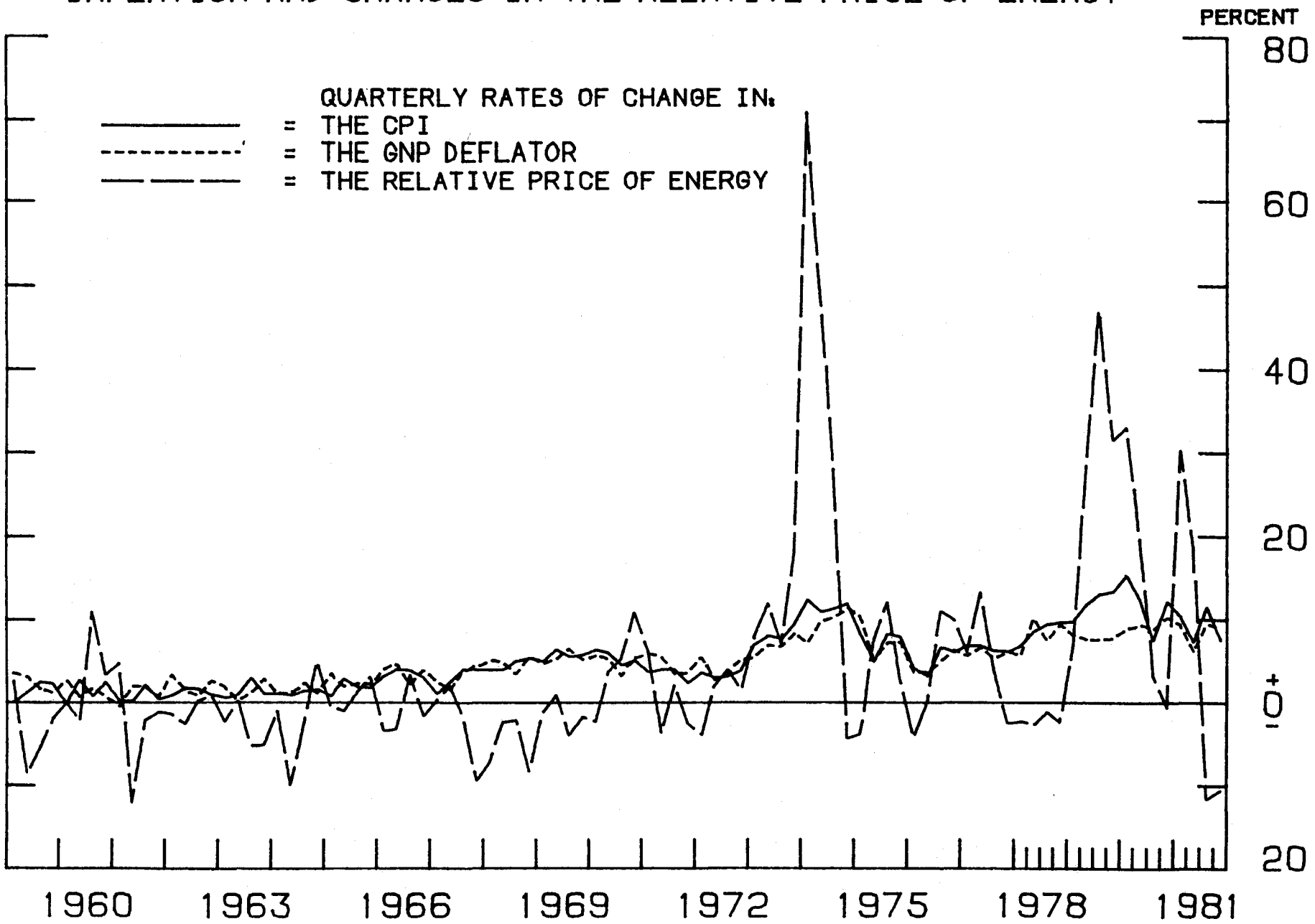
***Continuation from previous page.

Congressman Chalmers P. Wylie -- It is much more true to say that the evolution of the Gold Commission went through a stage in its developmental process in which its creation was one of a number of political "cards" being played in an attempt to obtain funding to increase the quota of the United States in the Interanational Monetary Fund. Section 10 of Public Law 96-389 created the Gold Commission. Prior sections gained votes by taking politically popular positions on Taiwan, the Palestine Liberation Organization, and El Salvador. Section 3 assuaged fiscal conservatives by stating, "The Congress reaffirms its commitment that beginning with Fiscal Year 1981, the total budget outlays of the Federal Government shall not exceed its receipts."

*Congressman Henry S. Reuss -- Many other economists hold different and more sophisticated views.

CHART 1-1

INFLATION AND CHANGES IN THE RELATIVE PRICE OF ENERGY



> relationship is of course a complex one, and there are many facets of it that are sensitive to nonmonetary economic variables. But, in spite of all the nuances, it is clear that inflation cannot persist over the long run in the absence of excessive monetary growth."

It is not our purpose here to settle the long-standing division among economists on the causes of inflation. Our purpose is simply to present some pertinent background information on the state of the U.S. economy in the decade and a half preceding October 7, 1980.

In Chart 1-2, the quarterly rate of inflation at annual rates, calculated from the index numbers for the deflator, are plotted together with the trend rate of inflation generated by a twelve-quarter moving average of lagged monetary growth.[4] A fairly close link between the two series may be observed, with the major exceptions of several quarters in 1974-1975 and 1979-1980.[5] Both of these episodes can be explained by the large rise in the relative price of energy, defined as the annual rate of change in the producer price index of fuels and related products and power minus the GNP price deflator (see Chart 1-1). Though the inflation since the 1960s may be regarded as primarily a monetary phenomenon,* it is still essential to account for the factors that produced excessive monetary growth as well as other independent sources of inflation.

Table 1-1 presents, on an annual basis, as well as for six subperiods, a number of relevant measures of economic performance crucial to an understanding of the development of U.S. inflation from 1960 to 1980. Columns 1-5 give the annual (and subperiod average) rates of growth of the money stock, defined as M1B, real GNP, the GNP price deflator, the CPI, and the real price of energy. Columns 6-11 give the annual (and subperiod average) unemployment rate, the Federal budget surplus (deficit) as a ratio to actual GNP, the high employment surplus (deficit) as a ratio to high employment GNP, the ratio of funds raised by the U.S. Government to total funds raised by the nonfinancial sector, the balance of payments surplus (deficit) on an official settlements basis, the dollar value of the U.S. monetary gold stock, and the trade-weighted dollar exchange rate (beginning 1967).[6]

We begin by describing briefly six subperiods of the past two decades before turning to a more detailed examination of the salient factors that account for the persistence of inflation, despite recurrent attempts to curb it.

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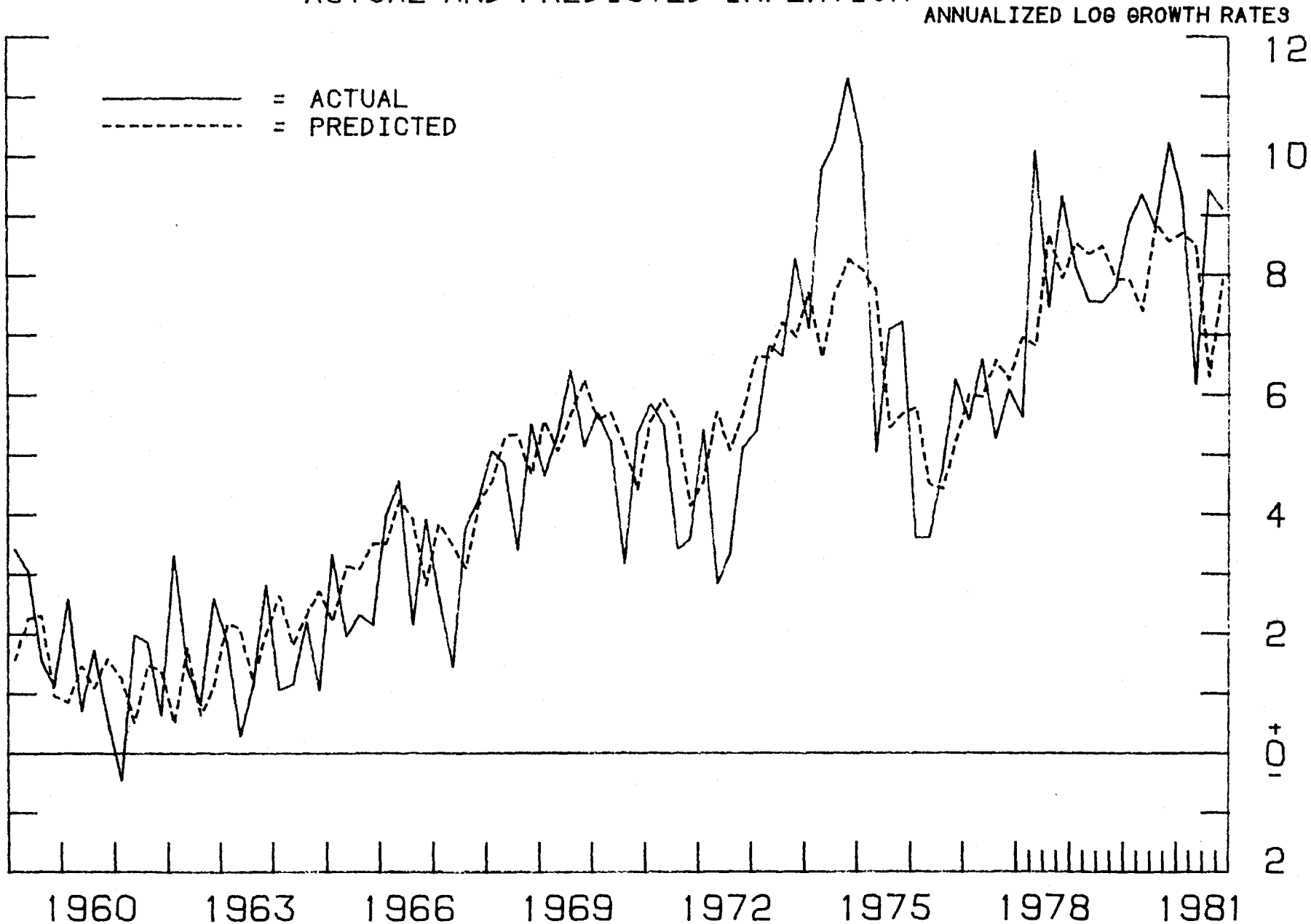
*Congressman Henry S. Reuss -- I dissent from this statement.

CHART 1-2
ACTUAL AND PREDICTED INFLATION[1/]



1/ WITH FIRST-ORDER AUTOCORRELATION CORRECTION

Table 1-1

Selected Economic Indicators, Annually, and by Subperiods, 1960-1980

Calendar Year	M1B (1)	Annual Rate of Change (in percent) Real Output (1972-100) (2)	Implicit Price Deflator (1972-100) (3)	CPI (1967-100)[a] (4)	Real Price of Energy (1972-100) (5)	Unemployment Rate (6)	Ratio of Federal Budget Surplus (Deficit) to GNP (7)	Ratio of High Employment Budget Surplus (Deficit) to High Employment GNP (8)	Ratio of Total Funds Raised by U.S. Federal Government to Total Nonfinancial Sector Funds (9)	Balance[c] of Payments Deficit(-) Surplus(+) ($ millions) (10)	U.S. Monetary Gold Stock[d] ($ millions) (11)	Trade-Weighted Exchange Rate of the dollar (1972-100) (12)
1960	0.6	2.2	1.6	1.6	-0.7	5.5	0.6	2.1	n.a.	672	17,804	
1961	3.1	2.6	0.9	1.0	0.2	6.7	(-0.7)	1.2	15.4	-158	16,947	
1962	1.8	5.8	1.8	1.1	-2.2	5.5	(-0.9)	0.4	12.9	265	16,057	
1963	3.6	4.0	1.5	1.2	2.1	5.7	0.1	1.1	6.9	-1,608	15,596	
1964	4.5	5.3	1.5	1.3	-4.4	5.2	(-0.5)	0.1	9.2	-1,489	15,471	
1960-64	2.8	4.3	1.4	1.2	-2.1	5.7	-0.2	1.0	11.1	-464	16,231	
1965	4.5	6.0	2.2	1.7	-0.4	4.5	0.1	0.1	2.6	1,091	13,806[e]	
1966	2.4	6.0	3.2	2.9	-0.8	3.8	(-0.2)	(-0.9)	5.2	1,242	13,235	
1967	6.3	2.7	3.3	2.9	-0.7	3.8	(-1.7)	(-2.0)	15.6	-5,874	12,065	119.96
1968	7.5	4.6	4.4	4.2	-5.6	3.6	(-0.7)	(-1.3)	13.7	-3,048	10,892	122.06
1969	3.1	2.8	5.1	5.4	-3.0	3.5	0.9	0.5	-3.9	-2,480	11,859	122.39
1970	5.1	-0.2	5.4	5.9	-0.1	4.9	(-1.2)	(-0.3)	12.6	-3,560	11,070	121.07
1965-70	4.9	3.1	4.1	4.2	-2.0	4.0	-0.5	-1.0	7.6	-2,105	12,155	121.37
1971	6.3	3.4	5.0	4.3	3.2	5.9	(-2.0)	(-0.9)	16.3	-23,813	10,206	117.81
1972	8.8	5.7	4.2	3.3	-1.1	5.6	(-1.4)	(-1.0)	8.5	-9,769	10,487[f]	109.07
1973	5.4	5.8	5.7	6.2	7.0	4.9	(-0.4)	(-0.7)	4.1	-5,868	11,652[g]	99.14
1971-73	7.0	5.6	4.8	4.6	2.8	5.5	-1.3	-0.9	9.6	-13,150	10,782	108.67
1974	4.2	-0.6	8.7	11.0	41.4	5.6	(-0.8)	(-0.4)	6.2	-12,013	11,652	101.42
1975	4.7	-1.1	9.3	9.1	7.4	8.5	(-4.5)	(-1.5)	40.5	-7,876	11,599	98.50
1974-75	4.5	-1.1	8.9	8.8	7.1	7.1	-2.7	-0.6	23.4	-9,945	11,626	99.96
1976	6.3	5.4	5.2	5.8	3.0	7.7	(-3.1)	(-1.1)	25.4	-20,251	11,598	105.63
1977	7.8	5.5	5.8	6.5	7.5	7.0	(-2.4)	(-1.1)	16.8	-36,950	11,719	103.35
1978	7.9	4.8	7.3	7.7	0.7	6.0	(-1.4)	(-0.6)	13.4	-34,025	11,671	92.39
1976-78	7.6	5.0	6.4	6.8	4.0	6.9	-2.3	-0.9	18.5	-30,409	11,663	100.46
1979	7.1	3.2	8.5	11.3	16.7	5.8	(-0.6)	(-0.1)	9.5	16,543	11,172	88.07
1980	6.2	-0.2	9.0	13.5	29.1	7.1	(-2.4)	(-0.7)	21.6[b]	-6,872	11,160	87.39
1979-80	6.2	-0.2	8.6	12.6	25.5	6.5	-1.5	-0.4	15.6	4,836	11,166	87.73

Notes to Table 1-1

[a] Year-to-year percent change.

[b] Average of first three quarters seasonally adjusted data.

[c] U.S. net official reserve assets minus net foreign official assets plus allocations of SDRs.

[d] See note a to Table 2-1 below.

[e] See note b to Table 2-1 below.

[f] See note d to Table 2-1 below.

[g] See note e to Table 2-1 below.

Source by Column

1-4, 6-8, 10: Economic Report of the President, January 1981, Tables B-59, B-3, B-31, B-74 as ratio of B-1, B-62, B-99. For Col. 8, before 1972, Economic Report, January 1979 Table B-62; February 1970, Table C-52.
For Cols. 2 and 9, full year data for 1980, from Survey of Current Business, March 1981, pp. S-6 and 50, lines 38 and 57.

5: Federal Reserve Bank of St. Louis data bank.

9: 1960-78: Survey of Current Business 60 (November 1980): 24-5; 1979-80: ibid. 61 (May 1981): 3.

11: Table 2-1 below.

12: Federal Reserve Bulletin 64 (August 1978): 200; 67 (October 1981): A-68.

. 1960-1964. This period of stability, which actually began .n 1958, was characterized by low monetary growth and, by historical standards, a low rate of inflation. Productivity growth was favorable and significant external shocks were absent. These years serve as a benchmark for the succeeding periods.

2. 1965-1970. The onset of steadily rising inflation in this period is generally associated with the financing of the Vietnam war and expanded Federal social programs. Both a rise in the rate of monetary growth and in fiscal deficits may be observed in columns 1 and 7. During the period 1965-1970, both monetary and fiscal policy were generally expansionary despite two significant attempts to reverse the inflationary process. Monetary growth was markedly reduced in 1966 in an episode commonly designated as "the credit crunch," and in 1969, a decrease in monetary growth supplemented a 1968 tax increase. The monetary gold stock declined in every year since 1960 except 1968-69, the declines reflecting the role of the United States as the world's central banker and the more rapid rise in U.S. inflation than elsewhere.

3. 1971-1973. In the belief that the inflation rate was slow in falling in response to the recession in business activity in 1970 and as a way of staunching the growing balance of payments deficits, the Nixon Administration sought a quick solution by resorting to direct controls on prices and wages in August 1971. The policy was in effect for the next three years. Initially, wages and prices were frozen for ninety days. Subsequently, mandatory wage and price guidelines were imposed that were gradually relaxed.

The measured inflation rate declined in 1971 and 1972, and there was satisfaction with the reduction in the inflation numbers. Yet, in retrospect, monetary growth was overexpansionary during these years and the first half of 1973. Consequently when the controls were eased in 1973, the pent-up excess demand quickly restored the inflation rate to its underlying trend rate.[7] To halt further depletion of its monetary gold stock, the United States closed the gold window in August 1971, and in 1973 abandoned the attempt to maintain fixed foreign exchange rates for the dollar.

4. 1974-1975. These unusual years were dominated by two sets of forces: contractionary money growth and an extraordinary rise in the real price of energy following the Arab oil embargo of 1973 (see Chart 1-1 and Table 1-1, col. 5). Some regard the energy price rise as retribution for the inflation the United States exported to the rest of the world in the 1960s.

The supply shock raised the inflation rate well above the trend rate for several quarters in the two years, substantially reduced real output growth, and raised the unemployment rate (Table 1-1, cols. 3 and 6).

5. 1976-1978. As a consequence of the 1974-75 recession, the unemployment rate rose to a level unprecedented in the post-World War II period. In reaction, the money growth rate was accelerated, and fiscal policy became generally expansionary. Once the effects of both the removal of price controls and the external energy supply shock had worked their way through economic processes, the inflation rate fell to its trend rate in 1976. In 1977 and 1978 the inflation rate moved up again.

6. 1979-1980. A further assault on the inflation problem in 1979 by means of monetary and fiscal restraint was thwarted by a second rise in the real price of energy. But in the face of overall monetary restraint in 1980, the effect of the energy price rise on the rate of inflation proved to be temporary.

Why the Setbacks to Success of Anti-Inflation Policies?

We now examine some of the reasons that explain the lack of success that has attended efforts since the mid-1960s to achieve a permanent reduction in the inflation rate.

1. The Inflation-Unemployment Tradeoff. Hidden within the brief sketch of the events of the past two decades is a dilemma in the implementation of anti-inflation policies -- the so-called tradeoff between inflation and unemployment. Empirical evidence lends support to the view that both monetary and fiscal policy have a lagged effect on economic activity measured in current prices. The initial effect of contractionary monetary and fiscal policy is on the level of real output and the unemployment rate (within one to three quarters after the policy is in place). The initial effect is temporary. It is attributable to the lag in the adjustment of wage and price expectations and inflexibility of contracts. The ultimate effect of contractionary monetary policy is on the price level and the rate of inflation. The time that elapses before the inflation rate is reduced, however, is measured in several years, not in several quarters.*

Accordingly, attempts to reduce inflation by monetary means have quickly led to reduced real output growth and increased unemployment. These results have occasioned a reversal of the contractionary policy before it could succeed in significantly reducing the inflation rate. The pattern is observable following the reduction in monetary growth in 1969, which initially led to the recession in real output and rise in unemployment

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*Congressman Henry S. Reuss -- This analysis is flawed in two respects. First, the history of postwar recessions is that inflation falls rapidly as output and employment fall. Second, this success against inflation has not been sustained in subsequent business expansions.

in 1970 (Chart 1-2 and 1-3). The contractionary policy was then reversed. A similar sequence occurred in 1974-1975, when contractionary monetary policy from mid-1973 and 1974 led in 1974-1975 to a dramatic decline in real output and a rise in unemployment, partly associated with the unexpected energy supply shock. The sequel for the next three years was an increase in monetary growth to levels not reached since 1973.

The evidence thus suggests that a policy of noninflationary monetary growth before 1980 was never maintained long enough to reap the benefits of the policy. The distinction between the short-run undesirable effects of such a policy and the long-run desirable effects has apparently not been understood by the public or political leaders. The negative effects on output and employment of monetary restraint have been perceived as likely to last forever, with no recognition that the benefits of reduced inflation will then emerge and have a positive effect on output and employment.

It is not surprising or irrational for the public to view the cost of a policy of monetary restraint as high and unrelenting and the benefits dubious. In the decade and a half before 1980, they experienced the costs and hardly any benefits of decelerating money growth. The experience in some other countries is different and the public perception of the effects of non-inflationary monetary policy is correspondingly different.

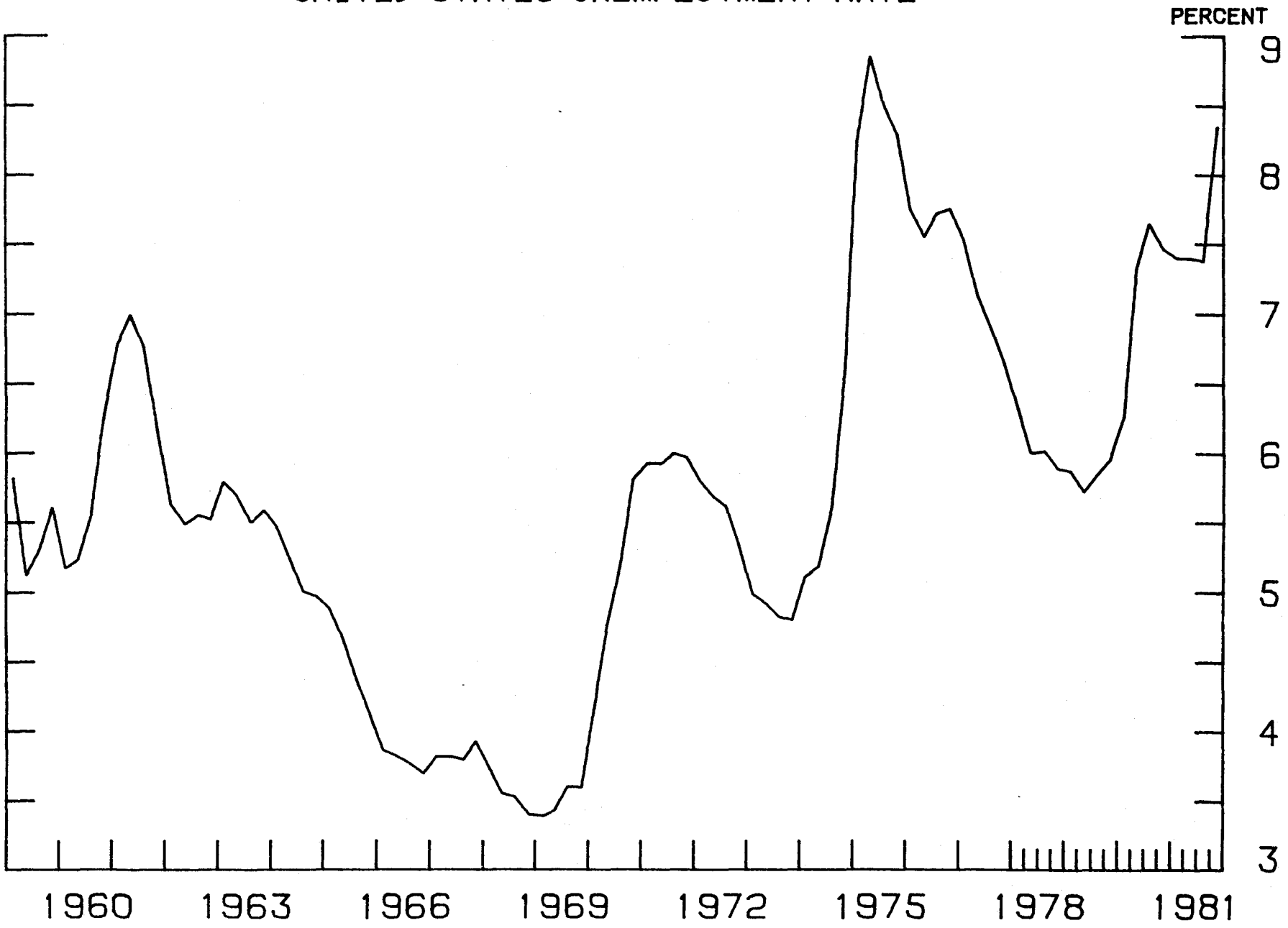
There is also no widespread public understanding of the inflationary long-run effects of rapid money growth. The public and many political leaders also fail to recognize the distortions and disincentives caused over the long run by persistent accelerating inflation. These produce long-run effects on output and employment that are largely unrecognized by the public.

Thus the policy of "buying" more output and employment growth is tempting and politically appealing, for the benefits are immediate and the costs are postponed and unrecognized. A policy of decelerating money growth is not appealing, for the costs are immediate and the benefits are delayed and not recognized by most of the public.

Finally, we note that the lag in the response of inflation to decelerating money growth seems to be getting shorter. The reaction time of export, import, and commodity prices has speeded up since market participants have begun to pay attention to the monetary growth rate and since the floating of dollar foreign exchange rates.

2. Sectoral Effects. The impact of anti-inflation actions falls disproportionately on certain sectors. Reduced provision of reserves to the banking system restricts the volume of loans to small business and the accompanying increase in interest rates restricts housing dependent on mortgage funds. Short-term interest rates may rise immediately when money growth

CHART 1-3
UNITED STATES UNEMPLOYMENT RATE



decelerates but it takes time until the subsequent decline in inflation leads to a fall in interest rates. If the response is expansion of Federal programs to alleviate the distress of small business and the mortgage market, anti-inflation actions may be nullified.*

Inflation, when not fully anticipated, has significant distribution effects. Generally, debtors gain at the expense of creditors, as do those with incomes indexed to inflation relative to those on fixed incomes. Home-owners in particular have been beneficiaries of inflation.

3. Inflationary Expectations. Inflationary expectations on the part of the private sector have been reinforced by the evidence of the past 15 years that inflation has only been temporarily reduced in response to contractionary policy. Hence, when a new round of contraction in monetary growth gets under way, the public may regard the new round as only temporary, as in past episodes, and not reduce their expectations of further inflation. The resistance of expectations to modification prolongs actual inflation by affecting wage demands and pricing decisions and maintaining upward pressure on interest rates.

Inflation expectations are believed to be incorporated rapidly and completely in asset prices that are determined in auction markets. A comparison of Charts 1-1 and 1-4 reveals that movements in a long-term interest rate (the yield on AAA corporate bonds) over the whole period are closely associated with the trend rate of inflation. Short-term interest rates (such as the three-month Treasury bill rate) are more volatile, reflecting both a negative response to short-term changes in monetary growth and a positive response to expected inflation.[8] Since the freeing of the gold market in 1968, the price of gold has also served as a good barometer of market anticipations of inflation. As can be seen in Chart 1-5, its movements are volatile but closely related to both world and domestic inflation rates.

To the extent that expectations of inflation are embedded in long-term contracts, both explicitly and implicitly, in labor and product markets, an attempt to reduce inflation by contractionary monetary growth must impose real hardship, at least

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*Congressman Henry S. Reuss -- I am pleased to see acknowledgement here of the highly discriminatory effect of monetarist anti-inflation policy, which does indeed fall most heavily on small business, autos, housing, agriculture, and capital investment.

CHART 1-4
YIELDS ON SHORT AND LONG TERM SECURITIES

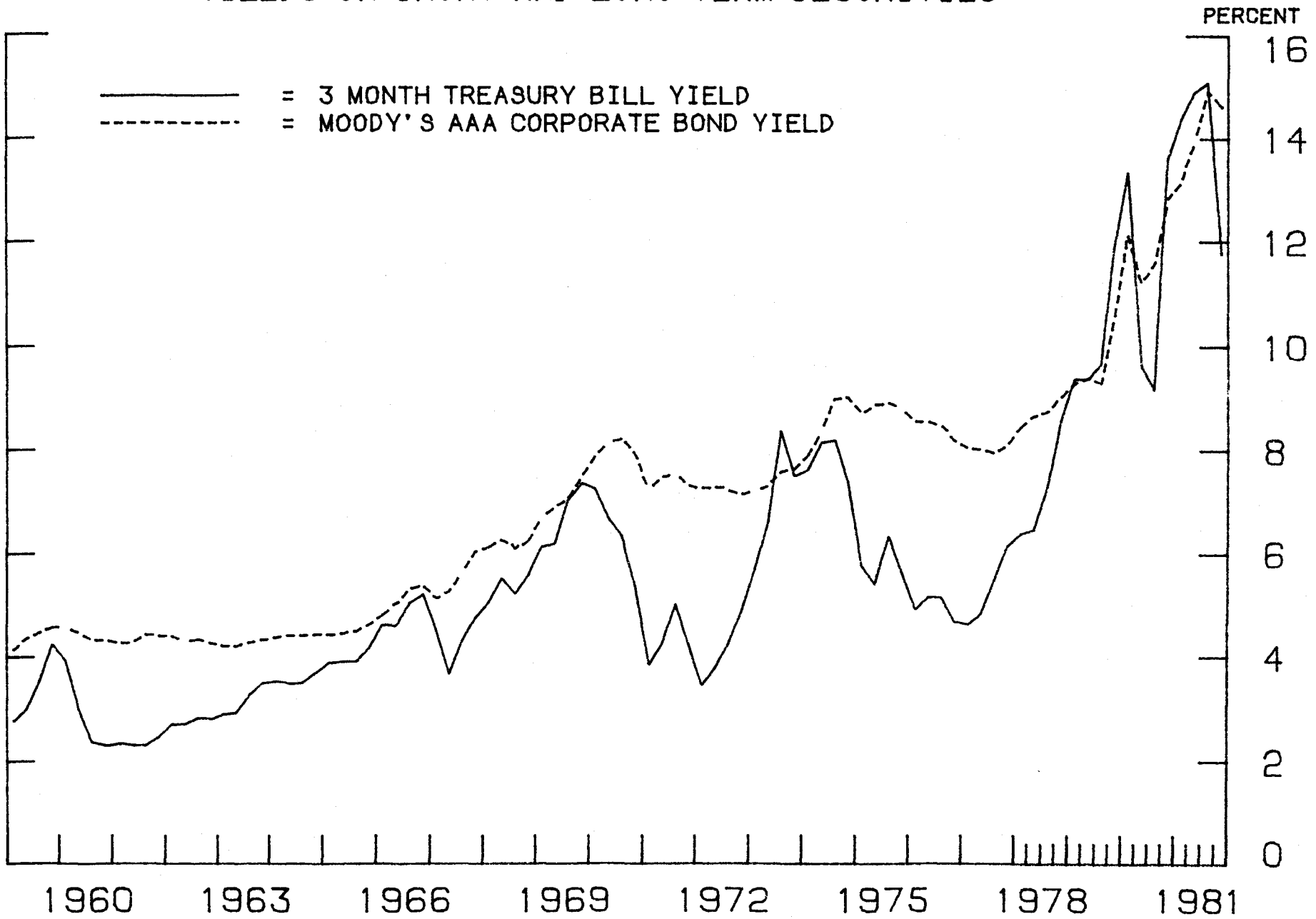
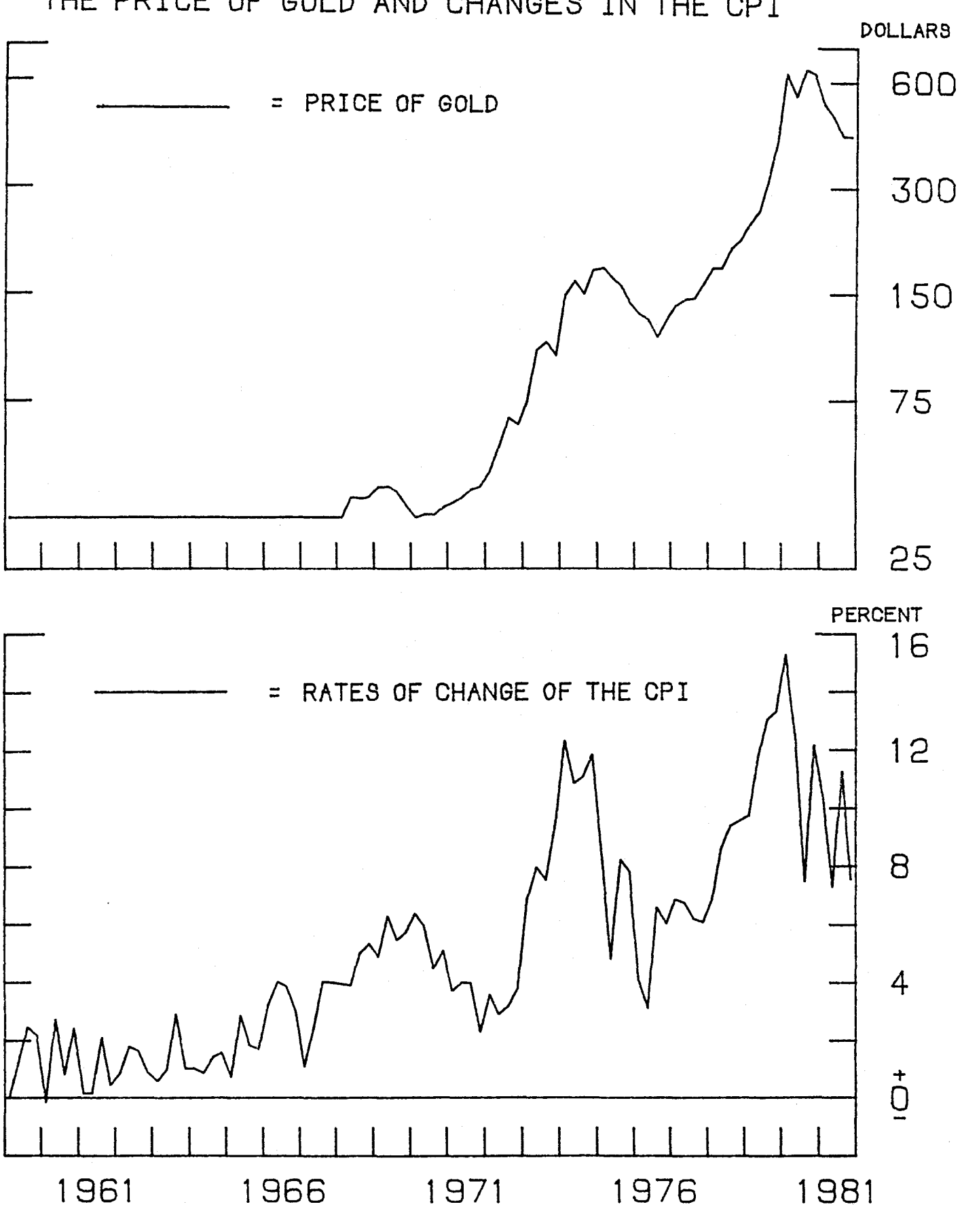


CHART 1-5

THE PRICE OF GOLD AND CHANGES IN THE CPI



until contracts can be adjusted. Yet the extent to which contracts will be renegotiated depends on whether the parties expect the policy to be enduring or quickly reversed.*

4. Structural Changes. A number of structural changes in the economy, independent of, or interacting with, the rate of monetary growth contributed to the difficulty of achieving positive results with anti-inflation actions. Four such changes are discussed: (a) declining productivity growth; (b) rising velocity; (c) persistent Federal budget deficits; (d) foreign influences on the open economy.

(a) Declining productivity growth. Growth in output per man-hour has declined in the United States (as it has in most industrialized economies) since the mid-1960s. Since reduced productivity growth implies a lower trend real growth rate, a given rate of monetary growth will be associated with a higher rate of inflation.

(b) Rising velocity. Income velocity of circulation of M1B (the ratio of GNP to the most widely used monetary aggregate) has been rising on average at slightly over three percent per year since the late 1950s. The trend reflects the process of financial innovation, that is, the substitution of new types of payments media for currency and deposits.** Because of this development, a given rate of monetary growth will be associated, other things equal, with a more rapid rate of inflation. Inflationary expectations will be incorporated in market interest rates and hence will tend to raise velocity. Although this phenomenon figures significantly during hyper-inflations, the evidence does not suggest that expectations have been a significant factor affecting velocity during the past two decades.

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*Congressman Henry S. Reuss -- This truism leaves unstated the fact that government policy can help by facilitating the adjustment of expectations and contracts. The Administration has ignored this fact, and so the costs of supertight money have been unnecessarily high.

**Governor J. Charles Partee -- The trend increase in velocity may also be associated in part with the trend increase in interest rates, which has made it more costly to hold low or zero yielding money assets.

(c) Persistent Federal budget deficits.* Budget deficits hamper anti-inflation policies in two ways. They may indirectly cause an increase in monetary growth when the authorities attempt to offset the high interest rates associated with bond financing of the deficit. Alternatively, budget deficits may increase velocity when the deficit is financed by the sale of government securities, in competition with private borrowers for private sources of funds. The rise in market interest rates leads to a rise in velocity and, for a given rate of monetary growth, a higher inflation rate. Both effects have undoubtedly been present in U.S. history. A controversy exists in the literature on the relation between budget deficits and monetary growth.[9] One channel emphasized in papers supporting such a link is the response of the Federal Reserve to increases in interest rates associated with deficits. The effect of Federal Reserve procedures before October 1979 was that an increase in monetary growth would accompany a rise in interest rates. Table 1-1 shows that the ratio of the Federal budget deficit to GNP is not closely correlated with either monetary growth or inflation on an annual basis, or even in a comparison of subperiod averages.** However, there is a significant correlation both on an annual and a subperiod average basis beween the ratio of the high employment budget deficit to high employment GNP and monetary growth and inflation.[10] Higher government spending by itself, without regard to its effect on budget deficits, has also been linked to monetary growth.[11]

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*Congressman Chalmers P. Wylie -- Budget deficits require Treasury security sales. Large deficits and large debt management sales take large percentages of personal and corporate savings to clear the market. The larger the deficit the smaller the residual savings remaining to finance private investment, including investment in plant and equipment. Without investment in plant and equipment, productivity slows and inflation rises, inventories are unsold, and unemployment spreads. This is a significant part of the problem in the automotive sector of our economy in Ohio and Michigan.

In addition, the process by which large deficits take large percentages of personal and corporate savings also brings higher interest rates as the Treasury prices its securities to clear the market, to sell. This leads to the current situation in which large corporations obtain a higher rate of return on their portfolio of government securities than they do on the corporate assets under their management. In these instances corporate savings are available but Federal deficits are robbing workers of jobs because managements can get higher yields from U.S. Treasuries than from outlays for plant and equipment. For example, the Bendix Corporation in Detroit has said that this is what it is doing with its $500 million pool of cash to maximize its corporate rate of return. (See the Wall Street Journal, January 29, 1982, p. 52.)

**Congressman Henry S. Reuss -- The relationship between deficits and inflation depends on the state of demand; therefore a simple correlation of the deficit/GNP ratio to inflation and money growth is not helpful.

The connection between bond-financed deficits, rising velocity, and inflation is also not empirically established. Since the mid-1950s, years of rapid inflation are not generally years when financing the Federal budget pre-empted a large share of total financial funds.[12] The subperiod averages also show the same result.

(d) Foreign influences on the open economy.* Under the Bretton Woods system, deficits in the U.S. balance of payments increased in the 1960s. Initially, the deficits were regarded as satisfying a rising world demand for international reserves, since the dollar served as the world's principal reserve asset. As the deficits persisted, they were regarded less benignly as a reflection of excess monetary growth. Because the dollar served as the principal reserve asset in the post-World War II period, there was less pressure on the United States by her trading partners than might otherwise have been the case to respond to the persistent balance of payments deficits by monetary and fiscal restraint. Moreover, the deficits served to increase world liquidity and so transmit inflationary pressures to other countries that either voluntarily or involuntarily fell in step with U.S. inflation rates.

The decline in the U.S. monetary gold stock and in the gold reserve ratio against Federal Reserve notes by the latter 1960s heightened concern abroad that convertibility of the dollar into gold was threatened, concern that culminated in runs on the dollar in 1967 and 1968, the establishment of the two-tier gold market in 1968, and the abandonment in August 1971 of the U.S. commitment to convert dollars held by foreign official agencies into gold.

Thus rather than acting as a constraint on domestic inflation, the Bretton Woods fixed-exchange rate system did not do so and also served to transmit U.S. inflation abroad. Finally, when convertibility domestically and internationally conflicted with overall domestic policy goals, it was abandoned.

In 1971 and 1973, the dollar was devalued, and since then, the exchange rate of the dollar has floated. Under a floating exchange rate system, the international economy provides even less of a constraint on domestic monetary and fiscal policy. If a country has a more rapid inflation rate than the rest of the world, then the exchange rate, which can be viewed as a measure of the purchasing power of its money relative to that of other countries, will steadily depreciate. The U.S. dollar

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*Congressman Henry S. Reuss -- The discussion which follows is interesting but not relevant to the purposes of the Gold Commission.

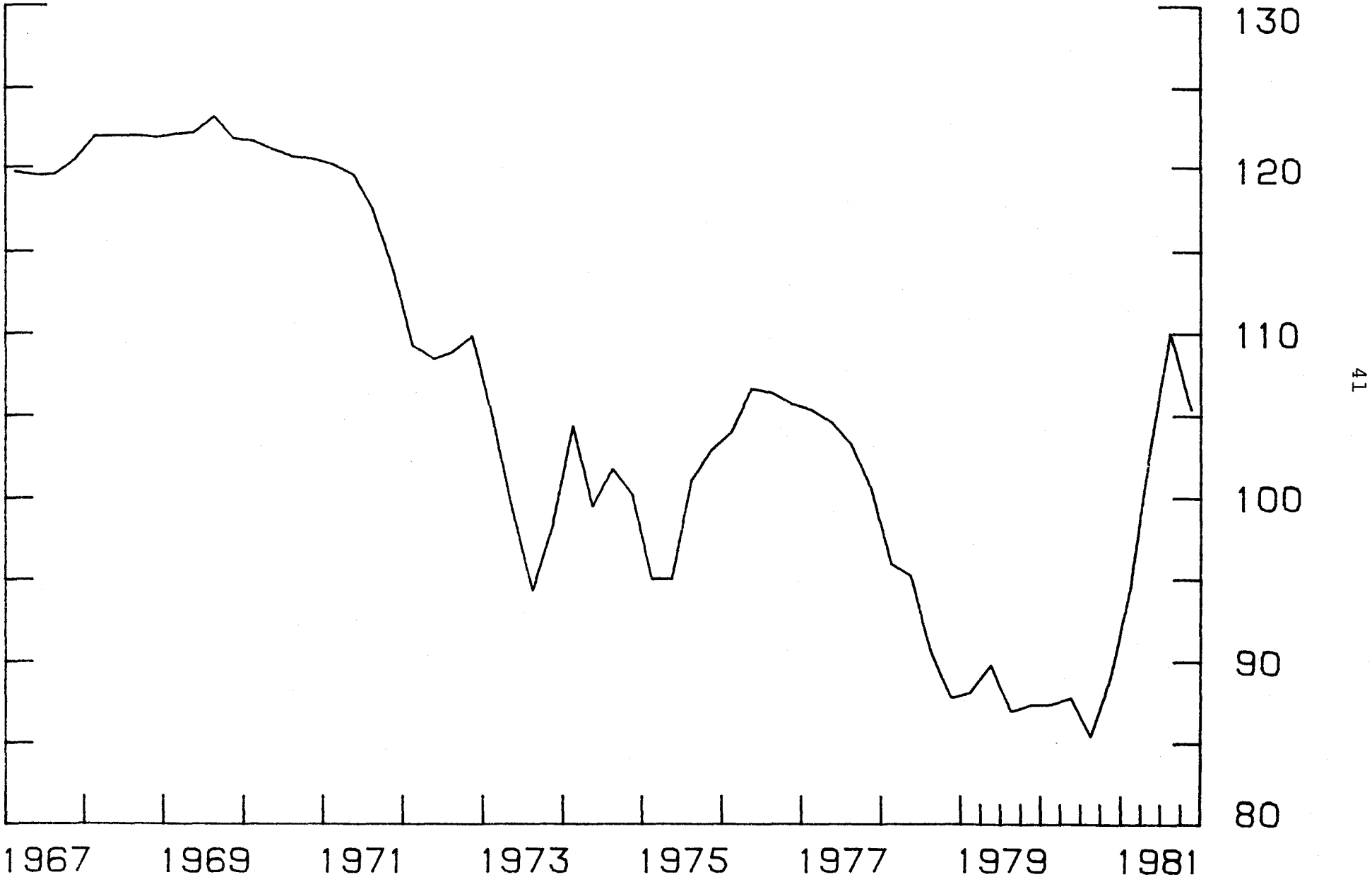
exchange rate has depreciated over the period since 1971 as a whole but there have been several significant upswings during the period (Chart 1-6 and Table 1-1, col. 12).

Theoretical arguments have been made that under floating exchange rates foreign influences can still have effects on domestic prices and activity, independent of domestic policy. One view is that the world is characterized by high capital mobility, and a rise in interest rates in one center is rapidly transmitted to another so that velocity behavior is similar internationally. If high capital mobility were a fact, then financial assets denominated in different currencies would be perfect substitutes. This conclusion breaks down if assets, that is, securities, are not perfect substitutes internationally because of risk with respect to exchange rate changes or to capital controls. With imperfect asset substitutability, there may be movements in relative national interest rates insulated from the rest of the world.

Another view is that independent monetary policy cannot succeed under floating exchange rates because of currency substitution, that is, an effort to restrict monetary growth domestically will be frustrated by the substitution of currencies issued by other countries. The argument is that the effect of reducing the growth rate of the domestic money stock is to impose a tax on domestic money holders, causing them to switch into holding foreign monetary assets including Eurodollars. Two problems undermine the argument. One is conceptual. The community is concerned with the real value of its money holdings -- what these will buy -- and receives a flow of real services from its real money balances. Thus a policy which reduces the rate of growth of the nominal money stock and the price level reduces the inflation tax on domestic real balances, and promotes holding larger real money balances. The second problem is empirical, whether the existence of foreign currency deposits as a possible substitute has had a significant impact on the demand for domestic real money balances. While theoretically possible, empirical evidence in support of the view is mixed at best.[13]

Just as a floating exchange rate makes possible monetary independence, it can also insulate a country from external real shocks. Floating exchange rates cushioned the U.S. economy against the effects of the rise in oil prices in 1979-1980. The decline of ten percent in the exchange rate from 1972 to 1973-1975 (bridging the devaluation of the dollar and the start of flexibility) and again in 1979-1980 was a source of insulation, since the extent of the decline was greater than would be explained by the trend rate of inflation. Nevertheless, the foreign oil shock did temporarily raise the domestic inflation rate. It did so through two channels. First, to the extent that the rise in imported oil prices was not fully absorbed by the exchange rate, it had a direct effect on the domestic price level. Second, a depreciating exchange rate itself tends to raise the domestic price level by raising the price of imports in general.

CHART 1-6
WEIGHTED AVERAGE EXCHANGE RATE OF THE U.S. DOLLAR



The effects on the inflation rate are temporary until expenditure and production are directed away from the more expensive oil-intensive sectors of the economy.

5. Incomes Policies.* Some observers believe that the reason anti-inflation policies have not succeeded is that demand restraint by itself is too costly to pursue. They argue that incomes policies that attempt to influence the setting of wages and prices directly will decrease inflation and increase the growth of output and employment that result from any given degree of demand restraint. One such policy that has some support would use the tax system to provide incentives to firms and workers to slow the rate of inflation. Different versions of tax-based incomes policy (TIP) exist. It is acknowledged that a TIP cannot substitute for demand restraint. The policy can only supplement it.

Conclusion

The basic economic problem that has plagued the United States (and the rest of the world) since the mid-1960s has been the persistence and acceleration of inflation,** with its associated economic distortions, disincentives and risks. We have reviewed the difficulties encountered by the U.S. monetary and fiscal authorities over this period in their successive attempts to pursue anti-inflation policies. The provision to create the Gold Commission was an expression of dissatisfaction with the unsucessful outcome of these past attempts.***

To determine if greater success is possible in the future, it is important to advance proposals that can cope with the difficulties that have attended policymakers' past efforts in dealing with the problem of inflation. Our mandate is to conduct a study to assess the role of gold. To do so, we examine the historical record of U.S. experience with gold (Chapter 2), discuss the different forms of the gold standard and alternative monetary standards (Chapter 3), and describe a host of proposals, some involving a role for gold, some not,**** that have been submitted to us as the means for achieving price stability (Chapter 4).

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*Congressman Henry S. Reuss -- This is a totally inadequate treatment of a most important topic. Incomes policies are widely accepted as necessary within the economics profession and by the Congress (see the Joint Economic Report). Certainly incomes policies enjoy vastly wider support among the American people than does the gold standard.

**Congressman Henry S. Reuss -- Stagnation, unemployment, and declining real living standards since 1973 are also important problems.

***Congressman Henry S. Reuss -- Nonsense.

****Congressman Henry S. Reuss -- We have no business describing proposals not related to gold.

Governor Henry C. Wallich wishes to be associated with Congressman Reuss' comment.

The test of the usefulness of these proposals is the extent to which they are immune to the kinds of pressures, noted in this chapter, that have prevented the achievemnt of a stable price level.

Notes to Chapter 1

1. The definition of inflation as a sustained rise in the price level has no implications as to its cause. It merely states that a rise in the price level that lasted for one day, one month, one quarter, or one year would not qualify as an inflation. A rise over a period of years would.

   Sympathizers with the views of the "Austrian" branch of economics are opposed to the use of the concept of "the price level." They hold that it is virtually impossible to construct a price index that accurately reflects changes in the value of money. They see the difficulty as heightened during an inflationary environment when relative prices change more than they otherwise would and a price index fails to capture these effects. Instead, this group defines inflation as a rise in the supply of money. See the writings of such Austrians as Ludwig Von Mises, The Theory of Money and Credit, London: Jonathan Cape, 1952 (reprinted by the Foundation for Economic Education, 1971); and Murray Rothbard, Man, Economy and State, Los Angeles: Nash Publishing, 1962.

2. On the limitations and deficiences of the consumer price index and feasible improvements in it, see Phillip Cagan and Geoffrey H. Moore, The Consumer Price Index, American Enterprise Institute Studies in Economic Policy, 1981.

3. Statement before the Joint Economic Committee of the U.S. Congress, in Federal Reserve Bulletin, February 1980, pp. 137 - 43 (quotation on p. 140).

4. The formula for the technique used is

$$P_t = a + \frac{b}{12} \sum_{i=1}^{12} \hat{m}_{t-1} + e$$

Here p, $\hat{m}$, refer to the quarterly change in the logarithms. We adopted a 12-quarter lag because it produced the lowest standard error of estimate (a measure of the dispersion of the error term associated with the regression line) of successive lags, ranging from 4 quarters to 20 quarters. Other investigators have found a 12-quarter lag also worked best for the period of the 1970s. We omit other variables, such as velocity of circulation, because the regression is designed to measure the trend or underlying rate of inflation that is to serve as a benchmark. Additional explanatory factors can be added as required when the actual inflation rate deviates from the trend rate.

The equation (in logarithms), for the period 1959:I to 1981:II, relating the quarterly change in the implicit deflator to a 12-quarter moving average of the quarterly change in money (defined as M1 for the years 1956 - 1958, thereafter as M1B) is (t values shown in parentheses):

$$\ln P_t - \ln P_{t-1} : \underset{(-1.335)}{-.00208} + \underset{(9.682)}{1.18871} \frac{1}{12} \left(\ln m_t - \ln m_{t-1} \right)_{t-1}$$

$$R^2 = 0.7669$$
$$SEE = 0.0034$$
$$DW = 2.081$$
$$\rho = 0.407$$

The t value is a test statistic for the statistical significance of the regression coefficient. A value greater than 2 generally indicates a significant coefficient.

R^2 measures the proportion of the variation of the dependent variable (the inflation rate) which is explained by variation of the independent variable (lagged money growth).

DW is the Durbin-Watson Statistic, a test statistic for the presence of serial correlation. A value close to 2 generally indicates the absence of serial correlation.

ρ (rho) is the first-order serial correlation coefficient. It measures the correlation between errors in adjacent time periods. When ρ equals zero, no first-order correlation is present, while a large value of ρ implies the existence of such serial correlation.

The equation uses M1B as the measure of the money stock because it has generally been accepted as the money aggregate most closely related to nominal income (GNP in current dollars) and the price level. Other definitions of money would not significantly alter the result.

5. The equation on which the predicted inflation rate is based was estimated using the Cochrane-Orcutt procedure -- a method to correct for serial correlation in time series regression models. This is a standard statistical technique. One interpretation of the predicted inflation rate so constructed is that it represents not only monetary influences but other unspecified influences as well. An alternative interpretation is that the Cochrane-Orcutt procedure corrects for lagged inflation or lagged money growth not represented in the underlying equation. There is no basis for choice between the two interpretations. If the first interpretation is accepted, omitting the correction for serial correlation in the estimation of the equation on which the

predicted inflation rate is based, the predicted inflation rate will represent only the influence of money. Chart 1-A-1 repeats Chart 1-2, except that the predicted inflation rate omits the auto-correlation correction. It does not appear that the omission of the auto-correlation correction in generating the predicted inflation rate in Chart 1-A-1 obliterates the general relationship between actual and predicted inflation rates. The exceptions remain in the years 1974-1975 and 1979-1980.

The relationship when the equation is estimated for the full postwar period will reveal exceptions reflecting disturbances special to the pre-1961 period, such as the impact of price decontrol after World War II and the Korean War episode, but these exceptions are fully consistent with the views expressed by Chairman Volcker in the text quotations.

6. The concept of the high (or full) employment is designed to show what the surplus or deficit in the budget would be if the economy were moving along its potential growth path free of fluctuation in business activity.

The definition of the balance of payments used in the table puts changes in international reserves below the line and focuses on the change in reserves as a product of the overall balance of payments deficit.

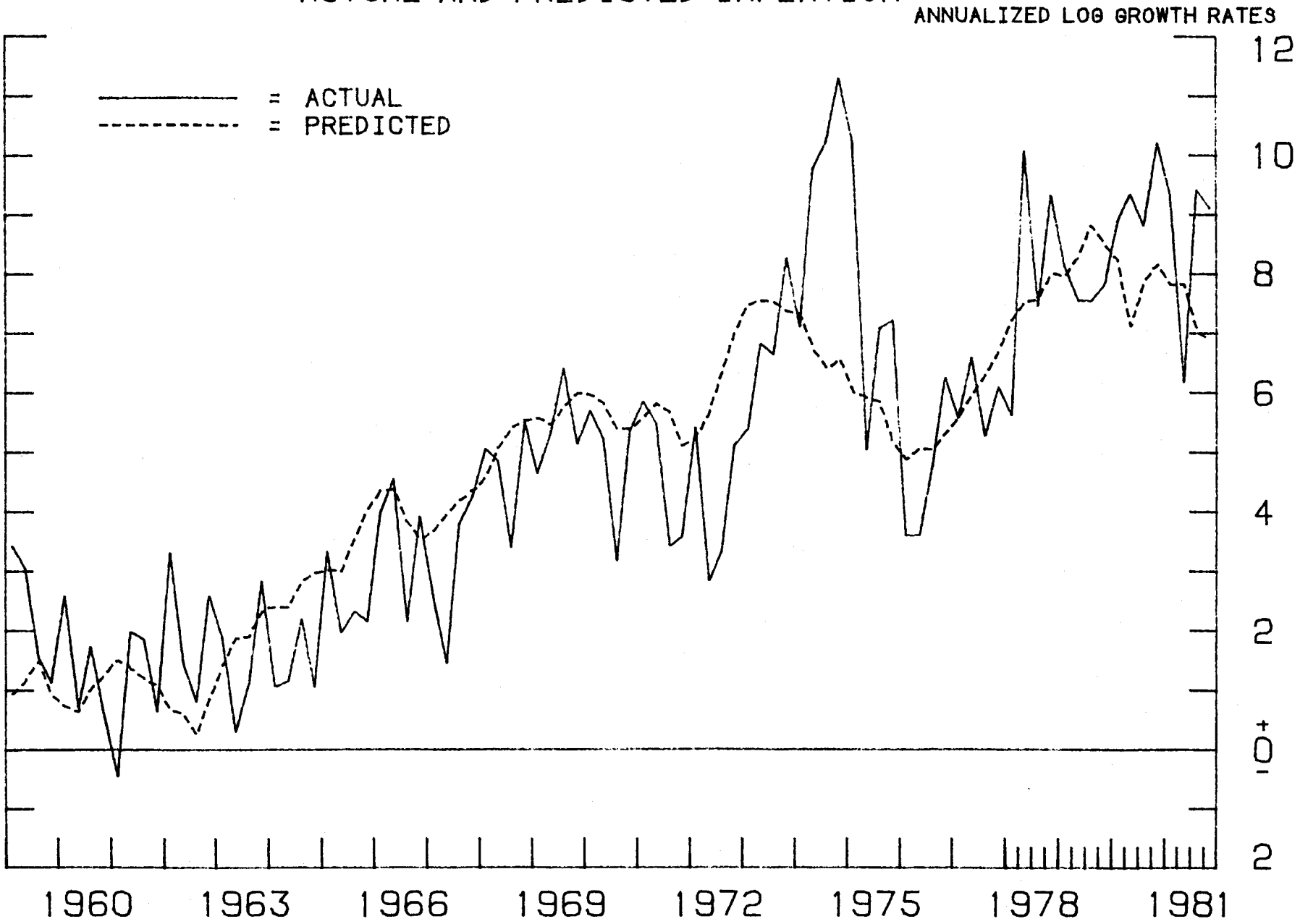
7. See Michael R. Darby, "Price and Wage Controls: The First Two Years," and "Price and Wage Controls: Further Evidence," in The Economics of Price and Wage Controls, K. Brunner and A.H. Meltzer, eds., Carnegie-Rochester Conference Series on Public Policy, vol. 2, 1976, pp. 235-63; 269-71. Alan S. Blinder and William J. Newton conclude that "catch-up inflation caused by the ending of controls carried the price level permanently 1 percent above what it would have been without controls." See "The 1971-1974 Controls Program and the Price Level: An Econometric Post-Mortem," NBER Working Paper no. 279, September 1978.

8. The relationship between interest rates and monetary growth is complex. In the past, interest rates tended to move negatively in response to short-term movements in monetary growth and positively in response to longer-term movements. In recent years, however, the negative short-term response of interest rates has not been regularly observed. One interpretation of the change in the pattern of interest rate behavior is that the market has come to regard any increase in monetary growth, however short-lived, as betokening a rise in future inflation rates and any decrease in monetary growth as betokening a subsidence of inflation. Hence interest rates recently have at times moved positively with short-term monetary growth.

9. R.J. Gordon, "World Inflation and Monetary Accommodation in Eight Countries," Brookings Papers on Economic Activity

CHART 1-A-1

ACTUAL AND PREDICTED INFLATION[1/]



[1/] WITHOUT FIRST-ORDER AUTOCORRELATION CORRECTION

(1977:2): 409-68; and W.A. Niskanen, "Deficits, Government Spending, and Inflation: What is the Evidence?" Journal of Monetary Economics 4 (August 1978): 591-602, dispute the validity of the link. W.D. McMillin and T.R. Beard, "The Short Run Impact of Fiscal Policy on the Money Supply," Southern Economic Journal 47 (July 1980): 122-35; and M.J. Hamburger and B. Zwick, "Deficits, Money and Inflation," Journal of Monetary Economics 7 (Janaury 1981): 141-50, find a significant impact of deficits on monetary growth.

Philip Cagan holds that the nominal deficit expressed as a percentage of GNP is overstated in real terms (see "The Real Federal Deficit and Financial Markets," The AEI Economist. (November 1981): 1-3). This is so because interest payments on the Federal debt, which are reflected in the deficit, include compensation for the depreciation of the debt in real terms. Hence the deficit should be reduced by the product of the federal debt in private hands and the rate of inflation. Expressing the deficit minus the decline in real value of the Federal debt as a percent of GNP reduces the nominal deficit considerably.

10. In Table 1-1, we report the ratio of the high employment budget deficit to high employment GNP constructed by the Department of Commerce. The conclusion that there is a close relation between monetary growth, inflation, and the ratio is obtained from a new set of estimates of potential (high employment) GNP, prepared by Jack Tatom. See his "Potential Output and the Recent Productivity Decline," Federal Reserve Bank of St. Louis Review 84 (January 1982): 16. L.O. Laney and T.D. Willett, "Presidential Politics, Budget Deficits, and Monetary Policy in the United States: 1960-1976," Claremont Working Papers (1981), also find a close link between high employment deficits and U.S. monetary growth.

11. R.J. Barro, "Comment from an Unreconstructed Ricardian," Journal of Monetary Economics 4 (August 1978): 569-81.

12. In the source cited in note 9 above (pp.3-5), Phillip Cagan adjusts the Federal budget deficit for the expected repayment of principal, on the assumption that the inflationary premium embedded in interest rates since the 1970s is equal to the depreciation in the value of the Federal debt due to inflation. On the further assumption that debt holders regard these additional interest payments as a return of principal rather than as income and therefore not to be consumed, they will reinvest the additional interest to maintain the principal of debt intact. The reinvestment will finance, without crowding out, an amount equal to the depreciation in real value of the debt.

13. Marc Miles, "Currency Substitution, Flexible Exchange Rates, and Monetary Independence," American Economic Review 68

(June 1978): 428-36, found evidence that currency substitution was significant for the Canadian demand for money. However, M.D. Bordo and E. Choudri, "Currency Substitution and the Demand for Money: Some Evidence for Canada," Journal of Money, Credit and Banking 14 (February 1982): forthcoming, find Miles's model to be misspecified and demonstrate that when the demand for money is properly specified, the influence of currency substitution (measured by expected changes in the exchange rate) is negligible. Bruce Brittain, "International Currency Substitution and the Apparent Instability of Velocity in Some Western European Economies and in the United States," Journal of Money, Credit and Banking 13 (May 1981): 135-55, found evidence for the significance of currency substitution for some countries but not for others.

Chapter 2

The Past Role of Gold in the U.S. Monetary System*

From 1834 to 1973, with the exception of the years 1862 through 1878 and of an interlude of less than a year's duration in 1933-34, the United States adhered to some form of a gold standard. The purpose of this review is to examine the operation of the successive types of gold standards in U.S. experience (including for each type the evidence on the stability of the price level and of real output), as well as the intervening episodes of floating exchange rates.

Chronologically, U.S. experience with the gold standard may be characterized as follows:

1. 1834-1861: a de facto gold standard in a largely bimetallic international monetary system

2. 1862-1878: the greenback standard

3. 1879-1914: a gold standard without a central bank, and a fractional reserve banking system, as part of an expanding international gold standard

4. 1914-1933: a managed gold standard, under the Federal Reserve System, which was legally obliged to maintain minimum gold reserves against its monetary liabilities, in a short-lived postwar international gold exchange standard

5. 1933-1934: a floating dollar in an international monetary system split between a depreciated sterling area and a gold bloc clinging to parity

6. 1934-1948: the interwar and World War II and immediate post war managed gold standard, in a fragmented international monetary system

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*Governor Henry C. Wallich -- I dissociate myself from a number of technical and historic points presented in this chapter.

Congressman Henry S. Reuss -- So do I. See my "additional dissenting views."

7. 1948-1968: the Bretton Woods dollar/gold standard system, with progressive dilution of the gold restraints on U.S. monetary conduct

8. 1968-1973: the breakdown of the Bretton Woods system

9. 1973-1981: the United States on an inconvertible paper dollar standard

U.S. Experience on the Gold Standard

1. 1834-61 -- a de facto gold standard

Before 1879, the United States was legally on a bi-metallic standard, but from 1834 until the Civil War suspension of specie payments, de facto it was on the gold standard. The Mint ratio established by the Coinage Act of 1792 made the dollar equivalent to 24.75 grains of fine gold and to 371.25 grains of fine silver, or a ratio of 15 to 1.[1] The Mint ratio at that time matched the market ratio. Subsequently, a great increase in Mexican and South American silver output led to a decline in the market value of silver relative to that of gold or a ratio approximating 15-1/2 to 1. Hence silver was overvalued at the Mint and relatively little gold was brought there. Instead, gold was shipped abroad where the price was higher. De facto during the period before 1834, the United States was on a silver standard.[2]

On June 28, 1834, the Coinage Act of 1834 changed the Mint ratio to 16.002 to 1, lessening the gold weight of a dollar to 23.2 grains of fine gold and leaving unchanged the silver weight of a dollar.[3] Before 1834, 100 ounces of pure gold or 1500 ounces of pure silver in coin would discharge a debt. After 1834, the debt could be paid with 94 ounces of pure gold in coin. But since silver was undervalued at the Mint, it was driven from circulation. Offering 1475.5 ounces of silver was sufficent at the market ratio to obtain 94 ounces of gold. The Coinage Act in effect debased the currency. Some supporters of the Act were aware that it would drive silver out of circulation. It was indeed their objective to achieve a gold standard and a permanent circulation of gold coins. Others urged that as the market value of silver relative to gold had been falling for many years before 1834, it would continue to do so in the future and therefore the Mint undervaluation of the metal would soon be eliminated. That prediction was wrong.[4]

The Act of 1834 was supplemented in 1837 by a law changing the proportion of alloy to pure metal in gold to correspond to that in silver. It established the ratio of alloy at one-tenth, changing the quantity of pure gold from 23.2 to 23.22 grains.[5] For each dollar weight in gold, there is a corresponding price of gold per fine troy ounce of 480 grains (480/23.22 = $20.67). The Mint ratio between silver and gold coins became 15.98 to 1 (371.25/23.22).

The gold discoveries in Russia, Australia, and California from 1848 on produced a fall in the market value of gold, accentuating the discrepancy between the Mint and the market ratios. By 1851, a silver dollar was worth about 104 cents of a gold coin, so no one would use silver in settlement of debts. Silver was used as a commodity, not as money.[6] Since subsidiary silver coinage was proportional to the weight of the dollar piece, it also disappeared from circulation. By 1850, there was a gold standard without adequate subsidiary money for retail transactions. The demonetization of silver may be dated from the Act of February 21, 1853, rather than the customary date of 1873. The Act reduced the number of grains of pure silver in 100 cents from 371.25 to 345.6, a reduction of nearly 7 percent which exceeded the difference between the value of the gold dollar and silver dollar.[7] The market value of the pure silver in subsidiary silver coins was thus less than the gold dollar (first minted in 1849; before then, only larger denominations had been coined).[8] The face value of subsidiary coins accordingly was greater than their value in bullion. The supply of subsidiary coins was left to the discretion of the Secretary of the Treasury, and their legal tender limited to a sum not exceeding five dollars. The Act also for the first time imposed a charge for seigniorage, which until then had been an expense borne by the Government, although subsidiary coins were not subject to seigniorage. (The Resumption Act of 1875 repealed the charge.)[9]

The overvaluation of gold at the Mint that made the dollar a gold currency, when the United States was legally on a bimetallic standard, was reinforced by the gold discoveries after 1848. In France, also legally on a bimetallic standard from 1803 on, the circulation was almost exclusively silver since the market ratio was higher than the Mint ratio of 15-1/2 to 1. When the gold discoveries after 1848 depressed the value of gold, as in the case of the United States, the divergence between the Mint and market ratios served to shift the franc to a gold standard de facto.[10] Only Great Britain was on a full-fledged gold standard during the period after 1821, when convertibility was restored after

the Napoleonic Wars. Since Great Britain was the world's leading trading country and the London money market was the hub of international capital movements, the gold standard had international scope despite the limited number of countries formally adhering to it.

External and internal shocks interacted during the decade beginning 1834, resulting in a highly unstable performance by the U.S. economy. The chief external shock was British in origin. British eagerness to invest in the United States in the early 1830s necessitated a U.S. trade deficit, made possible by a rise in U.S. prices above those prevailing in Britain. Thanks to an inflow of specie into U.S. bank reserves, the money supply expanded, causing U.S. prices to rise. (It is not clear that Andrew Jackson's war on the Second Bank of the United States had any independent consequences for monetary expansion.) Ultimately, loss of specie by the Bank of England led it in 1836 to restrain the capital outflow to the U.S. It raised the discount rate in July and August, refused to discount bills of exchange drawn on mercantile houses engaged in the Anglo-American trade, even at the higher rates, and as a result, produced financial pressure in the United States by early 1837.[11]

Simultaneously with the early capital outflow from Britain, a surge in British demand for U.S. raw cotton triggered a land boom. Between 1833 and 1836, land sales by the Federal Government at a constant price sextupled. News of the Specie Circular in July 1836, requiring payments to land agents in specie, concerned the Bank of England because of the implied rise in the demand for specie in the United States. Domestically, the planned distribution to the states in four equal installments (only three took place) of the surplus accumulated by the Federal Government from its land sales, starting January 1, 1837, might also have imposed a hardship on the banks as funds were transferred from one institution to another.[12]

Financial pressure in the United States in early 1837 was aggravated by a fall in the price of cotton, as British demand declined. As a result, debts secured by cotton became frozen, merchants holding such debts went bankrupt, and banks with such loans in their portfolios suspended specie payments as an alternative to the repayment of debts to Britain at a fixed exchange rate. In effect, the United States devalued the dollar during the period of suspension when foreign exchange was available only at a premium.[13]

The suspension continued for a year. In 1838, the economy revived when Britain resumed capital exports, but in 1839, loss of specie again prompted the Bank of England to raise the discount rate. As in 1837, both the supply of capital to the United States and the demand for its cotton fell. The successor Pennsylvania-chartered Bank of the United States, which had extended loans on cotton when the price was high, suspended specie payments in October 1839, followed by banks in the South and West. Nine states defaulted on their bonded indebtedness in 1841 and 1842, shutting off further capital flows from Europe until the 1850s. Bank failures were widespread, the supply of money fell sharply, and deflation ruled, 1839-43.

Banking panics also occurred in 1848 and 1857, but only the latter one was accompanied by restrictions on convertibility and a premium on gold.[14]

The gold standard experience of the United States before the Civil War was dominated by the role of the Bank of England. The standard imposed real adjustment costs on this country. External shocks produced boom and depression that further amplified the effects of internal shocks. Adjustment costs were the price the United States paid for maintaining a fixed exchange rate with sterling. When the costs became excessive, specie payments were suspended.

The record of the quarter-century from 1834 on reveals the magnitude of adjustment costs. Wholesale prices at annual rates varied as follows:[15]

1834-37 (+8 percent); 1837-43 (-7 percent); 1834-47 (+5 percent); 1847-49 (-5 percent); 1849-55 (+5 percent); 1855-61 (-4 percent).

The estimates of real output for the period 1834-59 are not continuous with the post-Civil War estimates.[16] At annual rates, they also suggest not much greater stability than in wholesale prices:

1834-36 (-1 percent); 1836-39 (+6 percent); 1839-40 (-1 percent); 1840-53 (+6 percent); 1853-54 (-4 percent); 1854-59 (+4 percent).

2. 1862-1878 -- the greenback standard[17]

Early in 1862, convertibility of Union currency into gold was suspended as a result of money creation in the

North to help finance the Civil War, disturbances in foreign trade, the general uncertainty arising out of the war, and the borrowing techniques of the Treasury. From then until resumption of specie payments on January 1, 1879, the United States was legally on a fiduciary standard -- the greenback standard. Despite support for inconvertible currency by many business groups before and during the war, and growing farm support after the war as agricultural prices fell, suspension of payments was generally regarded as temporary.

During suspension, greenbacks circulated side by side with gold, with the price of gold in terms of greenbacks varying from day to day. A floating rate of exchange existed between the two currencies. The major monetary use of gold was for foreign transactions. For foreign payments, gold was equivalent to foreign exchange, since Great Britain in particular maintained a gold standard. Dealers as well as others having extensive foreign transactions therefore found it convenient to maintain gold balances as well as greenback balances. To accommodate them, New York banks, and perhaps others as well, had two kinds of deposit accounts: the usual deposits payable in greenbacks or their equivalent, and special deposits payable in gold. The gold deposits were expressed in "dollars" like the greenback deposits, but the dollar stood for the physical amount of gold that had corresponded to a dollar before the Civil War and was to again after 1879. During the period of suspension, this physical amount of gold was worth more than a dollar in greenbacks -- it was worth well over two dollars in greenbacks from mid-1864 to early 1865.

Gold also retained an appreciable, though minor role, in domestic payments. Customs duties were payable in gold. In addition, the Treasury made virtually all interest and principal payments on its debt in gold at the pre-Civil War monetary value. Some private debt instruments required payment of interest or principal in gold. Finally, the West Coast remained largely on a specie basis. In the rest of the country, prices were quoted in greenbacks, and gold offered in payment was valued at its current market premium in greenbacks. On the West Coast, by contrast, prices were quoted in gold, at the pre-war parity, and greenbacks offered in payment were valued at their current market discount in gold.

Before the Civil War, the exchange rate between the U.S. dollar and the British pound varied around $4.86 within a narrow interval determined by the costs of shipping gold. From 1862 on, the exchange rate was not so limited and moved far outside those limits. It was determined by the demand for and supply of foreign exchange, and there was no legal commitments on the part of the United States that prevented the exchange rate from taking any value that was necessary to balance international payments.

The essential requirement for a return to the prewar parity was that the exchange rate so determined be within the initial range determined by the gold points. Once the Civil War was over, the most important factor affecting the exchange rate between the U.S. dollar and the British pound was the movement of internal prices in the United States relative to prices in Britain. A drastic decline in U.S. prices between 1867 and January 1879 made resumption possible. The price index fell at the rate of 5.4 percent per year (see Chart 2-1). Over the same period, the quantity of money rose at the rate of 1.3 percent per year. An exceedingly rapid rise in output was the primary factor producing the decline in prices.

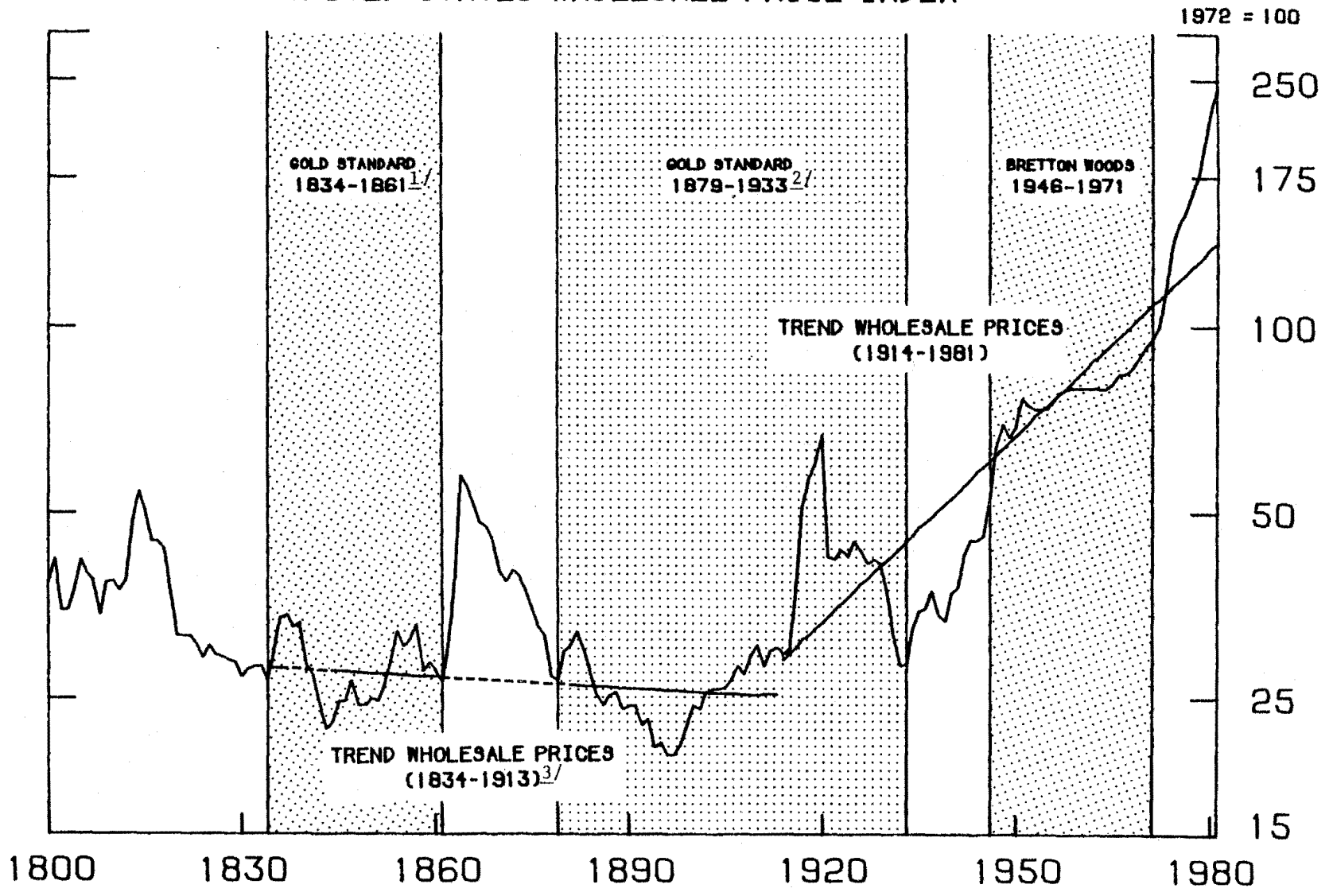
Specie resumption was a major political objective of the period and the question whether the government was proceeding toward this objective too rapidly or too slowly was a major political issue. Government action played a minor, if crucial, supporting role in contributing to successful resumption. It may have contributed to the rapid expansion of output through its policies on sale of public land, land grants to railroads, and other similar measures which contributed to the expansion of the West. But such government action was not of the kind that anyone at the time or since would have regarded as explicitly directed toward achieving resumption.

Government action had mixed effects on the mild rate of growth of the quantity of money outstanding. On the one hand, federal and state legislation laid the foundation for the rapid growth of commercial banking, particularly state banks after 1867, that produced increases in the ratios of deposits to reserves and deposits to currency. In addition, the elimination of reserve requirements against national bank notes in 1874 liberated reserves that encouraged a rise in the deposit-reserve ratio. The rise in the deposit ratios tended to increase the quantity of money outstanding, and thereby to inhibit price declines and to postpone the achievement of the prerequisites for successful resumption. On the other hand, the government did succeed in bringing about a minor reduction in the stock of high-powered money, mostly through use of government surpluses and debt refunding operations to retire Civil War currency issues from 1865 to 1869, and it thereby helped offset to a limited extent the effect of the rises in the deposit ratios.

In view of the recurrent political pressures to expand the greenback issues -- to which the government in fact yielded in 1873-74 following the banking panic of 1873 and the subsequent business contraction -- and the political difficulty then as now of obtaining budget surpluses to retire debt, the achievement of even a minor decline in highpowered money was not a negligible accomplishment.

The Resumption Act of January 14, 1875, which announced the intention to resume specie payments at the pre-war parity

CHART 2-1
UNITED STATES WHOLESALE PRICE INDEX



1/ Excludes 1838-1843 when specie payments were suspended.

2/ United States imposes gold export embargo from September 1917 to June 1919.

3/ Broken line indicates years excluded in computing trend.

Note: See Michael D. Bardo, Federal Reserve Bank of St. Louis Review, 63 (May 1981)

on January 1, 1879, contained a variety of provisions designed to appeal to silver advocates (replacement of fractional currency -- a Civil War paper issue -- by silver coins); paper money advocates (removal of existing limits on the aggregate issue of national bank notes and linking the retirement of greenbacks -- the aggregate outstanding not to fall below $300 million -- to the increase in national banknotes; for every five dollar increase in national bank notes the Treasury was to retire four dollars in greenbacks); and gold standard advocates (its main provisions). The Act authorized the Secretary of the Treasury both to use surplus revenue and to sell bonds in order to accumulate a gold reserve. At the time, the Act was little more than the expression of a pious hope and, insofar as it had any contemporary effect, it was to heighten the opposition to resumption.

That opposition was reflected in the free silver movement that arose in the mid-1870s. The Monetary Commission that was formed late in 1876 by a joint resolution of the Congress presented a year later one majority and two minority reports. The majority argued against resumption as "not practicable under the circumstances, until the laws making gold the sole metallic legal tender are repealed." Some of the majority recommended the old silver dollar of 412.5 standard grains (equivalent to 371.25 grains of fine silver); the rest recommended a legal relationship between silver and gold of 15.5 to 1 instead of the old relationship of 15.98 to 1, achievable either by reducing the silver content of the silver dollar to 399.9 or by increasing the gold content of the gold dollar. They favored the former inflationary effect. One minority report rejected silver as unsuitable for a standard of value but recommended devaluation of the gold dollar by about 2.6 percent. The second minority report supported the principle of silver remonetization only on condition that an international conference would accept silver as a universal legal tender.[18] There was clearly a range of views on the proper monetary standard, with some diehard attitudes toward resumption at the pre-Civil War parity. Late in 1877, the House passed a bill to repeal the Resumption Act. The bill was defeated in the Senate by one vote. This paper-thin decision turned out to be politically decisive.

The decline in the quantity of money in the last years before resumption, which helped foster the particularly rapid price decline in those years, in part owed something to the decline in the two deposit ratios associated with bank suspensions in 1877-78, in part to the influence of the Resumption Act. The clause in the Resumption Act requiring a withdrawal of $4 of greenbacks for every $5 of new national bank notes was interpreted in a manner that served to contract total circulation. The failure to deduct the voluntary surrender of national bank notes issued by banks retiring their notes from the gross increase in national bank notes by other banks effectively reduced outstanding note issues.[19]

Both before and immediately after resumption, the Treasury in its refunding operations went to great lengths to avoid the introduction of even temporary disturbances of any magnitude in the foreign exchange market. In 1877-79, the Treasury refunded about half the average outstanding interest-bearing public debt, to take advantage of lower rates of interest. For foreign holders of securities, calls of old bonds were so timed that one collection of securities was replaced by another or, if offsetting sales of new bonds were not possible, surplus from current account was available to pay for old bonds retired without export of U.S. gold. During these years, in fact, the United States was a net importer of over $5 million in gold, despite a repatriation of over $300 million of U.S. Government securities by foreigners.

The Resumption Act, and the borrowing and accumulation of a specie reserve under its provisions, had three effects, working in different directions, on resumption.

1. Insofar as the Act and the specie reserve instilled confidence in the prospective maintenance of specie payments, it inhibited either a speculative withdrawal of funds from the United States or a speculative accumulation of specie, and enhanced the willingness of foreigners to hold U.S. dollar balances. Had there been no Resumption Act, repatriation by foreigners of U.S. securities in 1876-78 might well have been greater than it was. More important, by setting a definite exchange rate that was to be attained and a definite date at which it was to be attained, the Act offered those speculators with confidence that the government would in fact succeed in achieving those aims an incentive to proceed so as to hold it there. In fact, the monthly average premium on gold dropped below 2 percent by March 1878 and never thereafter rose above that level. This effect clearly favored resumption.

2. The sale of bonds was an open market operation. The sale of bonds at home for gold was equivalent to selling bonds for greenbacks and then using the proceeds to purchase gold, with the effect of an open market purchase combined with an equivalent open market sale, the two together leaving the total monetary base unaffected. In practice, though gold was not the legal standard, it was used for monetary purposes alongside greenbacks. In consequence, insofar as the gold purchased came from gold held for monetary purposes by either the domestic public or the domestic banks, it did, in the first instance, reduce the reserve basis of the system. However, the banks and others could always replace gold holdings, if they so wished, by purchasing gold or its equivalent, sterling, in the free market at home or abroad and, in fact, that is what happened. The increase in the Treasury's gold reserves was not appreciably at the expense of the high-powered money holdings of the public or the banks. This effect was essentially neutral with respect to the growth of high-powered money.

3. Since gold was the equivalent of foreign exchange, the Treasury's purchase of gold constituted an increase in the demand for foreign exchange. Insofar as it borrowed abroad resources that would otherwise not have been available for loans to this country, it increased the supply correspondingly. But some of its borrowing abroad must have been at the expense of other lending to this country (lending was going on even though the net capital movement from this country was outward); to that extent, the supply was increased less than the demand even by foreign borrowing. Borrowing at home had this effect to an even greater extent. By borrowing at home, the Treasury acquired resources that would have been used in other ways, some of which might have involved a demand for foreign exchange. At most, however, only part of the resources would have been used to purchase foreign exchange, whereas the Treasury used all of them in this way. The result of the greater increase in demand than in supply was to make the greenback price of sterling higher than it otherwise would have been. The effect therefore made resumption more difficult; it required, that is, a decline in domestic prices sufficient not only to balance foreign payments on current account at the desired exchange rate but also to produce a large enough balance of payments surplus to finance the accumulation of the specie reserve. Whether the Resumption Act on balance hindered or helped resumption therefore depends on whether this effect was more or less important than the effects on confidence and speculation, and on the growth of high-powered money.

Whatever the conclusion on this score, the cessation of government borrowing to build up a gold reserve, once resumption had taken place, removed a source of pressure on the exchange rate and permitted domestic prices to rise sharply immediately after resumption, without producing balance-of-payments problems.

3. 1879-1914 -- a gold standard without a central bank[20]

The success of resumption did not end uncertainty about the monetary standard. For nearly two decades thereafter, the U.S. financial scene was dominated by controversy, which had started in the seventies, over the place of silver in the monetary system.

The rapid expansion of output in the Western world during those decades and the adoption of a gold standard over an area far wider than before added substantially to the demand for gold for monetary purposes at any given price level in terms of gold. That expansion in demand more than offset a contemporary expansion in supply, as a result both of increased production of gold and improvement of financial techniques in erecting a larger superstructure of money on a given base of gold. The result was a slow but rather steady downward tendency in product prices that prolonged and exacerbated the political discontent initiated by the rapid decline in prices after the end of the Civil War. "Greenbackism" and "free silver" became the rallying

cries. The silver forces were strong enough to obtain concessions that shook confidence in the maintenance of the gold standard, yet they were not strong enough to obtain the substitution of silver for gold as the monetary standard. The monetary history of this period is therefore one of repeated crises of legislative backing and filling.

The political campaign of 1896 on these issues was conducted with notorious bitterness involving both class and sectional conflicts. Fear and smear techniques were used freely on all sides. The free-silver advocates succeeded in capturing Democratic state conventions and in maneuvering adoption of a free-silver plank in the Democratic national convention, which chose William Jennings Bryan as candidate.* The National Silver party and the People's party -- an agrarian party -- deflected from its extensive reform program by the hope of victory on the silver issue, also nominated Bryan. A conservative Democratic group seceded, held an independent convention, and nominated its own candidate (John M. Palmer). The Republic party nominated McKinley who was persuaded to accept along with the nomination a platform favoring the gold standard until "international agreement with the leading commercial nations of the earth . . . can be obtained" for coining gold and silver at a fixed ratio. A rump group seceded from that convention and went over to the Democrats.

The election was won by the Republicans, largely, it has been claimed, because the farm vote swung to the party as a result of the rise in price and quantity of farm-product exports during the fall of 1896. Once the party was in power, Republican political action for monetary reform was restrained. Bryan's strength at the polls, however, compelled the Republicans to keep a campaign promise to propose another international conference in Europe to remonetize silver. The defeat of the silver inflationists had improved the United States' bargaining position, but by that time, rising gold output had snatched from the silver advocates the chance of achieving an international bimetallic standard. Not until March 14, 1900, however, was the Gold Standard Act passed. It declared the gold dollar to be the monetary standard of the country and prescribed a reserve of $150 million in the Treasury for the redemption of paper money.

The defeat of William Jennings Bryan in the Presidential election of 1896 marks in retrospect the end of the period. His defeat happened to follow gold discoveries in South Africa and Alaska and the perfection of the cyanide process for extracting gold. These developments produced a rapid expansion of the world's production of gold. Bryan's second defeat in the Presidential election of 1900 sealed the doom

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*Congressman Henry S. Reuss -- I include at this point an excerpt from the speech made by William Jennings Bryan at the Democratic convention:

"There are two ideas of government. There are those who believe that, if you will only legislate to make the well-to-do prosperous, their prosperity will leak through on those below. The Democratic idea, however, has been that if you legislate to make the masses prosperous, their prosperity will find its way up through every class which rests upon them."

of silver as a major issue dominating national politics. The gold standard had finally triumphed in the United States. The price reversal, which farmers had sought to achieve with silver, was produced after 1897 by the prodigious increase in the international supply of monetary gold. It was sufficiently large to force an upward price movement over the next two decades despite a continued growth in world output. The "money" issue retreated from the center of political controversy. The gradual rise in prices rendered the gold standard secure and unquestioned in the United States until World War I.

Monetary disturbances during the period from 1879 to 1914 were associated with banking difficulties in 1884, 1890, 1893, and 1907. Under a fractional reserve banking system, the public's withdrawal of currency from the banks not only reduced the banks' reserves but also produced a multiple contraction in deposits. In some episodes, as in the period 1834-1861, the banks restricted convertibility of deposits into currency. As a consequence, currency sold at a premium, which was equivalent to a depreciation of the deposit dollar in terms of gold or foreign exchange. These monetary disturbances, however, were attributable to the U.S. banking structure rather than the gold standard system, as was clear from the case of banking difficulties in 1873. The need for reform of the banking structure was widely acknowledged after 1907.

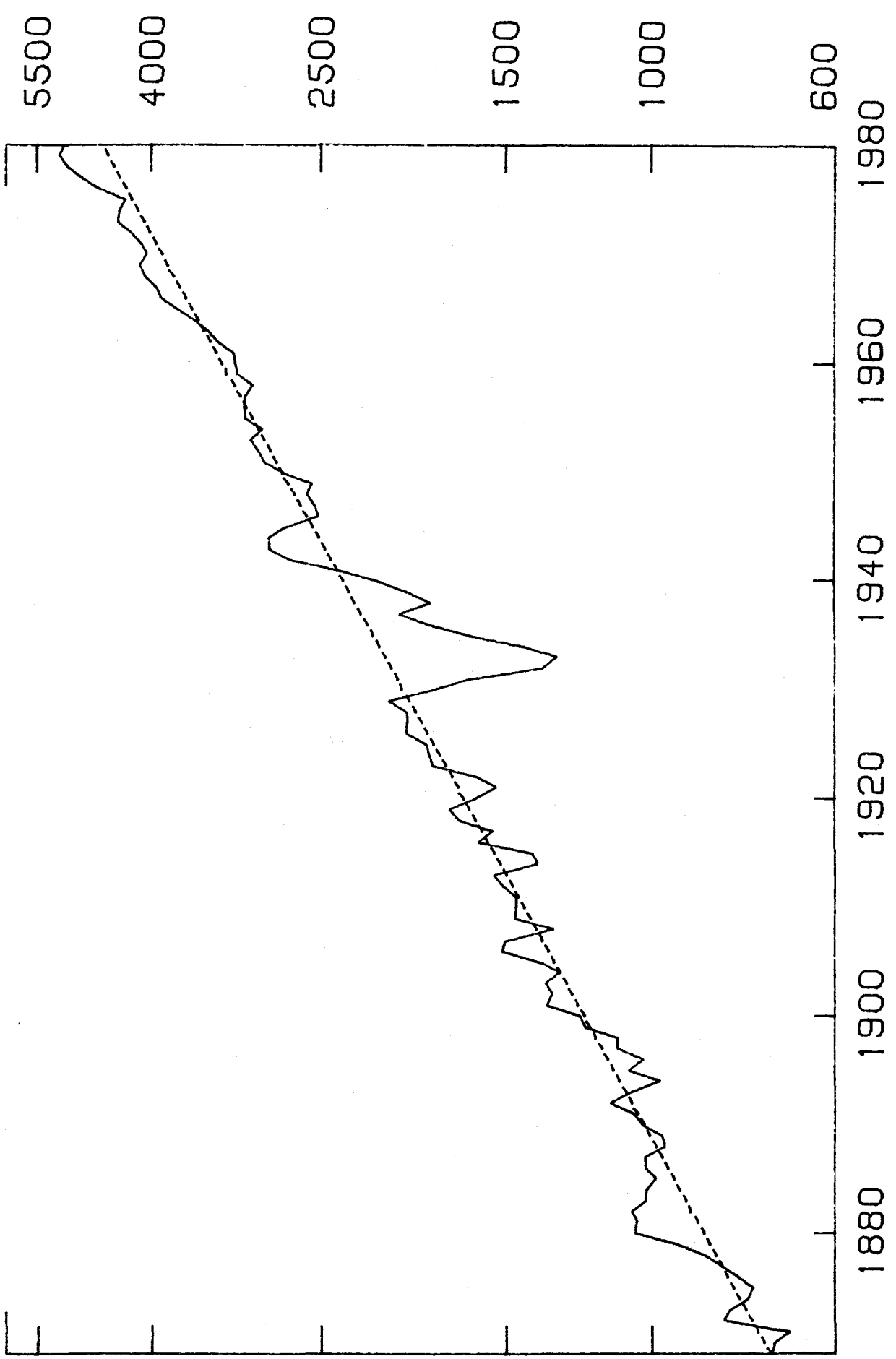
To form a judgment about U.S. experience under the gold standard, we can examine the behavior of prices and real per capita output (Charts 2-1 and 2-2), and of the monetary gold stock and the purchasing power of gold (Chart 2-3). The trend of the wholesale price index for the period 1834-61 and 1879-1914 was slightly downward, with a marked degree of variance about the trend.[21] Despite a sharp decline in estimated holdings between 1890 and 1896, the trend of the U.S. monetary gold stock was positive from 1879 to 1914.[22] The trend of the purchasing power of gold was positive (a falling price level) from 1879 to 1896, negative (a rising price level) from 1897 to 1914, reflecting the more rapid growth in U.S. monetary gold than in real output in the later period. Deviations from trend in the monetary gold stock were negatively associated with deviations from trend in the purchasing power of gold, with some tendency for the purchasing power deviations to lead the monetary gold stock deviations. This would be consistent with a tendency for the price level to revert towards a long run stable value under the pre-World War I gold standard, though over the short run inflation or deflation was experienced.

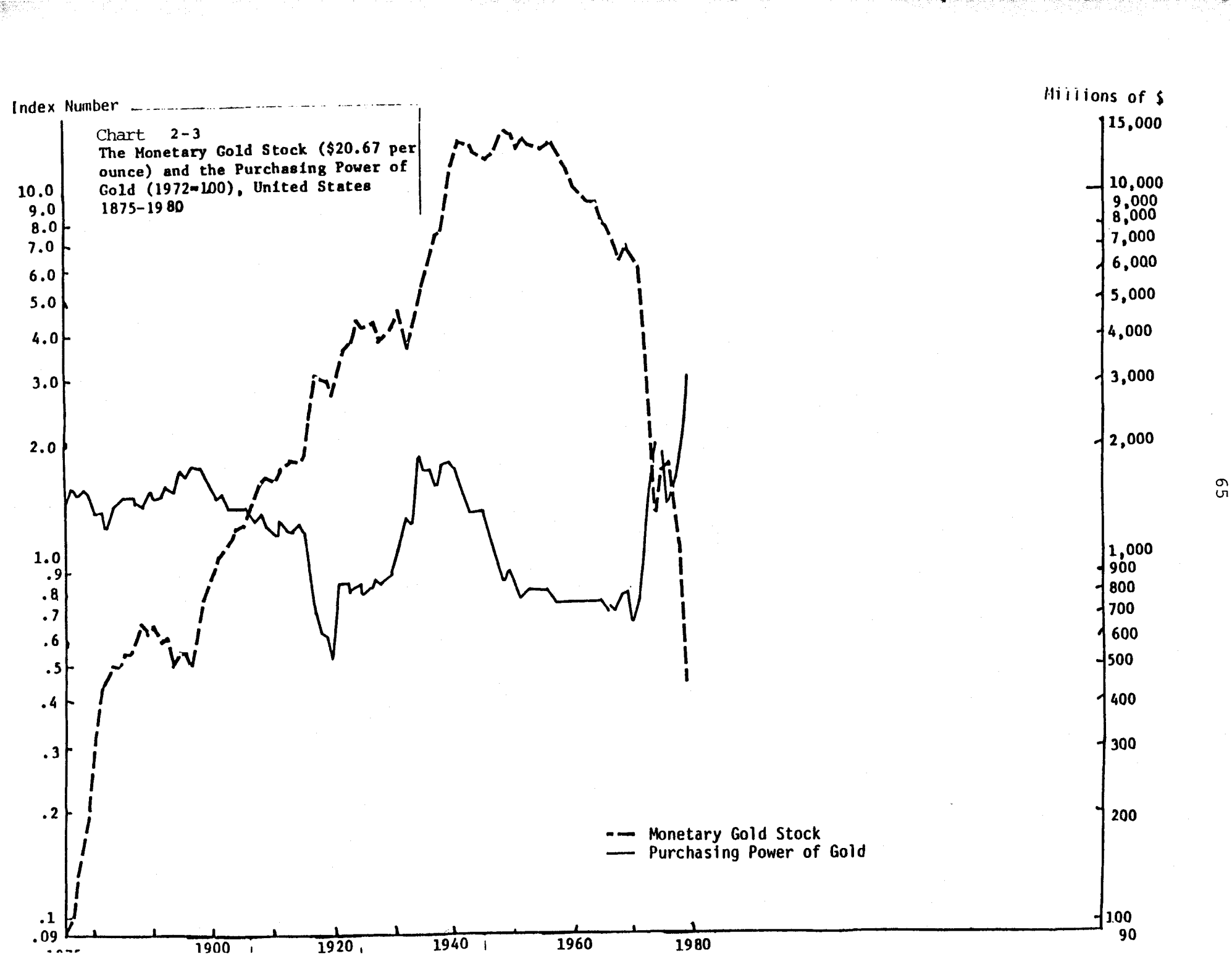
As might be expected, the trend of U.S. real per capita income was strongly positive from 1879 to 1914, but with substantial variance about the trend.[23]

In sum, contemporaries regarded the pre-World War I gold standard as a successful commodity standard, international in scope from the late nineteenth century on. It provided long-run stability despite short-term price instability. Years might elapse before a tendency to decline or rise in the price level was reversed. Real output growth around a rising trend was not steady but the instability was attributed to special features of the U.S. banking structure.

CHART 2-2

U.S. PER CAPITA REAL INCOME IN RELATION TO TREND




Index Number
Millions of $
Chart 2-3
The Monetary Gold Stock ($20.67 per ounce) and the Purchasing Power of Gold (1972=100), United States 1875-1980
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
.09
15,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
900
800
700
600
500
400
300
200
100
90
1900
1920
1940
1960
1980
Monetary Gold Stock
Purchasing Power of Gold

Relative to Great Britain, the United States was only a small country in the world economy. The Bank of England dominated the world economy, influencing international flows of capital and managing the gold standard on a narrow gold base, so that the rest of the world had to keep in step with its actions. With the monetary systems of many countries linked together through fixed exchange rates, international payments imbalances led to movements in money supplies, price levels, the relative prices of exports and imports, incomes and interest rates.

The extent to which these results were due to relative international peace, relatively free international trade, factor mobility within and across countries, the concentration of world capital and money markets in London, and the willingness of gold standard countries to maintain fixed parities can be judged by comparison with the absence of these conditions in the post-World War I decades.

4. 1914-1933 -- a managed gold standard[24]

The Federal Reserve Act was passed in 1913 under peacetime conditions when it was taken for granted that the gold standard would prevail. The Act included a gold standard rule incorporated in gold reserve requirements for Federal Reserve notes and deposits and also a "real bills" rule, according to which the criterion for determining the quantity of money would be linked to "notes, drafts, and bills of exchange arising out of actual commercial transactions" (section 13), offered for discount at rates to be established "with a view of accommodating commerce and businesss" (section 14d). Both were regarded as quasi-automatic in their operation. Taken literally, the two rules were contradictory. Maintenance of the gold standard means that the stock of money must be whatever is necessary to balance international payments. The real bills rule sets no effective limit to the quantity of money.

The Act was no sooner passed than the conditions taken for granted ceased to hold. Before the Federal Reserve System began operations in November 1914, World War I had begun. Very soon the belligerents effectively left the gold standard and a flood of gold started coming to the United States to pay for purchases by the Allies. Between September 1917 and June 1919 the United States controlled gold exports by export licenses and in effect suspended interconvertibility between paper money and gold. The gold standard criterion set a largely ineffective limit on the total quantity of money. A worldwide gold standard was re-established for a brief period in the 1920s, yet the gold standard never again played the role that the framers of the Act took for granted. The real bills criterion fared no better. Once the United States entered the war, loans on government securities began to rival commercial paper as collateral for Reserve Bank rediscounts. The Reserve System was authorized to issue notes against rediscounted assets other than commercial paper, mainly members' 15-day notes secured by government bonds. Thus the Federal Reserve System began operations with no effective legislative criterion for determining the quantity of money.

This conclusion can be documented by comparing the actual course of events with what would have happened under a fully operative gold standard. The wartime experience under a gold standard might not have differed from what actually occurred: the large inflow of gold up to the entry of the United States into the war would have produced a price rise through 1918 similar to actual experience. The big difference would have emerged between the end of the war and 1920 when nearly half of the monetary expansion from 1914 on occurred because the Federal Reserve subordinated monetary policy to the alleged necessity for facilitating Treasury funding of the floating debt plus unwillingness to see a decline in the prices of government bonds. The monetary expansion and the accompanying inflation led to an outflow of gold after the lifting of the embargo despite the great demand abroad for U.S. exports and despite the departure of most countries from a fixed parity between their currencies and either gold or the dollar. The ensuing decline in the reserve ratio of the Federal Reserve System finally compelled action to slacken monetary growth. The initial action -- a sharp rise in discount rates in January 1920 -- produced a reversal of the gold outflow of May. The following action -- a second rise in discount rates in June 1920 to the highest level in Federal Reserve history until 1973 -- was a deliberate act of policy involving a reaction stronger than was needed, since a gold inflow had already begun. It was succeeded by a heavy gold inflow and a negative rate of monetary growth over the following year, as both bills discounted by the Federal Reserve and its portfolio of government securities were sharply reduced. Wholesale prices were nearly halved by June 1921 from their level in May 1920. Real output fell precipitously.

The postwar increase in the quantity of money occurred because the Federal Reserve System did not observe the rules of the gold standard but exercised discretion. The subsequent collapse occurred because the power to manage money was not limited by the requirement to maintain gold reserve requirements. Had there been no discretion, neither the postwar increase, nor the postwar collapse need have occurred. Other things equal, the conversion from a wartime to a peacetime economy would likely have lowered temporarily the level of economic activity, but the Federal Reserve exacerbated the severity of the contraction.

The price and output movements of the post-World War I years in this country were part of a worldwide movement. Throughout most of the world, for victors, vanquished, and neutral alike, prices rose sharply before or into 1920 and fell sharply thereafter. About the only countries that escaped the price decline were those that were to experience hyperinflation. Though many national currencies were not rigidly tied either to gold or to the dollar, central bank policies nevertheless produced linkages sufficiently strong to result in common movements of prices in most national currencies. Flexible exchange rates were regarded as a temporary expedient pending return to gold, and monetary authorities everywhere sought to facilitate such a return to fixed parities. The results under managed fiduciary currencies were therefore similar to those that would have been experienced with fixed parities.

During the balance of the 1920s, the Federal Reserve System did not permit gold movements to affect the quantity of money outstanding. Inflows were offset by open market sales of government securities, outflows, by open market purchases. Federal Reserve credit after 1923 moved inversely with movements in the gold stock. The System achieved stable economic growth with falling wholesale prices, but this achievement was largely at the expense of economic stability in Great Britain and the peripheral countries tied to sterling. Britain's return to gold in 1925 at a parity that overvalued sterling would have caused her less difficulty if prices in the United States had risen instead of fallen thereafter. The United States would then have gained less gold or lost some, and the pressure on the pound would have been eased. When France returned to gold in 1928 at a parity that undervalued the franc and also did not permit gold inflows to affect its money stock and prices, the British position was further undermined.

The monetary standard to which most countries had returned by 1929 was the gold-exchange standard. They kept their monetary reserves in the form of balances of other currencies convertible into gold at fixed prices, notably sterling and dollars, rather than in the form of gold itself. Official agencies in such countries, usually the central banks, often fixed exchange rates directly by standing ready to buy or sell the national currency at fixed rates in terms of other currencies, rather than indirectly by standing ready to buy or sell gold at fixed prices in terms of the national currency.

Since the gold-exchange standard, like the gold standard, involved fixed exchange rates, it also meant that, so long as the standard was maintained, prices and incomes in different countries were intimately connected. They had to behave so as to preserve a rough equilibrium in the balance of payments among countries. The gold-exchange standard, however, made the international financial system more vulnerable to disturbances because it raised the ratio of claims to gold available to meet those claims.

The links by fixed rates of exchange ensured a worldwide decline in income and prices after 1929.* As is well known, shocks in one country's income, employment, and prices, tend to be transmitted to income, employment, and prices of its trading partners under a fixed exchange rate system. The evidence is clear that the United States was in the van of the movement and not a follower. If declines elsewhere were being transmitted to the United States, the transmission mechanism would be a balance of payments deficit in the United States as a result of a decline in prices and incomes elsewhere relative to prices and incomes in the United States. That decline would lead to a gold outflow from the United States which, in turn, would tend -- if the United States followed gold-standard rules -- to lower the stock of money and thereby income and prices in the United States.

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*Congressman Henry S. Reuss -- The view expressed here of the events leading up to the Great Depression is controversial and not shared by all economists.

However, the U.S. gold stock rose during the first two years of the 1929-33 contraction and did not decline, demonstrating that other countries were being forced to adapt to our monetary policies rather than the reverse.

The international effects were severe and the transmission rapid, not only because the gold-exchange standard had rendered the international financial system more vulnerable to disturbances, but also because the United States did not follow gold-standard rules. The Federal Reserve did not permit the inflow of gold to expand the U.S. money stock. It not only sterilized it, it went much further. The U.S. quantity of money moved perversely, going down as the gold stock went up. In August 1929, at the start of the business contraction, the U.S. quantity of money was 10.6 times the gold stock; by August 1931, it was 8.3 times the gold stock. The result was that other countries not only had to bear the whole burden of adjustment but also were faced with continued additional disturbances in the same direction, to which they had to adjust.

The effects first became severe in those countries that had returned to the gold standard with the smallest actual gold reserves, and whose financial structure had been most seriously weakened by World War I -- Austria, Germany, Hungary, and Rumania. To shore up the financial systems of those countries, international loans, in which the Reserve System participated, were arranged. But so long as either the basic pressure on those countries deriving from deflation in the United States was not relieved, or the fixed-exchange rate link which bound them to the U.S. dollar was not severed, such assistance was at best a temporary palliative. In country after country, that is what it proved to be. As they experienced financial difficulties, the United States was in turn affected by the reflex influence of the events it had set in train.

The first major country to cut the link was Britain, after runs on sterling precipitated by France and the Netherlands. Britain abandoned the gold standard in September 1931. The international monetary system split in two, one part following Britain to form the sterling area; the other following the United States, in the gold bloc. The trough of the depression in Britain and in other countries that accompanied Britain in leaving gold was reached in the third quarter of 1932.

In the two weeks following Britain's departure from gold, central banks and private holders in a number of foreign countries converted substantial amounts of their dollar assets in the New York money market to gold. The U.S. gold stock declined by the end of October to about its level in 1929. The Federal Reserve System, which had not responded to an internal drain from December 1930 to September 1931 as a series of runs on banks, bank failures, and shifts from bank deposits to currency by anxious despositors produced downward pressure on the U.S. quantity of money, responded vigorously to the external drain. A sharp rise in discount rates ended the gold drain temporarily but intensified bank failures and runs on banks. In 1931, unlike the situation in 1920, the System's reserve ratio was far above its legal

minimum. The System overreacted to the gold outflow and magnified the internal drain.

The Federal Reserve System justified its passivity in relation to the internal drain by reason of a shortage of free gold. The law specified that the System hold against Federal Reserve notes outstanding, the volume of which had increased with the internal drain, a reserve of 40 percent in gold and additional collateral of 60 percent in either gold or eligible paper (which consisted of commercial, agricultural, or industrial loans, or loans secured by U.S. government securities rediscounted by member banks; loans to member banks secured by paper eligible for rediscount or by government securities; and bankers' acceptances, i.e., "bills bought" in Federal Reserve accounting terminology). Because the System did not have enough eligible paper to furnish 60 percent of the collateral for Federal Reserve notes, part of the gold in excess of minimum requirements had to be pledged for this purpose. The amount of gold not needed to meet either minimum gold requirements or collateral requirements was therefore less than the amount of excess gold reserves. The Federal Reserve System asserted that the shortage of free gold was an important factor preventing the System from engaging in open market purchases. Such purchases would have reduced eligible paper holdings still further by reducing rediscounts and therefore could have been conducted only to a very limited extent without eliminating free gold entirely. Whatever the validity of the Federal Reserve view, the Glass-Steagall Act of February 27, 1932, disposed of that problem by permitting government bonds in the Reserve Banks' portfolios as well as eligible paper to serve as collateral against Federal Reserve notes in addition to the 40 percent minimum gold reserve.

The downward movement of money, income, and prices in the United States was reversed for a few months in the second quarter of 1932, when the Federal Reserve undertook a program of open market purchases, following which there was widespread revival in the real economy in the summer and fall. The termination of the program during the summer was followed in the six months from October 1932 by mounting banking difficulties, leading to state banking holidays. By February 1933, fears of a renewed foreign drain added to the general anxiety. For the first time, also, the internal drain partly took the form of a specific demand for gold coin and gold certificates in place of Federal Reserve notes or other currency. The Federal Reserve System reacted as it had in September 1931, raising discount rates in February 1933 in reaction to the external drain but not seeking to counter either the external or internal drain by extensive open market purchases. In the first few days of March, heavy drawings of gold, both internal and external, reduced the New York Federal Reserve Bank's reserve percentage below its legal limit. With some reluctance, the Federal Reserve Board suspended requirements for thirty days. On March 4, the Federal Reserve Banks remained closed as did all the leading exchanges. A nationwide banking holiday was proclaimed after midnight on March 6 by the incoming administration. All banks were closed until March 9 and gold redemption, gold shipments abroad or dealing in foreign exchange were suspended during the bank holiday.

The Emergency Banking Act of March 9, 1933, granted the President emergency powers over banking transactions and over foreign exchange dealings in gold and currency movements. The next day, March 10, the President issued an executive order extending the restrictions on gold and foreign exchange dealings beyond the banking holiday proper and, in effect, prohibiting gold payments by banking and nonbanking inssitutions alike, unless permitted by the Secretary of the Treasury under license. These measures were the precursors to a far-reaching alteration in the legal structure of the monetary standard.

5. 1933-1934 -- a floating dollar[25]

Despite the effective suspension of gold payments in March 1933, the price of gold or the rate of exchange between the dollar and currencies that remained rigidly linked to gold, hovered around "par" for over a month. The suspension was regarded as part of the banking emergency and hence expected to be temporary; foreign exchange transactions were strictly controlled and limited; the Administration made no official announcement that it proposed to permit the dollar to depreciate or be devalued; and after some weeks, several licenses to export gold were granted. Moreover, the technical gold position was sufficiently strong so that there was little doubt the preceding gold parity could have been maintained if desired; the ratio of the gold stock to the total stock of money was higher than at any time since 1914.

One important step, unprecedented in the United States, was taken during this period. On April 5, an executive order forbade the "hoarding" of gold and required all holders of gold, including member banks of the Federal Reserve System, to deliver their holdings of gold coin, bullion, or certificates to Federal Reserve Banks on or before May 1 except for rare coins, reasonable amounts for use in industry and the arts, and a maximum of $100 per person in gold coin and gold certificates. The gold coin and gold certificates were exchanged for other currency or deposits at face value, and the bullion was paid for at the legal price of $20.67 per fine ounce. The "nationalization" of gold outside Federal Reserve Banks was later completed by order of the Secretary of the Treasury, dated December 28, 1933, excepting only rare coins and a few other minor items from the requirement that all gold coin, gold bullion, and gold certificates be delivered to the Treasurer of the United States at face value corresponding to the legal price of $20.67 per fine ounce. The expiration date for the surrender of gold was later set for January 17, 1934, when the market price of gold was in the neighborhood of $33 per fine ounce.

An executive order of April 20, 1933, extending and revising the gold embargo, and comments by the President at his news conference the preceding day ended the period of stability in the price of gold. The President made it clear that the Administration intended to permit the dollar to depreciate in terms of foreign currencies as a means of achieving a rise in domestic prices. The order applied the restrictions on foreign exchange transactions not only to banks licensed under the executive order of March 10, but also to

all persons dealing in foreign exchange. On the same day, the Thomas amendment to the Agricultural Adjustment Act was offered in Congress. The amendment enacted into law on May 12, and explicitly directed at achieving a price rise through the expansion of the money stock, contained a provision authorizing the President to reduce the gold content of the dollar to as low as 50 percent of its former weight. The dollar price of gold immediately started rising, which is to say that so also did the dollar price of foreign currencies, including those like the French franc that remained on gold and those like the pound sterling that had gone off gold at an earlier date. In the next three months, the market price of gold rose to $30 an ounce, and thereafter fluctuated erratically between a low of about $27 and a high of nearly $35 until January 30, 1934, when the Gold Reserve Act was passed. During that period, the United States had a floating exchange rate determined in the market from day to day, as in the period from 1862 to 1879. However, there was considerably greater government intervention in the market. On September 8, 1933, an official gold price, to be fixed daily at the estimated world market figure less shipping and insurance cost, was established. The Treasury agreed to buy gold at that price to give American miners a price as high as they could have obtained by export in the absence of the export embargo.

Starting in October, the government intervened actively to raise the price of gold. The Reconstruction Finance Corporation was authorized to buy newly mined domestic gold from October 25 on, and a few days later, through the agency of the Federal Reserve Banks, to buy gold abroad. The purchase price was raised almost daily. For a time, the large-scale RFC purchases abroad made the announced price for newly mined domestic gold the effective market price. From the end of November, however, until the end of January 1934, the announced price exceeded the market price abroad.

The aim of the gold policy was to raise the prices of farm products and raw materials. Most farm products and raw materials exported by the United States had a world market, hence the decline in the foreign exchange value of the dollar meant a roughly proportional rise in the dollar price of such commodities as cotton, petroleum products, leaf tobacco, wheat, and similar items.

The decline in the foreign exchange value of the dollar was initially a product of speculative sale of dollars in the expectation of devaluation -- a short-term capital outflow. The decline was sustained by shifts in the demand schedules for imports and the supply schedules of exports produced by the cessation of internal deflation. Prices rose in the United States relative to prices in other countries. If the exchange value of the dollar had not fallen, the price rise would have discouraged exports and encouraged imports. These forces were subsequently reinforced by U.S. purchase of gold at home and abroad.

U.S. purchase of gold involved a reduction in the supply of goods for export, since gold is a potential export good, and hence a reduction in the demand for dollars by holders of other currencies

(to buy the domestically produced gold). The purchase of foreign gold involved an increase in the demand for goods for import (namely, gold) and hence in the supply of dollars offered in exchange for foreign currencies (to buy foreign gold). The combined effect was to create a potential deficit in the U.S. balance of payments at the former exchange rate. Given a flexible rate, the potential deficit was closed by a depreciation of the dollar sufficient to generate, through an increase in exports or a decline in imports or a movement of speculative funds, an amount of foreign currencies exceeding the amount demanded for other purposes by enough to pay for the gold.

These effects depended very little on the fact that gold was the commodity purchased. Given a floating exchange rate, essentially the same effects on the dollar prices of internationally traded goods would have followed from the same dollar volume of government purchase of wheat or perfume, or from the economically equivalent program, adopted after World War II, of building up stockpiles of foreign-produced strategic goods. As it was, the use of gold as the vehicle necessarily meant an accumulation of gold, just as the use of wheat or perfume would have meant the accumulation of that commodity.

The choice of gold as the vehicle did have an important effect on the impact of the program on foreign countries. In the first place -- and a corresponding effect would be present for any particular commodity -- the program had a special impact on gold-producing countries. In the second place -- and this effect would be present only for a commodity serving as the basis of a monetary standard -- it had a special impact on gold-standard countries. Being committed to sell gold at a fixed price in terms of their own currency, these countries necessarily experienced pressure on their gold reserves, which in turn necessitated either abandonment of the gold standard or internal deflationary pressure. Those countries were placed in the position of having to adjust downward their whole nominal price level.

The device used to achieve a decline in the exchange value of the dollar -- borrowing funds (through the issue of RFC securities) to purchase gold -- was not unprecedented. The identical device was employed before 1879 but that time for precisely the opposite purpose: to promote a rise in the exchange value of the dollar. As noted above, the mechanical as opposed to the psychological effects of the accumulation of a gold reserve rendered resumption more rather than less difficult.

A major obstacle to using gold as a vehicle for lowering the exchange value of the dollar and thereby raising prices was the existence of the so-called gold clause in many government and private obligations and in private contracts. That clause, whose use dated back to the greenback period after the Civil War, required payment either in gold proper, or in a nominal amount of currency equal to the value of a specified weight of gold. It was designed precisely to protect lenders and others against currency depreciation. This clause, if honored, would have multiplied the nominal obligations

of the federal government and of many private borrowers for interest and principal of debt by the ratio of the new price of gold to the old price of gold. Accordingly, a joint resolution was introduced in Congress on May 6, and passed on June 5, 1933, abrogating the gold clause in all public and private contracts, past and future. In February 1935, the Supreme Court, by a five-to-four decision, in effect upheld the constitutionality of that resolution. Not until the Act of October 28, 1977, was the prohibition against gold clauses removed, and express allowance for their use provided.

At the outset, the gold policy was one of two mutually inconsistent policies with respect to the monetary standard simultaneously pursued by President Roosevelt. The other was the organization of a World Monetary and Economic Conference which convened in London in June 1933. President Hoover had set in train the arrangements for the convocation of the Conference in May 1932, and it was originally scheduled to be held in January 1933. The aim of the Conference was to achieve cooperative action on international economic problems, and hopes were high that it would produce an agreement stabilizing foreign exchange arrangements. But the Conference was nearly a complete failure. One reason was that, while it was in process, the President apparently decided definitely to adopt the path of currency depreciation. He sent a message to the Conference on July 2, 1933, which disassociated the United States from any attempt to achieve what was described as a "temporary and probably an artificial stability in foreign exchange on the part of a few large countries" and was termed a "specious fallacy." The message was at the time given much of the public blame for the failure of the Conference. However, whatever the President might have said and however consistent U.S. policy might have been, it seems dubious that the economic preconditions existed for a viable exchange stabilization agreement. The fundamental difficulties were the probable incompatibility of the exchange rates of the sterling bloc and of the nations that still remained on gold, and the unwillingness at the time of the gold-bloc countries to change their gold parities.

The period of a variable price for gold came to an end on January 31, 1934, when the President, under the authority of the Gold Reserve Act passed the day before, reduced the gold content of the dollar to 13.71 grains and thus specified a buying and selling price of $35 an ounce for gold (480/13.71 = $35). He thereby devalued the gold dollar to 59 percent of its former weight. Under the terms of the Act, title to all gold coin and bullion was to be vested in the United States; all gold coins were to be withdrawn from circulation and melted into bullion and further gold coinage was to be discontinued; the Secretary of the Treasury was to control all holdings and dealings in gold; and the President was authorized to fix the weight of the gold dollar at any level between 50 and 60 percent of its prior legal weight.

Since the Treasury had formerly valued its own gold holdings at $20.67 an ounce, and paid only that price for gold it acquired from private individuals, commercial banks, and the Federal Reserve System, it realized a large "paper" profit from the revaluation of

the dollar; which is to say, the Treasury could print additional paper money entitled "gold certificates" to a nominal value of nearly $3 billion without acquiring additional gold and yet conform to the legal requirement that it hold a specified weight of gold (now less than before) for each dollar printed. Those gold certificates could not be legally held by private individuals, but they could be held by Federal Reserve Banks. Accordingly, to realize its "profits," the Treasury had to turn over gold certificates to the Federal Reserve System, receiving in return a deposit credit that it could convert into Fedeal Reserve notes or pay out by check. Stripped of its legal trappings, the economic effect was identical with a simple grant of authority to the Treasury to print and put in circulation nearly $3 billion of fiat currency in addition to the $3 billion in greenbacks already authorized by the Thomas Amendment to the Agricultural Adjustment Act.

Of the paper profit, $2 billion was appropriated to a stabilization fund set up under the control of the Secretary of the Treasury, who, with the approval of the President, was authorized to deal in gold, foreign exchange, and such other instruments of credit as he deemed necessary for the purpose of stabilizing the exchange value of the dollar. Of the balance of the paper profit, $645 million was used for the redemption of national bank notes, which simply substituted one form of fiduciary currency for another; $27 million was transferred to the Federal Reserve Banks for making industrial loans; $2 million was charged off to losses in melting gold coin; and $141 million remained in the General Fund cash balance.

Thus the interlude during which the United States was not on a gold standard was concluded. The type of gold standard on which it operated thereafter is the subject of the section that follows.

6. 1934 - 1948 -- the interwar, World War II, and postwar managed gold standard[26]

The official price of gold remained fixed at $35 an ounce from February 1, 1934, until March 31, 1972, when the official price was altered to $38. In this sense, the date in 1934 marked the return to a gold standard. But the gold standard to which the United States returned was very different, both domestically and internationally, from the one it had left less than a year earlier. The Treasury bought all gold offered to it by domestic producers at the price of $35 an ounce and sold at this price to licensed domestic industrial users. Internationally, the Treasury bought and sold gold at the fixed price in monetary transactions with foreign monetary authorities. The holding of gold coin and bullion was forbidden to private individuals in the United States, except for use in industry and the arts and for numismatic holdings, and gold no longer circulated domestically. The Federal Reserve continued to have a gold reserve requirement, but the state of the reserve was not a direct influence on policy at any time from 1933 until the threatened depletion of the gold reserve in the period from 1948 to 1968, under the Bretton Woods arrangements. In 1945, when the System was approaching the then existing requirement (40 percent for

Federal Reserve notes and 35 percent for Federal Reserve deposits), the law was changed to require a uniform 25 percent.

Fixed buying and selling prices for gold were no longer the main reliance for maintaining rigid exchange rates with other currencies, even those of countries nominally on gold. Instead, a new finance ministry organ was created, the stabilization fund, with powers to engage in open market purchase and sale of foreign exchange and gold to influence exchange rates. During the late 1930s, most of the so-called gold-bloc countries finally left gold, and nominally floating exchange rates with government intervention through stabilization funds became the rule. During the war, many countries fixed "official" exchange rates but sought to maintain them by extensive control over foreign exchange transactions, imitating the devices developed by Hjalmar Schacht for Germany in the 1930s, rather than by free purchase or sale at fixed prices of either gold or foreign exchange. Since then, an even wider variety of multiple exchange rates came into use.

After 1934, the role of gold in the United States was not that of the base of the domestic monetary system. Rather it became a commodity whose price was officially supported in the same way as the price of wheat, for example, was under various agricultural support programs.* The major difference is that the support price for agricultural products was paid only to domestic producers, the gold-support price to foreign monetary authorities as well. In addition, the agricultural products accumulated were freely sold at the support prices to anyone, the gold only to certain foreign purchasers and to licensed domestic industrial users. In consequence, the gold program set a floor under the world price of gold in terms of dollars.

The substitution in 1934 of a fixed price for gold, rather than a variable price as under the earlier purchase program in 1933 and early 1934, meant that the number of dollars spent on gold was no longer under the direct control of U.S. authorities. Having fixed the price, they were committed to buy all that was offered by foreign monetary authorities and domestic producers. But the effects of such purchases were the same as under the earlier program. For the United States, the purchases meant an increase in the dollar value of other exports relative to the dollar value of imports, thanks to a rise in prices of internationally traded goods relative to domestic goods through the combined effect of changes in exchange

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*Herbert J. Coyne -- Many economists would generally consider gold's role more distinctive than that of an ordinary commodity in this period. Indeed, Dr. Schwartz states in the book she authored with Milton Friedman, A Monetary History of the United States, 1867-1960 (on p. 473) that: "The link between gold purchases and Treasury authorization to create high-powered money is, of course, the main remnant of the historical role of gold, and still serves to give gold some special monetary significance."

rates and in domestic price levels of the various countries. For gold-producing countries, the purchases meant a higher price for one of their products, hence an expansion in the gold industry relative to other industries and a rise in income. For gold-standard countries, the price fixed for gold in the United States determined the rate of exchange between their currencies and dollars. They either had to adjust their internal price level to that new rate -- in the process presumably disposing of some of their reserves as measured in ounces of gold -- or to change their own fixed price of gold. For all gold-standard and gold-producing countries except the United States and for nongold-standard and nongold-producing countries, the gold purchases meant a reshuffling of international trade in response to a decreased U.S. demand for products other than gold, and an increased demand for such products by gold-producing countries; the program meant an increased supply of products from the United States and a decreased supply of products other than gold from gold-producing countries. Finally, international trade had to adjust to measures adopted by gold-standard countries to meet loss of their reserves.

The price fixed for gold initially overvalued the product and therefore stimulated a rapid increase in production and a rapid accumulation of government stocks. Production in the United States including its possessions rose from less than 2.6 million ounces in 1933 to 6 millon in 1940; in the world from 25 million ounces in 1933 to 41 million in 1940. The rise in prices of other commodities and services from 1940 to 1948 lowered the relative price of gold and reduced U.S. gold output (1948) below its 1933 level, though world output still exceeded the level of that year.

There was an initial sharp jump in the U.S. gold stock from January to February 1934 that was accounted for primarily by the revaluation of gold, but part was produced by the substantial amount of gold imported, as foreigners took advantage of the higher buying price that became official on January 31. Gold was almost immediately shipped to the United States. In the six weeks from February 1 to March 14, more than $0.5 billion of gold (valued at the new price) was imported. Once the initial rush of gold imports ended, the gold stock continued to rise at a fairly steady rate to the end of 1937. Until France left gold in late 1936, roughly half of U.S. gold imports came from France. For the next year, France was a net importer of gold from the United States rather than a net exporter. During the last quarter of 1937, a large-scale withdrawal of foreign short-term balances followed rumors that further devaluation of the dollar was being considered as a possible counter-cyclical measure. Withdrawal of European short-term funds from the United States ceased in July 1938. These counter movements roughly offset the forces making for a continued flow of gold to this country, so the total gold stock remained fairly steady from autumn 1937 to autumn 1938. Munich then led to a further flight of capital from Europe and a sudden increase in the rate of gold inflow. The outbreak of war simply maintained the rate of the gold inflow. The intensification of Britain's war effort after the fall of France in early 1940 and her attempt to tap American supplies of war material, as she had in

World War I, produced a further increase. Finally, the enactment of lend-lease in early 1941, which relieved Britain and her allies of the necessity of acquiring dollars to finance war purchases, brought an end to the rapid growth of the gold stock. In sum, the gold stock in the Treasury rose from 200 million ounces when the support price was fixed in early 1934 to 630 million ounces by the end of 1940, a rise that was 1-3/4 times as much as aggregate world output during the intervening period. The gold stock declined somewhat during the war, but an inflow in 1946-48, arising from the demand for U.S. goods of war devastated and neutral countries, brought the stock to nearly an all-time high in 1948 (exceeded only in 1949).

The rise in the dollar price of currencies of gold-bloc countries was at first much greater than that of currencies not linked to gold. From January 1933 to September 1934 the rise was 70 percent for the currencies of France, Switzerland, Belgium, the Netherlands, and Italy, and less than 50 percent for the pound sterling. The gold-standard currencies therefore appreciated not only relative to the dollar but also relative to other currencies. The differential appreciation measured the special impact of our gold price-support program on the position of the gold-standard countries. The fact that they lost gold meant that they bore, as it were, a larger part of the effect of the expansion of U.S. exports and contraction of U.S. imports other than gold than other countries did, and thereby cushioned the initial impact on those other countries.

Had nothing else intervened, the gold-standard countries would have had to reduce their internal price levels relative to those of other countries in order to stay on gold, that is, in order to render something like the new structure of exchange rates consistent with no pressure on the balance of payments. In fact, something else did intervene, but it intensified rather than eased the problem of the gold-standard countries. Gold purchases under the fixed price-support program coincided with a flight of capital to the United States from Europe largely induced by political changes: first, the rise to power of Hitler in Germany which led to a large-scale attempt to transfer capital out of Germany; then the increasing fears of war which led to flight of capital from France, Britain, and other European countries.

If the United States had continued its floating exchange-rate policy of 1933 and had fixed no firm price at which it was willing to buy the world's gold, the capital flight would have produced an appreciation of the U.S. dollar relative to other currencies, which would have discouraged exports from the U.S. and encouraged imports into the U.S. That outcome would have produced the unfavorable balance of trade required as the physical side of the capital import -- and incidentally, would have worked against one of the domestic objectives of New Deal policy, namely, to raise exports relative to imports as a means of stimulating employment. If, instead, the U.S. and other countries involved had all been on a gold standard of the nineteenth century variety, the attempt to transfer capital to

the U.S. would have increased gold reserves in this country, even without a rise in the dollar price of gold, and decreased gold reserves abroad; it would have increased proportionately the money stock in the U.S. and thereby have promoted a rise in domestic prices and income; and it would have decreased the money stock abroad and thereby have promoted a fall in prices and income in foreign countries. These changes would have tended to produce precisely the same shift in relative prices and the same unfavorable balance of trade as the appreciation of the dollar under the hypothetical floating exchange rates would have done.

Since the flight of capital constituted an increased demand for dollars, its effect on exchange rates and on U.S. trade in commodities and services other than gold were in precisely the the opposite direction to those of the gold price-support program and tended to offset them. There was simultaneously an increased offer of dollars for gold on the part of the U.S. Government and and an increased demand on the part of foreigners for dollars to hold. By trading assets held abroad for gold and transferring the gold to the U.S. Treasury, foreigners could acquire dollars and the Treasury could acquire gold without in any way affecting the rest of the U.S. balance of payments. To the extent that such offsetting occurred, the gold program did not affect U.S. trade currents and the relative prices of internationally traded goods in ways referred to earlier. Since such changes in trade currents and relative prices tended to reduce the amount of gold offered for sale to the United States at its fixed price, the capital inflow meant that this country acquired a larger amount of gold at $35 an ounce than it otherwise would have. Hence, while the capital inflow and the gold price-support program had opposite effects on U.S. exchange rates and on U.S. trade in commodities and services other than gold, both tended to raise its gold stock. For gold-standard countries that were themselves subject to a capital outflow -- that is, for all the important gold-bloc countries that had remained on gold after 1933 -- the capital outflow reinforced rather than offset the effect of the gold price-support program. It required an additional reduction in internal price levels beyond that called for by the support program. Exports had to be still larger relative to imports if they were to finance the capital outflow without a continued outflow of gold.

The deflation that would have been required by the combined effect of the U.S. gold price-support program and the capital outflow was more than the gold-bloc countries were willing to undergo, as perhaps the effect of either alone might also have been. Accordingly, in the fall of 1936, France and Switzerland devalued their currencies in conjunction with a tripartite agreement between the United States, France, and Great Britian. The governments of Belgium and the Netherlands, which followed suit, and Switzerland also subscribed to the agreement.[27]

All these countries set up exchange stabilization funds. The Tripartite Agreement of September 25, 1936, provided that stablization fund holdings of foreign currencies would be used to avoid undesirable fluctuations in exchange rates. Arrangements for

mutual currency support were undertaken, based on daily gold settlements at prearranged prices. Each day the authorities of the six countries would cable each other the prices in terms of their own currencies at which they would sell and buy gold for the next twenty-four hours. Each party would then decide, without risk of exchange losses, the buying and selling rates for the currencies of the other participants. Foreign balances at the end of each day were convertible into gold at the guaranteed price. The Agreement was a precursor of the swap arrangements that the industrialized countries perfected during the Bretton Woods period of international monetary arrangements. Under the Agreement, the U.S. Exchange Stabilization Fund purchased foreign currencies in New York at rates the foreign funds determined and that day converted these currencies into gold earmarked to its account abroad or released to it from foreign earmarked holdings in the United States. Mainly, however, gold imports into the United States were sold directly by foreign monetary authorities or private importers to the U.S. Treasury.

In purchasing gold, as in purchasing agricultural or other commodities, the U.S. Government can be said to have three sources of funds: tax receipts, borrowing, or money creation. The one difference is that the support program for other commodities (excepting silver) carried with it no authorization to create money, whereas the support program for gold did, thereby automatically providing the financial means for its continuance. Treasury deposits at Federal Reserve Banks could be increased through gold purchases by gold certificate credits equal to the amount of gold purchased times the official price of gold. Except for a minor handling charge (1/4 of 1 percent), this was also in practice the amount the Treasury spent by drawing a check on its deposits in acquiring gold. Gold purchases were usually financed in this way; hence, increases in the gold stockpile produced no automatic budgetary pressure. The link between gold purchases and the Treasury authorization to create high-powered money was the main remnant of the historical role of gold, and seemed to give gold some special monetary significance. The one important occasion when a different method of finance was used was in 1937, when the Treasury "sterilized" gold by paying for gold with funds raised through security issues.[28]

It is easier to describe the gold policy of the United States during the years 1934-1948 than it is to describe the resulting monetary standard of the United States. It was not a gold standard in the sense that the volume of gold or the maintenance of the nominal value of gold at a fixed price could be said to determine directly or even at several removes the volume of money. It was clearly a fiduciary rather than a commodity standard, but it is not possible to specify briefly who managed its quantity and on what principle. The Federal Reserve System, the Treasury, and still other agencies supervising the banking system affected the quantity of money by their actions in accordance with a wide variety of objectives. In principle, the Federal Reserve System had the

power to make the quantity of money anything that it wished, within broad limits, but it seldom stated its objectives in these terms. It sometimes, as when it supported the prices of government securities from 1942 to 1951, explicitly relinquished its control. And it clearly was not unaffected in its actions by gold flows. So long as the exchange rate between the dollar and other currencies was kept fixed, the behavior of relative stocks of money in various countries was necessarily close to what would be produced by gold standards yielding the same exchange rates, even though the mechanism might be quite different.

7. 1948-1968 -- the Bretton Woods dollar/gold standard system[29]

The international monetary system that was designed at the Bretton Woods Conference in 1944 reflected professional views on the defects of the arrangements that had prevailed in the 1930s. Protectionist trade policies, exchange controls, and competitive currency depreciation of the pre-World War II period were the cautionary experiences to be avoided by the postwar world. Removal of controls on trade and payments under a system of fixed exchange rates, with adjustment of parities limited to "fundamental" disequilibrium in the balance of payments, accordingly were the goals of the system created by the delegates to the Conference. The lending facilities of the International Monetary Fund were to be available to supplement IMF members' gold and foreign exchange reserves to provide them liquidity when in temporary balance of payments deficit.

Under the Bretton Woods Agreement of 1944, the Articles of Agreement of the International Monetary Fund provided that currency par values should be expressed in terms of gold or the U.S. dollar expressed in gold. IMF members were required to pay 25 percent of their quota subscriptions in gold, with some discretion allowed to reduce the gold proportion for countries with a weak reserve position. Gold subscription payments became a permanent asset of the Fund available to supplement its lending resources; many types of transactions between the IMF and its members were required to be made in gold; and members were required to maintain the gold value of IMF holdings of their currencies. Thus gold was to play a central role in virtually all aspects of IMF operations, and of countries' international monetary obligations as defined in the IMF Articles.*

As the Bretton Woods system evolved in practice, most countries maintained the legal par values for their currencies by intervening in the exchange markets to maintain exchange rates for their currencies at specified levels in terms of the U.S. dollar. Only the United States met its par value obligations by undertaking freely to buy and sell gold in official transactions at the official price -- the dollar's par value. The entire system of exchange rates was thus linked to gold through the convertibility undertakings of the United States.

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*Congressman Henry S. Reuss -- This interpretation distorts the meaning of the Bretton Woods system and exaggerates the role of gold in it. In fact, the Bretton Woods system was designed to allow exchange rates to vary in an orderly way, not to fix them. Its authors, including Keynes, viewed it as the very antithesis of a gold standard.

The establishment of par values for currencies was an important item on the Fund's agenda. Canada, France, the Netherlands, the United Kingdom and the United States declared their par values in December 1946; Germany and Japan in 1953, shortly after they became members; and Italy, not until 1960. Some of these parities were short-lived. An abortive attempt at convertibility of sterling in 1947 ended in September 1949, when the pound was devalued. The Netherlands thereupon devalued the guilder, and France, which had had separate rates for financial and commercial transactions, unified them, depreciating the franc vis-a-vis sterling.

In private gold markets until 1953, the price of gold was at a premium, but the IMF rule required monetary authorities to refrain from selling gold at premium prices. In March 1954, several months after the premium had been eliminated, reflecting balance of supply and demand, the London gold market reopened. For the rest of the decade, the price of gold in private markets remained at $35 an ounce.

With the return of many European currencies to convertibility in 1958, the achievement of the Bretton Woods conception of international monetary normalcy seemed only a matter of time. The outflow of dollars in U.S. official aid, military spending, and private investment, and economic recovery in Europe and Japan had enabled foreigners to add to their holdings of dollars and gold. Apart from the 1950-51 Korean war upsurge, U.S. prices were generally stable until the middle of the decade of the '60s, and their rate of rise generally lower than in the rest of the world. Money supplies in the rest of the world (except in the U.K.) grew at a faster rate than in the U.S. perhaps as a result of the U.S. contribution to the buildup of other countries' monetary reserves. The dollar's status as the reserve currency of the international economy seemed impregnable. Commercial banks and private firms could make foreign payments in their convertible currencies without the approval of central banks. Tariff and quota restrictions on commodity trade among the industrialized countries were eased and foreign trade grew at a rapid rate during the period. International transfers of capital grew, with New York at the center of the flows, and the dollar assumed the role as the vehicle currency in which the borrowers obtained capital and the investors lent their savings.

The successful operation of the system depended on foreign central banks intervening with their own currencies against the dollar to maintain par values, and the United States standing ready to buy or sell gold at $35 per ounce in transactions with foreign monetary authorities. The U.S. balance of payments accordingly was determined largely by the exchange parities other countries established. In general, other countries desired surpluses that would add to their dollar reserves, and the system tended to produce a steadily weakening U.S. balance of payments and growing doubts about the sustainability of the U.S. gold convertibility commitment.

A portent of the troubled future of the system was that 1960 was the first year in which U.S. gold reserves declined below the level of its total liquid liabilities to all foreign holders of assets denominated in dollars (Table 2-1).

Concern over the continuing conversion of dollars into gold led the Treasury to activate the Exchange Stabilization Fund. In its initial operations on March 13, 1961, acting through the Federal Reserve Bank of New York as its agent, the Fund sold foreign D-marks to reduce the premium on that currency.[30] On February 13, 1962, the Bank was also authorized to buy or sell foreign currencies on behalf of the Federal Open Market Committee in both spot and forward markets. For this purpose access to a stock of foreign currencies in addition to those acquired from the Stabilization Fund was needed. The Federal Reserve therefore negotiated a network of swap facilities with the central banks of other countries. The swap provided a specific amount of foreign currency in exchange for an equivalent dollar credit for the foreign central bank, with each party protected against loss due to a change in the par value of the other party's currency. Invested balances of both parties earned the same rate of interest, foreign balances in special U.S. Treasury certificates, Federal Reserve balances in interest-earning deposits abroad. Balances were available for payments to the other party or for foreign exchange market transactions. The swap was a credit line, usually for 3-month periods, renewable at maturity. By drawing on the credit, both parties initially raised their gross reserves. The Federal Reserve normally used the proceeds of a swap to absorb foreign official dollar holdings; these transactions in effect, provided forward cover to foreign official dollarholders, reducing their incentive to convert dollars into gold.

Repayments of short-term swap credits meant a corresponding decline in gross reserves. For the U.S. this could entail a loss of gold. To deter this eventuality, the U.S. began issuing nonmarketable securities, with maturities of 15 months to two years, denominated in the holder's currency, to fund outstanding swap debt.

A further indication of U.S. concern about gold was the prohibition after mid-1961 on holding of gold outside the U.S. by U.S. firms and households, and on March 3, 1965, the abolition of gold reserve requirements against Federal Reserve deposits.

A focus of pressure on the U.S. dollar was the London gold market. In March 1960, the price rose above $35 an ounce, as European central banks and private investors bought gold for dollars. The Bank of England sold gold to stabilize the price, but the U.S. Treasury initially was not willing to restore the Bank's holdings. Hence, when a rise in the price of gold occurred in October, the Bank did not intervene. On October 27, with the price reaching $40 an ounce, the Treasury agreed to sell gold to the Bank, reserving for the Bank the decision on intervention in

Table 2-1

U.S. Monetary Gold Stock and Liquid Liabilities to Foreigners

(millions of dollars)

End of Year (1)	Total Monetary Gold Stock[a] (2)	Total Liquid Liabilities to All Foreigners[c] (3)
1954	21,793	12,454
1955	21,753	13,524
1956	22,058	15,291
1957	22,857	15,825
1958	20,582	16,845
1959	19,507	19,428
1960	17,804	20,994
		21,027
1961	16,947	22,853
		22,936
1962	16,057	24,068
1963	15,596	26,361
		26,322
1964	15,471	28,951
		29,002
1965	13,806[b]	29,115
1966	13,235	29,904
		29,779
1967	12,065	33,271
		33,119
1968	10,892	33,828
		33,614
1969	11,859	41,735
		41,894
1970	11,072	43,291
		43,242
1971	10,206	64,166
		64,223
1972	10,487[d]	78,680
1973	11,652[e]	87,620
1974	11,652	120,325[f]
1975	11,599	127,432[f]
1976	11,598	152,468[f]
1977	11,719	193,977[f]
1978	11,671	244,577[f]
1979	11,172	268,451[f]
1980	11,160	295,627[f]
1981	11,151	343,683[f]

Notes to Table 2-1

Source: Col. (2): Treasury Bulletin, December 1965, IFS-1; July 1975, IFS-1; February 1982, IFS-1.

Col. (3): Treasury Bulletin, July 1975, IFS-2; February 1982, IFS-2.

(a) The Stock includes gold sold to the U.S. by the IMF with the right of repurchase, and gold deposited by the IMF to mitigate the impact on the U.S. of foreign purchases for the purpose of making gold subscriptions to the IMF under quota increases.

(b) The figure excludes $259 million gold subscription to the IMF in June 1965 for a U.S. quota increase that became effective February 23, 1966.

(c) The total includes small amounts due to the IMF arising from gold transactions, amounts due to official institutions, commercial banks abroad, to other foreigners, and to nonmonetary and regional organizations. Nonliquid liabilities to official institutions in the source beginning 1962 through 1973 have been deducted. Years for which two entries are shown show differences because of changes in reporting coverage. Figures on the first line are comparable with those for the following dates.

(d) Change in par value of the dollar on May 8, 1972, increased the recorded value of the total gold stock by $828 million.

(e) Change in par value of the dollar on October 18, 1973, increased the recorded value of the gold stock by $1,165 million.

(f) Includes categories of liabilities previously classified as nonliquid.

the market. European central banks soon after agreed to refrain from buying gold in the London market for monetary purposes whenever the price rose above $35.20, the U.S. price plus shipping costs. When the price fell below that level in 1961, the central banks returned to the market. However, in October 1961, when the price again was reacting to heightened demand, an agreement to create a "gold pool" was reached among the U.S. and seven European central banks. Each member undertook to supply an agreed portion of net gold sales to stabilize the gold market, as the Bank of England, as agent for the group, determined to be appropriate. The members of the pool subsequently agreed not to buy gold individually on the market, but to give the Bank of England the right to buy on their joint account when gold supply exceeded demand, the amount purchased to be distributed in proportion to each country's contribution to the pool. The pool functioned until a surge of buying led to the suspension of the arrangement in March 1968. During the period of the pool's operation, the participants sold a net total of $2.5 billion of gold on the London market, of which $1.6 billion was provided by the United States.

A key development for the international monetary system that was not perceived as such at the time was the acceleration of the monetary growth rate and the subsequent acceleration of the U.S inflation rate in the final years of this subperiod. What was perceived was the cumulative growth of deficits in the U.S. balance of payments. Assets denominated in dollars grew in excess of the demand for them by the rest of the world. Their conversion into gold, by shrinking U.S. gold reserves, threatened one of the basic underpinnings of the Bretton Woods structure, namely, convertibility of dollars into gold.

The Bretton Woods system might have been able to survive an end of gold convertibility. It could not survive the inflationary policies of the center country that characterized the decade from the mid-60s on. Crisis management by the IMF and the central banks of the leading industrialized countries became the hallmark of the international monetary system during the heyday of Bretton Woods.[31] The chief currency under pressure, apart from the dollar, was sterling. Persistent or recurring U.K. balance of payments deficits impaired the credibility of sterling's external value, already insecure by reason of the size of sterling balances held worldwide relative to U.K. gold and foreign exchange reserves. Private agents displayed lack of confidence in the dollar and sterling by shifting to currencies whose external values were regarded as stable or likely to appreciate (during this period, the D-mark and guilder). Repeated rescue operations to support the exchange value of sterling were overwhelmed in November 1967. Sterling, however, was a sideshow. The main act was the dollar's performance.

The gold market was the market in which participants expressed lack of confidence in the dollar-based international monetary system. After the devaluation of sterling in November 1967, the

vulnerability of the dollar took center stage. In the winter of 1967-68, a surge of demand for gold threatened both the London gold pool and the $10 billion statutory backing for Federal Reserve notes. On March 12, 1968, the U.S. gold reserve requirement was abolished. Ostensibly, the gold stock was then available for conversion of dollars held by foreign central banks. On March 17, however, the London gold market was closed to avoid further U.S. gold losses. The members of the gold pool announced that they would no longer supply gold to the London or any other gold market and that they no longer felt it necessary to buy gold from the market. Official transactions between central banks were to be conducted at the unchanged official price of $35 an ounce, but the gold price for private transactions was to be determined in the market. Central banks were still free to buy U.S. Treasury gold for dollars but some in fact refrained from doing so. Germany had explicitly forsworn converting its dollar holdings into gold in May 1967.

One measure the U.S. authorities might have taken was a rise in the dollar price of gold, thus increasing the value of the stock and the flow of reserve assets. If other countries did not follow suit by adopting a proportional increase in the price of gold in their currencies, the U.S. in this way might have obtained a devaluation of the dollar. Had the price of gold risen, the gold demands of other countries might have been satisfied without the rundown in U.S. reserve assets. Some countries might also have revalued because of the inflationary consequences of their payments surplus, given the gold-based increase in their asset holdings.

The U.S., however, resolutely opposed a change in the monetary price of gold. Such action would have required an Act of Congress which would have produced a long and unsettling debate in the two Houses, during which time the foreign exchange markets would have been disturbed. Moreover, there was no assurance that other countries would not make corresponding changes in their own par values, and it was feared that confidence in the stability of the monetary system would be seriously impaired by a change in the official dollar price of gold. Given the fixed price of gold when national price levels were rising, gold became an undervalued asset with a resulting gold shortage.

The measures adopted to avoid exchange rate changes were intended in part to limit international transmission of price changes.[32] Surplus countries tried to avoid price increases; deficit countries, price declines, both as external consequences of their balance of payments positions. Intermittently, depending on cyclical conditions, countries in both categories took steps to right payments imbalances.

Since palliatives to improve the balance of payments proved ineffective, deficits had to be financed either by drawing down reserves or seeking external credit or borrowing facilities, while surpluses obviously increased reserve accumulations. During the heyday of the Bretton Woods system, despite the growth of dollar assets, the adequacy of international liquidity, in the sense of

the quantity of international monetary reserves, was widely debated. Discussions during this period growing out of concern for the supply of reserves led to the creation of Special Drawing Rights by the IMF.[33] Until 1968, international reserves, however, were limited to gold, convertible foreign exchange, and reserve positions in the IMF.

Contrary to the expectation of the way the Bretton Woods system would operate, financing of payments imbalances for the most part was arranged through credits governments extended on a bilateral basis and through international borrowing and lending activities of commercial banks. Thus, facilities for international borrowing and lending activities, apart from the IMF drawing facilities, became an increasingly important part of the system.

Official dollar reserves of the surplus countries were augmented at times by actions those countries took in the Eurodollar market. Dollars acquired by their central banks and deposited in the Eurodollar market either directly or through the Bank for International Settlements would usually be relent to private borrowers who could resell the dollars to the central banks.

In sum, world reserves grew rapidly during the period.

8. 1968-1973 -- the breakdown of the Bretton Woods system

The devaluation of sterling in November 1967 was not regarded as the prelude to changes in the par values of other currencies, the devaluation of the dollar in terms of gold, the realignment of exchange rate relationships among the major currencies, and the substitution of a short-lived regime of central rates for the par value system -- all of which took place between November 1967 and December 1971. Instead, it was hoped that balance in the U.S. and U.K. external payments was finally on the point of achievement, and that the creation of a Special Drawing Rights Facility in the IMF would provide the basis for future expansion of official reserves, supplementing dollars, sterling, gold, and other reserve assets.

The hope was belied. The pattern of deficits and surpluses persisted and worsened in 1970 and 1971. The U.S. current account surplus dwindled and the U.S. capital account deficit grew dramatically, producing current account surpluses and capital inflows in other countries. The allocation of SDRs in 1970-72 provided additions to already massive acquisitions of dollar reserve assets.[34]

As in the heyday of the Bretton Woods system, disbelief of market participants in the pegged external values of currencies precipitated turbulence in the foreign exchange market.

The persistent outflow of funds from the U.S. overwhelmed foreign exchange markets in the first few days of May 1971. On May 5, seven European countries closed their foreign exchange markets, and five others on several continents withdrew their

support for the dollar and suspended dealings in D-marks, guilders, and Swiss francs. On May 9, both Germany and the Netherlands announced that their currencies would float, since they could not maintain exchange rates within the established margins.

In March 1971, before the panic of the foreign exchange market, there was a request from several European countries for conversion of officially held dollars into gold to enable them to pay for an increase in their IMF quotas. The payout reduced the U.S. gold stock to the lowest level since 1936. The dollar outflow meanwhile accelerated, leading, as noted, to the floating of European currencies. The imbalance between U.S. gold reserves and outstanding dollar liabilities and the weakening U.S. balance of payments position occasioned the changes the U.S. introduced on August 15, 1971, to achieve a dollar devaluation. Chief among them (besides a price and wage freeze, tax increases and federal government spending cuts) was a 10 percent import surcharge on 50 percent of total U.S. imports. The convertibility of the dollar into gold was formally suspended, as was the use of the swap network through which dollars could be exchanged with central banks for other currencies. The effect was to oblige other countries to hold dollars or to trade them for a price determined in the market and so revaluing their currencies. Foreign exchange markets abroad, except in Japan, shut down. The Japanese initial attempt to maintain the pegged rate of the yen compelled them to purchase $4 billion in the two weeks after August 15. The yen was then freed to float upward; other currencies floated when exchange markets were reopened on August 23. France introduced a dual exchange market, with trade and government exchange dealings based on the par value, financial exchange dealings at a floating rate. Restoration of a repegged system of exchange rates, however, remained the goal of the U.S. and its partners.

After much negotiation, a readjustment of currency parities was arranged at a meeting at the Smithsonian Institution in Washington on December 17-18, 1971. In return the U.S. agreed to withdraw the import surcharge. The par values of four currencies were revalued by percentages ranging from 2-3/4 (Belgium, Netherlands) to 7.7 percent (Japan), with the proviso that 2-1/4 percent margins of fluctuations (replacing the former 1 percent margin) above and below the new so-called "central" exchange rates were permissible. The Canadian dollar continued to float. The Smithsonian agreement also specified that the official dollar price of gold would henceforth be $38, a formal devaluation of the dollar of 7.9 percent. While the dollar remained inconvertible, the new official dollar price of gold implied a depreciation of the gold-value of the dollar rather than an appreciation of the dollar value of other currencies.

The central rates established at the Smithsonian meeting crumbled during the nine months following the floating of sterling in June 1972. Once again, the disbelief of market participants in those rates was revealed in the gold and foreign exchange

markets. The London free market price of gold rose with few reversals. Money growth and inflation rates continued to rise in the U.S. and both the balance of trade and the U.S. balance of payments deficit soared, with a corresponding surge in dollar holdings of the industrialized European countries and Japan. Capital controls were imposed in 1972 by the Netherlands and Japan before sterling was floated and Germany followed suit afterwards. On February 10, 1973, Japan closed its foreign exchange market and suspended support of the dollar. New central values were set in a hurried round of negotiations, although the lira, yen, Canadian dollar, the U.K. and Irish pounds, and the Swiss franc all floated. Again, the official dollar price of gold was raised (this time to $42.22), leaving unchanged the gold value of other currencies. The new central rates did not staunch the flow of dollars abroad, and a further crisis erupted in March 1973. This time the major industrial countries discontinued pegging their exchange rates to the dollar. The EEC countries in the snake, which had been activated in April 1972, plus Sweden and Norway agreed to a joint float, with Germany revaluing by 3 percent (in terms of SDRs) in relation to the other members. Canada, Japan and Switzerland floated individually, as did a handful of other countries. Though a large group of non-industrialized countries pegged to the dollar, the dollar currency area worldwide contracted; smaller groups of countries pegged to the French franc or to the pound.

In retrospect, it is likely that under an adjustable peg system, such as the Bretton Woods system turned out to be, whichever currency is at the center ultimately becomes overvalued. The reason is the asymmetry of action of the nonreserve currency countries in the system. An overvalued currency tends to induce prompt readjustment because weak exports and excessive imports create pressure for action. On the other hand, an undervalued currency tends not to produce pressure for readjustment because strong exports and weak imports are easy to live with. On net, the nonreserve currency countries that demanded action by the United States to right its balance of payments produced devaluations of their currencies against the dollar.

9. 1973-1981 -- the United States on an inconvertible paper standard

When pegged rates were abandoned in March 1973, it was initially assumed that floating was a temporary expedient to be succeeded by a reformed par value system. The U.S. took the lead in opposing the return to such a system. The dispersion of inflation rates among the industrialized countries and the higher variability of rates in inflation since the late 1960s enforced more frequent changes of exchange rates. Under the earlier system, changes in par values were delayed until foreign exchange market crises were provoked. The lesson since the shift in March 1973 was that floating provided more flexibility. The U.S. view prevailed. With the suspension of official gold convertibility, and widespread departures from the IMF's par value

provisions, negotiations were held to codify, in the form of amendments to the IMF Articles, the international monetary arrangements that had evolved in practice.

Under amendments to the IMF Articles agreed in early 1976 and implemented in April 1978, gold was formally removed from its previous central role in the IMF and IMF par value obligations were eliminated. The official IMF gold price was abolished, as were also par value, gold convertibility, and maintenance of gold value obligations. Gold was eliminated as a significant instrument in IMF transactions with members, and the IMF was empowered to dispose of its large gold holdings. Although the amended IMF Articles do provide for the future possibility of establishing a system of stable but adjustable par values, such a decision by the Fund would require an 85 percent affirmative vote by the IMF members, thus giving the United States an effective veto. The provisions in the amended IMF Articles relating to establishment of par values specify that the common denominator of the system shall not be gold or a currency.

It was widely believed that the desired stock of reserve assets would contract in a world of floating exchange rates compared to a world of pegged rates. In fact, official holdings of reserve assets have increased in every year since the float. From 1950 to 1969, on average, world reserves including gold rose by less than 3 percent per year, the foreign exchange component by 5 percent per year. From the end of 1969 to the end of 1972, the average annual rate of increase of foreign currency reserves was 43 percent. Since 1973, the average annual rate of increase has been 15 percent. The main source of growth of foreign currency reserves since 1973, as in earlier years, has been in the form of dollars. The apparent demand for reserves has increased even under floating rates.

A significant change in the distribution of foreign exchange reserves has occurred since October 1973 as a result of the rise in the price of oil. Total foreign exchange reserves of industrial oil-importing countries have increased at a slightly slower pace than reserves of all countries, which sextupled since 1970, but the major oil-exporting countries, which in 1970 held only about 8 percent of total world foreign exchange reserves, by the end of the decade held about one-quarter of the total. The motivations of oil-exporting countries for holding foreign-currency denominated assets are, however, clearly quite different from those of industrial countries.

Although other currencies have increased their roles as reserve currencies in recent years, the dollar has continued to serve as the main reserve currency, accounting for on the order of four-fifths of the world's official foreign exchange reserves. To the extent of intervention, as under pegged rates, the U.S. has settled its payments deficits in dollars, which foreigners willingly add to their asset holdings and use in payments to other countries. (There has been no intervention in foreign exchange markets by the

U.S. for a year and it is forseeably nil, so there are no current payments imbalances.) The dollar also remains the main official intervention currency in foreign exchange markets, and serves as a common vehicle currency in the interbank market for foreign exchange. In effect, the world has adopted an inconvertible dollar standard.

One change in the international reserve profile was the creation on March 13, 1979, of the European Monetary System -- replacing the "snake", the European joint float -- by nine European countries (Belgium, Denmark, France, Germany, Italy, Luxembourg, and the Netherlands; the U.K. is a member but does not participate in intervention arrangements). The center of the system is the European Currency Unit (a basket of all nine currencies), issued by the European Monetary Cooperation Fund in an amount equal to a deposit of 20 percent of gold and dollar reserves of participating countries, to be used for settlement of intervention debts. ECUs, now included in foreign exchange holdings of the participating countries, do not increase world monetary reserves, except for revaluation changes. The ECUs issued value gold on the basis of either the average market price of the six preceding months or the average market price on the day before issue, whichever is lower.

With gold valued at market price, world gold reserves at the end of 1979 were larger than foreign exchange reserves. The U.S. and a number of other countries, however, continue to value their gold assets at the old official price of $42.22 per ounce, despite the abolition of an official IMF price for gold.

After the float, the U.S. took the position that gold should be demonetized. An opposing view was promoted principally by France. Developments reflect the extent to which one or the other dominated international decisions. At issue was the use of gold in official transactions at the free market price, and the substitution of gold for the dollar in inter-central bank settlements at a fixed but higher official price.

The prescription against official transactions in the gold market that had been adopted in March 1968 was terminated in November 1973, but the official price of $42.22 posted in February 1973 was so far below the private market price that central banks were unwilling to buy and sell gold among themselves at the official price. The central banks were equally reluctant to sell gold on the private market in view of the possible depressive effect of sales on the market price or in anticipation of the opportunity to sell in the future at a higher price. In December 1973, the IMF terminated arrangements made four years earlier, under which it had been prepared to purchase gold from South Africa.

In June 1974, countries in the Group of Ten agreed that gold could be used as collateral for inter-central bank loans

at a price other than the official gold price, and in September, Italy obtained a loan from Germany on the pledge of Italian gold valued at a mutually agreed price. In December, the U.S. and France agreed that central banks were at liberty in valuing gold holdings for balance sheet purposes to use the market price, which the Bank of France proceeded to do.

Early in 1975, the countries in the Group of Ten and Switzerland agreed for a two-year period not to increase the sum of their and the IMF's gold holdings and to contribute no support to the price of gold in the free market. In August 1975 agreement was reached by an IMF committee that[35]

-- the official price of gold would be abolished

-- members would not be obliged to use gold in transactions with the Fund

-- a part of the Fund's gold holdings would be sold at auction for the benefit of developing countries and another part would be returned to member countries in proportion to their quotas.

The first public auction of part of the Fund's gold holdings was held in the June 1976. A four-year sales program was scheduled. In the first two years, 16 auctions were held approximately every six weeks, with aggregate sales of 12.5 million ounces. The balance of 12.5 million ounces was sold mainly in 24 auction lots through May 1980, and a small amount in noncompetitive sales. Restitution of 25 million ounces to member countries over a four-year period was completed in December 1979/January 1980.

The U.S. repealed the prohibition against gold holding by U.S. residents as of December 31, 1974, and Treasury offered gold at auction to help meet the expected increase in public demand for gold. The first auctions were held in January and June 1975, when the Treasury disposed of 1.3 million ounces. No auctions were held in 1976 and 1977. They were resumed in 1978 and 1979, when the Treasury sold 4.0 and 11.8 million ounces, respectively, motivated both by the desire to reduce the U.S. balance of payments deficit on current account and by the belief "that neither gold nor any other commodity provides a suitable base for monetary arrangements."[36]

The gold sales were equivalent to open market operations, in their economic effect, approximating $0.8 billion in 1978 and $3.3 billion in 1979. Gold sales by the Treasury reduced the public's deposits and also bank reserves. The sales thus initially may have served as a partial offset to Federal Reserve open market purchases of government securities that increased the public's deposits and bank reserves. It was a partial offset only because the System's portfolio of government securities showed a net increase of $7.7 billion

in 1978 and of $6.9 billion in 1979. It was an offset initially only depending on the Treasury's use of the proceeds of the gold sales. To the extent that the Treasury used the proceeds to retire gold certificate credits and thereby reduced its deposits at the Federal Reserve, the monetary effects of the gold sales were contractionary. However, to the extent that it disbursed the remainder of the funds it acquired, the Treasury's action restored the public's deposits and bank reserves, so the contractionary effect on the money supply of the gold sales was limited.[37]

Since 1979, the Treasury has sold no gold bullion. In July 1980, however, it began the sale of half-ounce and one-ounce gold medallions, in accordance with P.L 95-630, November 10, 1978. The legislation provided that not less than 1 million troy ounces of fine gold per year be struck into medallions and sold to the public over a five-year period at a price covering the market value of the gold content plus all costs. At the end of 1981, U.S. Government gold inventories amounted to 264.1 million ounces.

Direct official intervention to maintain the open market price of currencies within narrow limits has not lessened under floating rates compared with the pegged parity system. Intervention in some countries is assigned to nationalized industries that borrow foreign currency in order to buy their own currency on the foreign exchange market, in Italy and the U.K. with government provision of insurance against foreign exchange loss; in France with no such provision. In Japan and sometimes France, dollar deposits held by the government at commercial banks are used for intervention. Italian and French commercial banks intervene at the government's behest. Central bank intervention may thus be conducted by a variety of institutions at the direction of the monetary authorities.

Intervention by major industrial countries has been motivated by a number of considerations during the period since generalized floating began in early 1973. The United States has intervened primarily to avoid disorderly market conditions and at times (notably after October 1978) to correct severe movements in the dollar's value not related to fundamental economic conditions. Since early 1981, U.S. policy has been to intervene only in case of severe conditions of market disorder. Other countries also have, from time to time, joined in efforts to maintain the value of their currencies within narrow margins around central values established in terms of one another. Such efforts have been supported by both intervention and other policies.

There was apparently little intervention during the four months following the float in February 1973. The progressive decline in the weighted exchange rate of the dollar between February and July 1973 vis-a-vis a group of major currencies led to a decision by the governors of the central banks of

the Group of Ten to support the dollar. In July 1973, the Federal Reserve began to intervene in the New York exchange market to avoid "disorderly market conditions." Intervention was effected with the Federal Reserve's own small holdings of foreign currency or by activating the much larger total of foreign currency resources available through swap agreements.

Concerted exchange intervention was agreed to by the Federal Reserve, the Bundesbank, and the Swiss National Bank in May 1974, after several months of dollar depreciation. The dollar strengthened until September when renewed weakness developed through March 1975. The explanation given by the Board of Governors was:[38]

> Contributing to this decline in the dollar's exchange value was the asymmetry in intervention policies between countries with weaker currencies and those with strengthening currencies. Intervention sales of dollars by countries supporting weaker currencies exceeded purchases of dollars by countries resisting the appreciation of their currencies. The net effect of these operations was to add to the market supply of dollars, depressing the dollar's average exchange rate.

Explicit though limited approval of management of floating exchange rates was expressed by the IMF in guidelines it issued in June 1974.[39] Acceptance of intervention as desirable to counter disorderly market conditions was reiterated in a November 1975 meeting that preceded the revision of the IMF's Articles of Agreement in 1976.

The dollar showed little weakness in 1976, and the Federal Reserve intervened to sell dollars on behalf of other currencies. In January the Italian lira came under pressure. The decline in its exchange value weakened the French franc within the European currency "snake," leading to substantial French intervention. Massive intervention to support sterling, which declined from $2.00 in March to $1.77 in mid-September, was provided by a $5.3 billion stand-by credit arranged by the Group of Ten countries, Switzerland, and the Bank for International Settlements. Sterling's further decline later in the year led to an IMF drawing, further borrowing, and a facility to reduce official sterling balances. Intervention was also conducted to moderate appreciations of the D-mark, the Swiss franc, and the yen.

Renewed weakness of the dollar in early 1977 was masked in part by large intervention purchases of dollars by the Bank of England and the Bank of Italy undertaken to limit the appreciation of their currencies and to rebuild their reserve positions. The Federal Reserve intervened only occasionally during the first three quarters but, as the dollar dropped more sharply, the Federal Reserve increased the scale of intervention. In January 1978, the Federal Reserve was joined

by the U.S. Treasury Exchange Stabilization Fund, which negotiated a new swap facility with the Bundesbank.

The decline in the weighted average exchange value of the dollar accelerated in 1978 through the end of October.[40] An anti-inflation program announced on October 24 (involving fiscal restraints, voluntary wage and price standards, and a reduction in the cost of regulatory actions) did not moderate the dollar's slide on the exchange market. On November 1, the Administration and the Federal Reserve took further action. Foreign exchange resources equivalent to $30 billion were mobilized to finance intervention as needed to support the dollar in cooperation with Germany, Japan, and Switzerland. The Federal Reserve raised the discount rate from 8 1/2 percent to 9 1/2 percent, and imposed a 2 percent supplementary reserve requirement on large time deposits. During the last two months of 1978, U.S. exchange market intervention in support of the dollar totaled $6.7 billion, accompanied by significant purchases of dollars by Germany, Japan, and Switzerland. By mid-June 1979, the dollar's value (measured on a trade-weighted basis) had risen from its 1978 low by about ten percent, and U.S authorities had repurchased a greater sum of foreign currencies that had been sold in the last two months of 1978. The dollar then began to weaken, and U.S. intervention sales of foreign currencies, chiefly D-marks, resumed. Gross sales amounted to $9-1/2 billion equivalent between mid-June and early October. In addition, the Federal Reserve raised the discount rate to 11 percent in September.

On October 6, 1979, the Federal Reserve announced a wide-ranging set of measures to tighten monetary control (a shift in operating procedures from control of the Federal Funds rate to control of bank reserves; an increase in the discount rate to 12 percent; a marginal reserve requirement on banks' managed liabilities), and the dollar began to appreciate. After April 1980, however, the dollar began to decline, a movement that was reversed in September. From October 1979 on, the United States intervened frequently, operating on both sides of the market. When the dollar was in demand, it acquired foreign currencies in the market and from correspondents to repay earlier debt and to build up balances. The United States was a buyer from February to March. From late March to early April and beyond, it sold D-marks, Swiss francs, and French francs. By the end of July, the U.S. was again accumulating currencies, making net purchases of D-marks and lesser amounts of Swiss francs and French francs. By the end of 1980, the U.S. was intervening in the foreign exchange markets virtually on a day-to-day basis. For 1980 as a whole, U.S. authorities were net buyers of foreign currencies in an amount of $8.7 billion equivalent.

Shortly after taking office, the Reagan Administration announced its intention to limit U.S. intervention only to instances of serious market disorder. The reason given for

the shift in policy was the Administration's view that intervention is costly and ineffectual -- and may indeed be harmful -- and that the way to restore exchange rate stability is by the creation of more stable domestic economic conditions. Many foreign central banks, while generally in agreement with the basic principles underlying the Administration's views, continue to employ a more active intervention policy. It is doubtful, however, that such intervention has much effect over time on the exchange value of their currencies.

The Bretton Woods system broke down in part because non-reserve currency countries were unwilling as a group to adopt the inflationary policies the reserve-currency country was pursuing. To achieve independent monetary policy, the only workable exchange rate system was floating, and it was hoped that flexible exchange rates would permit a country to choose its desired long-run trend rate of monetary growth and of inflation, independent of other countries' choices.*

Even when autonomy exists, monetary policy may perform badly. It is in this context that the movement in a number of countries during the 1970s toward the improvement of monetary control must be viewed.

Central banks have typically used short-term interest rates as the instrument to control monetary growth. Under non-inflationary conditions, this conduct produced a procyclical movement in monetary growth. Under the gathering inflationary conditions since the mid-1960s, the inflation premium that became imbedded in interest rates made the instrument unreliable as an indicator of restriction or ease. Reliance on it contributed to a secular rise in the rate of monetary growth. Central banks in a number of countries, some more willingly than others, in the 1970s adopted targets for monetary growth without necessarily abandoning their desire to hold down interest rates or exchange rates, so that successful targeting has not invariably been the result. If it was hoped that public announcement of targets for monetary growth would itself reduce expectations of inflation, the failure time after time to achieve the targets has diluted any possible effect on the formation of expectations.

The period since October 6, 1979, when the Federal Reserve announced a new procedure to improve control of monetary aggregates, is probably too brief to pronounce judgment on the likelihood that the System will achieve its objectives of deceleration in monetary growth. The inconvertible paper monetary standard operated at the discretion of monetary authorities is on trial.**

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*Congressman Henry S. Reuss -- While I support floating exchange rate arrangements, I do not subscribe to this analysis.

**Congressman Henry S. Reuss -- On the contrary, it is monetarism that is on trial.

What is the current role of gold? IMF members no longer define the exchange value of their currency in terms of gold and account for gold at any price consistent with their domestic laws. Gold is no longer the numeraire of the international monetary system. The introduction of SDRs (valued in terms of a basket of national currencies, as of July 1974, rather than in terms of gold) was intended to supplement the dollar, gold, and other reserve assets in the international monetary system.*

The market price of gold until 1980 increased more rapidly after the float than the prices of most other durable assets.[41] The future role of gold in the international monetary system as a reserve asset and as a determinant of the world's price level may depend importantly on the

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*Herbert J. Coyne -- Again, the Friedman-Schwartz book acknowledges the present monetary role of gold on p. 684 of A Monetary History of the United States, 1867-1960, in the summary chapter:

"Today gold is primarily a commodity whose price is pegged rather than the keystone of the world or the U.S. monetary system. However, the legacy of history and the use of gold as a vehicle for fixing exchange rates still give it a monetary significance possessed by no other commodity subject to government price-fixing." (Emphasis added)

In addition, while gold does not have an officially defined position, this paragraph fails to take into account the acceptance of gold as the world's most important reserve asset and its current use in facilitating official transactions. Further, it is not mentioned that efforts to demonetize gold have faltered. In addition, gold has been utilized in the European Monetary System, gold restituted to member countries by the IMF was largely kept and not converted into foreign exchange, and less developed countries have had a tendency to build their gold stocks. Central banks in general have been net buyers of gold for the first time since 1972, and many central banks are remonetizing gold and using it for government financing purposes. As one observer of gold notes, "The simplest way to acknowledge gold's role is to buy it."

In the Journal of Law and Economics, Joseph Gold, the former legal counsel of the IMF, comments on gold's present and future status:

"It is a widespread view among members that gold continues to be a reserve asset and continues to have monetary functions. This view persists notwithstanding the change in the legal status of gold and the absence of its use in official settlements or in support of currencies."

performance of the dollar. If the performance of the dollar improves, gold may play a minor role even if its use as a reserve asset continues. Failure of the dollar to perform in a stable fashion in the future leaves open the possibility of a restoration of a significant role for gold.*

Summary

The United States adopted a de facto gold standard in 1834. Thereafter, it adhered to some form of a gold standard with only two extended interruptions, once for 17 years in the 19th century, and again in this century, for 13 years, if one dates the interruption from 1968, when the two-tier London gold market was created; for 10 years, if one dates it from 1971 when convertibility of the dollar, even for official transactions, was formally suspended; for 8 years, if one dates it from 1973, when floating exchange rates were adopted by the United States and the industrial countries. The political objective of returning to the gold standard was achieved in the 19th century case, despite opposition from silver and paper money advocates. Whether that political objective exists or is currently achievable cannot be determined from a retrospective view.

In addition to the two extended interruptions in U.S. adherence to a gold standard, temporary suspension of a few weeks to a year's duration occurred in 1837, 1839, 1857, 1893, 1907, 1917-19, and 1933. In all cases but the latter two, the years in question climaxed periods of economic expansion in the United States, fostered by external as well as internal factors. The pace of the expansions raised U.S. prices and incomes above those prevailing in the rest of the gold standard world. To bring the U.S. price and nominal income structure into alignment with that of its trading partners entailed reductions in the U.S. money stock, usually resulting from a decline in U.S. gold reserves and in capital imports from abroad. Prices, output, and employment subsequently declined, accompanied by bankruptcies of firms and bank failures. Suspension of specie payments in the years under review was a means of mitigating the costs of deflationary adjustment that maintaining par values of the exchange rate imposed. The devaluation implicit in suspension gave the economy a breathing spell. With recovery, the former par value of the exchange rate was restored.

No special comment is needed on the World War I restriction of interconvertibility between paper money and gold and the free international movement of gold. The situation in

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*Congressman Henry S. Reuss -- I dissent from this statement.

1933, however, does require comment. That year was in no respect similar to the earlier examples of temporary devaluations. The year 1933 was a year of a business cycle trough after four years of deflation. The deliberate reduction in the gold content of the dollar was arranged to achieve a price rise of nongold commodities, and the devaluation was never reversed. Moreover, the fixed exchange rate gold standard to which the United States returned in 1934 was the same in name only to the pre-1933 gold standard.

Before 1914, gold flows in and out of the United States were an important determinant of the expansion or contraction of the economy. Between 1919 and 1933, large outflows of gold occasioned contractionary actions by the monetary authorities; small outflows and both large and small inflows of gold were sterilized. After 1934, both inflows and outflows were not permitted to determine monetary growth and the performance of the economy. When the gold reserve ratios applicable to Federal Reserve deposits and notes were close to the minimum legal requirement, the minimum was lowered and eventually abolished. Gold became a symbol rather than an effective constraint on the operation of the monetary authorities.

Charts 2-1 and 2-2 summarize the evidence on the performance of the economy; Charts 2-3 and 2-4 summarize evidence on the purchasing power of gold, whether the gold standard was suspended or in effect.

Trend movements in prices are the most striking feature of Chart 2-1. From 1834 to 1861, a mild downward trend prevailed, with pronounced cyclical upswings and downswings around the trend. The greenback period from 1862 to 1878 shows the sharp wartime price rise to 1865 followed by a decline of equal magnitude spread over the years to the close of the period. That decline persisted during the gold standard period to 1896, reflecting the disparity between the rate of growth of the monetary gold stock and the enlarged world demand. The reversal of the downward trend from 1896 to 1914 reflects the dramatic increase in world gold output during that period. World War I, like the Civil War period, shows a steep price increase to 1920, followed by the steep price decline from 1920 to 1921, rough stability during the 1920s, and then the great deflation of 1929-33 that restored the wholesale price series to its pre-World War I level, and the implicit price deflator to a somewhat higher point than the pre-World War I level. The contraction of 1937-38 is apparent in the post-1933 upswing which continues into and beyond World War II. The wholesale price series shows rough stability in the early 1960s, whereas the implicit price deflator continues an upward movement. Both series accelerate after the mid-1960s.

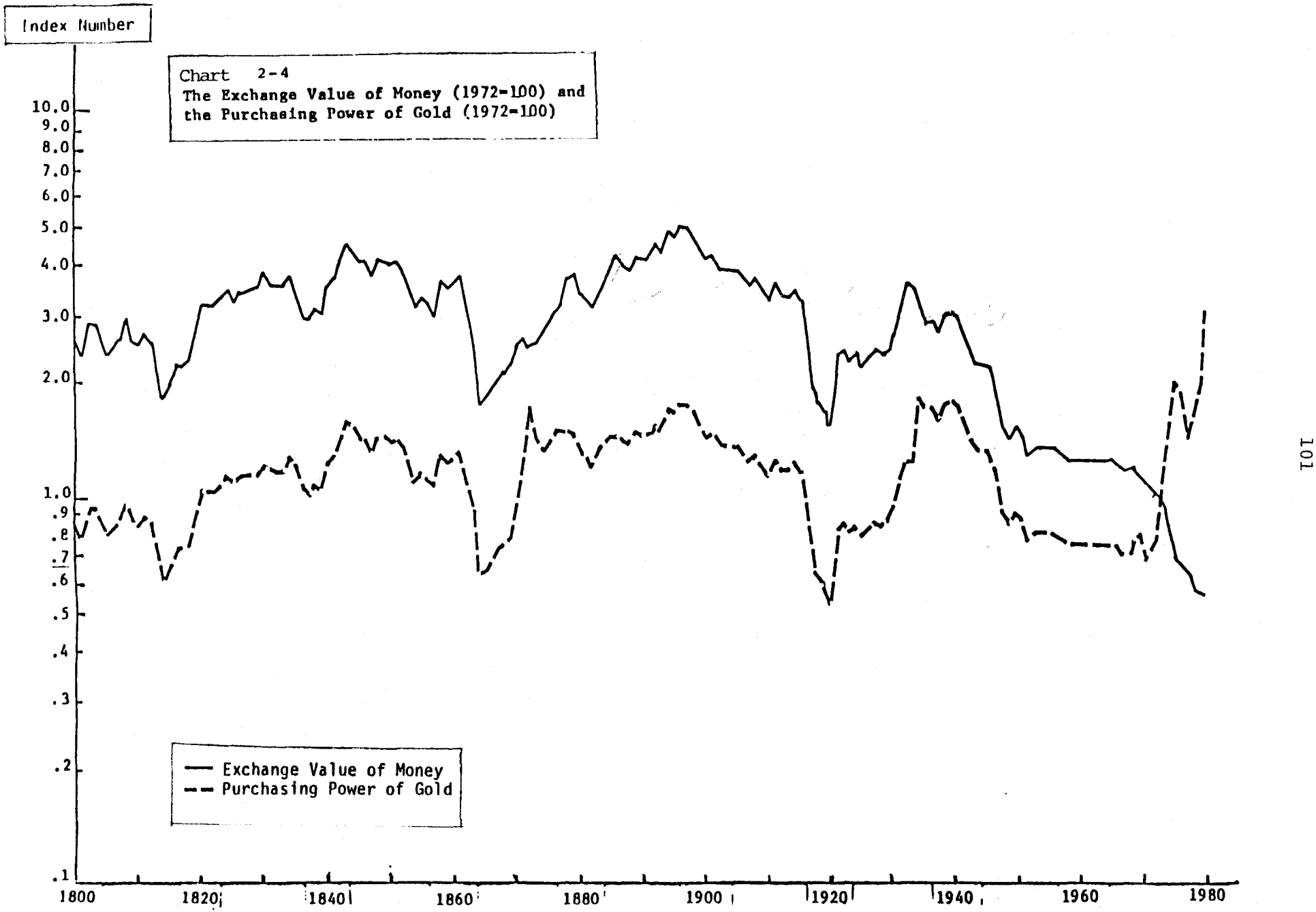
Index Number
Chart 2-4
The Exchange Value of Money (1972=100) and the Purchasing Power of Gold (1972=100)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
.9
.8
.7
.6
.5
.4
.3
.2
.1
1800
1820
1840
1860
1880
1900
1920
1940
1960
1980
Exchange Value of Money
Purchasing Power of Gold

Chart 2-2 plots the deviations of real per capita income from its long-run trend. The trend has been strongly positive from 1870 to 1980, as might be expected. There was substantial variance about the trend before 1914 but far smaller in magnitude than from 1914-47, reflecting the sharp swings in the three interwar deep depressions, 1920-21, 1929-33, 1937-38, as well as the wartime movements. However, the pre-World War I variance was marginally greater than the variance of the deviations from trend post-1948. A comparison of the standard deviations of year-to-year percentage change in real per capita income also shows little difference between the pre-World War I gold standard experience and post-World War II experience: 5.8 percent vs. 5.5 percent. Unemployment was on the average lower in the pre-1914 period than in the post-World War I period; 6.8 percent vs. 7.5 percent. But again, excluding the interwar years, unemployment 1946-80 averaged 4.8 percent, reflecting the government's commitment to maintaining employment.

Chart 2-3 compares the purchasing power of gold, derived in index form from the quotient of the price of gold divided by the wholesale price index, with the U.S. monetary gold stock. Under the gold standard, a rise in the purchasing power of gold ultimately increased the growth of the U.S. monetary gold stock by raising the rate of world gold output, and inducing a shift from nonmonetary to monetary use of gold.* Movements in the purchasing power of gold thus preceded long-term movements in the monetary gold stock. This relationship underlay the reversion of the price level towards stability under the gold standard. Price increases or decreases tended to be reversed after a run of years.** Persistent inflation of post-World War II experience, without a force to reverse the trend, could not have occurred under a fully functioning gold standard. The absence of this positive association after World War II between the purchasing power of gold and long-term movements in the monetary gold stock reflects the loosening of the link between the money supply and the gold stock.

Over shorter periods, the relationship under the gold standard was in the opposite direction. Changes in the monetary gold stock, by influencing changes in the money supply, produced a negative association between the purchasing power of gold and the gold stock. Thus an increase in the

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*Congressman Henry S. Reuss -- New discoveries were a far more important source of change in the world gold stock than changes in demand.

**Congressman Henry S. Reuss -- Such price stability as the world achieved under the gold standard was measured over decades and centuries, not years. From year-to-year price level changes were as common and as serious as today.

gold stock would lead to an increase in the price level, and for a given nominal price of gold, lower the purchasing power of gold. The negative association may be observed during the gold standard period, changes in the monetary gold stock leading short-term movements in the purchasing power of gold.

Chart 2-4 compares the exchange value of money, computed as the reciprocal of the wholesale price index, with the purchasing power of gold. The two series are closely related until 1968, when the two-tier market for gold was introduced. The direct relationship until 1968 reflected the existence of a fixed nominal price of gold. The inverse relationship thereafter reflects the increase in private demand for gold as a hedge against inflation and political instability, once private transactions were determined in the free market.

To conclude: The gold standard provided long-term but not short-term price predictability. Long-term inflation or deflation under the pre-World War I gold standard would predictably be reversed as gold output was discouraged or encouraged by decreases or increases in its purchasing power. Thus the price level tended to revert toward a long-run stable value under the gold standard, providing a degree of predictability with respect to the value of money. Subsequent to World War I, the discipline of the gold standard came to be regarded as an impediment to the management of the economy to achieve the objectives of growth and high employment. The deep depressions of the inter-war years were the measure by which the economy under a gold constraint was judged to be a failure. The loosening of the link to gold after World War I and its abandonment fifty years later reduced long-term price predictability. Belief in long-term price stability eroded as public perception of the absence of a long-run constraint on monetary growth took hold. Although price stability was generally included among the goals of the post-World War II era, in fact stability of employment took precedence. In the event, by early 1981, neither goal was in sight.

Notes to Chapter 2

1. Act of April 2, 1792, sec. 9, in National Monetary Commission Laws of the United States Concerning Money, Banking, and Loans, 1778-1909 [Laws], Washington: Government Printing Office, 1910, p.475.

2. J.L. Laughlin, The History of Bimetallism in the United States, 4th ed., New York: Appleton, 1901, pp. 51, 57.

3. Laws, p. 496.

4. Laughlin, op. cit., pp. 64-71.

5. Act of Janaury 13, 1837, in Laws, p. 502.

6. Laughlin, op. cit., p. 77. See also David A Martin, "1853: The End of Bimetallism in the United States," Journal of Economic History 33 (December 1973): 825-44. Laughlin dates the 4 percent premium on silver coins as of 1853; Martin dates it as of 1851.

7. Laws, p. 512, The Act of Feb. 21, 1853, states the standard weight of silver in a 50-cent coin as 192 grams, which is equivalent to 172.8 grams per one-half a fine troy ounce.

8. Laws, p. 508.

9. Laws, p. 574.

10. Laughlin, op. cit., pp. 118-20; J.E. Cairnes, Essays in Political Economy: Theoretical and Applied, London: MacMillan, 1873, p. 142.

11. George Macesich, "Sources of Monetary Disturbances in the U.S., 1834-1845," Journal of Economic History 20 (September 1960): pp. 407-34; Peter Temin, The Jacksonian Economy, New York: Norton, 1969, pp. 28-82, 138-39.

12. R.H. Timberlake, Jr., The Origins of Central Banking in the United States, Cambridge: Harvard University Press, 1978, Ch. 5, "The Specie Circular and Distribution of the Surplus," pp. 50-62; Temin, op. cit., pp. 120-136.

13. Temin, op. cit., 113-20; pp. 141-47.

14. Bray Hammond, Banks and Politics in America from the Revolution to the Civil War, Princeton: Princeton University Press, 1957, pp. 707-17.

15. U.S. Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 1, Series E-52, p. 201.

16. These are unpublished partial estimates of GNP in 1860 prices, constructed by Robert E. Gallman. The estimates are partial because they do not include the change in inventories. It is for this reason that the annual rates of change do not show the cyclical movements of the economy. Those movements are dominated by change in inventories. An alternate real income series, in 1929 prices, is available in Thomas Senior Berry, Estimated Annual Variations in Gross National Product, 1798 to 1909 (Richmond, Bostwick Press, 1968). Annual rates of change of these estimates (shown there in Table 1, col 3, p. 32) are: 1834-37 (+5); 1837-38 (-1); 1838-56 (+4.6); 1856-57 (-8); 1857-59 (+6).

17. This section draws heavily on Milton Friedman and Anna J. Schwartz, A Monetary History of the United States, 1867-1960 [History], Princeton, Princeton University Press, 1963, pp. 15-88.

18. Report and Accompanying Documents of the United States Monetary Commission Organized Under Joint Resolution of August 15, 1876 [44th Congress, 2d Sess., Senate Report No 703], Washington, G.P.O., 1877, vol. 1, pp. 1-160.

19. Timberlake, op. cit., Ch. 8, "The Panic of 1873 and Resumption," pp. 108-119.

20. See Friedman and Schwartz, History, pp. 89-188.

21. Sources of wholesale prices: 1800-1889, U.S. Bureau of the Census, Historical Statistics, Series E-52, pp. 202-203, shifted from 1910-14 to 1972 base; 1890-1970, ibid., Series E-23, p. 199, shifted from 1967 to 1972 base; 1971-1979, U.S. Department of Labor, Bureau of Labor Statistics, Handbook of Labor Statistics, December 1980, Bulletin 2070, Table 140, p. 334, shifted from 1967 to 1972 base; 1980, Survey of Current Business, August 1981, pp. 5-7, producer prices, all commodities, shifted to 1972 base.

22. Source of monetary gold stock: 1875-1878, Phillip Cagan, Determinants and Effects of Changes in the Stock of Money, 1875-1960, New York, Columbia University Press for NBER, 1965, Table F-7, p. 340; 1879-1913, Friedman and Schwartz, History, Table 5, col. 1, p. 131, Table 8, col., 1 p. 180; 1914-1941, Board of Governors of the Federal Reserve System, Banking and Monetary Statistics, 1914-1941, 1943, p. 536, plus $237 million deducted by the source restored annually 1914-1933, and 1934-41 figures recalculated at $20.67 per ounce instead of at $35; Banking and Monetary

Statistics, 1914-1941, 1943, p. 536, plus $237 million deducted by the source restored annually 1914-33, and 1934-41 figures recalculated at $20.67 per ounce instead of at $35; Banking and Monetary Statistics 1941-1970, p. 899, recalculated; 1971-1980, Federal Reserve Bulletin, Dec. 1976, p. A59; Dec. 1978, p. A55; Aug. 1981, p. A53, recalculated. Purchasing power of gold: See Statistical Compendium below.

23. Sources of real per capita income: Derived from a nominal income series; population; and a price deflator implicit in net national product in Milton Friedman and Anna J. Schwartz, Monetary Trends in the United States and the United Kingdom, 1867-1975 (in press), Ch. 4, extended 1976-80, in the same way as the figures were constructed for preceding years. The price deflator, in 1929 prices in the source, has been shifted to a 1972 base. The trend line shown on Chart 2-2 was derived as follows:

$$\log y = \underset{(316.1)}{6.58} + \underset{(52.9)}{0.016687}\ \text{time},$$

where y = real per capita income.
$\bar{R}^2$ = .962
SEE = .10
D.W. = .342

An alternative series that was discussed at one of our meetings is a Bureau of Labor Statistics series of real net spendable weekly earnings of a worker with three dependents. This series diverges markedly from 1962 on from a series of real per capita disposable personal income, showing a progressively steeper decline that does not characterize the real per capita disposable personal income series (or the real per capita income series).

As an article by Paul Ryscavage, "Two divergent measures of purchasing power," Monthly Labor Review, Aug. 1979, pp. 25-30, explains, the real earnings series is a faulty measure. It is constructed from estimates of average hourly earnings and average weekly hours of both full-time and part-time workers. The two estimates are multiplied to obtain average weekly earnings. From the gross average figure, the BLS deducts the social security tax and the Federal income tax liability applicable to a married worker with three dependents. The Consumer Price Index is then divided into the net spendable earnings to arrive at real net spendable earnings.

The key problem with the series is the measure of gross average weekly earnings. It includes not only

weekly earnings of men, the majority of whom work full time, but also the weekly earnings of women and teenagers, many of whom work part time. The earnings of the latter two classes of workers pull down the overall average for production and nonsupervisory workers.

Since the series of real net spendable weekly earnings of a worker with three dependents is not based on earnings data for a worker with these characteristics, it does not provide a reliable measure of his economic well-being, as the BLS acknowledges.

At the Hearings we conducted on November 13, Professor Roy Jastram suggested that "the use of real per capita income as a measure of the comparative fluctuations in the economy with and without the gold standard" was misleading. Specifically, he argued that unionization of labor and the growth of transfer payments since 1934 tended to diminish declines in real per capita income thereafter. Since transfer payments do not raise aggregate real incomes, it is hard to see why per capita results would be affected. Unionization might have increased instability insofar as it reduced income for those not covered by unions. In any event we reject Professor Jastram's suggestion that manufacturing production is a more even-handed measure of the severity of cyclical movements in both gold standard and post-gold standard periods. Since manufacturing production has declined relative to aggregate GNP, it is a statistically biased measure of economic well-being over the past half century.

24. Friedman and Schwartz, History, pp. 189-406.

25. Ibid., pp. 462-71.

26. Ibid., pp. 471-76; 508-11; 550-51.

27. Arthur I. Bloomfield, Capital Imports and the American Balance of Payments, 1934-39, Chicago: University of Chicago Press, 1950, pp. 158-66.

28. During the first nine months of 1937, the Treasury did not use the cash balances it could create on the basis of the gold it bought. Instead, it paid for the gold by borrowing from the public and banks. What the Treasury took from the public and the banks by the sale of securities offset what it paid to the public and the banks by the purchase of gold. Accordingly, high-powered money did not reflect the growth of the gold stock.

The operation was economically identical with the sterilization actions of the Federal Reserve in the 1920s, when the System sold bonds on the open market to offset the increase in high-powered money that would otherwise have arisen from a gold inflow. The Treasury program became effective at about the same time the Federal Reserve was imposing two increases in reserve requirements on member banks (on March 1 and May 1, 1937; an earlier increase was imposed in August 1936). The sterilization program sharply reinforced the effect of the rise in reserve requirements in producing monetary restrictiveness: the rise in reserve requirements increased the demand for high-powered money; simultaneously the Treasury's action virtually brought to a halt an increase in high-powered money which had been proceeding with only minor interruptions since 1933.

A start toward desterilization was made in September 1937, when the Board of Governors of the Federal Reserve system requested the Treasury to release $300 million from the inactive gold account. The Treasury released the amount requested by the Federal Reserve, but it continued to sterilize all further gold purchases, which amounted to $174 million in that month. Hence inactive gold held by the Treasury fell only $126 million in September 1937.

As of January 1, 1938, the Treasury limited the addition to the inactive gold account in any one quarter to the amount by which total gold purchases exceeded $100 million, and on April 19, 1938, discontinued the inactive gold account, which then amounted to about $1.2 billion. In the first half of 1938, accordingly, there was a more rapid increase in high-powered money than in the gold stock. The Treasury printed gold certificates corresponding to some of the inactive gold in the Treasury, deposited the certificates at the Reserve Banks, and drew on the balances it thus established to pay government expenses or to redeem debt. The operation was essentially an open market purchase of securities undertaken at Treasury initiative.

Initially, the shift of inactive gold from Treasury cash to Treasury deposits at the Federal Reserve Banks had no immediate monetary effect. Effective desterilization did not occur until more than a year after formal desterilization. Only after February 1939 did the sum of Treasury cash holdings and deposits at Reserve Banks decline toward the level that had prevailed before the sterilization program.

29. This section draws heaviliy on Chapter 2 of The International Transmission of Inflation (in press) by M.R. Darby, J.R. Lothian, A.E. Gandolfi, A.J. Schwartz, and A.C. Stockman.

30. See "Treasury and Federal Reserve Foreign Exchange Operations," in Federal Reserve Bulletin, Sept. 1962, pp. 1138-53.

31. Margaret G. de Vries, The International Monetary Fund 1966-1971: The System Under Stress, Washington, D.C., 1976, Part Five, "Exchange Rates in Crisis," pp. 432-48.

32. For a description of the controls that were imposed, see International Monetary Fund, Annual Report on Exchange Restrictions, various editions.

33. Lance Girton argues that the emphasis upon international liquidity during this period and the subsequent introduction of SDRs stemmed from the application of the real-bills doctrine to the international monetary system. See his "SDR Creation and the Real-Bills doctrine," Southern Economic Journal 41 (July 1974); pp. 57-61. The real-bills doctrine is the notion that if banks restricted their advances to the nominal value of trade, the money supply would have a desirable elasticity. In fact, it would become unstable. The fallacy in the doctrine is that it sets no effective limit to the quantity of money.

34. By the end of the fourth quarter of 1972, the value of SDRs was slightly over $9.4 billion or 6 percent of total world international reserves as reported in International Financial Statistics, July 1974.

35. IMF, Annual Report, 1975, p. 44.

36. See Annual Report of the Secretary of the Treasury on the State of the Finances, 1978, p. 491, Exhibit 60, a press release on the increase in the amount of gold sales, announced Aug. 22, 1978 ("The sales will make an important contribution toward reducing the U.S. balance of payments deficit on current account") and Exhibit 61, a statement by Assistant Secretary Bergsten before the Senate Committee on Banking, Housing and Urban Affairs in which the quotation in the text appears.

37. Only $42.22 of the price obtained for every ounce the Treasury auctioned was applied to the retirement of gold certificates. The balance was applied to the Treasury's General Fund.

38. Board of Governors of the Federal Reserve System, 61st Annual Report, 1974, pp. 65-66.

39. The first guideline stated: "A member with a floating exchange rate should intervene on the foreign exchange market as necessary to prevent or moderate sharp and disruptive fluctuations from day to day and from week

to week in the exchange value of the currency." A second guideline encouraged intervention to moderate movements from month to month and quarter to quarter "where factors recognized to be temporary are at work." A third guideline suggested consultation with the Fund if a country sought to move its exchange rate "to some target zone of rates." A fourth guideline dealt with the size of a country's reserves relative to planned intervention; a fifth, with avoiding restrictions for balance of payments purposes; a sixth, with the interests of other countries than the intervening one. IMF Annual Report, 1974, pp. 112-116.

40. The index of weighted average exchange values of the dollar against the "G-10" contries plus Switzerland (March 1973=100) declined at an average annual rate of 9.3 percent between January and November 1978. From January 1976 to January 1978, it had declined at a 3.3 percent annual rate.

41. The price of gold from the end of 1973 to the end of 1980 increased at an average annual rate of 20.7 percent. By comparison, the total returns on common stock and on long-term corporate bonds increased at average annual rates of 7.2 percent and 4.0 percent, respectively. (These figures appear in R.G. Ibbotson and R.A. Sinquefield, "Stocks, bonds, bills and inflation: Year-to-year historical returns (1926-1974)"; "Simulations of the Future (1976-2000)" in Journal of Business 49, Jan. 1976, pp. 11-47, and July 1976, pp. 313-338.). The U.S. CPI over this period increased at a rate of 7.8 percent per year on average and the London Economist's world commodity price index increased at a 9.5 percent rate.

Chapter 3

Types of Monetary Standards

The original meaning of the term monetary standard was that a particular weight of either gold or silver served as the supreme form of money with which all lesser forms of money were interconvertible. The term has since come to be used as meaning a monetary system, that is, the institutions and practices relating to payments for the settlement of debts. In this chapter, we examine the character of various types of monetary standards, including some of which we have no examples in modern times.

I. Alternative Standards

A monetary standard has two aspects, one domestic and one international. The domestic aspect applies to the arrangements regulating the quantity and growth rate of the internal money supply. The international aspect applies to the arrangements by which the external value of the currency is determined. These two aspects are present for any type of monetary standard. It is possible to adopt a purely domestic monetary standard with the external value of a country's currency floating with respect to other currencies. On the other hand, a country could choose arrangements that fixed the external value of its currency with respect to other currencies. Whether or not the international aspect would govern the domestic aspect depends on the design of a given monetary system.

The two broad divisions of monetary standards are commodity and paper standards. Commodity standards may be based on metals, other commodities, or baskets of commodities including metals. Metallic commodity standards have usually been based on silver or gold or a combination of both known as bimetallism.[1] We limit our examination of metallic standards to variants of the gold standard before turning to the examination of other commodity standards and of paper standards, commenting first on domestic and then international aspects of each. Finally, we consider the strengths and weaknesses of the gold standard variants as a group, of other commodity standards, and of paper standards.

A. Variants of the Gold Standard

The basic argument that is offered in support of all variants of a gold standard is that gold has intrinsic value and therefore serves as a standard of value for all other goods.* In addition, supporters view gold as a store of value because new production adds only a small fraction to the stock accumulated over centuries, hence prices denominated in terms of gold will not vary greatly from year to year. If other forms of money exist, for example, government-issued or bank-issued paper currency and bank deposits, then convertibility into gold at a fixed price would assure that, even if inflationary policies were adopted, the monetary authorities would be compelled to abandon such policies. An increase in government paper currency would tend to raise prices in terms of paper currency, would reduce the purchasing power of paper currency, and induce money holders to convert their paper dollars to gold, putting pressure on the government's gold holdings. At the same time, with gold as a country's reserve asset, adjustment to balance of payments deficits and surpluses would be automatic. Thus an increase in the domestic money supply by ultimately raising the price level would raise the price of exports relative to the price of imports, leading to a balance of payments deficit and a gold outflow. In addition, the increase in the money supply would lower domestic interest rates relative to those abroad, inducing a capital outflow and a further gold outflow.

Another attribute claimed for gold standards is that the rate of increase in the gold money supply would vary automatically with the profitability of producing gold, and hence assure a stable money supply and stable prices at least in the long run. Thus, a rapid increase in the output of gold, due to gold discoveries or technological improvements in gold mining, would raise the prices of all other goods in terms of gold, making them more profitable to produce than gold, and ultimately leading to a reduction in gold output. Moreover, the initial reduction in the purchasing power of gold would lead to a shift in the demand for gold from monetary to nonmonetary use, thus reinforcing the output effects. Conversely, a decline in prices of goods and services, due to technological improvements in the nongold sector, would increase the profitability of gold production, encouraging increased gold output, which would ultimately tend to raise the price level. The initial increase in the purchasing power of gold would also lead to a shift in the demand for gold from nonmonetary to monetary use, thus reinforcing the output effects. Long-run price stability would be the result.

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*Congressman Henry S. Reuss -- This view is, of course, purely mystical.

Gold standards vary depending on the presence or absence of the following elements:

1. a national money unit
   a. present
   b. absent
2. nongold national money issued by either the government or by a fractional-reserve commercial banking system
3. a central bank
   a. with gold reserves only
   b. with mainly foreign exchange reserves
4. convertibility of nongold money into gold coin or gold bars
5. classes of holders for whom nongold money is convertible

1a. 100 percent gold coin standard with national money

Under such a standard, the national unit is defined as a specific weight of gold which thus sets the price of an ounce of gold in terms of that unit. There are 480 grains of gold in a fine troy ounce. Dividing 480 grains by the weight of the national unit in gold yields the price. Defining a dollar, for example, as 11.368 grains of gold sets the price of an ounce of gold at $42.22+. Under a 100 per cent gold coin standard, gold would be money, but prices would be expressed in terms of the national unit -- dollars, pounds, marks, or francs. Banks would exist to issue warehouse receipts for gold in the national money unit and would hold 100 percent reserves. Terms of loans by the banking system and others would be expressed in the national money unit. Exports or imports of gold coin would be unlimited and free of taxes and restrictions.

The supply of money and the prices of goods in terms of that money would be determined in the market by the demand for gold for monetary and nonmonetary uses[2] and by the supply of gold, which would be governed by the opportunity cost of producing gold. The demand for gold for nonmonetary use would be governed by the relative price of monetary gold and all other commodities. The demand for monetary gold would be governed by (a) total wealth available to hold in asset form; (b) the total amount of goods and services produced; (c) the average price of those goods and services; (d) the return on holding monetary gold relative to the return available on alternative assets; and (e) the tastes and preferences of holders of money.

In this system, the market would be free to choose forms of money other than gold and warehouse receipts.

Government intervention in the monetary system would be limited to its undertaking to buy gold from the public at a fixed price and converting it into coin, and to sell gold to the public at a slightly higher fixed price, if it so chose, the difference between the two prices representing brassage -- the government production fee to cover cost of coin manufacture.

The determination of the external value of a national currency under a 100 percent gold coin standard may be explained with an example drawn from a variant of the gold standard to be discussed below. The principle is the same for all variants based on a national monetary unit.

The external value of the currency is fixed in terms of gold. For example, consider the reason the external value of pound sterling in terms of a dollar was $4.8665 before World War I and from 1925 to 1931. The dollar was defined as 23.22 grains of fine gold and a pound sterling as 113.0016 grains of fine gold, hence 4.8665 was the multiple of the weight of gold in a pound sterling compared with the weight of gold in a dollar. This was a fixed exchange rate because the gold weight of each currency was fixed or, equivalently, the price of gold per ounce was fixed. If the United States had adopted one dollar price of gold and the British a different dollar price, obviously, the equivalence between the exchange rate and the respective weights defining each currency would have disappeared. A variable price of gold among countries would have meant variable weights of gold represented by each currency.

The link between currencies is gold at a fixed price. Imbalances in international payments might be settled by claims on the national currencies of other countries which had fixed gold equivalents, financed in the example cited mainly by the use of bills of exchange. If the demand for and supply of a national currency did not balance, gold flows would be activated. Thus whenever the dollar price of a British pound at the official or par exchange rate of $4.86 deviated by more than one or two percent above or below par (these limits, referred to as the gold points, represented the cost of transferring -- packing, shipping, and insuring -- gold between the two countries), it paid either to convert U.S. dollars into gold and transfer it abroad, or else to convert British pounds into gold and transfer it here. If U.S. demand increased, for example, for cheaper British goods, this raised the dollar price of the pound (that is, bills of exchange). Once the dollar price of the pound reached $4.92, referred to as the U.S. gold export point, it paid to convert U.S. dollars into gold, ship the gold to England and purchase pounds at $4.86. Conversely, at the U.S. gold import point,

which might have been as high as $4.83, it paid to convert pounds sterling into gold, ship the gold to the U.S., and purchase dollars. Gold shipments in either direction would then act to restore the price of foreign exchange to parity.

Thus it is not only gold flows from new gold output but inflows or outflows related to movements in the balance of payments that affect the size of the domestic money supply. A reduction in a country's domestic money and ultimately in its price level enhance the country's appeal as a source of goods and services to foreigners and reduce domestic demand for foreign goods and services. An increase in a country's domestic money and ultimately in its price level diminish that country's appeal as a source of goods and services to foreigners and increase domestic demand for foreign goods and services. Thanks to this automatic adjustment process, the duration and size of imbalances of international payments would tend to be self-limiting. Gold flows serve to equalize price movements across countries.

Economists debate the details of the process just described.[3] Some argue that gold flows under the gold standard before 1914 were minimal and that prices worldwide adjusted rapidly. There was one world price level and the external adjustment process posed no greater problem than interregional adjustment of prices within a country. These are refinements that need not detain us.

1b. Gold standard without national money

The key feature of such a standard is that the role of government would be limited to assuring the weight and fineness of coins minted by the private sector. No national money unit would exist -- no dollars, pounds, marks, or francs. Coins of different weights would circulate and prices would be denominated in weights of gold. Banks might exist to issue warehouse receipts for gold with a cover of 100 percent reserves. Borrowing and lending, limited to the private sector, would be conducted, the debt instruments denominated in weights of gold. Settlement of international payments would rarely be made in weights of gold. Instead, international capital flows would occur in the form of interest-bearing debt instruments, denominated in weights of gold, or the transfer of ownership of equities to foreign holders.

The proponents of the conception of the gold standard here sketched regard it as superior to any other form of monetary standard because it eliminates money creation by both government and banks. In their view the record of government and banks shows them to have overissued the currency. In a real gold standard, such as the one described, the quantity of gold available for monetary use would determine the level of prices. If the demand for gold exceeded the supply, prices, expressed in weights of gold, would fall.

In the idealized arrangement that is proposed, the market might choose forms of money other than gold and warehouse recipts, including promises to pay gold on demand or at a future date. Private contracts would specify payment in whatever form was mutually agreeable, including the use of technological means for electronic transfer of funds that could significantly economize the means of making payments with physical gold or the need to hold gold in physical possession.

Introducing de novo a real gold standard would clearly change the character of the existing political and financial system.*

2. Gold standard with nongold money issued by either the government or a fractional-reserve commercial banking system

The earliest departure from the idealized 100 percent gold coin standard was the creation of substitutes for gold. The motive for substitution was a reduction in the real resources employed in mining gold. Paper money substitutes may be produced with much smaller real resources. Such substitutes included fiat currency issues by governments and commercial bank issues of notes and deposits, with gold reserves of the government and banks equal to a fraction only of their monetary liabilities. The incentive to limit the size of the fraction of gold reserves was strengthened during trend periods when the supply of gold did not keep pace with the demand for it for monetary and nonmonetary uses.

Fractional gold reserves were held as an earnest of the issuers' readiness to convert nongold money into gold at the pleasure of the holder, at a fixed price of gold, not a changing market price of gold. In this system, domestic disturbances, such as banking panics, could affect the size of the country's gold reserves. Public alarm about the adequacy of the gold reserve ratio could trigger an internal drain of gold, when holders chose to shift from bank notes or bank deposits to gold. In the aftermath of such episodes, an increase in the gold reserve ratio was produced usually by a contraction of the issuers' monetary liabilities.

A fractional reserve gold standard accentuated the effects of gold flows on the quantity of money. A one-dollar gold inflow, depending on the size of the reserve ratio, might increase the domestic quantity of money as much as $8 or $10; a one-dollar gold outflow might reduce the quantity of domestic money by as much as $8 or $10, with parallel effects on domestic spending and prices.

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*Congressman Henry S. Reuss -- Why does the Commission Report treat this eccentric idea with such mild and noncommital language?

However, as noted above, international capital flows alleviated to some extent either the size of gold flows or their consequences. Short-term capital flows served to reduce and smooth the immediate flows of gold that would otherwise have been required to settle payments imbalances. Long-term capital flows enabled developing countries to borrow real resources from developed countries by running a persistent excess of imports of goods and services over exports of goods and services without entailing gold flows. In the event of a rise in the domestic quantity of money, in the short-run, interest rates would tend to decline, inducing investors to shift funds to foreign money markets. The size of the change in export prices relative to import prices that would otherwise have occurred would be reduced by the resulting gold outflow.

In a fractional-reserve banking system and a gold standard with a national money unit, domestic and international convertibility of claims on the monetary authorities was the mechanism to insure that nongold money growth was held in check.

3a. Gold standard with a central bank holding gold reserves only

Central banks in Europe predated the gold standard. Their behavior did not always serve the discipline the gold standard imposes. They did not necessarily respond to a loss of gold due to balance of payments deficits by actions to reduce the domestic quantity of money outstanding, or to a gain of gold due to balance of payments surpluses by actions to increase the domestic quantity of money outstanding.

Scholars continue to debate the extent to which such behavior by the Bank of England and other central banks characterized the period before 1914. After World War I, the issue is not in doubt: central banks, including the Federal Reserve System, frequently chose not to permit gold flows either to expand or contract the domestic quantity of money, or to do so to a lesser degree than full adjustment would have required. The gold standard was not automatic but managed.

3b. Gold standard with a central bank holding mainly foreign exchange reserves

Central banks also learned to economize on gold holdings by using other currencies as reserve assets, principally sterling before 1914, increasingly dollars thereafter. A country that held all or a large part of its monetary reserves in the form of foreign exchange, that is, claims on a country

that is on a gold standard, was said to be on a gold exchange standard. Gold holdings are non-earning assets. For that reason the gold exchange standard has appeal since foreign exchange, in the form of deposits at foreign banks or foreign treasury bills, provides earning assets. Of course, a country holding foreign exchange reserves in a currency that devalues sustains losses.[4]

The gold standard before World War I was often described as a sterling/gold exchange system and, under the Bretton Woods system after World War II, as a dollar/gold exchange system. Both were fixed exchange rate systems in conception, but the Bretton Woods system became an adjustable pegged exchange rate system.

The par value of each national currency was expressed either in terms of gold or in terms of the U.S. dollar of 13.71 grains of fine gold, each established in agreement with the International Monetary Fund. Members of the IMF were responsible for maintaining the par value of their currencies, with the United States alone undertaking the free purchase and sale of gold at the fixed price of $35 per ounce. Other countries bought and sold their currencies for dollars to maintain their par values within agreed limits. Settlement of international payments imbalances took place mainly by transfers of reserve assets in the chief money markets.

Convertibility of many European currencies was first achieved under the Bretton Woods system in 1958. For only a few years thereafter can the system be said to have performed fairly effectively. From the mid-1960s on, it was characterized by repeated foreign exchange crises as market participants anticipated that existing par values were unsustainable and shifted funds from a weak currency to a strong currency, exacerbating the external position for both currencies. Countries with undervalued currencies resisted revaluation and countries with overvalued currencies resisted devaluation.

The system of fixed but adjustable pegged exchange rates collapsed under the pressure of persistent deficits in the reserve center country's balance of payments and undervalued currencies in surplus countries. The U.S. money supply grew at rates independent of the country's balance of payments position, contrary to the case under an international gold standard. Dollar reserve accumulations abroad, unless sterilized by monetary authorities, expanded the monetary bases of our trading partners. According to them, the United States exported inflation to the rest of the world through its balance of payments deficits.

4. Gold standard with convertibility of nongold money into gold coin or gold bars

In the gold coin standard with a national money unit and nongold substitutes, such as existed in a number of countries before 1914, gold coin circulated -- usually a minor fraction of aggregate domestic money -- and nongold money was redeemable in coin. Again, as a way of economizing on the use of gold, many countries ceased to coin gold after 1914 (the United States, not until 1933). Thus free coinage, circulation of gold coins, and the legal tender status of gold coins terminated. The aim was to concentrate all of a country's gold holdings into reserves available for international payments. Nongold money became convertible into heavy gold bars. Such a gold standard is known as a gold bullion standard.

5. Gold standard with classes of holders for whom nongold money is convertible

Under a gold coin standard with a national money unit and nongold substitutes, all holders of nongold money -- domestic and foreign -- could convert it into gold coin. Under a gold bullion standard, convertibility could exist for both classes of holders. Under the Bretton Woods dollar/gold exchange standard, convertibility in the United States was limited to foreign official institution dollar assets. Foreign institutions willingly held dollars for the purpose of intervention so long as they were confident that they could obtain gold from the United States for dollars at their initiative. A gentleman's agreement among central banks in certain industrial countries not to present dollar balances for convertibility into gold for a time staved off the denouement. The chronic deficits in the U.S. balance of payments and the unwanted accumulations of dollars by foreigners which threatened to drain all U.S. gold finally led to formal inconvertibility for all holders in 1971.

B. Variants of Other Commodity Standards

Economists have long argued that a commodity standard with a bundle of commodities is superior to a single commodity standard like the gold standard.[5] The reason is that such a scheme could mitigate the price level instability produced by basing the standard on one commodity like gold, because of unexpected changes in its demand and supply. Technologically induced changes in relative costs of production of some of the bundle would be offset in the rest of the bundle.

The usual prescription for the bundle of commodities is that it would include standardized staples like metals and manufactured commodities that are traded in broad markets.

The precise composition varies with the author of the plan for a commodity standard. In support of such a standard, it has been argued that possible monetization of the bundle of commodities would provide producers with a floor to their incomes, while convertibility into currency would impose a ceiling on the market prices of the bundle.

If nonmonetary stocks of the commodities available for use as monetary stocks were small, the quantity of money would change primarily through additional current output or withdrawals for current use. Since the commodity industries represented in the bundle would have a fairly elastic current output, any decline in other prices would induce a substantial increase in their output, adding to the stock of money and current income. Opposite effects would occur with any rise in other prices. Changes in the quantity of money would affect the volume of real assets held by the public and the fraction of total assets held as money, causing the community to alter their expenditures in a countercyclical fashion. Thus, commodity currency could have substantial countercyclical effects.

Plans for a commodity standard differ on the role of government and the provision for a reserve. The government's role could be limited to the announcement that the monetary unit is defined as specified amounts of each of the bundle of commodities. The private sector would then issue financial instruments denominated in the unit. The government would have no role as an issuer of currency. Some plans envisage no government reserves of the bundle of commodities. Instead, the private sector would hold reserves in order to redeem the financial instruments -- say, warehouse receipts for the bundle -- issued by it. Storage costs presumably would be passed on in some form to the public. Again, fractional reserve holding might well be development of a commodity standard, given the incentive to reduce resource costs of holding 100% reserves.

Private individuals would use the warehouse receipts to obtain from the issuers commodities covered by the standard and sell to the issuers for warehouse receipts commodities covered by the standard. A deflationary tendency would encourage production of the commodity bundle that would be exchanged for newly issued warehouse receipts at the fixed price, thus countering the initial tendency. An inflationary tendency would lead private individuals to redeem the warehouse receipts in commodity bundles, thus countering that tendency. In this way, self-interested actions by individuals in the economy would maintain the stability of the price level and so preclude deviations in the price level over the long run.

If a commodity standard were adopted internationally, it could provide an international currency with fixed exchange rates.

C. Paper Standards

Under a paper money standard, it is essential to anchor the system to a nominal fiat reserve -- what economists call "outside" money, provided by a central bank, another governmental agency or even a nongovernmental agency. In our paper money system, the monetary base of the Federal Reserve System serves as outside money. First, we examine current monetary arrangements and then, by contrast, arrangements that would prevail under a radical restructuring of the monetary system.

1. Current Monetary Arrangements

Our current monetary arrangements rely on the discretion of the Board of Governors of the Federal Reserve System. To insulate the Board from short-run political pressures, safeguards are provided by the staggered 14-year terms of the governors, the decentralization and somewhat autonomous regional Reserve Banks, and the independence from Congressional appropriations. Congress has no direct supervisory authority over either the Board or the Reserve Banks, although the chairman and other members of the Board testify frequently before various Congressional committees. Twice a year, as required by the Full Employment and Balanced Growth Act of 1978, the Board submits a written report to Congress on the state of the economy and the course of monetary policy and consults with the Congress on its report.

It is the responsibility of the Federal Reserve Banks to provide without limit the amount of paper currency that the public demands. A limit on the quantity of paper money that the Federal Reserve could issue existed before 1968 when it was required by law to keep a 25 percent gold backing for each dollar it issued. Instead of controlling the amount of currency in circulation -- it now constitutes about one-fourth of the money supply aggregate M1, defined as the sum of currency, travelers checks, and all transaction deposits -- the Federal Reserve attempts to control the money supply.

Although reserve requirements on transaction deposits provide an essential institutional setting, the most important discretionary tool the Federal Reserve possesses for monetary control is its portfolio of government securities. It is through increasing and decreasing its holdings of government securities that the Federal Reserve is able to effect changes in the reserve positions of banks and other depository institutions. When the Federal Reserve buys government securities, it pays for them by adding to the reserves of depository institutions. Federal Reserve sales of government securities reduce reserves. Institutions expand their lending activities, and hence increase transaction deposits, when their reserves increase. The opposite effects occur when

their reserves decrease. Changes in its portfolio thus enable the Federal Reserve to control, over a period long enough for the depository institutions to react, the amount of transactions deposits they create.

Currently, the dollar's foreign exchange value is determined by changing supply and demand in the foreign exchange market, whether because flows of goods and services to and from other countries vary, or because of long-term or short-term capital movements, changes in relative interest rates or expected price behavior, or of interventions by monetary authorities to influence the foreign exchange rate of their currencies vis-a-vis the dollar.

2. Proposals for Significant Change*

Proposals for significant change in current monetary arrangements, while maintaining a paper standard, derive from concern over the record of monetary instability associated with the operation of paper money standards. Proposals for reform range from the introduction of 100% reserve requirements for banks of issue, to rules limiting the discretion of the Federal Reserve System in creating reserves for the banking system, to proposals by F.A. Hayek and others calling for the free private production of money and currency competition among issuers of money.[6] Advocates of basing monetary policy on a rule, such as requiring the Federal Reserve to increase the money supply at a fixed rate over time, contend that such a policy would promote price stability and dampen cyclical changes in the economy. For them, discretion is politically dangerous and economically objectionable.

Suggestions for improving the performance of our paper standard include introducing 100% reserve requirements for banks, payment of interest on bank reserves, and payment of interest on demand deposits. The advantage of a 100% reserve requirement is that it would reduce monetary instability by eliminating fluctuations in the banks' reserve-deposit ratio and the public's currency-deposit ratio that currently introduce some slippage between the Federal Reserve's provision of reserves and the change in deposits the banks create. By paying a market rate of interest to banks on their reserves, the incentive to evade the requirement would be largely eliminated. Moreover, by paying interest on demand deposits, individuals would hold the optimum quantity of money in their

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*Congressman Henry S. Reuss -- The final draft circulated to Commission members for comment referred to these proposals, more honestly, as "radical proposals."

circumstances. If interest is not paid on deposits, individuals must take into account the return they could earn on interest-bearing assets, reducing cash holdings by employing, say, more bookkeeping services to compensate for the loss of not holding the alternative asset. Since money is costless to produce, holding smaller than optimum balances is a wasteful use of real resources.

In the schemes for free competition in money, private issuers would be free to produce as much of their money as they wished and users of money would be free to choose whichever currency suited them best, presumably one with stable buying power. Currency competition would be compatible with any exchange rate regime, either flexible or fixed.

One such proposal urges the United States to adopt parallel currencies: dollars and gold. The supply of dollars and hence the price level in terms of dollars would be determined by the Federal Reserve (by discretionary monetary policy), the supply of gold used as money and hence the price level in terms of gold by the free market. The relative price of the two currencies (their exchange rates) would vary depending on conditions in the gold market, the monetary policy actions taken by the Federal Reserve, and the public's taste for the two currencies. According to this scheme, were the cross-elasticity of demand between the two currencies high, then a fall in the price of the dollar (that is, an increase in the expected rate of change of the gold price) would lead to a massive shift out of dollars into gold. In some respects, the experience of California in the greenback period (1862-78) was an example of this scheme: gold and greenbacks circulated freely at flexible rates and were both used as exchange media. In addition, proponents of such a scheme argue that shifts from gold to dollars and from dollars to gold would act as a signal to the Federal Reserve to intervene, decreasing monetary growth when the public shifted away from dollars into gold, and increasing monetary growth when the public shifted away from gold into dollars.[7] The advocates of free currency competition regard it as needed to achieve price level stability, as leading to optimum currency areas, and eventually to currency unification, as users of money choose the most useful money.[8]

II. Strengths and Weaknesses of Alternative Standards

We prefix an evaluation of the strengths and weaknesses of the three types of monetary standards we have described by the tabular presentation in Table 3-1. It lists seven criteria of desirable attributes of a monetary standard:

a. flexibility, that is, the ability to accommodate real economic growth as well as financial innovation

b. resistance to domestic and foreign shocks both of a monetary and nonmonetary character

c. freedom from political manipulation

d. magnitude of associated resource costs

e. provision of long-run price predictability, in the sense of mean reversion of the price level, that is, the price level would ultimately return to its initial value

f. provision of long-run price stability, in the sense that the price level would neither rise nor fall over substantial periods

g. provision of short-run economic stability, that is, stability of prices and real output

A check in a column of the table indicates that the standard satisfies the criterion, an x indicates that it does not, and a question mark indicates that the effects are uncertain.*

A. Gold Standard Variants

1. The pure gold coin standard: a 100% gold coin standard (a) with national money and (b) without national money

Since we have no empirical basis on which to form a judgment with respect to the qualities of a 100% gold standard with or without a national money unit, our evaluation is based on theoretical considerations.

Both standards, in common with all commodity standards, would be free from political manipulation but, on the other hand, would exhibit a number of negative features. These include high real resource costs of their establishment and operation; inability to accommodate real growth if technological progress in gold mining and new mine discoveries do not keep pace with the growth of the rest of the economy; long-term inflationary or deflationary movements of the price level, depending on the rate of growth of the monetary gold stock relative to the demand for gold; susceptibility to shocks

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*Congressman Henry S. Reuss -- I do not endorse the unfavorable comparison made here of current monetary arrangements with radical alternatives, gold-based and otherwise. Our economic difficulties stem from a range of policy and structural defects which would exist under any monetary standard.

Table 3-1

Criteria for Evaluating Alternative Monetary Standard[a]

Monetary Standard	Flexibility	Resistance to Shocks	Freedom from Manipulation	Low Resource Costs	Long-run Price Predictability	Long-run Price Stability	Short-run Economic Stability
A. Gold							
1. Pure variants	X	X	✓	X	✓	?	X
2. Classical variants	X	X	X	[b]	✓	?	X
B. Commodity	✓	X	✓	X	✓	✓	?
C. Paper							
1. Current	✓	✓	X	✓	X	X	?
2. Competing monies variant	?	✓	✓	✓	?	?	?

[a] Check means standard satisfies condition, X means it does not; question mark indicates effects are uncertain

[b] Resource costs were reduced in variants of the classical gold standard, particularly so for countries on the gold exchange standard

from both home and foreign changing conditions of supply and demand, each of which in turn could produce short-term economic instability.

If the standard with or without a national money unit literally were limited to or based on the existing gold stock in a country plus annual additions from gold output, long-term inflationary or deflationary movements of the price level would be possible, depending on the rate of growth of the monetary gold stock relative to the demand for gold. These movements impose costs on the economy. It matters little if a loan contract is denominated in a weight of gold rather than a nominal dollar amount if the conditions ruling when the contract is entered into have changed when the terms of the contract have to be fulfilled. Lenders or borrowers can be harmed, depending on whether inflationary or deflationary forces prevail. Foresight with respect to future long-term changes in demand for or supply of gold exceeds investor capacity to encompass in a loan contract. This aspect of a gold standard cannot be neglected.

One other aspect of a gold standard with or without national money is that the traditional view that gold production varies positively in response to changes in its real price does not appear to be true currently[9] (see Chapter 4). On the supply side, South African mines produce less when the price is high because they can work poorer ores, and currently an increase in the real price of gold does not shift gold from nonmonetary to monetary stocks. If the price of gold were fixed and inflationary expectations vanished, it is conceivable, however, that the responses on the supply and demand sides might change.

Another feature of the two theoretical variants invites comment -- the feature that allows for possible introduction by the market of fiduciary monies by issuers who promise to pay gold by weight or in coin of the realm on redemption. If such monies were not always redeemable, as the issuer promised, it is likely that government would become involved in the money creation process if only to enforce contracts and to prevent fraud. Moreover, when an issuer fails to fulfill his promise to those who entered into a contract with him, third-party effects also occur -- the holder of the monies will default on payments owed by him to third parties. For this reason, government is likely to be drawn into the money creation process in order to set limits on the size of the fiduciary issue and otherwise regulate promises to pay gold. The rationale for a gold standard without national money as free from government intervention is weakened by the feature in question. It undermines the case for a 100% gold coin standard.

This feature also has a bearing on the claim made that high resource costs are a positive value of gold standards.

If this were so, they should not occasion the introduction of substitutes for gold in circulation and in reserves. To suggest that markets might introduce such substitutes in the idealized gold standards belies the claim made for the beneficence of high resource costs. The market will seek means to achieve at lower resource costs what the gold standard is designed to achieve at much higher resource costs.

2. Variants of the classical gold standard

We can summarize the strengths of the gold standard variants of historic experience, and we can then inquire why, given these advantages, the United States and the rest of the world retreated from them.

We note the following advantages conferred by a gold standard. One: A gold standard promotes long-term domestic and international price predictability. This condition provides incentives to private market agents to make long-term contracts which are vital for the efficient operation of a market economy. In addition, such long-term price predictability minimizes confusion between relative and price level movements, so that economic agents do not experience false signals with regard to real economic decisions. Two: Government intervention in the determination of the price level and overall level of economic activity is limited under a fully functioning gold standard. Three: Fixed exchange rates create the efficiencies of a stable international money that integrates the world's commodity and capital markets.

The short explanation of the world's retreat from a gold standard, given its advantages, is that, whether advisedly or not, the world came to prize goals other than those of the gold standard. All gold standard countries confront destabilizing conditions on the supply side, due to gold discoveries, and on the demand side, due to the spread of the gold standard when additional countries adopt it. Improving the real performance of the economy was given pride of place. To achieve the improvement, the task was assigned to government management of monetary and fiscal policy, rather than to private sector initiatives. Only the role of fixed exchange rates carried over to the postwar world but fundamentally divorced from the gold standard restraints. Under Bretton Woods, there was no provision that the internal supply of a country's currency was to be governed by its gold holdings, as was the case under the gold standard, nor was there a requirement that a country had to undergo deflation or inflation domestically to balance its external accounts. This dilution of gold standard discipline is an example of its institutional vulnerability. The gold standard was abandoned for shorter or longer periods whenever adherence to it was deemed costly.

The goal of stabilizing the real performance of the economy in the postwar period seemed incompatible with the gold standard. A fully functioning gold standard requires short-term adjustment of the domestic economy to correct balance of payments disequilibria. Such adjustments entail short-term price instability and short-term output instability, which means fluctuating employment. In addition, fixed exchange rates transmit real disturbances in one country to the rest of the world. A timely example is the size of adjustment costs that would have occurred, had the world been on fixed exchange rates from 1974 on. The increase in the price of oil led to a redistribution of international monetary reserves from oil-importing to oil-producing nations. Under fixed exchange rates, the domestic price level in oil-importing countries would have been subject to a massive deflation. More generally, under fixed exchange rates, a boom in one country will lead to an increase in demand by its residents for goods and services in the rest of the world. The opposite will happen in the case of a recession.

For these reasons the value of external stability in maintaining a fixed rate of exchange between the domestic money and foreign monies came to be regarded as purchased at the cost of instability in the domestic money supply, domestic spending, prices and employment. The simple rule for governments to maintain a fixed price of gold was overthrown in the 1970s, but the seeds of the downfall of that rule were sown earlier in postwar years as country after country opted for monetary independence, full employment and economic growth. Countries rejected the restraints that the operation of a fixed exchange rate imposed on the pursuit of these widely supported national objectives. In the United States, where the share of international trade was a minor factor in aggregate national income, the view prevailed that the domestic economy should not be hostage to the balance of payments. Maintenance of the price of gold was not an objective of either the Employment Act of 1946 or the Humphrey-Hawkins Full Employment and Balanced Growth Act of 1978.

B. Variants of Other Commodity Standards

The proposed commodity standards have no empirical counterparts, so we compare their strengths and weaknesses with the gold standard and paper money standards.

Technically, commodity standards appear to be superior to a gold standard because nonmonetary production of commodities that might be included in the bundle is a larger fraction of aggregate output than is nonmonetary production of gold. The broader base might therefore provide a more stable price level under a commodity standard, but it is not obvious that that would be the case. Had prices of commodities been expressed in terms of a currency unit consisting of a bundle of commodities rather than in terms of gold, the general price level probably would have fluctuated as much as it actually did, say, from 1800 to 1950. In addition, changes in the relative cost of the commodities in the bundle, just as changes in the cost of gold, would contribute to price

instability. Commodity currency, however, would offer greater countercyclical effects on income and thus on the money supply than would a gold-based currency.

In other respects, the two standards are similar under 100% reserve or fractional reserve arrangements and both can serve as international currencies. The one respect in which a gold standard is superior to commodity standards is that gold commands clearly broad support by many people and European central bank governors as the most trusted money. Commodity standards have no such emotional appeal. Holding stocks of gold may be acceptable to the public. Holding stocks of useful goods would probably not be understood or countenanced.

To the extent that a commodity standard with 100% reserves operated in a fully automatic fashion, it would be preferable to a paper money standard with discretionary control of the money supply.[10] The commodity standard would be separate from the government budget and less subject to overissue. However, it would still be subject to instability reflecting changing relative prices and the risk of deliberate manipulation by countries having monopoly power over one or more commodities in the bundle. For example, if one of the countries on a commodity standard failed to adhere to it, say, by impeding the free movement of the commodities in the bundle among the countries adhering to the standard, the policies of the destabilizing country would have damaging effects on the others. Restrictions on international trade would likely be introduced generally. In addition, if a significant change occurred in either the supply of or demand for one commodity in the bundle which is produced primarily in one country, that could lead to instability, were that country to exercise its monopoly power.

With fractional reserves, there is no clear advantage of a commodity standard over a paper money standard unless adherence to rules were scrupulously observed under the former but not the latter standard. Under the commodity standard, shifts from monetary to nonmonetary stocks of commodities in the bundle change the supply of money. It is an advantage that no such shifts occur under a paper money standard.

The final assessment is that commodity standards are more complex and entail greater resource costs than would exist under a properly managed paper standard.

C. Paper Standards

Paper money is valued only because others will accept it in exchange for valuable goods and services, and not because of any intrinsic value.* The chief advantage of all paper standards,

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*Congressman Henry S. Reuss -- The concept of "intrinsic value" is nonsensical. Paper money is valued because it represents a convenient and reliable store of value and liquidity, and it retains that value so long as the society and government which support it command the confidence of their citizenry.

including the present one, is that they exact minimum costs in the form of resources used to produce the money supply, and they are sufficiently flexible to accommodate economic growth. Moreover, if accompanied by flexible exchange rates, they can insulate the economy from external shocks.

1. Current Monetary Arrangements

For some observers, the discretionary character of the paper standard is an advantage. Monetary authorities have a choice of policy goals and are free to determine how to use their powers to attain them. As problems change, their goals may change.

Other observers view the historical record of our fractional reserve managed paper money system as one of considerable instability both in the short run and the long run and have advocated a number of proposals designed to reduce:

> instability associated with fractional reserve banking (100% reserve proposal);
>
> instability associated with discretionary policy (monetary growth rules);and
>
> inefficiencies associated with the costlessness of producing paper money balances (paying interest on bank demand deposits).

2. Proposals for Competing Monies

Finally, we evaluate the case for competing monies. Its principal appeal lies in its reliance on the impersonal forces of the market rather than the monopoly power of government. However, unless brand names can be attached to competing private monies, that is, unless the public can be guaranteed that private money issuers will not overissue for private gain, it seems likely that government regulation will be necessary.[11]

With respect to the proposal for a parallel currency, the extent to which it would contribute to price stability depends on the reason shifts would occur between dollars and gold. If a shift occurred because of overissue of dollars, Federal Reserve actions to reduce the money supply would be desirable. However, if a shift reflected a change in the public's taste for gold and dollars unrelated to price behavior, or to a shock in the gold market, then such actions would be undesirable. The question then arises, how would the Federal Reserve know the source of a shift?

U.S. experience under the greenback standard is not comparable to the proposal for a parallel currency. In the greenback era, the price of gold was fixed by Great Britain. What varied was the dollar price of gold, reflecting a changing value of the dollar. The country had a dual currency system because dollars were used for domestic purposes, gold for international transactions (with the

exception of California, where gold was also used for domestic transactions). The fact that the rest of the world was on a gold standard maintained by the British ensured that the U.S. arrangement would be temporary, lasting only until the U.S. price level in terms of dollars fell enough to make resumption of payments in gold possible at the prewar parity. Hence market participants' relative holdings of gold and dollars would reflect expectations on the timing and pattern of resumption rather than the free market factors stressed by proponents of this proposal.

Finally, the optimum currency area (the maximum geographical area over which one money can provide price stability) may be so great that only the governments of very large economies can effectively provide the money supply.[12] Even those sympathetic to the proposed change may conclude that currency competition will ultimately self-destruct, since one currency will outcompete all others. The money industry is a declining cost industry that is a natural monopoly, which at some stage would be nationalized.[13]

III. Conclusion

Each of the standards has advantages and disadvantages. Existing and historical standards were adopted (evolved) as a response to different economic and social priorities of the period as well as in response to the purely economic considerations of the resource costs involved. Thus the classical gold standard prevailed in a world characterized by free markets, free mobility of labor and capital, and distrust of government intervention in business affairs. In that environment, in which national economic growth and high employment were not given the weight assigned to them today, the automatic working of the gold standard was preferred to the "evils of managed money." Hence it is difficult to make the case for one standard over another divorced from the prevailing concerns of the time. Nevertheless, on the grounds of the criteria listed in this chapter, the gold standard may not be the standard best suited to current problems, as is reflected in the recommendations advanced by the Commission.*

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*Congressman Henry S. Reuss -- Amen.

Notes to Chapter 3

1. The great English economist Alfred Marshall also proposed a combination of silver and gold that he designated symmetalism. He argued that a bimetallic standard would inevitably degenerate into a single standard of either gold or silver, one metal tending to drive the other out of circulation. Symmetalism was a plan to make a composite bar of fixed proportions of gold of given weight with a weight of silver, say, twenty times greater, the government undertaking to buy or sell on demand the composite bar for a fixed amount of currency. Neither metal separately would be convertible into currency at a fixed rate nor would currency be convertible at a fixed rate into either metal. See Memorials of Alfred Marshall, ed. A.C. Pigou, Macmillan: London, 1925, pp.204-06.

2. This assumes that it is costless to shift from nonmonetary to monetary use of gold. The cost was either borne by the Mint or paid by the public when gold coins circulated in the past.

3. See, for example, D.N. McCloskey and J.R. Zecher, "How the Gold Standard Worked, 1880-1913," in J.A. Frenkel and H.G. Johnson, eds., The Monetary Approach to the Balance of Payments, Toronto: University of Toronto Press, 1976.

4. As happened when sterling was devalued in 1949 and 1967.

5. A survey of the pre-1950 literature on commodity standards may be found in Milton Friedman, "Commodity-Reserve Currency," in his Essays in Positive Economics, Chicago: University of Chicago Press, 1953, pp. 204-50. See also Robert Hall, "The Government and the Monetary Unit," unpublished paper #159 of the National Bureau of Economic Research Inflation Project.

6. See his Choice in Currency, A Way to Stop Inflation, The Institute of Economic Affairs, Occasional Paper 48, London, February 1976; Denationalisation of Money, An Analysis of the Theory and Practice of Concurrent Currencies, The Institute of Economic Affairs, Hobart Paper Special, No. 70, London, October 1976.

7. See Joe Cobb, U.S. Choice in Currency Commission, "Rahn Proposal for Capital Gains Treatment of Gold Coins," (February 10, 1982).

8. There is some historical precedent for competing monies. Such a system was quite successful in late eighteenth and early nineteenth century Scotland and in the antebellum United States (except for wildcat banks). See Lawrence White, "Free Banking in Scotland Prior to 1844," Unpublished Ph.D. dissertation (November 1981), and Hugh Rockoff, "The Free Banking Era: A Re-examination," Journal of Money, Credit and Banking 6 (May 1974): 141-68.

9. This discussion does not incorporate gold producers' expectations about movements of the gold prices, nor does it incorporate asset-holders' expectations. For a discussion of the traditional

view, see Jurg Niehans, The Theory of Money (Johns Hopkins University Press, 1978), pp. 140-58; and Robert J. Barro, "Money and the Price Level under the Gold Standard," Economic Journal 89 (March 1979): 13-33.

10. This assumes, however, that the government does not have better access to superior information than the public has.

11. See Benjamin Klein, "The Competitive Supply of Money," Journal of Money, Credit and Banking 6 (November 1974): 423-53.

12. Indeed, many countries in Latin America and the Caribbean have tied their currency units to the dollar. See Michael Connolly, "Optimum Currency Pegs for Latin America," Journal of Money, Credit and Banking 14 (Forthcoming).

13. See Roland Vaubel, "Free Currency Competition," Weltwirtschaftliches Archiv 113, 1977, no. 3, pp. 435-61.

Chapter 4

Existing Gold Arrangements and Proposals for Change

We begin this chapter with a review of the prevailing set of gold arrangements in the United States. They serve as a benchmark from which we evaluate proposals for change suggested by members of the Commission, witnesses who testified at the hearings we conducted, and interested citizens. A Staff Appendix reports findings on the operation of the gold market as it functioned when the price of gold was pegged by governments and as it has functioned since 1968 when the price of gold was freed to fluctuate in response to changes in demand and supply. The Appendix includes a discussion of the allocation of the stock of gold between monetary and nonmonetary uses, the determinants of demand and supply, and approaches to the determination of the equilibrium price of gold. The Appendix also presents the record of gold production over past centuries and its relation to trend movements in commodity prices. The chapter concludes with a statistical compendium of time series relating to world and U.S. output and stocks of gold, industrial and investment demand for gold, and the changing nominal and real price of gold.

I. Existing Gold Arrangements

We distinguish the effects of current gold arrangements on operations of the Treasury Department, the Federal Reserve System, and private citizens, and on the conduct of international transactions.

Treasury

The Treasury Department holds most of the United States' monetary gold stock in depositories located in Fort Knox, Kentucky and West Point, New York; U.S. Assay Offices in New York and San Francisco; and the Denver and Philadelphia Mints. The Federal Reserve Bank of New York is custodian of the remainder of the gold stock. In total, the stock amounts to 264 million ounces. The Treasury values the stock at $42.22 per ounce, the last official price set in 1973. No official price exists today. The Treasury could choose to revalue the gold stock, for example, at changing market prices without legislative approval, but such action would have no economic consequences, because, as noted below, the Treasury's gold-certificate issue is limited by law.

The Secretary of the Treasury is authorized by 31 U.S.C. Sec. 405b and 449 to issue gold certificates against any gold held by the Treasury. Public Law 94-564, Sec. 8, retains, as the legal value at which gold certificates may be issued, the last par value of the dollar of $42.22 per fine troy ounce. Gold certificates have been issued to the Federal Reserve System, pursuant to the foregoing authority, to the full extent of the gold held by the Treasury.

The Treasury currently mints no U.S. gold coins. Indeed, 31 U.S.C. Sec. 315b prohibits the minting of U.S. gold coins for domestic circulation. However, Public Law 95-630 provides that the Treasury during each of five calendar years shall strike and sell to the general public gold medallions containing not less than one million ounces of gold. The medallions are to be sold at prices covering the market value of the gold content plus all costs. The first sales of medallions were made in July 1980.

Currently, the Treasury has no policy of actively buying or selling gold, but the Secretary of the Treasury has the authority, pursuant to 31 U.S.C. 733 and 734, to sell gold, and with the approval of the President, to purchase gold, at home or abroad, in such amounts and manner and at such rates as he deems to be in the public interest. The Secretary of the Treasury, with the approval of the President, also is authorized to deal in gold and foreign exchange for the account of the Exchange Stabilization Fund (ESF) that was created by section 10 of the Gold Reserve Act of 1934 (31 U.S.C. 822a), in accordance with the terms of that provision of law, as amended. ESF assets have not, however, included gold since December 1974. The stabilization fund currently has appropriated capital of $200 million.

Federal Reserve System

Currently, gold serves neither as currency nor as backing for U.S. currency. Pulic Law 90-269 amended the Federal Reserve Act so as to eliminate the requirement that the Federal Reserve Banks maintain reserves in gold certificates of not less than 25 percent against Federal Reserve notes in circulation. In addition, this Act eliminated the gold reserve requirement for U.S. notes and Treasury notes of 1890. Reserves now consist of the accounts of depository institutions at Federal Reserve Banks and their holdings of vault cash.

The Federal Reserve System holds as an asset gold certificates issued by the Treasury against its gold holdings valued at $42.22 per fine troy ounce of gold. The certificates are a liability of the United States Treasury and as such represent a Federal Reserve claim on the Treasury.

Private Citizens

In December 1973, U.S. citizens were permitted to own

gold coins minted up to 1959 (before that date, up to 1934), and as of December 31, 1974, to own bullion gold. As of the latter date, they have been free to purchase, hold, sell or otherwise deal in gold in the United States and to hold gold certificates. They are also free to manufacture and sell gold medallions and "coins." Private citizens are free to include gold clauses in private contracts entered into on or after October 28, 1977, the date of enactment of P.L. 95-147. Sec. 4(c) of that provision of law continued in effect, however, the Gold Clause Resolution of June 5, 1933, as to obligations entered into prior to October 28, 1977. That Resolution made unenforceable, at other than their dollar face value, gold clauses in obligations.

International Transactions

The United States is barred, by its obligations under the Articles of Agreement of the International Monetary Fund, accepted by the United States (pursuant to section 24 of the Bretton Woods Agreement Act, as amended) from adopting an exchange arrangement by which the external value of the dollar is established and maintained in terms of gold. Accordingly, gold does not determine the value of the dollar in terms of other currencies, and it does not serve as an international means of payment.

II. Proposed Changes in Gold Arrangements

We classify the changes in current gold arrangements that have been proposed and brought to our attention in five groups:

A. A domestic gold standard with a fixed price of gold

B. An international gold standard with a fixed price of gold

C. Increased use of gold in domestic Federal Reserve and Treasury operations, but not a return to a gold standard

D. Increased use of gold in international monetary arrangements, but not a return to a gold standard

E. Decreased role of gold as a potential policy instrument.

We examine the main elements of the proposed changes and evaluate the advantages or disadvantages of each group.

A. A domestic gold standard with a fixed price of gold*

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*Congressman Henry S. Reuss -- This section completely misstates the issue. The major difficulties with a domestic gold standard are, first, that it would place control of U.S. monetary policy in the unfriendly hands of the Soviet Union and South Africa and, second, that it would contribute nothing to the control of inflation. The technical issues mentioned below, though insoluble, are secondary.

Proposals

To achieve long-run price stability,* advocates of a restoration of a domestic gold standard recommend that the Government establish a new official fixed price of gold (that is, define the weight of gold in a dollar) and maintain it by buying and selling gold freely at that price. The Government would also determine a ratio, or upper and lower bounds of a ratio, between the monetary gold stock and Federal Reserve note circulation, or the monetary base, that the Federal Reserve System would be required to observe, reducing its monetary liabilities when the reserve ratio declined, expanding them when it rose. Legal tender gold coins, denominated in dollars, would be issued to serve as hand-to-hand currency and as legal reserves for commercial and other bank deposits. No restrictions would apply to ownership of gold coin or bullion. Nongold currency would be convertible into gold on demand by holders.

To implement a restoration of a domestic gold standard in the United States requires the solution of a series of interlocking problems.

Evaluation

1. The basic problem has been designated the re-entry problem: how to determine the "right" fixed price at which to resume. In the past, when a country reinstituted the gold standard, there was an old official price that was once again restored or that served as the base for revaluation or devaluation. There is no comparable old price today. The last official price of an ounce of gold, $42.22, is so out of line with current market prices that it provides no guidance. The risk involved in choosing the wrong price is great. An incorrect price might lead to a huge inflow of gold and inflation if it were too high, a huge outflow and economic contraction if it were too low.

At least three concrete proposals to solve the re-entry problem exist:

(a) Arthur Laffer proposes that an announcement be made by the Government that some months hence a dollar unit of the monetary base of the Federal Reserve System will be linked to a fixed quantity of gold at that day's average transaction price in the London gold market.[1] That would become the official price of gold in terms of dollars henceforth. If it turns out that the price so chosen is too high or too low, the proposal goes on to recommend suspension of convertibility. The procedure is then repeated, with a new announcement that convertibility will be reinstated at a future date at the

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*Congressman Henry S. Reuss -- Whether this is the unsullied motive of every speculator who has flocked to the gold standard is open to question.

price then prevailing in the market. The proposal opens up the possibility for instability as speculators bid up the price of gold before the end of the first announcement period. Then if convertibility is suspended because the price turns out to be too high, speculators will unload gold and the price of gold might fall too low before the end of the second announcement period. Moreover, prospects for suspension of convertibility would introduce instability and undermine confidence in the system.

A conjecture on how gold holders might react to the announcement by the United States that it will go back to the gold standard at a future date indicates possibly conflicting market reactions.

The prospect of a fixed price for gold might signify, to those who hold gold in the expectation that it will appreciate, the urgency of selling gold even before the price is fixed, if they foresee a low fixing price. That might lead to a reduction in the market price at the time of fixing. Further sales by such holders once the price had been fixed, if the belief were to prevail that the price would be maintained indefinitely, would compel the United States to buy gold to prevent a decline in the fixed price. If such sales by those holding gold in the expectation that it would appreciate did not take place, once the intention to fix the price of gold had been announced, it would suggest market skepticism that the price, when picked, would be "right."

On the other hand, the prospect of a fixed price of gold for those who hold it to diversify their portfolios and as a hedge against contingencies might encourage them to increase their holdings in the belief that the price would be maintained.

(b) An alternative proposal to determine the re-entry price has been made by Robert Aliber.[2] Start with the price of gold, when price stability was last known in the United States, say, 1961. Adjust the dollar price of gold in 1961, $35 per ounce, by the decline in the purchasing power of the dollar in the two subsequent decades. In addition, adjust for changes in the real (relative) price of gold that have occurred since 1961. The proposal, however, is defective as a way of determining the appropriate re-entry price. It ignores the parameters of the gold demand and supply functions, which would need to be estimated before a return to a gold standard were contemplated.

(c) One approach to the problem of the price at which to reinstitute the gold standard seizes on the opportunity the selection offers to adopt simultaneously a 100% gold reserve against the money supply. The price of an ounce of gold is to be determined, under this scheme, by dividing a money aggregate, such as the M1 measure of the U.S. money supply, by the number of ounces of gold held by the Treasury. One such calculation yielded a price of $1500 per ounce. A variant of this approach divides the world dollar GNP by the world stock of monetary gold, yielding a price of $3500 per ounce. We set aside questions about justification

for the proposed approach, and comment only on the inescapable consequence of adopting either variant. It is clear that a massive inflation would result as the price level adjusted to the higher price of gold.

2. Even if the fixed price turned out to be "right," a second problem is that a return to a gold standard must be accompanied by a strategy to assure adequate monetary growth. That would depend on an adequate supply of gold. World gold reserves above and below ground may seem more than adequate, quoted in billions of ounces, but the flow supply cannot be ignored. The evidence is that gold production responds sluggishly to changes in market price and, since the 1960s, has responded perversely (see the Staff Appendix below). Some observers regard the fact that the bulk of current world gold output is produced by South Africa and the Soviet Union as a harbinger of instability in future gold output.

3. A third problem is the potential for shocks in the gold market at home or abroad. On the demand side, they might arise from changes in the demand for gold for hoarding, and on the supply side, from gold discoveries. Such potential shocks would make it difficult for one country alone to return to the gold standard because it would bear unilaterally the adjustment costs imposed by the shocks.

In the discussion of the gold market in the Appendix, possible solutions to some of the foregoing problems are examined. Additional problems, however, affect the feasibility of a return to a gold standard.

4. Under a domestic gold standard with convertibility between gold and the dollar available only to residents of the United States, the problem of how to enforce the limitation of convertibility appears intractable. Residents might be required to declare under oath that they were acting for themselves or for other residents, but not for foreigners, when demanding gold or supplying gold at the gold window. Alternatively, gold imports and exports might be embargoed. Opportunities for profitable violation would arise with discrepancies between the U.S. fixed price and the world market price of gold. In both cases, an enforcement army of inspectors would appear to be needed.

5. A fifth problem concerns international aspects of a unilateral return to a gold standard by the United States. The objective would be to preserve flexible exchange rates while domestic monetary growth would be constrained by a gold reserve requirement. However, it is not obvious how this arrangement would function. Under such an arrangement, a shift from a foreign currency into gold by an American investor would impose the whole burden of adjustment on the foreign currency-dollar exchange rate, since the dollar price of gold would not change. Assuming significant portfolio shifts by Americans between foreign currencies and gold, and all other things

equal, exchange rates would tend to become more variable than they are under the present floating system. In addition, the reduction in the gold reserve would lead to a contraction of the monetary base. The rest of the world, of course, could peg to the dollar, as some countries do now. Could foreign countries obtain gold from or sell gold to the United States? How would such gold transactions affect domestic monetary policy?

6. Advocates of the gold standard claim that its restoration -- and possibly even the announcement of a decision to restore it -- would immediately reduce both the inflation rate and the level of interest rates, and would eliminate inflationary expectations. No transitional costs are mentioned. However, contracts in the credit and labor markets and final products markets reflect the existing inflationary cost and price structure. Advocates do not explain how the adjustment of the existing cost and price structure to what they describe as a new noninflationary gold standard can be achieved without bankruptcy and loss of employment. It is this consideration that motivates some who argue that it is premature to advocate a return to the gold standard before price stability has been attained.*

B. An international gold standard with a fixed price of gold

Proposals

Under this proposal, the United States would maintain fixed exchange rates with other countries based on the fixed price of gold it chose and the definition of the gold content of the dollar and other national money units. Such a standard could be achieved either by international agreement or by evolution -- the United States could be the first to reinstitute the fixed price of gold and other countries, persuaded by U.S. success in stabilizing the domestic price level, might follow suit. International payments imbalances would be settled by gold flows or by flows of dollars or dollar assets convertible into gold at the fixed price. The monetary base and the money supply would vary with gold flows.

Problems in implementing an international gold standard in some respects are similar to those presented in implementing a domestic gold standard.

Evaluation

1. The key problem again is choosing the right price for gold at which to fix the exchange rate.** In 1925, Great

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*Congressman Henry S. Reuss -- In other words, this claim by the gold bloc is completely unfounded.

**Congressman Henry S. Reuss -- This problem, though virtually insoluble, is not the key problem. The key problem is that the gold standard would not work and could not be sustained if even technical issues of implementation could be resolved.

Britain returned to the gold standard at an unrealistically high gold price for the pound. In 1947, it repeated that mistake. In the first instance, it struggled for six years in a vain attempt to deflate the economy to make the gold price viable in the face of gold outflows. The pound was then freed to float. In the second instance, it gave up the attempt after two years and devalued. In 1928, France returned to the gold standard at an unrealistically low gold price for the franc. Gold inflows into France (and U.S. sterilization of its gold inflow) destabilized the system.

2. The preceding examples indicate a problem that could arise were the United States to choose the gold price for the dollar independent of other countries' decisions. As in the British-French exchange rate decisions in the 1920s, unilateral actions could produce unsustainable relationships.

3. A multilateral return to the gold standard would require international agreement and amendment of the IMF rules. Yet there is no evidence that our trading partners have an interest in re-instating the gold standard. The views they have expressed, in fact, are negative with respect to the desirability or feasibility of a return to the gold standard.

4. All the problems associated with fixed exchange rates would have to be dealt with again. Is the United States, with a relatively closed economy, well advised to seek fixed exchange rates that throw the whole burden for adjusting international payments imbalances on the domestic money supply, incomes, and employment?

5. Assuming that the profits of gold revaluation could be sterilized in the United States, would that also be true of the rest of the world? If not, would the United States not be open to the transmission of inflation from foreign economies that chose to monetize the profits of revaluation?

6. Restoring an international gold standard implies restoring convertibility to dollar claims of foreign governments and central banks, not to mention private institutions and individuals. Such claims could be exercised and affect the monetary base with no relation to ongoing balance of payments flows.

C. Increased use of gold in Federal Reserve and Treasury operations, but not a return to a gold standard.

Proposals

Two types of changes in gold arrangements, considered in this group, both based on a variable price of gold, differ in their advocates' view of discretionary Federal Reserve policymaking. One type would reduce or even eliminate the Federal Reserve's discretion. The other type would enhance it. Neither type involves a return to a gold standard but either, if adopted, would make a significant change in current gold arrangments.

Three proposals of the first type differ broadly in content. One proposal is that gold coins, by weight, be issued and allowed to circulate as a parallel currency, their price to be determined by market forces. Some proponents have urged Treasury issue of official coins; others have promoted issues by private mints. Some favor exemption of the coins from capital gains and sales taxes. The underlying conception is that paper money holders could exercise the option to convert paper to gold coins and the pace of such conversions would be a signal to the Federal Reserve whether its policies were overly expansionary. Exemption from capital gains taxes would, however, make the coins differentially attractive and confuse the "signals" given to the Federal Reserve.

Another proposal advocates Treasury issue of gold-backed notes or bonds. The argument supporting the proposal is that the more stable purchasing power of gold than of the dollar would permit the market yield on such gold-backed issues to be lower than current market yields on dollar notes or bonds. Thus, using these instruments would hold the national debt below what it would otherwise be, and restrain the incentive for monetary and fiscal authorities to use the inflation tax as a way of reducing deficits. Moreover, gold-backed bonds, by competing with dollar-backed bonds, would limit the Federal Reserve's ability to use open market operations to expand the money supply. Proposals differ with respect to the redemption of the issue: some specify redemption at the price of gold at date of issue, others at date of redemption, others offer the option of redemption in dollars rather than gold. Some propose a coupon of 2 or 3 percent; others a coupon of 8 percent -- still much lower than current yields on Treasury dollar issues.

The third proposal to limit Federal Reserve discretion is based on a different approach. It would limit the growth in M1 by tying the maximum allowable growth of currency in every 12-month period to the increase in that period in the value of the Federal Reserve's gold certificates. The value of the gold certificates presently is established by statute of the last official price of gold which, as noted in section I above, was $42.22 an ounce. The proposal is that the official price would be increased percentagewise in each period by enough (1) to offset a predetermined increase in the certificate requirement, starting at 9 percent in 1981, plus (2) the maximum desired growth in M1 beginning in 1982, plus (3) an adjustment for changes in the ratio of checking deposits to currency. The proposal recommends a 33 percent yearly increase in the certificate requirement as from 9 to 12 percent, 12 to 16 percent, and so on. The purpose of the increase is to raise the official price at which gold certificates can be issued to the market price of gold in about eight years. Capital gains accruing to the Treasury from raising the price would be used to retire Federal Reserve holdings of Treasury debt, leaving the monetary base unchanged by the action. Gold coins would not be convertible at fixed prices, but they

could circulate as coins by weight, as under the preceding proposal.

A proposal of the second type would allow the price of gold to fluctuate with market forces but would establish upper and lower bounds to the ratio between the value of the gold stock and the monetary base (the gold cover). If the gold cover reached either the upper or lower limit, the Federal Reserve would intervene by conducting open market operations either in gold or government securities. The proposal assumes flexible foreign exchange rates for the dollar.

Evaluation

1. The issue of gold coins by weight probably would have only marginal consequences for Federal Reserve operations. Whether gold coins are successfully used as money will depend on the market test. Given the past variability in the price of gold, the short-run variability of goods priced in terms of gold coins may be much larger than that of goods priced in terms of dollars. That would make the use of gold coins as a medium of exchange unlikely.

No limit is proposed on Treasury issue of the gold coins. The possibility therefore exists that the Treasury's gold stock might be transferred to the public in this manner, should their unlimited use spread. It is assumed that only U.S. residents will acquire the coins in small quantities. But what if foreign sources ordered large quantities on a given day? Such an order, placed in the gold market, would raise the price. That consequence will not follow at the Treasury sales window.

If no quantity limit is imposed on the issue of gold coins by the Treasury, setting a seignorage fee well in excess of the cost of minting would limit sales by reason of the high price. One suggestion along these lines is that the Treasury issue a one-ounce $1000 legal tender coin. If as many as 25 million of such coins were issued, they would earn the Treasury approximately $15 billion in seignorage at current market prices. The payment in dollars for the coins would reduce the money supply as currently measured, provided the Treasury refrained from adding the seignorage to its general funds and the Federal Reserve took no offsetting action. It is alledged that a $1000 one-ounce coin would fluctuate less in value than a bullion coin would, and that holders could use it in transactions or to diversify their portfolios.*

Some proponents of an issue of gold coins believe that legal tender status would enhance the monetary attributes of the coins, but others object to the compulsory aspect of

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*Mr. Herbert J. Coyne -- The coin should have a face value of $100.00 or $200.00 or else denominated by fine weight of gold. In addition, because selling the coin in the manner proposed above would result in the depletion of U.S. gold reserves, it should be specified that gold used for coin mintage should be covered by bullion purchases in the market.

legal tender status with respect to the payment of taxes.

The exemption of gold coins from capital gains and sales taxes, when other forms of gold holding were not so favored, would encourage a shift in composition of portfolios that includes gold to coins, and the addition of gold coins to some portfolios that had not previously included gold.*

2. The problem raised by an issue of gold backed-notes or bonds is that it offers gold holders an opportunity to acquire gold without incurring the cost of storage and insurance. A Treasury issue of gold-backed bonds, paying a low rate of interest, would permit speculation on gold with the additional inducement of the coupon. The purchase of such an instrument would indicate an expectation that the market price of gold would rise. The Treasury would be betting against the market, with the possibility of Treasury losses.

However, the existence and growing use of a futures market serve to make many of the foregoing problems inconsequential. Gold can now be held under futures contracts without explicit storage and insurance costs. Such costs are implicit in the price at which gold is bought forward. Such costs would also be implicit in gold-backed Treaury securities. Speculation in gold is permitted and will continue to be permitted whether or not gold-backed securities are issued. A coupon on a gold-backed bond would only mean that it would sell at a higher price than a zero-coupon gold-backed bond or another non-interest bearing way of holding gold. There would therefore be no net inducement to speculate on Treasury gold-backed securities.

3. The proposal to link the growth of currency issues. to the predetermined change per year in the price of gold is a monetary growth rule in disguise. The same objective could be accomplished without the use of gold.**

4. The problem with the proposal to use the price of gold as an indicator for discretionary monetary policy is that it fails to distinguish the source of movements in the price of gold. Movements in the price of gold might reflect market reactions to monetary policy, but equally they might reflect changing real forces in the gold market.

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* Congressman Henry S. Reuss -- This shift would come at the expense of common stocks and other productive capital investments which the Nation requires.

**Congressman Henry S. Reuss -- This is true. Also, all the objections to money growth rules which years of experience in the United States and United Kingdeom have taught us would apply.

An argument made for open market operations in gold is that it offers the central bank the option of using an instrument that will have its initial impact on the price of gold rather than on interest rates. Thus, if the central bank were concerned about producing a change in interest rates, yet desired to affect the growth rate of the money supply, it could conduct appropriate gold operations, in preference to operations in government securities. The duration of the differential effect on interest rates of gold rather than government securities operations is not addressed by the argument. It seems dubious that the differential effect, assuming it can be detected, will persist for longer than the briefest interval -- say, a day.* Gold operations, like government securities operations, affect bank reserves. It is the banks' response to the change in their reserves that affects credit markets.

In addition, open market operations in gold would not be as effective as those in government securities because gold is not as close a substitute as government securities are for financial assets financing real production and consumption.

D. Increased use of gold in international monetary arrangements, but not a return to a gold standard

Proposals

The proposals considered here do not involve a major change in existing monetary arrangements.

One proposal advocates revaluing the U.S. monetary gold stock at prices closer to current market prices and using the gold stock for intervention purposes in the foreign exchange market and to settle international payments imbalances.

A proposal of a different sort would be to initiate action aimed at a renewed restitution to member countries of their IMF gold contributions.

Evaluation

No revaluation of the gold stock is needed to permit sales of U.S. gold for foreign currencies. Given current

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*Mr. Herbert J. Coyne -- Without further study, it is inappropriate for the judgment to be made that the differential effect of using gold for open market operations would only persist for one day. I believe this as yet unexplored technique could have a much more significant differential effect and be a useful addition to the Federal Reserve's operational instruments.

foreign-exchange-market practices, it is difficult to envisage the mechanics of such an operation. A proposal to use gold for settlement purposes in a floating-exchange rate system is also inappropriate.

A variant proposal is that agreements with foreign central banks be negotiated to accept gold at a market-related price.* However, foreign governments and the U.S. Treasury can already buy and sell gold at market-related prices, either in the market or bilaterally. It is therefore unclear what is to be negotiated.

The proposal to use gold as an intervention vehicle endorses intervention when such a policy may not be in the national interest. If intervention is a policy of choice, gold is clearly not needed to achieve it.

To institute restitution of IMF gold to member countries in proportion to their quotas would require a high majority vote of the IMF membership. If gold is regarded as a valuable asset to be held against emergencies by the United States, the same consideration should apply to the international gold reserve.

E. Decreased role of gold as a potential policy instrument

There is essentially only one proposal in this group, namely the Treasury should sell the gold stock over a period of years and use the proceeds either to retire Federal debt, reduce taxes, or finance the current deficit. A program of auction sales could be directed to such a goal, but it would require avoidance of speculation by the market on the timing and magnitude of gold sales. However, such sales would reduce insurance against contingencies. The existence of a monetary gold stock leaves open the possiblity of a return to some form of a gold standard, were the monetary and fiscal authorities to engage in massive overissue. The gold stock serves as a reminder to the authorities that there is an option other than money creation at their discretion. In addition, the possibility of a future return to a gold standard probably has psychological value to some citizens.

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*Herbert J. Coyne -- The idea is not clearly presented or examined here. The purpose of an official agreement between central banks on gold transactions would be to facilitate the use of gold reserves by central banks and international monetary authorities at a market-related price to settle balance of payments surpluses or deficits. Gold could be exchanged for foreign currencies when countries are experiencing deficits or surplus currencies exchanged for gold.

It should be noted that gold is currently used for this purpose by various central banks. An international code of conduct would only formalize these ongoing transactions.

Notes to Chapter 4

1. Arthur B. Laffer, Reinstatement of the Dollar: The Blueprint (A.B. Laffer Associates, February 29, 1980).

2. See note 18 of the Appendix to this chapter.

Staff Appendix: The Gold Market

This Appendix is organized as follows:

A. Introduction
B. History of the gold market before 1968
C. Changes in location and operation of gold markets since 1968
D. Components of the demand for gold
E. Components of the supply of gold
F. Approaches to determination of equilibrium price of gold
G. Record of gold production in past centuries and its relation to trend movements in commodity prices
H. Summary

A. Introduction

Gold is a commodity. Like any other commodity, it will be produced only if the price at which it can be sold will exceed the costs of production, including the return on capital investment, wage costs, and prices of other inputs.

In the private market that has operated since 1968, the price of gold fluctuates, like the prices of other world-traded commmodities, to balance supply and demand. In the short run, the price may be volatile. In the long run, the price must be high enough to yield a return to producers that is competitive with other uses of their capital. Similarly, no commercial user will buy gold unless its price is competitive with that of substitutes and the product in which it is embedded can be sold at a profit. Investors will choose to hold gold only if it is expected to yield a return measured in purchasing power that is equal at the margin to the expected real return on other investment opportunities.

B. History of the gold market before 1968

Over the centuries, gold mined in many countries around the world has found its way to central distribution points where users have been able to acquire it. The distribution centers until 1968 were usually dominated by governments but private sector demand was accommodated in those markets from new output, recycled material, or from existing official stocks.

In the United States, the main government institutions

dealing with the gold market have been the mints and assay offices, which purchased newly mined gold, assayed it and imports of foreign gold, and sold gold on demand to domestic or foreign buyers before 1933. In addition, private gold refiners and processors converted gold material into gold bars or processed gold for the trade. There were no significant direct dealings between gold producers and industrial users. Before 1933, commercial banks and Federal Reserve Banks were also gold buyers and sellers. Thereafter, purchase of gold was confined to government agencies other than the Federal Reserve. Beginning in 1933, the Treasury Department or refiners licensed by it sold bar gold or refined gold to licensed users.

The world's principal gold market before World War I was in London.[1] Four bullion brokers were in business there long before the adoption of the international gold standard. One of them, N.M. Rothschild and Son, was agent for many South African gold mines, having earlier financed the industry. Once a week the brokers met to fix the price of gold and silver. The adoption of the gold standard restricted their business, since the Bank of England's (more or less) fixed buying and selling prices of gold limited fluctuations in the price. Nevertheless, the brokers continued to "fix" the price and arrange the matching of bids and offers. A fifth bullion broker began operations in 1853.

During World War I, there was no international gold market. European continental gold, Australian gold, and United States gold were all embargoed. All gold from the Union of South Africa had to be sold to the Bank of England at the statutory price. Purchasers of gold did not have access to the world's supplies but were limited to supplies available in their own countries.

From 1919 until Britain's return to the gold standard in 1925, the brokers once more resumed the distribution of newly mined gold. During this period, licenses were required for the export from London of newly produced South African gold, and South African gold was sold to the highest bidder through London agents. The demand was channeled through bids the bullion brokers made on behalf of clients, with no upper limit to the price until April 1925.

In 1925, South African gold shipments to London were temporarily suspended when the mines began to bring their output to the Pretoria mint for coinage, a more profitable course for them than sending it to London. To allow the London bullion market to function as the distributor of South African gold throughout the world, the South African Reserve Bank undertook to buy gold from the producers and sell it in London through N.M. Rothschild as their agents. The Reserve Bank thus became the principal buyer of gold produced in South Africa.

The relative importance of the London bullion market in the world distribution of gold declined in the interwar period. Before World War I, the gold was distributed to new and rapidly developing countries because of their regular borrowings in London. After the war, the burden of satisfying international demands for gold was shared with the London bullion market by the American banking system. From the time Britain left gold in 1931 until World War II, the bullion brokers operated as they had from 1919 to 1925. World War II closed the London gold market again.

After the war, South African and other Commonwealth gold producers began selling gold on other free markets, notably in Zurich, either for dollars or transferable sterling, and at premium prices in excess of the $35 per ounce price of gold that the Bretton Woods Conference had adopted as the par value. Other centers thus gained business mainly of private transactors at London's expense. The Bank of England argued that opening the London gold market would secure a larger share of new gold for central banks. Accordingly, the London gold market was reopened in 1954. By 1956, 85 percent of the new gold coming on the gold market was handled there.

The London market was the only two-way free market for gold of any size in the world economy, serving as a market not only for suppliers but for users as well. This distinguished it from markets elsewhere, such as Hong Kong, Macao, Beirut, Bombay, where local demands for gold predominated.

The market in Paris, in contrast to London, was a monopoly of the Banque de France, which sold gold when it was profitable to do so. France prohibits the import and export of gold by its inhabitants, so the market is local.

Rivaling London were the markets in Switzerland (Geneva and principally Zurich). Since the Swiss constitution required the central bank to maintain a certain level of gold reserves, the Swiss National Bank therefore tended to be a buyer rather than a market manager like the Bank of England or the Banque de France. In addition, commercial banks and Swiss nationals also held gold in their portfolios. Swiss laws permitted foreigners to trade freely and openly in gold without fear of disclosure. Zurich was largely a secondary market trading private customers' gold. What the Swiss market lacked was a major international foreign currency market comparable to London's. The relevance of the exchange market to the gold market was that arbitrage between the gold and foreign exchange market was thereby encouraged.

The preeminent role of the London gold market until 1968 was further confirmed by the Gold Pool arrangement instituted in 1961, for which the Bank of England acted as

agent for eight major countries to stabilize gold prices in the London market at the official price. With prices stabilized there through purchases and sales by the gold pool, it was unnecessary to intervene in other gold markets.

C. Changes in location and operation of gold markets since 1968

After March 17, 1968, when the governments that had constituted the London Gold Pool agreed to terminate all gold dealings with the private market either as buyer or seller, the U.S. Treasury amended existing gold regulations to permit domestic producers to sell and export gold freely to foreign buyers as well as to authorized domestic users. Authorized domestic users were permitted to import gold or purchase it from domestic producers within the limits of their licenses. Private traders in gold could apply for licenses to acquire gold in any market for sale to U.S. industrial users, but all transactions with foreign monetary authorities were prohibited.[2]

With the demise of the Gold Pool, the London gold market remained closed from March 18 until April 1 "in deference to the strongly held views of some signatories of the Washington agreement [to establish the two-tier market] that the inauguration of the two-tier gold system would otherwise be prejudiced."[3] Until March 17, South African gold had been sold in London directly to the Bank of England or through the London bullion brokers under the Bank's supervision. During the two weeks that the London gold market was closed, three Swiss banks formed a pool to buy from the South African Reserve Bank and sell all South African gold output at negotiated prices. Title to the gold was transfered to the Swiss banks but delivery of the gold continued to be made in London. Zurich thus became a primary market.

On April 1, 1968, the London gold market was reopened. Two fixings daily at 10:30 a.m. and 3 p.m. (instead of a morning fixing only) were instituted and spot prices were fixed in U.S. dollars instead of sterling as before. In 1972, the South Africans resumed sales of part of their gold output to London dealers, dividing it between the Swiss pool banks and the London dealers. (The sale of South African krugerrands is conducted in a market separate from the bullion market.) Soviet gold is usually sold in the Zurich market through the local Soviet bank.

Other gold markets that were once prominent, like Beirut, have declined and been supplanted by new markets (Bahrain and Dubai) in the Persian Gulf. The Middle East obtains some of its gold in Zurich in addition to the Persian Gulf sources. Hong Kong and Singapore are the significant centers for gold purchases in the Far East.

The gold markets so far discussed have been spot markets where transfers of physical gold have taken place. New types of gold markets have recently emerged, in which trading in gold futures contracts proceeds much as futures trading in other commodities.

Initially established in Winnipeg in 1972, gold futures contracts developed spectacular growth when such trading was approved on U.S. commodity exchanges in 1974 by the Commodity Futures Trading Commission. From 7,000 contracts in 1974, the number grew to 11 million in 1980. Of the five commodity exchanges, the New York Commodity Futures Exchange (COMEX) and the International Monetary Market (IMM) are the industry leaders. The main explanation for the success of the futures market is that gold futures contracts provide a hedge against price risk for producers and industrial users.

A movement toward a world market for trading futures is under way, to provide a 24-hour-a-day spot and futures gold price reading. An exchange trading gold futures denominated in British pounds sterling is scheduled, as of this writing, to begin operations in April 1982; a Tokyo exchange was scheduled to open in March 1982. Futures trading in Singapore and Hong Kong dates from 1980. A market in futures is also open in Sydney, Australia. However, the volume in New York and Chicago far surpasses that in other locations. An international continuous market is envisaged, since trading hours in New York and Chicago are midnight hours in Hong Kong and Singapore, while London's business day is about to end before trading begins in North America.

Futures are contracts for delivery of a commodity at a specified time, price and place. Options confer the right, but not the obligation, to buy or sell commodities or commodity futures or other instruments. Since April 1981, the European Options Exchange of Amsterdam has listed gold options. The Montreal Stock Exchange established a joint gold options market with the European Options Exchange in February 1982.

D. Components of the demand for gold

1a. Three Categories of Demand

In principal, the demand for gold may be classified in three broad categories, which are not, however, easily distinguishable in practice: (1) the nonmonetary demand for industrial fabrication; (2) the monetary demand for reserves by commercial or central banks and, when coins circulated for transactions use before 1933 in the United States, for coin by the private sector; (3) investment demand by the private sector.

Demand for gold for industrial fabrication comprises a variety of uses. The principal one through the ages has been the manufacture of jewelry. Of long-standing also has been the use of gold in dentistry. The decorative arts also have a long history of the application of gold in techniques that were known to ancient civilizations. Gold leaf, laminated gold, gilding, gold plating and vermeil have made use of gold. The current industrial uses of gold include electronics, rayon and synthetic thread production, window glass using gold, alloys for brazing and soldering, catalysts, television selector production, and medical use (gold therapy of rheumatoid arthritis). Two other uses of gold -- in medals, medallions, and facsimilies of official, i.e., fake coins as well as official coins, are sometimes included in industrial demand and sometimes in investment demand. Investment demand is estimated as the residual obtained by subtracting total enumerated consumption from total supply.

One problem with the classification scheme is that jewelry is included in industrial demand, yet for many holders, especially those in developing countries, jewelry represents a form of investment. Even if impeccable data on the components of the demand for gold were available and, as will presently be shown, that is not the case, the mixed industrial-investment characteristic of the jewelry component complicates the interpretation of the quantitative importance of the determinants of industrial demand for gold.

A special feature of the gold market is that there is a vast stock of gold from past production, the cumulative total currently estimated at between 2.8 and at least 3 billion ounces, of which 300 million ounces may have been lost through the ages. The above-ground stocks of gold have accumulated over the centuries since gold is virtually indestructible. Of these stocks, the largest fraction is held by governments. The balance is held by commercial and industrial users, by investors, and as decorative, religious, and collectors (museum) items. In the main, transfers from existing investment stocks to industrial users have been limited. Recycled scrap gold and the annual flow of gold output to the market tend to be the main sources to satisfy the demand of industrial users.

1b. Statistics on Demand for Gold, by Categories

The reported statistics for each of the three categories of demand for gold are estimates. Even for the second category, for which records of the banks and the mints exist, the sources of the statistics are not in full agreement. For the first category -- industrial demand -- the degree of estimation is greater and, in any one source, coverage

may vary from year to year. Again, the estimates shown in different sources are not in full agreement. Given the margin of error associated with the estimates of the first two categories, the residual investment demand obviously cannot be estimated with any greater accuracy.

2a. Estimates of World Demand for Gold, by Categories

One estimate over extended periods from 1835 to 1952 allocates the distribution of gold output among monetary demand, the industrial arts, and absorption by India, China, and Egypt. The percentages of output are as follows:[4]

Period	Monetary	Industrial	Eastern Absorption
1835-1889	50	35	15
1890-1929	58	24	18
1930-1952	90	11	-1

The significance of the separate classification of Eastern absorption (absorption of gold by India and, of lesser significance, Egypt and China) was that in the nineteenth and early twentieth centuries, the Indian masses invested much of their accumulated savings by purchasing precious metals, usually in fabricated form. When the price of gold rose after 1933, they sold off large quantities of their gold. Indian bullion dealers melted their clients' gold trinkets, and sent them to the Mint in Bombay to be refined, assayed and molded into bars, which were exported. Silver has since supplemented gold in Eastern absorption.

Beginning in 1893, the Director of the U.S. Bureau of the Mint presented annual estimates of world consumption of gold in the arts and industries. These estimates were obtained by correspondence with the leading countries of the world, and initially showed consumption of gold in British India separately. Because of incomplete coverage, the estimates are clearly not comprehensive for the world.

The League of Nations gave annual estimates from 1915 of the change in central bank reserves (omitting 1918-22, when Russia's reserve was not reported) and industrial consumption, annually, 1922-38. For 1931-38, the amounts of gold released by the East are given. During the 1920s, the monetary demand averaged twice the industrial demand (with the exception of 1925) and during the 1930s, industrial demand dwindled and monetary demand absorbed nearly all annual output plus the release of Eastern gold.[5] Since 1950, more reliable estimates have become available. Only in 1954-55 and 1957-58, did the gold purchases by official Western monetary authorities top one-half of the annual supply of gold. In the 1960s, in 3 years, there were no official purchases, with a low of under 7 percent of total supply and a high of 42 percent. In only 2 years of the 1970s were there any official purchases, ranging only from 10 to

under 15 percent of the total supply. The world monetary gold stock peaked at about 1.2 billion ounces in the 1960s. Although the gold reserves of central banks of industrial countries has fallen since then, as monetary authorities reduced official reserves, for the world as a whole, the monetary gold stock was only marginally lower in 1980.

Industrial including jewelry demand for gold, which has been negligible until the 1950s, then rose progressively as the real price declined. By the late 1960s, industrial demand equaled total gold output.

Industrial demand absorbed 92 percent of the supply in 1971 -- the peak year for industrial demand since 1950 -- and fell as low as 38 percent in one year only -- 1974. In 9 years, industrial demand accounted for between 40 and 50 percent of the annual supply; in 7 years, for between 50 and 60 percent; in 6 years for between 60 and 70 percent; in 4 years for between 70 and 80 percent; in 3 years for between 80 and 90 percent.

Coin, medallion, and net private bullion purchases first became significant as a percent of total supply in 1967-68, then dwindled in 1969-72. Since then, they have ranged from 20 to 62 percent of annual total gold supply.

2b. Estimates of Demand for Gold in the United States, by Categories

The Director of the Bureau of the Mint gave annual estimates in dollar amounts of the absorption of gold by U.S. industrial users from 1880 through 1967; since then, the estimates are in troy ounces. We give the series in troy ounces throughout in the Statistical Compendium. We express the annual industrial consumption and the change in the U.S. monetary gold stock (gold and bullion held by the Treasury and commercial banks and the public before 1914 through 1933; from 1914 through 1933, held also by the Federal Reserve Banks), each as a percent of U.S. annual gold production. We also give the annual net gold export or import data.

3. Determinants of World Demand for Gold: Industrial Demand

Table 4-1 shows annual estimates of the components of world gold demand from 1950 to 1980, in millions of troy ounces. Before the price of gold in the private gold market was freed to deviate from the official price in 1968, estimates of the breakdown of industrial and jewelry demand are not available: only a combined aggregate estimate exists. The table otherwise shows only net purchases in each category listed. Blanks in a column indicate that there were net sales in those years that added to supply and hence are included in the companion table for the annual world gold supply.

What factors determine the world demand for gold? First, we consider industrial demand, and then asset demand. Of two

Table 4-1

Components of Annual World Gold Demand, 1950-1980
(million of fine troy ounces)

Year	Source of Demand	Industrial Demand: Electronics (1)	Industrial Demand: Dentistry (2)	Industrial Demand: Other (3)	Jewelry Demand: Developed Countries (4)	Jewelry Demand: Developing Countries (5)	Jewelry and Industrial Demand (1)+(2)+(3)+(4)+(5) (6)	Coin and Medallions[a] (7)	Net Private Bullion Purchases (8)	Net Purchases by: Centrally Planned Economies (9)	Net Purchases by: Offical Western Agencies (10)	Total Demand (6)+(7)+(8)+(9)+(10) (11)
1950							12.0		3.1		9.2	24.3
1951							13.0		3.2		7.5	23.7
1952							13.0		4.7		6.5	24.2
1953							12.5		1.0		12.9	26.4
1954							13.0				19.1	32.1
1955							13.5				19.0	32.5
1956							15.0		3.2		13.9	32.1
1957							17.0				19.7	36.7
1958							19.0				19.4	38.4
1959							22.0				21.5	43.5
1960							25.0		5.8		8.4	39.2
1961							28.0				17.2	45.2
1962							30.0		2.5		10.5	43.0
1963							32.5				23.4	55.9
1964							34.5				20.2	54.7
1965							36.0		10.1		6.3	52.4
1966							37.5		2.6	2.1		42.2
1967							38.0		46.9	0.1		85.0
1968		2.6	2.0	1.9		29.3	35.8	3.5	19.8	0.9		60.0
1969		3.2	1.9	2.0		29.2	36.3	2.3		0.5	2.9	42.0
1970		3.0	1.9	2.0		34.2	41.1	3.2		0.1	7.6	52.0
1971		2.8	2.0	2.2	17.8	16.3	41.3	3.4				44.7
1972		3.4	2.1	2.4	22.6	9.4	39.9	3.3			4.9	48.1
1973		4.1	2.1	2.3	13.8	2.9	25.2	2.4	17.2			44.8
1974		3.0	1.8	2.2	8.9		15.9	9.5	16.8			42.2
1975		2.2	2.0	1.9	10.2	6.6	22.9	8.7	4.4			36.0
1976		2.4	2.5	2.1	15.1	14.9	37.0	7.5	1.9			46.4
1977		2.5	2.6	2.1	17.4	14.9	39.5	6.2	6.9			52.6
1978		2.8	2.9	2.5	19.0	13.3	40.5	10.8	4.8			56.1
1979		3.0	2.8	2.4	17.7	6.0	31.9	10.4	12.8			55.1
1980		2.6	2.0	2.1	8.7		15.4	6.2	9.4		7.4	38.4

Source, by Column; A. J. Aron & Company, Statistical Handbook for the Symposium on Gold (October 1981)
B. J. Aron & Company, Gold Statistics and Analysis (November 1978)
C. Consolidated Gold Fields Limited, Gold 1979 (June 1979)

(1)-(5), 1968-70: Source C, p. 16 (converted from metric tons to fine ounces).
1971-72: Source B, p. 36.
1973-80: Source A, p. 13.

(6)-(10): Source A, p.13.

Note: Arithmetic errors in Source A, p.13, have been corrected.
Data revisions in early 1982 became available to us too late for use in the econometric analysis based on this table. A revised version of Table 4-1 appears in the Statistical Compendium.

possible approaches, one analyzes the disaggregated data, the other, the aggregate data. The disaggregated approach estimates demand functions for each of the components of industrial demand and, in addition, breaks it down by regions of the world. The advantage of this approach is that it can isolate the possible influence of changes in the composition of demand which may affect aggregate demand. One example is the growth of gold use in electronics and relative decline in its use in dentistry. Another is the higher income elasticity in developing countries than in developed countries. The chief disadvantage of the disaggregated approach is the existence of measurement problems with respect to some of the components.

The alternative approach, summing all possible industrial uses of gold, isolates the key economic determinants of the demand. These include the real price of gold (the market price deflated by a worldwide price index), the real price of close substitutes (for example, silver), and world real income. The effects of the real price of gold on the quantity demanded would be expected to be negative -- a higher real price would reduce the quantity demanded, other things equal. The effect of the real price of close substitutes on the quantity of gold demanded would be expected to be positive -- a higher real price of a close substitute would increase the quantity of gold demanded, a lower real price of a close substitute would reduce the quantity of gold demanded. Likewise, world real income would be expected to exert a positive effect on the quantity of gold demanded.

An econometric estimate of aggregate world industrial demand for gold for 1950-80 reveals both real income and the real price of gold to be the key statistically significant determinants of demand, with signs in accordance with theoretical expectations (see Appendix Table 4-A1, part 1). However, the real price of silver as a measure of close substitutes for gold was found to be statistically insignificant. We used U.S. real income as a proxy for world real income, in the absence of a world real income series before 1960. In the regressions, the income effect overpowers the price effect. Continued growth of real income at the rate of 3 to 4 percent per year would be associated, other things equal, with a 5 to 7 percent increase in the demand for gold for industrial purposes. In addition, a one percent rise in the real price of gold would lead to a three-quarters of 1 percent decline in the quantity demanded.

We also estimated aggregate world industrial demand for gold over the period 1969-80, using two measures of world real income, in addition to U.S. real income (see Appendix Table 4-A1, part 2). The results, using all three measures of income, are similar. Both income and price elasticities are higher than over the longer period, suggesting that continued growth of real income at the rate of 3 to 4 percent per year would be associated, other things equal, with a 9 to 12 percent increase in the demand for gold for industrial purposes,[6] while a one percent rise in

the real price of gold would lead to a corresponding decline in the quantity demanded.[7] We caution again that the results may be contaminated by the presence of investment motives for absorbing gold in the data for industrial demand.

4. Determinants of World Demand for Gold: Asset Demand

Asset demand for gold by the private sector is motivated by regard for gold as a hedge against inflation and against political uncertainty. To be an effective hedge against inflation, gold must appreciate over the period during which it is held at a rate at least as great as the sum of the real rate of interest and the rate of inflation. If the real rate of interest rises, other things equal, holders will tend to divest themselves of gold. If the expected rate of inflation rises, other things equal, investors will wish to increase their holdings of gold as an asset. If the market rate of interest rises, the demand for gold will rise only commensurate with the extent to which inflationary expectations are fully incorporated in the nominal interest rate.

In the case of an increase in political uncertainty, other things equal, the demand for gold should rise.

The determinants of the world net asset demand for gold (private purchases less sales of gold)[8] should depend positively on the world's wealth or real income, negatively on the real rate of interest, and positively on expectations of inflation. In regressions using annual data over the period 1969 to 1980, we found limited support in most cases for our theoretical specification. Only one regression confirmed expectations [Appendix Table 4-A2, eq. (8)]. In that regresion, the real rate of interest, measured by the Eurodollar rate minus the rate of change of the world consumer price index; the actual rate of inflation, based on the latter series; and world real income, all had the postulated signs and were statistically significant. Moreover, these variables explained over 80 percent of the variation in net asset demand. Other equations, also reported in Appendix Table 4-A2, using other measures of the variables, were less successful.

A quarterly estimate of the asset demand from 1968 II through 1974 IV reported in the literature explained much of the variation of that series.[9]

E. Components of the Supply of Gold

1. Gold Production

Gold was mined in ancient times, but the earliest quantitative estimates available of gold output date from the discovery of America. Between 1493 and 1980, the estimates of gold mined ranges between 2.8 and at least 3 billion

ounces, about two-thirds of which was mined in the past 50 years.

Between 1493 and 1848, the year of the California gold discoveries, total gold mined is estimated at in the range of less than 40 million to less than 150 million ounces, of which the United States produced less than 2 million ounces. Most of the gold produced by that date was held by individuals as jewelry or coins, not in government monetary reserves. The world monetary gold stock in 1848 was about 50 million ounces.

From 1850 to 1933, total gold mined is estimated at 900 million ounces, of which the United States produced one-third. Most of this output was coined, 350 million ounces by Great Britain, 220 million ounces by the United States, 150 million ounces by the rest of the world, the total not necessarily in circulation. By 1933 the world monetary gold stock amounted to 580 million ounces, having increased at a considerably faster rate than total gold mined.

Except in the decades of the 1870s, 1880s, and 1920s, until 1933 the official price of gold was generally at a premium over production costs encouraging an expansion of gold output and discouraging commercial use. The increase in the official price of gold in 1934 accounted for the huge rise in gold output thereafter until the 1960s, when the decline in the real price of gold eroded the incentive to increase output.

World gold production peaked in 1970. Until recent decades, in the short run, a rise in the real price of gold would lead to an increase in output and ultimately to the possibility of gold discoveries. The reversal of the foregoing relationship in recent years is attributable to two factors. Before World War I, gold mining was an extensive industry, which means that exhaustion of easily minable gold led to a shift to new sites. Gold mining subsequently became more intensive, involving large amounts of fixed capital, so that a change in output reflected shifts among grades of ore at a given site. In addition to the change in the nature of the process of gold mining, institutional change also played a role in producing a difference between pre-World War I and more recent gold mining. That institutional change was the subsidization by governments of gold-producing countries of the mining of lower-grade ore. Because of the structural and policy changes, the relation of the real price of gold and gold output has been reversed. This may account for the decline in world gold production since 1970. The decline may also be responding to the earlier decline in the real price of gold and the depletion of existing reserves.

2. Changes in the Major Producing Areas

Fewer than a dozen countries have accounted for the bulk of the

gold mined in each century for which estimates exist. South America's share of total world gold output rose from 36 percent in the 16th century to a peak of 80 percent in the 18th century, and then rapidly dwindled in the 19th and 20th centuries; currently it amounts to about 2 percent of total output. The output of European gold mines declined from 21 percent of the world output in the 16th century to 6 percent in the first decade of the 19th century. A major discovery in Russia in 1814 restored the share of Europe's output by 1840 to the level in the 16th century, following which the relative importance of the continent's contribution declined to 1 percent by 1925. Soviet output since then has accounted for a rise in the continent's contribution to 21 percent in 1980. U.S. discoveries in 1848, and Australian discoveries in 1851 raised the combined shares of the two areas to 80 percent of total world output by 1855, with a gradual decline thereafter to 56 percent by 1895. A major discovery in Canada in 1896 restored the North American plus Australian share of the total to 58 percent in 1905. The decline in the following decades reduced the combined share to less than 10 percent in 1980. Gold output of South Africa made a significant contribution from the beginning of the 20th century, rising consistently except in the decade of the 1930s until it accounted for two-thirds of total output by 1970. Since then it has declined to about 55 percent in 1980.

There are thus fluctuations not only in the average annual aggregate output of gold but also in the geographical sources of increments to the gold stock.

The current nine leading gold-producing countries accounting for 91.4 percent of total gold output in 1980, and their shares were as follows:

Country	Share of Total Gold Output in 1980 (in percent)
Republic of South Africa	55.6
U.S.S.R.	21.3
Canada	4.1
Brazil	2.8
U.S.A.	2.4
Philippines	1.8
Australia	1.4
Ghana	1.0
Zimbabwe	0.9

Note: Revised figures for 1980 lower the percentage for South Africa to 51.7 and raise the U.S.S.R. percentage to 23.8.

The Republic of South Africa and the U.S.S.R., the major gold producing countries, are regarded by some observers as politically unreliable sources of gold.

U.S. new gold output declined from 1.7 million ounces in 1970 to 0.95 million ounces in 1980. Supply to consumers and investors was

supplemented in that year by private refiners' recovery of secondary gold from scrap, amounting to 2.2 million ounces, and by commercial imports, amounting to 4.5 million ounces.

3. World Gold Reserves

As with any exhaustible resource, the estimate of underground gold reserves is based on current economic minability. Other idenfified deposits that are known are not currently economic to mine. It is also always possible that undiscovered gold may remain to be found.

The best estimate of unmined economically minable world gold reserves is that it approximates 1 billion ounces -- compared to 1.8 billion ounces that have been mined over the past 50 years. Half of the 1 billion ounces is in South Africa, half of the other half in the U.S.S.R. Other identified unmined deposits not economically minable currently total about 0.9 billion ounces. These estimates are subject to upward revision. It may be that the rise in the price of gold since 1973 has not yet been reflected in the calculation of demonstrated and inferred reserves, which depend on detailed information about hundreds of deposits.

Since South African reserves are so large a fraction of total world reserves, it is important to examine key aspects of the estimation of that country's reserves. In 1970, it was widely believed that its gold mining industry could not survive, given rising costs of production and a falling real price of gold. Since then, the increase in the price of gold led by 1980 to a ten-fold increase in capital spending on producing mines plus additional amounts for the development of new mines not yet in production. While milling capacity of the industry expanded over the decade, there was no corresponding increase in the output of gold. In fact, annual output fell steadily from 32.1 million ounces to 21.7 million ounces. The reason is that the average grade of ore milled by gold mines fell from 13.3 grams per ton in 1970 to 7.3 grams per ton in 1980. There is little expectation that the level of production will rise in the 1980s, barring a dramatic change in the relationship between the price of gold and costs of production. The rise in costs has been associated with a substantial increase in the industry's wage bill and improvements in the living quarters for black workers, which are planned to continue. High capital costs also confront the industry. They deter expansion of existing mines mining lower grade ore, and also the reopening of mines that were uneconomic when the gold price was fixed.

Gold mining in South Africa is a labor-intensive industry. Mechanization of the gold fields is impractical because of the depth at which mining has to be carried out, the hardness of the rock that has to be excavated to develop access tunnels, the high temperatures of the rock, and the narrowness of the orebody. Most of the people employed are black workers whose families remain in tribal homelands. Movement of blacks into skilled work is opposed by many white trade union members, posing an obvious labor problem for the industry.

The calculation of South African ore reserves depends critically on the concept of pay limit, which is the minimum quantity of metal in the mineralized rock sufficient to yield the revenue to cover costs of mining, processing, and marketing gold. The reserves usually include ore available for extraction within a year. All gold mines in South Africa lease mines from the State subject to the restriction that the company must mine to the average value of its published ore reserves. When the price of gold was fixed, the pay limit rose as mining costs increased; since the 1970s, the pay limit has declined when the price of gold has risen and risen when it declined. In some mines, a relatively minor change in the pay limit can make significant tonnages of low grade ore payable or unpayable, with large effects on the total ore reserve. Whereas pay limits formerly were reviewed once or twice a year, the practice now is to review them monthly. The objective is to limit the number of places that have to be stopped before they have been worked out, so that grade control can be achieved as working places are exhausted.

Projections by industry sources of South African gold output, assuming a current gold price of $305 rising to $407 by 1984, then rising at the same rate as costs until 2000, or alternatively, a current price of $450, rising to $554 in 1984 and then remaining constant in real terms until 2000, are broadly similar: annual gold output totals 22.5 million ounces until 1987 and then gradually declines to 11.25 million ounces by 2000.

One other determinant of South African gold output must be mentioned. A state assistance program was introduced in 1968 to subsidize gold mines that were no longer profitable, thus enabling marginal mines to remain in operation. If the price of gold should decline, the amount of state assistance, which was negligible in 1980, could again rise. The State's motive in providing assistance was to obtain foreign exchange from sales of gold output and incidentally to avoid capital costs of re-opening mines at a later date when their operation might again become economic.

While information relating to South African gold mining is very fully reported, figures neither for annual output nor for reserves of gold are published by the U.S.S.R. Publication of statistics of gold output was prohibited by the Soviet government in 1926, data about geological deposits were discontinued in 1934, and the gold reserves of the State Bank have been secret since 1935. A series of Western estimates, using a variety of methodologies, have been subject to substantial revision from time to time.

An early estimate was based on an announcement in a Five Year Plan that prospecting had raised known deposits from 79.4 million ounces in 1926 to 111.5 million ounces in 1934. The Gold Mining Administration Director at that time predicted that Soviet gold production would surpass that of the South African Rand (the principal South African mining district) and lead the world. The prediction was empty but encouraged Western estimates of Soviet output of 18.3 million ounces and monetary reserves ranging as large as 272 million ounces.

A 1960 revision by the CIA of those estimates, as reported by Consolidated Gold Fields Ltd., reduced the estimate of annual output to a range of 4.3 million ounces to 4.9 million ounces and of monetary reserves to 56 million ounces. Western observers thereafter used the CIA figures which were reputedly based on a Party document a Soviet defector provided.

Consolidated Gold Fields Ltd. made an effort subsequently to produce its own estimates, initially by translating and collating Soviet press reports and technical papers available in the West. The Soviet sources gave percentage estimates of the extent to which targets had been met in individual gold producing areas and the rate of growth of output and additions to ore reserves. No targets or production figures were given by the sources. In 1974, the company adopted a different approach to estimating Soviet gold production, based on information about the type and size of equipment and processes that were being used in mining and extracting gold. Relying on comparison with similar workings elsewhere, the gold content of the material treated was estimated from the nature of each operation and the numbers, types and sizes of machines being used. Between the first and second study, substantial upward revision of the estimates resulted from a re-examination of publications on reef mining. More attention had been placed on alluvial mining in the company's first study because the Soviet press and radio publicized developments there rather than in reef mining, which presumably contributed more to aggregate gold output than previously had been assumed. The second approach yielded an overestimate because it assumed that Soviet production was as efficient as in the West.

Currently, Consolidated Gold Fields Ltd. has under way a third study using satellite photographs in addition to the earlier techniques. At this stage, the company estimates that Soviet annual output is in the range of 9 to 11 million ounces. A revision of estimated Soviet Soviet output has raised the annual figures the company reports. The estimate it gives for 1980 is 10 million ounces. The company assumes that sales to the West by the communist bloc of 12.9 to 13.2 million ounces per year in 1976-78 required drawing down stocks. Communist bloc sales include, in addition to sales by the Soviets, smaller amounts by the People's Republic of China and North Korea. The decline in sales to the West by the bloc in 1978-80 was attributed to the availability of an alternative source of foreign exchange -- oil and gas sales -- as well as the availability of commercial and official credit from the West, which reduced the need to market gold abroad. Increased gold sales since reportedly reflect an increase in demand for foreign exchange which the alternative sources have not supplied.

What is currently known or assumed about world gold reserves therefore suggests that gold output until the end of the century will at best offset some portion of the declining trend that existed from 1970 to 1975.

4. Components of the World Gold Supply

The supply of gold does not depend solely on new gold mined, although for the world as a whole the production of market economies is the principal component. Most gold producers in this sector sell all their annual output, but some may market more or less than current output. South Africa was reluctant to sell its output in 1976-77 when the price of gold declined, although it had a large balance of payments deficit. Instead of selling gold, it arranged a swap of 8.0 million ounces or so of gold for foreign currency, with the option to repurchase the gold at the swap price plus interest. In 1979, it exercised the option and bought 3.9 million ounces of the swap total, selling most of it at the then higher prices, and adding the remainder to its gold reserves. In other years since 1960, South African gold sales have been more or less than current output, depending on the market price of gold, the price of diamonds and other minerals the country exports, and its balance of payments.

Canada has sold gold on occasion in excess of current output to reduce the size of its gold reserves. Australia from time to time requires producers to sell part or all of their output to the central bank. On the whole, gold production in market economies flows to supply the markets of the world.

The supply components other than the output of market economies are intermittent, fluctuating from year to year when present, and absent altogether in other years. These components include:

a) the flow from centrally planned economies;

b) sales by official monetary institutions;

c) sales of private jewelry hoards by residents of developing countries; and

d) sales of private bullion hoards.

a) As noted, the flow of gold to the market from the communist bloc has fluctuated with its need for foreign exchange. There were no sales in the five years 1966-70, when the bloc was a net purchaser. Sales are estimated to have ranged from 13 million ounces per year in 1976-78, as noted above, to 1.7 million ounces in 1971. The bloc is believed to have sold 2.9 million ounces in 1980, and an estimated 7.2 or more million ounces in 1981.

b) Net sales by official institutions since 1950 were limited to the years 1966-68, 1971, 1973-79. They ranged in size from 0.2 million ounces in 1973 to 45.1 million ounces in 1967.

c) Jewelry sales by residents of developing countries amounted to 1.7 million ounces in 1974 and 4.2 million ounces in 1980. In other years since 1950, developing countries absorbed gold jewelry.

d) Dishoarding of private bullion holdings since 1950 contributed to the supply of gold only in the years 1969-72, when it ranged from 0.1 million ounces to 11.0 million ounces.

Table 4-2 lists the components of the world gold supply annually from 1950 to 1980 and compares the total with the corresponding annual world output. The movements in supply are more erratic than those in gold output.

5. Determinants of Market Economy Gold Production

An econometric estimate of the determinants of the gold production of market economies for 1950-80 was obtained by a regression on current and lagged values of gold and a time trend as a proxy for technical progress.[10] As expected, the real price affects market economy production negatively and with a one-year lag.[11] In addition, regressions covering the period 1969-80 gave results similar to those for the longer period.[12] All the results are reported in Appendix Table 4-A3.

F. Determining the equilibrium price of gold

Except during periods when the U.S. did not adhere to the gold standard, the price of gold has been fixed by the government. The most recent such period of non-adherence may be dated from 1968, when the two-tier gold market came into being, with the termination of the London Gold Pool's efforts to hold the price of gold in private transactions at the official price. Since then, it may be said that the price of gold at any moment is determined in a free market by the interaction of total demand for and supply of gold.

Because gold is held for asset as well as industrial purposes, and because the existing stock of gold is very large relative to changes in the stock, it is important to distinguish between the stock and the flow markets for gold. It has been generally agreed that, in the case of the gold market, in the short run at least, conditions in the stock (asset) market dominate those in the flow market. Thus the determinants of net asset demand would be the key factors affecting the price in the absence of any significant sales from official sources or from the communist bloc. Indeed, evidence by Peter Abken,[13] the International Gold Corporation (see note 7), and Otani and Lipschitz (see note 7) suggests that monthly and quarterly variations in the price of gold are largely explained by conditions in the asset market. However, in the long run, conditions in the market for current gold output are the key determinants of the price.[14] In addition to the determinants of industrial demand, the key consideration of the flow supply side is market production of gold. Evidence that it responds negatively to variations in the real price of gold has just been discussed. This relationship reflects the special conditions in the South African gold industry. However, international production has expanded in the past as a result of technological innovation and new discoveries.

Table 4-2

Annual World Gold Supply and Gold Output, 1950-1980
(millions of fine troy ounces)

Source of Supply / Year	Production in Market Economies (1)	Flow from Centrally Planned Economies (2)	Net Official Sales (3)	Jewelry Sales by Developing Countries (4)	Dishoarding of Private Bullion Holdings (5)	Annual Total Supply (1)+(2)+(3) +(4)+(5) (6)	Annual World Output (7)
1950	24.3					24.3	28.3
1951	23.7					23.7	27.4
1952	24.2					24.2	27.9
1953	24.2	2.2				26.4	27.8
1954	25.5	2.2			4.4	32.1	29.1
1955	26.8	2.2			3.5	32.5	30.4
1956	27.8	4.3				32.1	31.5
1957	29.0	7.4			0.3	36.7	32.6
1958	29.9	6.3			2.2	38.4	33.7
1959	32.1	8.6			2.8	43.5	36.2
1960	33.5	5.7				39.2	37.8
1961	34.7	8.6			1.9	45.2	39.3
1962	37.3	5.7				43.0	41.7
1963	38.6	15.7			1.6	55.9	43.3
1964	40.0	12.9			1.8	54.7	44.9
1965	41.0	11.4				52.4	46.5
1966	41.0		1.2			42.2	46.9
1967	39.9		45.1			85.0	46.0
1968	40.1		19.9			60.0	46.5
1969	40.3				1.7	42.0	47.1
1970	40.9				11.1	52.0	48.1
1971	39.7	1.7	3.1		0.2	44.7	47.1
1972	37.8	6.8			3.5	48.1	45.9
1973	35.8	8.8	0.2			44.8	44.1
1974	32.8	7.1	0.6	1.7		42.2	41.5
1975	30.9	4.8	0.3			36.0	39.5
1976	31.3	13.2	1.9			46.4	40.6
1977	31.1	12.9	8.6			52.6	40.7
1978	31.3	13.2	11.6			56.1	41.2
1979	31.2	6.4	17.5			55.1	42.8
1980	30.7	2.9		4.8		38.4	42.6

Source, by Column: J. Aron & Company, Statistical Handbook for the Symposium on Gold (October 1981)
(1)-(3) and (5): p.13.
(4): p.33.
(7): p.19.

Note: An undated version of this table appears in the Statistical Compendium.

If the equations for the industrial demand for gold and for the gold output of market economies are solved for the real price of gold, this yields a reduced-form equation,[15] where the real price of gold is determined by the exogenous (independent) variables of the flow demand and supply equations: world real income, the time trend as a proxy for technical advance, the real price of silver, and the real price of gold lagged by one year. Such a reduced-form equation explains up to 93 percent of the annual variation in the real price of gold. Adding a market interest rate and, in turn, the annual percentage change in the price level or, lagged money growth as a proxy for price expectations, to account for factors affecting the net asset demand for gold, adds 4 percent to the explanation of price variations[16] (see Appendix Table 4-A4.)[17]

One way to arrive at an equilibrium price of gold is to follow the approach of Robert Aliber.[18] He takes the price of $35 per ounce in 1961, a year when the United States had virtual price stability, as an initial equilibrium price. Assuming no other factors affected the real price, the nominal price of gold should have increased to the same extent as the increase in the U.S. price level since 1961 plus a return equal to the real rate of interest. The U.S. CPI tripled between 1961 and 1980, hence the nominal price of gold should have been $105 in 1980. Using the world CPI change, the price should have been $155.[19]

However, as the discussion above indicates, other factors would have affected the real price of gold in addition to the increase in the general price level. If world real income elasticity of demand for gold is taken to be 1.85 (based on the results for 1950-80 reported in Appendix Table 4-A1 Part 1), and the increase in world income approximated 83 percent (based on an index of world real GNP), the demand for gold would have increased by 154 percent over the period 1961-80.[20] Over the same period, the total world gold stock increased by 35 percent.[21] Thus the excess demand for gold amounted to about 120 percent. If we take the price elasticity of demand for gold to be -1[22], and price elasticity of supply to be close to zero,[23] then the real price would have increased (other things equal) by about 120 percent since 1961. On this calculation, the equilibrium price of gold in 1980 would have been between $230 and $340.[24] This exercise assumes that factors affecting the net asset demand for gold are transitory, and would vanish once price stability under a gold standard is restored.

Assume that at a price per ounce of gold, within the calculated range of $230 to $340, the gold standard was restored. In the current free market, a monetary demand essentially does not exist. The price calculation reported here was based on equating the nonmonetary demand for and the supply of gold. Under a gold standard, the government sets the price and must satisfy all demands for gold at that price. Under a reinstituted gold standard, a monetary demand for gold would recur. Only after the monetary demand for gold had been accommodated, would the nonmonetary demand for gold be satisfied. Thus the asset demand relationship in the foregoing econometric exercise would no

longer be relevant. The supply equation, however, would presumably be unaffected by a return to the gold standard. The question then resolves itself into the adequacy of the supply relative to the putative prospective monetary and nonmonetary demand for gold.[25]

G. Record of gold production in past centuries and its relation to trend movements in commodity prices

The rate of growth of world gold output over the centuries has waxed and waned. Chart 4-1 plots world yearly output of gold from 1800 to 1980. Table 4-3 compares average annual rates of growth of world output of gold (in millions of fine ounces), for subperiods since 1849, with corresponding average annual rates of change of available measures of the U.S. price level.

The table leaves no doubt that gold production has not increased at a constant annual rate from subperiod to subperiod. Averaging over periods of high and low growth rates of gold production obviously yields a smoother picture. Similarly, averaging over periods of a falling price level matching low growth rates of gold production and periods of a rising price level matching periods of high rates of gold production yields a smoother picture of price change. But for contemporaries each period was distinct and exacted first the costs of deflation and then the costs of inflation. The growth rate of gold output has not been stable over time.

Three subperiods since 1934 invite comment. Annual rates of growth of gold output more than doubled in the closing years of the interwar period, 1934-40. The doubling was a response to the sharp increase in the profitability of gold mining that the U.S. increase in the official price from $20.67 to $35 an ounce produced. At first glance, the 0.66 average annual rate of increase in the U.S. price level from 1934 to 1940 may not appear to reflect the surge in gold output. However, a comparison of the change in the average annual rate of increase in the U.S. price level from the 1920-33 to the 1934-40 subperiod (+4.6 percent per year) with the corresponding change in the rate of change of gold output (+3.6 percent per year) shows a close relationship between the two variables. After 1950, the rate of change of the U.S. price level in the two subperiods that are distinguished no longer tracks the rate of change of gold output. Post-World War II inflation experience was fueled by means other than rising gold output, which accounted for inflations before 1914 that were clearly less virulent than the postwar episode.

H. Summary

The rate of growth of gold output is not constant over time. After World War II, output grew at about 3 percent per year until 1970, and has since declined at about 1.5 percent per year. The most important gold producer among market economies is South Africa. Factors that would operate to continue the downward trend in South African output include a government mandated shift to lower-grade ores

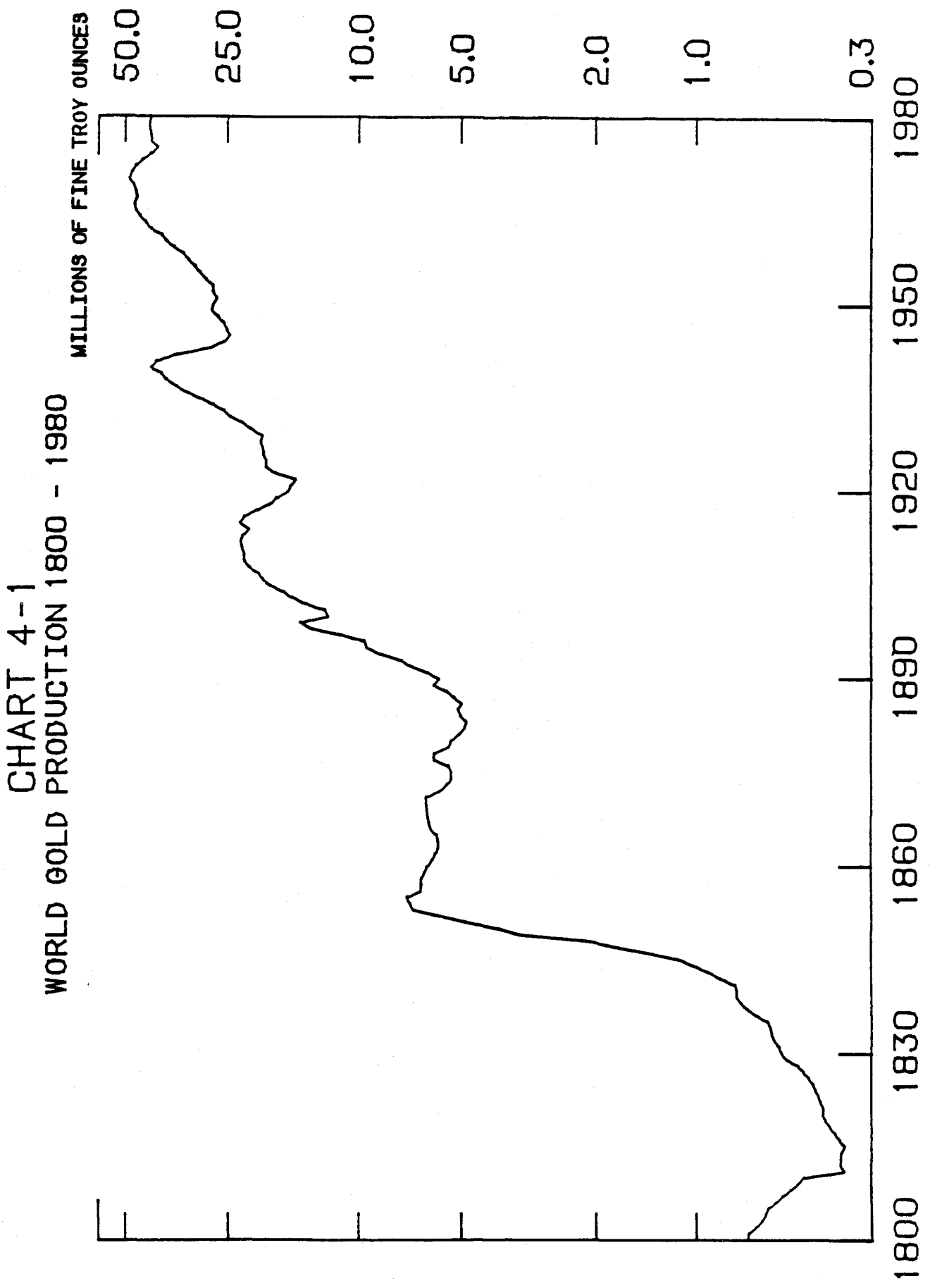
CHART 4-1
WORLD GOLD PRODUCTION 1800 - 1980
MILLIONS OF FINE TROY OUNCES
50.0
25.0
10.0
5.0
2.0
1.0
0.3
1800
1830
1860
1890
1920
1950
1980

Table 4-3

Comparison of Average Annual Rates of Change of World Gold Output and of Various Measures of the U.S. Price Level, by Subperiods, 1849-1980

World Gold Output		U.S. Price Level		
Period	Average Annual Rates of Change (in percent)	Period	Average Annual Rates of Change (in percent)	
1849-1870	6.2	1849-1870	2.37	Wholesale Prices
1871-1889	-0.3	1869-1896	-2.11	(NNP price deflator)
1890-1913	6.0	1896-1913	1.97	"
1920-1933	3.4	1920-1933	-3.90	"
1934-1940	7.0	1934-1940	0.66	"
1950-1968	2.7	1950-1968	2.64	(GNP price deflator)
1969-1980	-1.6	1969-1980	6.50	"

Source: For gold output, see the Statistical Compendium, Table 1, below.

For wholesale prices, 1849-70, see U.S. Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 1, Series F-2, pp. 202-203.

For the deflator implicit in net national product, 1869-1940, see M. Friedman and A.J. Schwartz, Monetary Trends in the United States and United Kingdom, 1867-1975, Ch. 4, appendix of basic annual data (in press).

For the deflator implicit in GNP, 1950-80, see Economic Report of the President (transmitted to the Congress February 1982), Table B-3, p. 236.

Note: Rates of change assume continuous compounding, that is, they are the difference between the natural logarithms of the variable at the terminal and initial dates divided by the number of years separating those dates.

when the average gold price rises, inflation effects on labor and capital costs, shortages of skilled labor and labor unrest, as well as the high costs associated with deep mining. Offsetting these factors are the possibility of discovery of new gold fields and uranium revenues, since the mineral is found in one-sixth of South African gold mines. Gold output in the United States and Canada, including by-product gold production mainly from copper mining, has also displayed a negative postwar trend, although a rise in gold prices has encouraged reopening of mines and exploration. Brazil has become a recent gold producer, although its output is not consequential. Among Communist countries, the U.S.S.R. is the leader, estimated to produce about one-fifth of the world's output, although its sales are not geared to production but to balance of payments needs. For the long run, little increase in annual world gold production is in prospect.

Advocates of a return to the gold standard tend to dismiss concern with the prospective rate of growth of world gold output. Yet the amount of gold available for annual additions to the stock of monetary gold is a crucial factor in determining the trend of the price level under a gold standard. If the annual rate at which the monetary gold stock increases is below the rate of population growth and real income growth, the consequence is a declining trend in the price level.

This conclusion follows from extensive studies of the per capita demand for money that have shown it to be determined by per capita real income and an interest rate representing the yield on an asset alternative to holding money. If the supply of monetary reserves will not match the growth in demand for money, the price level will fall. It was not by coincidence that the negative rate of gold output growth from 1871 to 1889 was associated with a declining price level in the United States and worldwide until 1896. The decline in the price level was the consequence of the decline in the rate of gold output growth concomitant with a rising world demand for gold. Similarly, the decline in the price level during the 1920s was a consequence of the fall in the rate of gold output during that decade. In each case, the declining rate of gold output was a response to an earlier decline in the real price of gold.

A declining trend in prices may seem a desirable development after decades of a rising price level. However, such a change would impose two kinds of adjustment costs upon the economy: (1) transition costs in moving from an inflationary to a deflationary environment; (2) continuing costs of a deflation, assuming continuance of a gold standard. The costs might be regarded as tolerable if they affected all markets proportionally, so borrowers and lenders, workers and employers, retired and active labor force participants, urban and rural families, were all equally burdened. No more than the costs of inflation, however, will the costs of deflation be so distributed.

Notes to Chapter 4

1. W.A. Brown, Jr., The International Gold Standard Reinterpreted, NBER, 1940, 2 vols., pp. 627-37.

2. Annual Report of the Secretary of the Treasury 1968, pp. 467-70.

3. Bank of England, Quarterly Bulletin, June 1968, p. 109.

4. W.J. Buisschau, "Some Notes on Gold Production and Stocks," in National Industrial Conference Board Special Studies no. 43, Shall We Return to a Gold Standard - Now? 1954, p. 163.

5. International Currency Experience: Lessons of the Inter-War Period, League of Nations, 1944, p. 233. Where they overlap, the League of Nations annual estimates do not agree with the annual estimates in the source cited in note 4 for the period 1930-1952. In many years, the sum of the change in central bank reserves and industrial consumption does not equal the gold supply.

6. U.S. real income grew at an average annual rate of 2.74 percent from 1969 to 1980; real income of 7 industrial countries increased at an average annual rate of 3.22 percent, and world real income by an average rate of 3.76 percent. For sources, see Table 4A1, part 2.

7. The estimates of the determinants of industrial demand for gold reported here were obtained from ordinary least squares regressions. We also used the two-stage least squares procedure, as a check on possible identification problems, and the results were not significantly different from those for OLS regressions. A recent study using annual data over the period 1970-80 reported the real price elasticity as -1.2 and the real income elasticity as 2.9 (International Gold Corporation Limited, A Gold Pricing Model (August 1981: p. 5.) The results are similar to those reported in our Appendix Table 4-A2. A quarterly study of the period 1968-74 reported a price elasticity of -0.7 and an income elasticity of 0.6 (L. Lipschitz and I. Otani, "A Simple Model of the Private Gold Market, 1968-74: An Exploratory Econometric Exercise," IMF Staff Papers 24 (March 1977): pp. 32-63.)

8. We added the constant $20 billion (the amount required to make negative changes positive) to the net asset demand series to allow us to make the log transformation. This procedure does not introduce significant bias in our estimates. Net asset demand is defined as Table 4-1, col. 8, minus Table 4-2, col. 5, for a definition excluding coins and medallions. Including coins and medallions, the definition is the sum of Table 4-1, cols. 7 and 8, minus Table 4-2, col. 5. Regression results including coins and medallions were superior to those excluding them. Our net asset demand equation is a reduced form that we believe captures

the essential factors that determine the flow net asset demand for gold.

9. Lipschitz and Otani (note 7, above) found hoarding demand for gold to be significant functions of Eurodollar and Euromark interest rates, expected inflation, and wealth over the period 1968-74.

10. The results were similar for the period 1951-80, using the world CPI as the deflator (available only since 1950); for 1950-80, we used the U.S. wholesale price index as the deflator. See Appendix Table A3.

11. The real price lagged two and three years did not improve the results nor did omitting the time trend (Appendix Table A3). One possible explanation for the negative coefficient on the real price is that it reflects producers' expectations about the behavior of the future price of gold. When gold prices are high, they may be expected to decline, so producers reduce output in anticipation of the price decline. See Stephen W. Salant, "The Vulnerability of Price Stabilization Schemes to Speculative Attack," Journal of Political Economy (forthcoming).

12. The estimate of price elasticity of gold output reported by Lipschitz and Otani for the period 1968-74 is -0.11, similar to our result.

13. "The Economics of Gold Price Movements," Federal Reserve Bank of Richmond, Economic Review (March/April 1980): pp.3-13.

14. However, this statement neglects the condition for the optimal depletion of an exhaustible resource. In that case, in a competitive market, Notelling's rule that the price of the resource should rise by the market rate of interest would be of paramount importance. See Stephen W. Salant and Dale W. Henderson, "Market Anticipations of Government Policies and the Price of Gold," Journal of Political Economy 86 (August 1978): pp. 627-48.

15. An equation system is said to be complete when it has as many endogenous (dependent) variables as equations (in our example, two: one for the demand for gold, the other for the supply of gold), and when it can be solved for these variables. The solution is called the reduced form of the system. The reduced form is convenient for calculating the effect of a change in exogenous (independent) variables on an endogenous variable.

16. In the equations in Appendix Table A4, we deflate the prices of gold and silver by the U.S. and world CPI. To be consistent, we use the two series as measures of price change. Results were similar in regressions using the U.S. wholesale price index as the measure of annual price change.

17. The study by the International Gold Corporation (see note 7, above), using monthly data, explains most of the variation in the

price of gold with measures of the real rate of interest, lagged world money growth, and a measure of world political tension. However, the reported results do not include Durbin-Watson statistics, suggesting that they may be marred by autocorrelation, as are many of those reported here.

18. See his statement before the Commission, November 12, 1981. For a more comprehensive treatment of his approach, see his paper, "Inflationary Expectations and the Price of Gold," presented to the World Conference on Gold, Rome, February 5, 1982.

19. The world CPI, available in IMF, IFS Yearbook, increased 4.4 times over 1961-80.

20. If we use the income elasticities of the past decade, reported in Appendix Table A1, part 2, and those reported in the International Gold Corporation study (an average of 3.22 in Table A1, part 2, and 2.9 in the latter study), the income elasticity would be closer to 3. Such an estimate would raise the increase in gold demand to 213 percent.

21. Based on U.S. data.

22. Based on the results shown in the Appendix tables and other sources cited.

23. The assumption here is that the price elasticity in the gold output equations in Appendix Table A3 can be taken as a proxy for the price elasticity of the short-run supply curve.

24. Using the income elasticity from the recent period would raise the price to $330 and $490. The higher income elasticity estimates, however, must be viewed with caution. Some of the net asset demand for gold that has emerged since 1969 may be captured by the income effect.

25. On the importance of knowing not only the parameters of the nonmonetary demand for gold but also of the money-market monetary demand for gold, in evaluating the outcome of a return to the gold standard, see Robert P. Flood and Peter M. Garber, "Gold Monetization and Gold Discipline," Board of Governors of the Federal Reserve System, International Finance Discussion Papers, Number 190 (September 1981).

For an analysis of the same issues from an alternative approach, see William Fellner, "Gold and the Uneasy Case for Responsibly Managed Fiat Money, in Essays in Contemporary Economic Problems: Demand, Productivity, and Population, 1981-1982 edition, ed. William Fellner, American Enterprise Institute, pp. 97-121.

Appendix Table 4-A1, Part 1

Annual World Industrial Demand for Gold, 1950-1980

$$\log Q^{D}_{ind} = B_0 + B_1 \log \left(\frac{P_g}{P}\right) + B_2 \log \left(\frac{P_s}{P}\right) + B_3 \log y + e$$

Equation No. (Technique)	Constant (B_0)	Coefficients of Independent Variables (t-values in parentheses) Real Price of Gold (B_1) WPI	Real Price of Gold (B_1) CPI	Real Price of Silver (B_2) WPI	Real Price of Silver (B_2) CPI	Real Income (B_3) U.S.	$\bar{R}^2$	SEE	DW	ρ
1. (C-O)	-22.478 (-6.187)*	-0.779 (-5.075)*		-0.273 (1.863)		2.317 (7.950)*	.945	.101	1.714	.715
2. (C-O)	-11.307 (-3.464)*		-0.714 (-3.605)		-0.122 (-0.570)	1.399 (5.639)*	.895	.140	1.937	.563

*Statistically significant at the 5 percent level.

Technique: C-O = Cochrane Orcutt

Sources: Industrial demand ($\log Q^{D}_{ind}$): Table 4-1.

Price of gold ($\log P_g$): London Price and J. Aron.
Price of silver ($\log P_s$): London Price and J. Aron.
Wholesale price index (WPI): U.S. Bureau of Labor Statistics.
Consumer price index (CPI): World price index (IMF).
Real income (U.S.): Department of Commerce, Bureau of Economic Analysis.

Note: See Chapter 1, note 4, for definitions of statistical measures.

Appendix Table 4-A1, Part 2

Annual World Industrial Demand for Gold, 1969-1980

$$\log Q^{D}_{ind} = B_0 + B_1 \log \left(\frac{P_g}{P}\right) + B_2 \log \left(\frac{P_s}{P}\right) + B_3 \log y + e$$

Equation No. (Technique)	Coefficients of Independent Variables (t-values in parentheses)											
	Constant (B_0)	Real Price of Gold (B_1)		Real Price of Silver (B_2)		Real Income (B_3)			$\bar{R}^2$	SEE	DW	ρ
		WPI	CPI	WPI	CPI	7 Major Industrial Countries	World	U.S.				
1. (OLS)	-11.319 (-4.095)*	-1.495 (-5.876)*		0.228 (1.013)		4.518 (6.261)			.941	.125	2.32	
2. (OLS)	-8.268 (-3.243)*	-1.462 (-5.294)*		0.216 (0.880)			3.855 (5.625)*		.862	.136	2.09	
3. (C-O)	-41.636 (-8.655)*	-1.053 (-7.266)*		-0.009 (-0.557)				3.895 (9.927)*	.929	.101	2.56	-0.39
4. (OLS)	-7.857 (-3.634)*		-1.301 (-5.534)*		0.086 (0.415)	3.590 (6.350)*			.906	.113	2.23	
5. (OLS)	-5.510 (-2.775)*		-1.268 (-5.030)*		0.066 (0.296)		3.074 (5.783)*		.890	.122.	2.05	
6. (C-O)	-32.494 (-8.593)*		-0.969 (-7.478)*		-0.125 (-0.859)			3.142 (10.199)*	.941	.093	2.63	-0.42

* Statistically significant at the 5 percent level.

Technique: OLS = Ordinary least squares

C-O = Cochrane Orcutt

Sources: Industrial demand ($\log Q^{D}_{ind}$): Table 4-1.

Price of gold ($\log P_g$): London Price and J. Aron.

Price of silver ($\log P_s$): London Price and J. Aron.

Wholesale price index (WPI): U.S. Bureau of Labor Statistics.

Consumer price index (CPI): World price index (IMF).

Real income (7 major industrial countries): Citibank, based on GDP of U.S.A., Canada, U.K., Japan, France, Germany, Italy.

Real income (world): IMF.

Real income (U.S.): Department of Commerce, Bureau of Economic Analysis.

Appendix Table 4-A2

Annual World Net Asset Demand for Gold, 1969-1980

$$\log NA^D = B_0 + B_1 \log R + B_2 \log (R - \hat{P}) + B_3 \log (R - \hat{P}^*) + B_4 \hat{P} + B_5 \hat{P}^* + B_6 \hat{\bar{M}}_{t-1} + B_7 \log y + e$$

Coefficients of Independent Variables
(t-values in parentheses)

Equation No. (Technique)	Constant (B_0)	Nominal Interest Rate (B_1)		Real Interest Rate (B_2)		Expected Real Interest Rate (B_3)		Actual Rate of Price Change (B_4)		Expected Rate of Price Change (B_5)		Lagged Long-Term Monetary Growth Rate (B_6)	Industrial Real Income (B_7)	R^2	SEE	DW	ρ
		90-day Treasury bill rate	Euro-dollar rate	90-day Treasury bill rate	Euro-dollar rate	90-day Treasury bill rate	Euro-dollar rate	U.S. CPI	World CPI	U.S. CPI	World CPI						
1.	-5.249	-0.281						0.0496					1.893	.372	.302	1.89	
(OLS)	(-1.102)	(-0.465)						(0.666)					(1.810)				
2.	-2.577		-0.025						0.053				1.183	.463	.279	2.18	
(OLS)	(-0.545)		(-0.085)						(1.336)				(1.103)				
3.	-5.523	-0.088								-0.052			1.871	.472	.277	1.73	
(OLS)	(-1.468)	(-0.262)								(1.428)			(2.129)*				
4.	-2.906		0.127								0.085		1.115	.674	.218	2.37	
(OLS)	(-0.978)		(0.568)								(2.845)*		(1.595)				
5.	-6.652	-0.082										7.450	2.097	.349	.307	1.82	
(OLS)	(-1.606)	(-0.165)										(0.372)	(2.103)*				
6.	-6.623		0.023									4.394	2.086	.347	.308	1.75	
(OLS)	(-1.542)		(0.049)									(0.206)	(2.043)*				
7.	-5.568			0.055				0.190					1.898	.363	.304	1.87	
(OLS)	(-1.180)			(0.297)				(0.427)					(1.792)*				
8.	-1.372				-0.190				0.061				0.892	.804	.171	1.90	-0.57
(C-O)	(-0.654)				(-3.488)*				(3.478)*				(1.866)*				
9.	-7.404					-0.127				0.032			2.274	.488	.223	1.79	
(OLS)	(-1.411)					(-0.564)				(0.719)			(1.919)*				
10.	-2.434						0.063				0.098		1.041	.667	.220	2.41	
(OLS)	(-0.689)						(0.396)				(2.157)*		(1.246)				
11.	-8.955					-0.377						20.278	2.407	.570	.250	2.37	
(OLS)	(-2.572)*					(-2.039)*						(1.464)	(2.939)*				
12.	-5.442						-0.271					17.099	1.697	.561	.251	2.30	
(OLS)	(-1.599)						(2.00)*					(1.294)	(2.047)*				

Notes to Appendix Table 4-A2

* Statistically significant at the 5 percent level.
Technique: OLS = Ordinary least squares
C-O = Cochrane Orcutt

Expected U.S. annual rate of price change $(\hat{P})^*$ was obtained by regressing the rate of change in U.S. CPI on a measure of the long-term rate of change of money -- a 3-year moving average of M1B -- lagged one year $(\hat{\bar{M}}_{t-1})$:

$$(1.)\ \hat{P}^* = \underset{(-4.2)^*}{-0.125} + \underset{(1.94)^*}{3.30}\ \hat{\bar{M}}_{t-1}$$

$\bar{R}^2 = .875$
SEE = .010
D.W. = 1.80
$\rho = 0.363$

Expected world annual rate of price change was obtained by regressing the rate of change in world CPI on the U.S. money variable, as in equation (1) above:

$$(2.)\ \hat{P}^* = \underset{(-0.81)}{0.043} + \underset{(3.17)^*}{2.483}\ \hat{\bar{M}}_{t-1}$$

$\bar{R}^2 = .755$
SEE = .016
D.W. = 1.68
$\rho = 0.677$

For industrial countries covered by real income measure, see Table 4-A1, part 2.

Appendix Table 4-A3, Part 1

Annual Market Economy Gold Production, 1950-1980

$$\log Q^S = B_0 + B_1 \log \left(\frac{P_g}{P}\right)(t) + B_2 \log \left(\frac{P_g}{P}\right)(t-1) + B_3 \text{ Time} + e$$

Equation No. (Technique)	Constant (B_0)	Coefficients of Independent Variables (t values in parentheses)		(B_3) Time	R^2	SEE	DW	ρ
		Real price of Gold (B_1) U.S. WPI	Real Price of Gold Lagged (B_2) U.S. WPI					
1. (C-0)	4.285 (13.498)*	-0.074 (-1.886)**		-0.011 (-0.934)	.964	.033	0.65	0.936
2. (C-0)	4.406 (14.004)*		-0.104 (-2.369)*	-0.012 (-1.024)	.967	.032	0.841	0.937
3. (C-0)	4.427 (12.853)*	-0.036 (-0.794)	-0.081 (-1.569)	-0.010 (-0.740)	.966	.032	0.760	0.940
4. (C-0)	4.038 (23.077)*	-0.094 (-2.880)*			.964	.033	0.645	0.933
5. (C-0)	4.148 (22.013)*		-0.126 (-3.258)*		.966	.032	0.856	0.934
6. (C-0)	4.203 (21.719)*	-0.047 (-1.129)	-0.089 (-1.750)**		.967	.032	0.741	0.935

Sources: Market economy gold production (Q^S): Table 4-2, col. 1.
See notes to Appendix Table 4-A1 for sources of other data.
* Statistically significant at 5 percent level.
** Statistically significant at 10 percent level.

Appendix Table 4-A3, Part 2

Annual Market Economy Gold Production, 1951-1980

$$\log Q^S = B_0 + B_1 \log \left(\frac{P_g}{P}\right)(t) + B_2 \log \left(\frac{P_g}{P}\right)(t-1) + B_3 \text{ Time} + e$$

Equation No. (Technique)	Constant (B_0)	Coefficients of Independent Variables (t values in parentheses)							
		Real Price of Gold (B_1)		Real Price of Gold Lagged (B_2)		(B_3)			
		U.S. WPI	World CPI	U.S. WPI	World CPI	Time	R^2	SEE	DW	ρ
1. (C-O)	4.359 (18.407)*	-0.077 (-2.193)*				-0.014 (-1.466)	.968	.030	0.711	0.923
1a. (C-O)	4.325 (17.630)*		-0.036 (-1.200)			-0.020 (-2.149)*	.964	.032	0.853	0.923
2. (C-O)	4.425 (19.139)*			-0.101 (-2.504)*		-0.014 (-1.560)	.969	.029	0.962	0.923
2a. (C-O)	4.446 (17.849)*				-0.064 (-2.046)*	-0.021 (-2.269)*	.967	.030	0.908	0.930
3. (C-O)	4.392 (19.529)*	-0.045 (-1.095)		-0.073 (-1.541)		-0.010 (-1.063)	.965	.029	0.827	0.921
3a. (C-O)	4.417 (18.162)*		-0.022 (-0.750)		-0.059 (-1.779)**	-0.017 (-1.796)**	.967	.030	0.876	0.924
4. (C-O)	4.064 (27.558)*	-0.104 (-3.503)*					.966	.030	0.658	0.909
4a. (C-O)	3.874 (27.394)*		-0.065 (-2.252)*				.959	.034	0.843	0.907
5. (C-O)	4.152 (25.414)*			-0.131 (-3.669)*			.967	.030	0.964	0.911
5a. (C-O)	3.959 (27.365)*				-0.090 (-2.824)		.962	.032	0.871	0.909
6. (C-O)	4.208 (25.767)*	-0.058 (-1.514)		-0.083 (-1.777)**			.969	.029	0.790	0.911
6a. (C-O)	4.068 (25.207)*		-0.092 (-1.419)		-0.072 (-2.133)*		.963	.032	0.828	0.909

Source: See notes to Appendix Table 4-A3, Part 1.

Appendix Table 4-A3, Part 3

Annual Market Economy Gold Production, 1969-1980

$$\log Q^S = B_0 + B_1 \log \left(\frac{P_g}{P}\right)(t) + B_2 \log \left(\frac{P_g}{P}\right)(t-1) + B_3 \text{ Time} + e$$

Equation No. (Technique)	Constant (B_0)	Coefficients of Independent Variables (t values in parentheses)								
		Real Price of Gold (B_1)		Real Price of Gold Lagged (B_2)		(B_3)				
		U.S. WPI	World CPI	U.S. WPI	World CPI	Time	R^2	SEE	DW	ρ
1. (C-O)	3.565 (11.374)*	-0.064 (-1.517)				0.010 (0.388)	.920	.031	0.706	0.872
1a. (C-O)	3.568 (11.511)*		-0.062 (-1.609)			0.088 (0.329)	.922	.031	0.718	0.872
2. (C-O)	3.787 (15.548)*			-0.094 (-2.227)*		0.004 (0.209)	.937	.028	1.520	0.850
2a. (C-O)	3.786 (16.240)*				-0.088 (-2.288)*	0.0001 (0.020)	.938	.028	1.510	0.847
3. (C-O)	3.730 (13.083)*	-0.030 (-0.675)		-0.078 (-1.578)		0.014 (0.569)	.932	.029	1.240	0.866
3a. (C-O)	3.722 (13.279)*		-0.030 (-0.718)		-0.071 (-1.580)	0.010 (0.438)	.934	.028	1.240	0.866
4. (C-O)	3.683 (19.812)*	-0.057 (1.707)					.927	.030	0.704	0.852
4a. (C-O)	3.666 (21.077)*		-0.057 (-1.788)				.930	.029	0.714	0.857
5. (C-O)	3.836 (21.701)*			-0.093 (-2.572)*			.943	.026	1.480	0.835
5a. (C-O)	3.791 (23.368)*				-0.088 (-2.606)*		.945	.026	1.510	0.845
6. (C-O)	3.729 (13.083)*	-0.030 (-0.675)		-0.078 (-1.578)		0.014 (0.569)	.932	.029	1.240	0.865
6a. (C-O)	3.837 (21.441)*		-0.024 (-0.658)		-0.071 (-1.663)		.941	.027	1.210	0.841

Source: See notes to Appendix Table 4-A3, Part 1.

Appendix Table 4-A4

Reduced-Form Equations for the Annual Real Price of Gold, 1969-1980

$$\log \frac{P_g}{P} = B_0 + B_1 \log y + B_2 \frac{P_s}{P} + B_3 \log \frac{P_g}{P}\ (t-1) + B_4\ \text{Time} + B_5 \log R + B_6 \hat{P} + B_7 \frac{\Delta}{M} + e$$

Equation No. (Technique)	Coefficients of Independent Variable (t-values in parentheses) Constant (B_0)	7 Industrial Countries Real Income (B_1)	Real Price of Silver (B_2)	Real Price of Gold Lagged (B_3)	Time (B_4)	Nominal Interest Rate: 90-Day Treasury Bill Rate (B_5)	Nominal Interest Rate: Euro-dollar rate (B_5)	Rate of Price Change: U.S. CPI (B_6)	Rate of Price Change: World CPI (B_6)	Long-term Monetary Growth Rate (B_7)	R^2	SEE	DW	ρ
1. (C-0)	-5.881 (-0.445)	1.920 (0.640)	0.841[a] (3.912)*		-0.026 (-0.234)						.930	.169	1.84	0.169
2. (C-0)	-7.480 (-0.578)	2.433 (0.832)	0.790[b] (3.970)*		-0.046 (-0.440)						.902	.164	1.86	0.318
3. (C-0)	-32.428 (-2.244)	7.921 (2.415)*	0.700[a] (3.573)*	0.512[a] (1.848)	-0.262 (-2.052)**						.931	.167	-0.27[h]	-0.180
4. (C-0)	-34.090 (-2.702)*	8.081 (2.924)*	0.630[b] (3.555)*	0.481[b] (2.100)**	-0.259 (-2.566)*						.914	.154	-0.29[h]	-0.330
5. (C-0)	-43.501 (-6.194)*	10.550 (6.244)*	0.700[a] (2.203)**	0.250[a] (1.569)	-0.334 (-4.653)*	-0.864 (-3.339)*		11.365 (2.872)*			.974	.103	-2.33[h]	-0.739
6. (C-0)	-23.211 (-1.410)	6.068 (1.683)	0.769[b] (1.616)	-0.076[b] (-0.185)	-0.184 (-1.306)		-0.215 (-0.569)		5.671 (1.299)		.920	.148	-2.68[h]	-0.541
7. (C-0)	-40.024 (-4.494)*	9.334 (4.107)*	0.522[a] (1.120)	0.531[a] (2.828)*	-0.293 (-2.965)*	-0.384 (-1.169)				22.297 (2.088)**	.964	.122	-2.34	-0.652
8. (C-0)	-35.897 (-4.307)	8.415 (4.426)*	0.431b (1.037)	0.403[b] (1.941)**	-0.261 (-3.473)*		-0.328 (-1.209)			24.226 (2.368)**	.951	.116	-2.73	-0.667

[a] Deflated by the U.S. consumer price index.

[b] Deflated by the world consumer price index.

[h] Durbin-Watson h statistic, a measure of autocorrelation in the presence of a lagged dependent variable. A value less than one indicates the presence of autocorrelation.

Source: See Appendix Tables 4-A1 to 4-A3.

* Statistically significant at the 5 percent level.

** Statistically significant at the 10 percent level.

S T A T I S T I C A L C O M P E N D I U M

STATISTICAL TABLES RELATING TO GOLD PRODUCTION, STOCKS, SUPPLY AND DEMAND, AND THE NOMINAL AND REAL PRICE OF GOLD

CONTENTS

GOLD PRODUCTION

Table SC-1

Geographical Sources of World Gold Output, by Regions, Subperiods, 1493-1980
(in percent)

Period	Europe	North America	South America	Africa	Asia	Australia and New Zealand	Other
1493-1600	20.7	3.4	35.7	35.5	-	-	4.7
1601-1700	11.1	4.3	61.7	22.3	-	-	0.6
1701-1800	5.8	5.0	80.0	8.9	-	-	0.3
1801-1850	33.9	21.2	38.3	5.3	-	-	1.3
1851-1900	16.7	36.1	5.6	7.1	3.1	31.2	0.3
1901-1925	5.4	28.2	3.2	42.5	6.8	13.1	0.8
1926-1950	13.3	24.7	3.9	49.6	6.4	2.1	0.0
1951-1980	14.8	12.9	2.1	63.4	3.1	2.2	1.5

Source: See notes to Table SC-2.

Table SC-2
Annual Estimates of World Gold Production, 1800-1980
(millions of fine ounces)

1800	0.701	1840	0.750
1801	0.700	1841	0.768
1802	0.662	1842	0.840
1803	0.638	1843	0.924
1804	0.620	1844	1.022
1805	0.609	1845	1.132
1806	0.578	1846	1.395
1807	0.551	1847	1.714
1808	0.521	1848	2.097
1809	0.496	1849	3.315
1810	0.476	1850	3.910
1811	0.356	1851	4.886
1812	0.369	1852	5.851
1813	0.371	1853	6.965
1814	0.368	1854	7.118
1815	0.361	1855	7.269
1816	0.374	1856	6.581
1817	0.385	1857	6.576
1818	0.399	1858	6.572
1819	0.411	1859	6.437
1820	0.419	1860	6.305
1821	0.417	1861	6.103
1822	0.424	1862	5.968
1823	0.432	1863	5.835
1824	0.439	1864	5.876
1825	0.447	1865	5.916
1826	0.462	1866	6.151
1827	0.478	1867	6.225
1828	0.494	1868	6.300
1829	0.537	1869	6.342
1830	0.556	1870	6.384
1831	0.566	1871	6.391
1832	0.586	1872	5.798
1833	0.597	1873	5.504
1834	0.600	1874	5.360
1835	0.612	1875	5.341
1836	0.660	1876	5.430
1837	0.704	1877	6.001
1838	0.736	1878	5.987
1839	0.758	1879	5.416

Table SC-2 (concluded)

1880	5.349	1930	20.836
1881	5.064	1931	22.330
1882	4.886	1932	24.151
1883	4.746	1933	25.367
1884	5.015	1934	27.372
1885	5.102	1935	29.999
1886	4.945	1936	32.931
1887	5.256	1937	35.118
1888	5.509	1938	37.703
1889	6.048	1939	38.929
1890	5.815	1940	41.770
1891	6.300	1941	40.119
1892	7.060	1942	35.209
1893	7.544	1943	28.052
1894	8.657	1944	25.410
1895	9.578	1945	24.378
1896	9.717	1946	24.902
1897	11.397	1947	25.401
1898	13.921	1948	26.399
1899	15.073	1949	27.563
1900	12.421	1950	27.237
1901	12.692	1951	26.583
1902	14.494	1952	27.335
1903	15.934	1953	27.287
1904	16.902	1954	28.653
1905	18.488	1955	29.901
1906	19.534	1956	30.974
1907	20.040	1957	32.354
1908	21.484	1958	33.416
1909	22.094	1959	35.832
1910	22.147	1960	37.549
1911	22.467	1961	38.984
1912	22.670	1962	41.860
1913	22.307	1963	43.432
1914	21.320	1964	45.171
1915	22.718	1965	46.525
1916	22.035	1966	46.900
1917	20.297	1967	45.999
1918	18.568	1968	46.465
1919	17.667	1969	47.070
1920	16.335	1970	48.590
1921	16.004	1971	47.595
1922	15.467	1972	46.305
1923	17.802	1973	44.507
1924	19.033	1974	41.949
1925	19.026	1975	39.946
1926	19.349	1976	41.774
1927	19.398	1977	41.941
1928	19.756	1978	42.300
1929	19.500	1979	42.253
		1980	41.948

Table SC-2

Sources: 1800-1925: Congressional Record - Senate, July 4, 1952, pp. 9338-39. The source gives annual estimates beginning 1871. For the century, 1701-1800, for decades, 1801-50, and for quinquennia, 1851-70, estimates of aggregate output for each period are given. We interpolated along a logarithmic straight line between the mean value for each period centered at the midpoint: 1750-1805; 1806-1815; 1816-1825; 1826-1835; 1836-1845; 1846-1852; 1852.5-1857.5; 1857.5-1862.5; 1862.5-1867.5; 1867.5-1870. If the sum of the interpolated figures did not equal the reported estimated total, we distributed the difference yearly over each time span.

1926-49: Annual Reports of the Director of the Mint.

1950-80: J. Aron & Company, Gold Statistics and Analysis (December 1981-January 1982), p. 21.

Note: Before 1850 and for less developed countries, the estimates are subject to substantial measurement error. For example, for Chile, the identical total output -- 385,809 fine ounces -- is given for the 1821-30 and 1831-40 decades. In addition, in some countries, to avoid government taxes or regulation, gold was probably sold without proper accounting of the output.

Table SC-3

Concentration of World Gold Production Among Top Four Producing Countries, by Decades, 1801-1980

Decade	Average Annual World Gold Production (millions of fine ounces)	Top Four Countries[a]	Percent of Total World Output Produced by:											
			Brazil	Chile	Colombia	Mexico	Austria-Hungary	Russia	U.S.A.	Australia	New Zealand	China	Canada	South Africa
1801-10	0.585	71.9	20.6	17.1	24.5	9.7								
11-20	0.382	66.0	14.8	16.9	25.3	9.0								
21-30	0.469	68.4	15.1	8.2	22.0			23.2						
31-40	0.657	73.3	14.7		16.2		8.0	34.5						
41-50	1.712	83.4	4.5		6.4			42.3	30.2					
51-60	6.456	93.7			1.7			12.8	41.3	37.9				
61-70	6.110	90.8						14.2	37.5	30.3	8.3			
71-80	5.650	87.6						21.5	33.8	25.8	6.5			
81-90	5.239	78.4						20.7	30.2	22.6		4.8		
91-1900	10.161	61.1						11.6	24.4	21.3			3.7	
1901-10	18.381	74.1						6.8	23.0	18.2				26.0
11-20	20.639	74.7						4.7	19.2	8.5				42.2
21-30	20.554	68.0							10.9	2.9			7.9	46.3
31-40	31.567	73.5						12.9	11.5				12.1	37.0
41-50	28.576	76.2						12.1	7.6				13.1	43.4
51-60	31.441	80.7						11.5	5.8				14.1	49.3
61-70	45.030	88.0						12.1	3.6				7.6	64.7
71-80	42.592	85.6						20.5	2.7				4.2	58.2

[a]Total may not add to sum of four country figures because of rounding differences.

Source: See Table SC-2.

Note: A table for 1801-1930, similar to this one, is given in Hugh Rockoff, "Some Evidence on the Real Price of Gold, Its Cost of Production, and Commodity Prices," presented at a National Bureau of Economic Research conference on the classical gold standard, March 1982. According to Rockoff, gold supply has been potentially vulnerable to political shocks because of the concentration of output. Government policies, or struggles for power, which influenced supply in one country, could influence the world's supply.

Table SC-4

Share of World Gold Output of Nine Leading Producing Countries

Annually, 1968-1980
(in percent)

	South Africa	U.S.S.R.	Canada	U.S.A.	Australia	Ghana	Philippines	Rhodesia-Zimbabwe	Brazil	Sum of 9 Countries
1968	67.5	12.8	5.8	3.2	1.7	1.6	1.1	1.1	0.4	95.2
1969	67.1	13.4	5.5	3.7	1.6	1.5	1.2	1.0	0.4	95.4
1970	67.7	13.7	5.1	3.7	1.3	1.5	1.3	1.0	0.4	95.6
1971	67.5	14.4	4.8	3.2	1.4	1.5	1.4	1.1	0.3	95.7
1972	65.2	15.4	4.6	3.2	1.7	1.6	1.3	1.1	0.4	94.7
1973	63.5	16.4	4.5	2.7	1.3	1.7	1.3	1.9	0.5	93.8
1974	60.8	18.2	4.2	2.8	1.3	1.5	1.3	2.0	0.5	92.6
1975	59.6	19.5	4.3	2.7	1.4	1.4	1.3	1.6	0.4	92.2
1976	58.5	19.6	4.3	2.7	1.3	1.4	1.3	1.5	0.6	92.1
1977	57.5	20.1	4.4	2.8	1.6	1.2	1.4	1.5	0.7	91.3
1978	58.0	20.5	4.4	2.6	1.7	1.0	1.5	1.4	0.8	91.9
1979	58.0	20.9	4.0	2.4	1.5	1.2	1.4	1.0	0.9	91.4
1980	55.6	21.3	4.1	2.4	1.4	1.0	1.8	0.9	2.8	91.4

Detail may not add to total because of rounding differences.

Source: Consolidated Gold Fields Limited, Gold, 1979, 1980, and 1981 editions, Table 2, output of non communist countries, converted from metric tons to ounces; J. Aron, Symposium on Gold (September 1981), p. 19, for Soviet Union output in ounces.

Table SC-5

Annual Estimates of U.S. Gold Production, 1835-1980
(thousands of fine ounces)

1835	39	1880	1,472
1836	26	1881	1,679
1837	16	1882	1,572
1838	24	1883	1,451
1839	23	1884	1,490
		1885	1,538
1840	24	1886	1,687
1841	30	1887	1,603
1842	43	1888	1,604
1843	58	1889	1,595
1844	55		
1845	49	1890	1,598
1846	55	1891	1,605
1847	43	1892	1,597
1848	484	1893	1,739
1849	1,935	1894	1,911
		1895	2,255
1850	2,419	1896	2,568
1851	2,661	1897	2,775
1852	2,903	1898	3,118
1853	3,144	1899	3,437
1854	2,903		
1855	2,661	1900	3,830
1856	2,661	1901	3,806
1857	2,661	1902	3,870
1858	2,419	1903	3,560
1859	2,419	1904	3,892
		1905	4,266
1860	2,225	1906	4,565
1861	2,080	1907	4,372
1862	1,896	1908	4,561
1863	1,935	1909	4,810
1864	2,230		
1865	2,575	1910	4,650
1866	2,588	1911	4,678
1867	2,502	1912	4,498
1868	2,322	1913	4,266
1869	2,395	1914	4,520
		1915	4,824
1870	2,419	1916	4,406
1871	2,104	1917	3,981
1872	1,742	1918	3,258
1873	1,742	1919	2,878
1874	1,620		
1875	1,619	1920	2,414
1876	1,932	1921	2,361
1877	2,269	1922	2,289
1878	2,477	1923	2,426
1879	1,882	1924	2,446
		1925	2,320
		1926	2,239

Table SC-5 (concluded)

1927	2,117	1954	1,837
1928	2,145	1955	1,880
1929	2,057	1956	1,827
		1957	1,794
1930	2,100	1958	1,739
1931	2,214	1959	1,603
1932	2,219		
1933	2,277	1960	1,667
1934	2,742	1961	1,548
1935	3,163	1962	1,543
1936	3,760	1963	1,454
1937	4,112	1964	1,456
1938	4,245	1965	1,705
1939	4,621	1966	1,803
		1967	1,584
1940	4,863	1968	1,478
1941	4,832	1969	1,733
1942	4,583		
1943	1,381	1970	1,747
1944	1,022	1971	1,495
1945	195	1972	1,450
1946	1,462	1973	1,176
1947	2,165	1974	1,127
1948	2,025	1975	1,052
1949	1,922	1976	1,048
		1977	1,100
1950	2,394	1978	999
1951	1,981	1979	970
1952	1,893		
1953	1,958	1980	951

Sources

1835-1844: U.S. Bureau of Mines, Economic Paper No. 6, R. H. Ridgway, "Summarized Data of Gold Production," 1929, p. 14.

1845-1870: Annual Report of the Director of the Mint, 1907, p. 13.

This source shows total gold output from 1792 to 1834 as 677,000 fine ounces and from 1834 to 1844 as 363,000 fine ounces.

1871-1925: Congressional Record, July 4, 1952, p. 9338.

1926-1949: Annual Reports of the Director of the Mint, various issues.

1950-1980: J. Aron and Company, Symposium on Gold, 1981, p. 19.

GOLD STOCKS

Table SC-6
Annual Estimates of the World's Total Gold Stock, 1800-1980
(millions of fine ounces)

1800	113.02	1840	133.94
1801	113.72	1841	134.71
1802	114.39	1842	135.55
1803	115.02	1843	136.47
1804	115.64	1844	137.50
1805	116.25	1845	138.63
1806	116.83	1846	140.02
1807	117.38	1847	141.74
1808	117.90	1848	143.83
1809	118.40	1849	147.15
1810	118.87	1850	151.06
1811	119.23	1851	155.95
1812	119.60	1852	161.80
1813	119.97	1853	168.76
1814	120.34	1854	175.88
1815	120.70	1855	183.15
1816	121.07	1856	189.73
1817	121.46	1857	196.30
1818	121.86	1858	202.88
1819	122.27	1859	209.31
1820	122.69	1860	215.62
1821	123.11	1861	221.72
1822	123.53	1862	227.69
1823	123.96	1863	233.52
1824	124.40	1864	239.40
1825	124.85	1865	245.32
1826	125.31	1866	251.47
1827	125.79	1867	257.69
1828	126.28	1868	263.99
1829	126.82	1869	270.33
1830	127.37	1870	276.72
1831	127.94	1871	283.11
1832	128.53	1872	288.91
1833	129.12	1873	294.41
1834	129.72	1874	299.77
1835	130.33	1875	305.11
1836	130.99	1876	310.54
1837	131.70	1877	316.54
1838	132.43	1878	322.53
1839	133.19	1879	327.95

Table SC-6 (concluded)

1880	333.30	1930	1,064.46
1881	338.36	1931	1,086.79
1882	343.25	1932	1,110.94
1883	347.99	1933	1,136.31
1884	353.01	1934	1,163.68
1885	358.11	1935	1,193.68
1886	363.05	1936	1,226.61
1887	368.31	1937	1,261.73
1888	373.82	1938	1,299.43
1889	379.87	1939	1,338.36
1890	385.68	1940	1,380.13
1891	391.98	1941	1,420.25
1892	399.04	1942	1,455.46
1893	406.59	1943	1,483.51
1894	415.24	1944	1,508.92
1895	424.76	1945	1,533.30
1896	434.48	1946	1,558.20
1897	445.87	1947	1,583.60
1898	459.80	1948	1,610.00
1899	474.87	1949	1,637.57
1900	487.29	1950	1,665.82
1901	499.98	1951	1,693.20
1902	514.48	1952	1,721.11
1903	530.41	1953	1,748.88
1904	547.31	1954	1,778.01
1905	565.80	1955	1,808.45
1906	585.33	1956	1,839.91
1907	605.37	1957	1,872.55
1908	626.86	1958	1,906.23
1909	649.76	1959	1,942.43
1910	671.91	1960	1,980.24
1911	694.38	1961	2,019.53
1912	717.05	1962	2,061.20
1913	739.35	1963	2,104.47
1914	760.67	1964	2,149.36
1915	783.39	1965	2,195.89
1916	805.43	1966	2,242.79
1917	825.72	1967	2,288.79
1918	844.29	1968	2,335.33
1919	861.96	1969	2,382.40
1920	878.29	1970	2,430.54
1921	894.30	1971	2,477.68
1922	909.76	1972	2,523.54
1923	927.57	1973	2,567.59
1924	946.60	1974	2,609.09
1925	965.62	1975	2,648.59
1926	984.97	1976	2,689.19
1927	1,004.37	1977	2,729.88
1928	1,024.13	1978	2,771.13
1929	1,043.63	1979	2,813.89
		1980	2,856.46

Table SC - 6

Source: Figure for 1800 is cumulated total of world gold production, 1493-1800 in Congressional Record - Senate, July 4, 1952, p. 9338. Thereafter, cumulated annual additions from Table SC - 2.

Table SC-7

World Monetary and Nonmonetary Gold Stock,[a]

Annually, 1807-1914
(millions of fine ounces)

End of Year	World Gold Stock		End of Year	World Gold Stock		End of Year	World Gold Stock	
	Monetary	Nonmonetary		Monetary	Nonmonetary		Monetary	Nonmonetary
1807	37.84	79.54	1845	48.00	90.63	1883	155.37	192.62
1808	38.12	79.78	1846	48.48	91.54	1884	156.55	196.46
1809	38.40	80.00	1847	48.95	92.79	1885	158.44	199.67
			1848	49.66	94.17	1886	161.04	202.02
1810	38.69	80.18	1849	52.02	95.13	1887	162.93	205.38
1811	38.99	80.24				1888	165.77	208.05
1812	39.28	80.32	1850	54.39	96.67	1889	168.13	211.74
1813	39.59	80.38	1851	57.46	98.49			
1814	39.87	80.47	1852	63.38	98.42	1890	170.26	215.42
1815	40.18	80.52	1853	69.52	99.24	1891	173.34	218.64
1816	40.48	80.59	1854	74.73	101.15	1892	178.07	220.97
1817	40.79	80.67	1855	79.93	103.22	1893	183.03	223.56
1818	41.10	80.76	1856	85.37	104.36	1894	189.65	225.59
1819	41.41	80.86	1857	90.33	105.97	1895	195.57	229.19
			1858	94.83	108.05	1896	201.48	233.00
1820	41.71	80.98	1859	98.61	110.70	1897	208.57	237.31
1821	42.05	81.06				1898	217.79	242.01
1822	42.35	81.18	1860	102.39	113.23	1899	226.54	248.33
1823	42.66	81.30	1861	105.70	116.02			
1824	42.99	81.41	1862	108.54	119.15	1900	233.88	253.41
1825	43.33	81.52	1863	110.67	122.85	1901	241.68	258.30
1826	43.65	81.66	1864	112.56	126.84	1902	249.72	264.76
1827	43.98	81.81	1865	115.87	129.45	1903	258.47	271.94
1828	44.32	81.96	1866	119.66	131.81	1904	267.69	279.62
1829	44.65	82.17	1867	122.73	134.96	1905	280.93	284.87
			1868	125.57	138.42	1906	291.10	294.24
1830	44.98	82.39	1869	128.41	141.92	1907	302.22	303.16
1831	45.31	82.72				1908	318.30	308.56
1832	45.66	82.87	1870	131.48	145.24	1909	331.07	317.88
1833	45.99	83.13	1871	134.32	148.79			
1834	46.35	83.37	1872	136.45	152.46	1910	341.95	329.15
1835	46.35	83.98	1873	138.58	155.83	1911	352.11	341.46
1836	46.35	84.64	1874	140.47	159.30	1912	361.34	354.90
1837	46.35	85.35	1875	140.12	164.99	1913	373.40	342.84
1838	46.35	86.08	1876	144.25	166.29	1914	389.48	370.38
1839	46.35	86.84	1877	146.85	169.69			
			1878	149.93	172.60			
1840	46.59	87.35	1879	151.11	176.84			
1841	46.82	87.89						
1842	47.06	88.49	1880	152.05	181.25			
1843	47.30	89.17	1881	153.47	184.89			
1844	47.53	89.97	1882	154.42	188.83			

[a] Monetary gold stock includes both official gold reserves and bank and nonbank holdings of gold coin.

Source: League of Nations, Interim Report of the Gold Delegation of the Financial Committee (Geneva, 1930), Table B, pp. 82-84 (converted from £'s to ounces by dividing by 84/11.5 shillings per fine ounce).

Table SC-8

Estimated Gold Holdings of Central Banks and Governments, Annually, 1913-1980
(millions of fine ounces)

End of Year	Gold Held by Central Banks and Governments incl. International Organizations		End of Year	Gold Held by Central Banks and Governments incl. International Organizations	
	F.R. estimates (1)	IMF estimates (2)		F.R. estimates (1)	IMF estimates (2)
1913	222.0		1950	1,008.7	996.2
1914	258.6		1951	1,016.1	1,004.4
1915	302.0		1952	1,022.7	1,012.3
1916	320.8		1953	1,035.7	1,024.4
1917	345.8		1954	1,054.7	1,043.5
1918	329.8		1955	1,073.9	1,062.0
1919	329.2		1956	1,087.9	1,082.8
			1957	1,107.6	1,101.0
1920	351.0		1958	1,126.9	1,121.3
1921	389.2		1959	1,148.4	1,148.8
1922	407.2				
1923	418.6		1960	1,158.1	1,154.5
1924	434.3		1961	1,174.9	1,171.5
1925	435.3		1962	1,185.0	1,183.1
1926	446.7		1963	1,208.6	1,216.4
1927	464.1		1964	1,229.0	1,226.8
1928	486.6		1965	1,235.1	1,248.8
1929	500.1		1966	1,234.9	1,242.9
			1967	1,188.6	1,204.2
1930	529.5		1968	1,168.9	1,173.6
1931	547.9		1969	1,171.7	1,180.3
1932	577.3				
1933	580.8		1970	1,179.3	1,183.1
1934	624.6		1971		1,172.6
1935	619.7		1972		1,178.3
1936	637.7		1973		1,179.5
1937	666.5		1974		1,178.2
1938	714.9		1975		1,177.0
1939	720.8		1976		1,167.0
			1977		1,158.0
1940	813.8		1978		1,150.1
1941	834.4		1979		1,130.9
1942					
1943			1980		1,134.5
1944					
1945	951.0				
1946	960.5				
1947	973.7				
1948	986.4	970.0			
1949	999.4	984.7			

Notes to Table SC-8

Sources:

Col. 1: Banking and Monetary Statistics, 1914-1941, Board of Governors of the Federal Reserve System pp. 544-48; Banking and Monetary Statistics, 1941-1970, Board of Governors of the Federal Reserve System, pp. 913-22. Dollar figures in the source converted to ounces. For 1934-41, only individual country figures are given (see below). Total figures are ours.
Notes in the source on the series for 1913-41 follow.

"The figures represent physical gold, in the form of coin or bullion, held either at home or abroad by central banks and governments. They do not include gold in circulation or in hoards -- that is, gold held by ordinary commercial banks, business concerns, and private individuals. The principal reason for excluding such gold is that satisfactory figures are not available; but it is also considered that gold in the hands of central authorities represents in general the effective gold reserves of the world and should be stated separately, even if accurate figures for other types of gold holdings could be shown. Where countries have not had institutions performing all the recognized central banking functions during the entire period covered by the tables, the gold reserves of government-owned banks or of banks having issue privileges in the countries concerned have been shown in the tables in order to make the compilation as representative as possible. Hence the institutions....are not all central banks in the strict sense.

"Total figures for the gold reserves of central banks and governments are not shown ... after January 1934. Those that are shown are incomplete and not fully comparable. On particular report dates gold reserves may have existed for some countries not included in the table for that date, or there may have been unreported holdings in countries for which figures are included.

"In recent years, the compilation of comprehensive figures for official gold holdings has become increasingly difficult. there has been a tendency toward official secrecy regarding gold reserves which was strengthened by the outbreak of war. One important gold-holding country, the U.S.S.R., has not disclosed its holdings since September 1935, while the last report for Italy was on December 31, 1940, and for Japan on march 22, 1941. In addition, during the war period a number of smaller central banks in countries occupied by the enemy have gone into liquidation or have ceased reporting.

"Further, many central banks have reported figures which fail to disclose the full extent of their countries' official gold reserves. In some cases, notably that of Germany in recent years, the central bank shows only part of its gold holdings as a separate item. In other countries gold has been transferred to - or has been independently accumulated by - special government agencies, the existence of which is known but which operate in a greater or less degree of secrecy. These government funds, created in most cases for the purpose of stabilizing the exchange value of their respective currencies, were initiated on a large scale with the establish-

Notes to Table SC-8 (continued)

ment of the British Exchange Equalization Account in 1932, and have reached their greatest development in this agency, which since September 1939 has held virtually the whole of the United Kingdom's gold reserves.

"Since 1932, when the British Account was established and when regular reports ceased on the large Russian gold holdings, and especially since September 1935, when all Russian reports were discontinued, aggregates of the regularly reported figures have become progressively less representative of the total central gold reserves of the world. Such situations have generally been met in the past by carrying reported figures forward from month to month, in cases considered appropriate, to fill gaps in the statistics for individual countries. Additional defects which have developed in the reported figures during 1940 and 1941 have prompted the decision to omit total figures for recent years from the present tables; for the sake of convenience in presenting the tables, this has been done beginning with February 1934. As a corollary, the practice of covering gaps between reports by carrying forward from month to month the last reported figure for individual countries was discontinued at the same time.

"Many government funds have never reported their gold holdings, but in recent years the three leading exchange funds - the British Exchange Equalization Account, the United States Exchange Stabilization Fund (Special A/c No. 1), and the French Exchange Stabilization Fund - have rendered certain reports on a delayed basis; the French fund reported monthly, and the others at quarterly or semiannual intervals. The British and French funds discontinued this practice following the outbreak of war in September 1939, although three special reports on British gold holdings have been published during the war period by the United States Treasury in connection with Congressional hearings on Lend-Lease legislation.... None of this information has been incorporated in [the table].

"Further light has been cast from time to time upon the operations of certain exchange funds by announcements of gold transfers between them and their respective central banks; such transfers usually are reflected in abrupt changes in the reported figures for the countries concerned....

...."In the case of most of the countries included .... the year end figures are as of December 31 during the entire period. There [are].... exceptions to this rule, most of which are due to the practice of some central banking institutions of consistently reporting on the same day of the week, with the result that the calendar date of their year end report differs from one year to the next, and falls on December 31 only by chance.

"Scope and sources of data for individual countries.... Under war conditions, some difficulty has been experienced in obtaining direct reports on gold reserves, especially from certain European countries. In a few cases where the source of the figures is given as 'current balance sheet,' the information has actually been drawn from reliable indirect reports on balance sheets, such as those published by the League of Nations, the Bank for International Settlements, and the Swiss National Bank."

Notes to Table SC-8 (concluded)

Notes in the source on the series for 1945-70 follow:

"[The] table... shows quarterly data for gold reserves of 60 countries and one international and two regional organizations, as well as world totals. During World War II it was difficult to obtain reliable information on gold reserves, since many countries did not disclose their official holdings and a number of others reported figures that failed to disclose the full extent of their holdings. Therefore, no attempt has been made to show holdings before December 1945.

"In most foreign countries the central bank or bank of issue holds the country's gold reserves, but in several both the central bank and an exchange stabilization fund or similar governmental authority hold the reserves. In others - Canada and the United Kingdom, for example - such authorities hold all of the gold reserves.

"The source of the gold reserve figures for most countries and for the Bank for International Settlements (BIS) has been either the balance sheet or the statistical bulletin of the central bank. Figures for the IMF and several countries have been obtained from the Fund's monthly bulletin, International Financial Statistics. Although most figures given are for the end of the month, figures for several countries, particularly Asian countries that do not issue end-of-month reports, refer to the last report date of the month.

"Gold reserves have been reported in three ways - in the currency of the country, in weight units, or in U.S. dollars. Reserves reported in foreign currencies have been converted into dollars at rates that result in a valuation of $35 per fine ounce, the rate that was in effect during the period covered by this section. Where gold reserves have been reported in weight units, the conversions have been made at the rate of $35 per fine ounce.

"The figures for estimated world gold reserves represent reported holdings of central banks and governments and of regional and international organizations; unpublished holdings of various central banks and governments; and estimated official holdings of countries from which no reports have been received. The figures do not include amounts for the U.S.S.R., other Eastern European countries, and the People's Republic of China.

"The figures for the most part represent physical gold, in the form of coin or bullion, held either at home or abroad. A number of countries have gold deposited with the BIS, and they include these deposits as part of their gold reserves. To avoid overstating world reserves, therefore, the figures included in Table 14.3 for the BIS represent the Bank's gold assets net of gold deposit liabilities."

Column 2: IMF, International Financial Statistics data tape. Differences between columns 1 and 2 appear to reflect differences in coverage of small countries as well as of estimates of their gold holdings.

Table SC-9

U.S. Monetary Gold Stock, Annually, 1860-1914
(millions of fine ounces)

	U.S. Monetary Gold Stock				U.S. Monetary Gold Stock		
June 30	Outside Treasury including Gold Certificates (1)	in Treasury excluding Cover for Gold Certificates (2)	in and Outside Treasury (3)	Dec. 31	Outside Treasury including Gold Certificates (1)	in Treasury excluding Cover for Gold Certificates (2)	in and Outside Treasury (3)
1860	10.03	0.32	10.35	1890	26.85	7.21	34.06
1861	12.89	0.15	13.06	1891	26.90	6.33	33.23
1862	n.a.	n.a.	13.69	1892	26.84	5.87	31.51
1863	n.a.	n.a.	12.58	1893	28.35	3.91	32.26
1864	9.92	0.80	9.82	1894	26.07	4.17	30.24
1865	7.19	1.95	9.14	1895	25.87	3.06	28.93
1866	5.82	2.26	8.08	1896	26.88	6.64	33.52
1867	4.43	4.57	9.00	1897	28.26	7.78	36.04
1868	3.94	3.80	7.74	1898	34.01	11.93	45.94
1869	4.46	3.91	8.37	1899	37.69	11.46	49.15
1870	5.48	3.69	9.17	1900	41.70	11.93	53.63
1871	4.36	3.55	7.91	1901	44.19	12.71	56.90
1872	4.98	2.18	7.16	1902	47.22	13.10	60.32
1873	4.69	1.84	6.53	1903	50.75	12.85	63.60
1874	4.74	2.39	7.13	1904	54.01	11.11	65.12
1875	3.97	1.89	5.86	1905	54.92	13.78	68.70
1876	4.79	1.50	6.29	1906	61.59	15.19	76.78
1877	5.34	2.76	8.10	1907	65.57	12.06	77.63
1878	5.30	5.01	10.31	1908	68.75	11.26	80.01
				1909	67.54	11.71	79.25
Dec. 31				1910	70.38	12.29	82.67
1878	5.69	5.52	11.21	1911	73.59	13.35	86.94
1879	9.21	7.07	16.28	1912	76.38	14.50	90.88
1880	13.83	7.27	21.10	1913	80.07	12.70	92.77
1881	17.15	8.10	25.25	1914	75.11	12.75	87.86[a]
1882	18.99	6.39	25.38				
1883	19.87	7.52	27.39				
1884	21.02	6.85	27.87				
1885	22.50	7.16	29.66				
1886	22.71	8.27	30.98				
1887	24.00	10.09	34.09				
1888	24.23	9.86	34.09				
1889	24.13	9.23	33.36				

Notes to Table SC-9

Note: Dollar figures in sources have been converted to millions of fine ounces of gold.

[a]The dollar figure for which the ounce equivalent is shown is $1,815,976,319. The dollar for 1914 in Table SC-10 is $1,526 million. The major reason for the difference is that $287 million was deducted by the Federal in each year 1914-33 because that amount was not turned into the Treasury in 1934, when gold holdings outside the Treasury was prohibited. The gold that was not returned was assumed to be lost gold. Even if $287 million is added to the $1,526, there remains a discrepancy of approximately $3 million between the Federal Reserve figure reported in Table SC-10 and the Treasury figure shown here. The Treasury ounce estimate is about 145 thousand higher than the Federal Reserve with the assumed lost gold restored to the stock estimates.

(1) June 1860-June 1878: Annual Report of the Secretary of the Treasury on the State of the Finances (A.R. Treasury), 1928, p. 554.
Dec. 1878-Dec. 1879: A.R. Treasury, 1898, pp. 124-27 and 131-33.
Dec. 1898-Dec. 1902: A.R. Treasury, 1903, pp. 206 and 212.
Dec. 1903-Dec. 1908: A.R. Treasury, 1909, pp. 189-93, 205-08.
Dec. 1909: A.R. Treasury, 1910, pp. 184 and 192.
Dec. 1910-Dec. 1914: A.R. Treasury, 1915, pp. 303-06 and 316-18.

(2) June 1860-June 1878: Col. 3 minus Col. 1.
Dec. 1878-Dec. 1897: A.R. Treasury, 1898, pp. 59-61 ("Net gold in Treasury").
Dec. 1898-Dec. 1902: A.R. Treasury, 1903, p. 173.
Dec. 1903-Dec. 1908: A.R. Treasury, 1909, pp. 189-93, 205-08.
Dec. 1909: A.R. Treasury, 1910, pp. 184 and 192.
Dec. 1910-Dec. 1914: A.R. Treasury, 1915, pp. 302-06 and 316-18.

(3) June 1860-June 1878: A.R. Treasury, 1928, p. 552.
Dec. 1878-Dec. 1897: A.R. Treasury, 1898, pp. 109-11.
Dec. 1895-Dec. 1902: A.R. Treasury, 1903, pp. 216 and 220.
Dec. 1903-Dec. 1908: A.R. Treasury, 1909, pp. 189-93, 205-08.
Dec. 1909: A.R. Treasury, 1910, pp. 184 and 192.
Dec. 1910-Dec. 1914: A.R. Treasury, 1915, pp. 302-06 and 316-18.

Table SC-10

U.S. Monetary Gold Stock, Annually, 1914-1980
(millions of fine ounces)

End of Year	U.S. Monetary Gold Stock			End of Year	U.S. Monetary Gold Stock		
	outside Treasury and Federal Reserve Banks including gold certificates in circulation (1)	in Treasury and Federal Reseve Banks excluding (2)	inside and outside Treasury and Federal Reserve Banks (3)		outside Treasury and Federal Reserve Banks including gold certificates in circulation (1)	in Treasury and Federal Reserve Banks excluding (2)	inside and outside Treasury and Federal Reserve Banks (3)
1914	49.42	24.41	73.83	1950			652.00
1915	61.35	36.62	97.97	1951			653.51
1916	76.14	47.52	123.66	1952			664.34
1917	50.02	88.73	138.75	1953			631.17
1918	29.90	109.09	138.99	1954			622.66
1919	22.99	107.97	130.96	1955			621.51
1920	19.68	107.99	127.67	1956			630.23
1921	15.90	147.28	163.18	1957			653.06
1922	21.26	154.94	176.20	1958			588.06
1923	34.22	157.22	191.44	1959			557.34
1924	53.15	150.62	203.77	1960			508.69
1925	59.98	138.96	198.94	1961			484.20
1926	58.71	144.72	203.43	1962			458.27
1927	57.51	140.46	197.97	1963			445.60
1928	53.16	133.29	186.45	1964			442.03
1929	47.25	146.12	193.37	1965			394.46
1930	58.00	150.32	208.32	1966			378.14
1931	48.31	153.58	201.89	1967			344.71
1932	37.85	166.60	204.45	1968			311.20
1933	11.51	183.79	195.30	1969			338.83
1934			235.37	1970			316.34
1935			289.29	1971			291.60
1936			321.64	1972			275.97
1937			364.58	1973			275.97
1938			414.62	1974			275.97
1939			504.10	1975			274.71
1940			628.41	1976			274.68
1941			650.34	1977			277.55
1942			649.69	1978			276.41
1943			628.03	1979			264.60
1944			589.46	1980			264.32
1945			573.80				
1946			591.60				
1947			653.37				
1948			697.11				
1949			701.80				

Notes to Table SC-10

Dollar figures in sources converted to ounces. For the discontinuity between the 1914 figure in col. 3 in this table and the corresponding figure in Table SC-9, see note a in the notes to the latter table. Only col. 3 is shown here from 1934 on, when gold was transferred to the Treasury by former holders.

Although the right to hold gold was restored to U.S. residents beginning 1975, no record is available of the amounts held outside the Treasury.

Source, by Column:

1. Banking and Monetary Statistics, 1914-1941, Board of Governors of the Federal Reserve System, pp. 409-12, sums of gold coin and gold certificates

2. Ibid., p. 536, less cover for gold certificates includes col. 1

3. 1914-41: Ibid., p. 544
   1942-70: Banking and Monetary Statistics, 1941-1970, Board of Governors of the Federal Reserve System, p. 899
   1971-80: IMF, International Financial Statistics data tape

GOLD SUPPLY AND DEMAND

Table SC - 11

Two Estimates of World Gold Supply; Change in Official Gold Reserves; and Gold Absorption in Manufactures and the Arts, Annually 1914-1938, 1930-1952
(millions of fine ounces)

PART 1

Calendar Year	World Output (1)	Eastern Absorption (-) or Dishoarding (+) (2)	Change in Official Gold Reserves (3)	Industrial Consumption: Absorption (-) or Release (+) (4)
1914	21.67			
15	22.84		+43.35	
16	22.01		+18.82	
17	20.37		+25.01	
18	18.58			
19	17.32			
1920	16.11			
21	15.97			
22	15.48			7.55
23	17.85		+11.32	7.40
24	18.63		+15.72	7.06
25	18.58		+ 1.02	7.35
26	19.11		+11.42	6.87
27	19.06		+17.42	6.00
28	18.87		+22.45	5.76
29	19.21		+13.50	
1930	20.90		+29.41	4.93
31	22.30	7.06	+18.34	3.05
32	24.09	10.84	+29.51	1.74
33	25.40	7.35	+ 2.08	1.94
34	27.58	7.35	+51.96	1.09
35	30.24	4.93	- 2.90	2.37
36	33.28	3.93	+34.35	2.23
37	35.32	1.94	+38.70	2.27
38	37.74	1.64	+43.54	1.45

PART 2

1930	20.9	-3.1	15.4	-2.4
31	22.4	7.2	28.6	-1.0
32	24.3	11.7	38.0	2.0
33	25.3	7.4	34.7	2.0
34	27.3	7.2	36.5	2.0
35	29.6	5.0	35.6	1.0
36	33.1	3.6	36.7	0
37	35.0	1.9	36.9	0
38	37.4	1.7	39.1	0
39	38.1	2.3	40.4	0

PART 2 (continued)

Calendar Year	World Output (1)	Eastern Absorption (-) or Dishoarding (+) (2)	Change in Official Gold Reserves (3)	Industrial Consumption: Absorption (-) or Release (+) (4)
1940	40.1	2.2	41.3	-1.0
41	39.3	0.1	37.4	-2.0
42	34.4	-0.9	30.8	-2.7
43	26.7	-1.6	20.7	-4.4
44	24.3	-2.2	16.7	-5.4
45	23.2	-3.0	13.9	-6.3
46	23.5	-3.5	8.5	-11.5
47	24.0	-4.5	5.0	-14.5
48	25.0	-5.5	5.9	-13.6
49	25.9	-4.5	5.8	-15.6
1950	26.6	-4.2	8.6	-13.8
51	26.0	-6.0	12.8	- 7.2
52	26.4	-6.0	9.2	-11.2

Table SC - 11

Note: For Parts 1 and 2, dollar figures in the sources have been converted to ounces.

Part 1

Source: International Currency Experience, League of Nations, 1944, p. 233. Notes to the table in the source cite the U.S. Bureau of the Mint for col. 1 (including U.S.S.R. output) and col.4 (including not only new gold but scrap and coin used in the arts); Baull for International Settlements for col.2; Federal Reserve Bulletin, September 1940, for trhe levels from which col.3 is computed (no change in computed for 1918-22 because U.S.S.R.'s reserves are not reported).

Part 2

Source: W.J. Busschau, "Some Notes on Gold Production and Stocks" in National Industrial Conference Board Special Studies no. 43, Shall We Return to a Gold Standard - Now? 1954, pp. 164-65. The source cites Union Corporation annual reports as the compiler of the monetary gold stock in col. 3. Industrial consumption is described as including a "quantity of gold hoarded in various parts of the world in processed or semiprocessed form, of which in 1951 between 7 million and 8 million and in 1952 slightly more than 4 million are estimated to have been held for hoarding in various parts of the Western World."

Table SC - 12

Components of Annual World Gold Demand, 1950-1980
(million of fine troy ounces)

Year \ Source of Demand	Industrial Demand: Electronics (1)	Industrial Demand: Dentistry (2)	Industrial Demand: Other (3)	Jewelry Demand: Developed Countries (4)	Jewelry Demand: Developing Countries (5)	Jewelry and Industrial Demand (1)+(2)+(3)+(4)+(5) (6)	Coin and Medallions[a] (7)	Net Private Bullion Purchases (8)	Net Purchases by: Centrally Planned Economies (9)	Net Purchases by: Offical Western Agencies (10)	Total Demand (6)+(7)+(8)+(9)+(10) (11)
1950						12.0		3.1		9.2	24.3
1951						13.0		3.2		7.5	23.7
1952						13.0		4.7		6.5	24.2
1953						12.5		1.0		12.9	26.4
1954						13.0				19.1	32.1
1955						13.5				19.0	32.5
1956						15.0		3.2		13.9	32.1
1957						17.0				19.7	36.7
1958						19.0				19.4	38.4
1959						22.0				21.5	43.5
1960						25.0		5.8		8.4	39.2
1961						28.0				17.2	45.2
1962						30.0		2.5		10.5	43.0
1963						32.5				23.4	55.9
1964						34.5				20.2	54.7
1965						36.0		10.1		6.3	52.4
1966						37.5		2.6	2.1		42.2
1967						38.0		46.8	0.1		84.9
1968	2.6	2.0	1.9	29.3		35.8	3.5	19.7	0.9		59.9
1969	3.2	1.9	2.0	29.2		36.3	2.3		0.5	2.9	42.0
1970	3.0	1.9	2.0	34.2		41.1	3.2		0.1	7.6	52.0
1971	2.8	2.0	2.2	17.8	16.3	41.3	3.4				44.7
1972	3.4	2.1	2.4	22.6	9.4	39.9	3.3			4.9	48.1
1973	4.1	2.1	2.3	13.8	2.9	25.2	2.4	17.2			44.8
1974	3.0	1.8	2.2	8.9		14.2	9.4	16.9			40.5
1975	2.2	2.0	1.9	10.2	6.6	22.9	8.8	4.3			36.0
1976	2.4	2.5	2.1	15.1	14.9	37.0	7.5	1.8			46.3
1977	2.5	2.6	2.1	17.4	14.9	39.5	6.2	6.9			52.6
1978	2.8	2.9	2.5	19.0	13.3	40.5	10.8	4.7			56.0
1979	3.0	2.8	2.4	17.7	6.0	31.9	10.4	12.3			54.6
1980	2.6	2.0	2.1	8.7		10.6	6.3	8.8		7.4	33.1

Source, by Column; A. J. Aron & Company, Gold Statistics and Analysis (December 1981/January 1982)
B. J. Aron & Company, Gold Statistics and Analysis (November 1978)
C. Consolidated Gold Fields Limited, Gold 1979 (June 1979)

(1)-(5), 1968-70: Source C, p. 16 (converted from metric tons to fine ounces).
1971-72: Source B, p. 36.
1973-80: Source A, p. 13.

(6)-(10): Source A, p.11.

Note: This table shows the latest revisions of data given in Table 4-1, not available to us in time to base the econometric work we report on the revisions.

Table SC - 13

Annual World Gold Supply and Gold Output, 1950-1980
(millions of fine troy ounces)

Source of Supply / Year	Production in Market Economies (1)	Flow from Centrally Planned Economies (2)	Net Official Sales (3)	Jewelry Sales by Developing Countries (4)	Dishoarding of Private Bullion Holdings (5)	Annual Total Supply (1)+(2)+(3) +(4)+(5) (6)	Annual World Output (7)
1950	24.3					24.3	27.2
1951	23.7					23.7	26.6
1952	24.2					24.2	27.3
1953	24.2	2.2				26.4	27.3
1954	25.5	2.2			4.4	32.1	28.7
1955	26.8	2.2			3.5	32.5	29.9
1956	27.8	4.3				32.1	31.0
1957	29.0	7.4			0.3	36.7	32.4
1958	29.9	6.3			2.2	38.4	33.4
1959	32.1	8.6			2.8	43.5	35.8
1960	33.5	5.7				39.2	37.5
1961	34.7	8.6			1.9	45.2	39.0
1962	37.3	5.7				43.0	41.9
1963	38.6	15.7			1.6	55.9	43.4
1964	40.0	12.9			1.8	54.7	45.2
1965	41.0	11.4				52.4	46.5
1966	41.0		1.2			42.2	46.9
1967	39.8		45.1			84.9	46.0
1968	40.0		19.9			59.9	46.5
1969	40.3				1.7	42.0	47.1
1970	40.9				11.1	52.0	48.6
1971	39.7	1.7	3.1		0.2	44.7	47.6
1972	37.8	6.8			3.5	48.1	46.3
1973	35.8	8.8	0.2			44.8	44.5
1974	32.8	7.1	0.6	1.7		42.2	41.9
1975	30.9	4.8	0.3			36.0	39.9
1976	31.2	13.2	1.9			46.3	41.8
1977	31.0	12.9	8.7			52.6	41.9
1978	31.1	13.2	11.7			56.0	42.3
1979	30.7	6.4	17.5			54.6	42.3
1980	30.2	2.9		4.8		37.9	41.9

Source, by Column: J. Aron & Company, Gold Statistics and Analysis (December 1981/January 1982)
(1)-(3) and (5): p.11.
(4): p.36.
(7): p.22.

Note: This table shows the latest revisions of data given in Table 4-2.

Table SC - 14

U.S. Excess of Gold Exports or Imports; Change in U.S. Monetary Gold Stock, and Gold Used in U.S. Manufactures and Arts
Annually, 1880-1980
(millions of fine troy ounces)

Fiscal years ending June 30	Excess of Gold Exports(+) or Imports (-) (1)	Calendar Years	Change in U.S. Monetary Gold Stock (2)	Gold Used in U.S. Manufactures and Arts (3)
1880	- 3.7	1880	4.8	0.5
81	- 4.7	81	4.1	0.5
82	- 0.1	82	0.1	0.5
83	- 0.3	83	2.0	0.7
84	- 0.9	84	0.5	0.7
85	- 0.9	85	1.8	0.6
86	+ 1.1	86	1.3	0.7
87	- 1.6	87	3.1	0.7
88	- 1.3	88	---	0.8
89	+ 2.4	89	- 0.8	0.8
1890	+ 0.2	1890	0.8	0.9
91	+ 3.3	91	- 0.8	1.0
92	0	92	- 1.7	0.9
93	+ 4.2	93	0.8	0.7
94	+ 0.2	94	- 2.0	0.6
95	+ 1.5	95	- 1.3	0.7
96	+ 3.8	96	4.6	0.6
97	- 2.2	97	2.5	0.7
98	- 5.1	98	9.9	0.8
99	- 2.5	99	3.2	1.0
1900	+ 0.1	1900	4.5	1.1
01	- 0.6	01	3.3	1.1
02	- 0.1	02	3.4	1.3
03	+ 0.1	03	3.3	1.4
04	- 0.9	04	1.5	1.4
05	+ 1.9	05	3.6	1.6
06	- 2.8	06	8.1	1.9
07	- 3.1	07	0.8	2.0
08	- 3.7	08	2.4	1.5
09	+ 2.3	09	- 0.8	1.8
1910	+ 3.7	1910	3.4	2.0
11	- 2.5	11	4.3	2.0
12	+ 0.4	12	3.9	2.1
13	+ 0.4	13	1.9	2.2
14	+ 2.2	14	- 4.9	1.7
15	- 1.3	15	24.1	1.7
July 1 - Dec.31,1915	-13.7			

Table SC - 14 (continued)

Calendar Years	Excess of Gold Exports(+) or Imports (-) (1)	Change in U.S. Monetary Gold Stock (2)	Gold Used in U.S. Manufactures and Arts (3)
1916	-25.6	25.7	2.4
17	- 8.7	15.1	2.4
18	- 1.0	0.2	2.6
19	+14.1	- 8.0	3.7
1920	- 4.6	- 3.3	3.9
21	-32.3	35.5	2.3
22	-11.5	13.0	2.7
23	-14.2	15.2	3.2
24	-12.5	12.4	3.1
25	+ 6.5	- 4.8	3.0
26	- 4.7	4.5	3.0
27	- 0.3	- 5.5	2.7
28	+19.0	-11.5	2.7
29	- 8.5	6.9	2.7
1930	-13.5	15.0	2.1
31	- 7.0	- 6.5	1.4
32	+21.6	2.6	1.0
33	+ 8.4	- 9.2	0.8
34	-33.4	120.1	0.4
35	-49.7	53.9	0.7
36	-31.9	32.4	0.9
37	-45.3	42.9	1.1
38	-56.4	50.0	0.9
39	-102.1	89.5	1.1
1940	-135.5	124.3	1.2
41	-28.1	21.9	1.9
42	- 9.0	- 0.6	2.2
43	- 2.0	-21.7	2.8
44	-24.1	-38.6	3.5
45	+ 3.0	-15.7	4.0
46	- 6.1	17.8	5.7
47	-56.2	61.8	2.8
48	-48.0	43.7	2.6
49	-19.6	4.7	4.3
1950	+10.6	-49.8	3.8
51	+15.7	1.5	3.0
52	-79.5	10.8	3.6
53	- 0.1	33.2	3.5
54	- 0.5	- 8.5	2.2
55	- 2.8	- 1.2	2.0
56	- 3.0	8.7	2.2
57	- 3.0	22.8	2.2
58	- 7.4	-65.0	2.6
59	- 8.6	-30.7	3.2

Table SC-14 (concl.)

Calendar Years	Excess of Gold Exports(+) or Imports (-) (1)	Change in U.S. Monetary Gold Stock (2)	Gold Used in U.S. Manufactures and Arts (3)
1960	- 9.5	-48.6	3.7
61	+20.5	-24.5	3.9
62	+ 6.6	-25.4	4.5
63	+ 4.6	-13.2	4.3
64	+10.9	- 3.6	5.9
65	+33.8	-47.6	6.6
66	+11.9	-16.3	7.8
67	+27.8	-33.4	6.5
68	+17.5	-33.5	6.6
69	- 6.4	27.6	7.1
1970	- 5.6	-22.5	6.0
71	- 5.0	-24.7	6.9
72	- 5.7	-15.6	7.3
73	- 5.0	0	6.7
74	- 7.3	0	4.7
75	- 2.2	- 1.3	4.0
76	- 6.0	--	4.6
77	- 9.5	2.9	4.9
78	- 8.6	- 1.1	4.7
79	+ 4.8	-11.8	4.7
80	- 5.6	--	3.2

Note: -- indicates less than 50,000 ounces.

Table SC - 14

Source by Column

(1) 1880 - 1970: Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 2, Washington, D.C., 1975 Series 197 and 198, pp. 884-85, converted from dollars to ounces. A note in the source states that prior to 1895, figures relate to coin and bullion only, thereafter to ore also. 1971-1980: U.S. Treasury and Department of Commerce.

(2) First differences of col. 3, Tables SC - 9 and SC - 10.

(3) Annual Reports of the Director of the Bureau of the Mint. Dollar amounts before 1967 converted to ounces.

Table SC-15

Change in U.S. Monetary Gold Stock and Gold Used in U.S. Manufactures and Arts as Percent of U.S. Gold Output, Annually, 1880-1980

Calendar Years	Change in Gold Stock (1)	Gold Used in Manufactures as percent of U.S. gold output (2)
1880	327.5	33.2
81	246.8	30.4
82	8.7	32.4
83	138.2	51.5
84	32.5	47.1
85	116.0	37.2
86	78.7	41.7
87	194.0	44.7
88	- 0.3	49.8
89	-45.7	50.7
1890	44.4	53.7
91	-51.4	59.3
92	-107.6	58.5
93	43.3	43.0
94	-105.8	32.0
95	- 58.3	33.1
96	179.0	25.2
97	90.8	24.2
98	317.3	24.2
99	93.6	27.9
1900	116.9	28.0
01	86.0	29.1
02	88.4	34.6
03	92.1	39.5
04	38.9	35.6
05	83.9	37.7
06	192.8	41.5
07	19.4	45.1
08	52.4	33.4
09	- 1.3	37.9
1910	73.6	43.5
11	91.2	42.2
12	87.7	47.3
13	44.1	52.0
14	-107.3	38.7
15	500.5	36.2
16	582.7	54.9
17	379.4	61.3
18	7.3	78.7
19	-278.7	128.0

Table SC-15 (cont.)

Calendar Years	Change in Gold Stock (1)	Gold Used in Manufactures as percent of U.S. gold output (2)
1920	-137.1	159.8
21	1505.3	99.3
22	567.5	119.7
23	628.4	133.4
24	505.6	128.2
25	-208.8	127.7
26	200.1	136.1
27	-257.8	129.9
28	-536.6	127.6
29	335.1	132.8
1930	713.2	98.3
31	-291.5	63.7
32	115.3	43.8
33	-404.5	36.1
34	4379.0	14.8
35	1704.7	23.4
36	860.6	25.1
37	1044.0	27.5
38	1178.9	20.3
39	1936.5	24.0
1940	2556.4	24.2
41	453.4	40.2
42	-18.1	60.4
43	-1568.4	200.4
44	-3774.0	343.8
45	-8030.7	2050.3
46	1217.5	390.2
47	2853.1	129.5
48	2160.0	127.2
49	244.0	221.4
1950	-2080.2	160.6
51	76.2	151.4
52	572.1	192.0
53	-1694.1	178.6
54	-463.3	121.7
55	-61.2	104.5
56	477.3	119.6
57	1272.6	125.0
58	-3737.8	149.7
59	-1916.4	198.1
1960	-2918.4	222.0
61	-1582.0	252.8
62	-1648.1	290.7
63	-905.8	292.5
64	-245.2	404.3
65	-2790.0	384.2

Table SC-15 (concl.)

Calendar Years	Change in Gold Stock (1)	Gold Used in Manufactures as percent of U.S. gold output (2)
66	-905.2	431.2
67	-2110.5	408.3
68	-2267.3	446.8
69	1594.3	410.2
1970	-1287.3	341.9
71	-1654.8	463.7
72	-1077.9	502.4
73	0	572.2
74	0	412.7
75	-119.8	379.6
76	- 2.9	443.5
77	260.9	441.7
78	-114.1	474.3
79	-1217.5	481.6
1980	- 2.1	338.1

NOMINAL AND REAL PRICE OF GOLD

Table SC-16

Official or Market Price of Gold per Ounce in Nominal U.S. Dollars and in 1967 U.S. Dollars, Annually, 1800-1980

	Price of Gold Per Ounce in U.S. Dollars (1)	Wholesale Price Index 1967 = 100 (2)	Real Price of Gold (1) ÷ (2) (3)
	Official Price		
1800	19.39	45.6	42.52
1801	"	50.2	38.63
1802	"	41.4	46.84
1803	"	41.7	46.50
1804	"	44.6	43.48
1805	"	49.9	38.86
1806	"	47.4	40.91
1807	"	46.0	42.15
1808	"	40.7	47.64
1809	"	46.0	42.15
1810	"	46.3	41.88
1811	"	44.6	43.48
1812	"	46.3	41.88
1813	"	57.3	33.84
1814	"	64.4	30.11
1815	"	60.1	32.26
1816	"	53.4	36.31
1817	"	53.4	36.31
1818	"	52.0	37.29
1819	"	44.2	43.87
1820	"	37.5	51.71
1821	"	37.5	51.71
1822	"	37.5	51.71
1823	"	36.4	53.27
1824	"	34.7	55.88
1825	"	36.4	53.27
1826	"	35.0	55.40
1827	"	34.7	55.88
1828	"	34.3	56.53
1829	"	34.0	57.03
1830	"	32.2	60.22

(continued)

Table SC-16 continued)

	Price of Gold Per Ounce in U.S. Dollars (1)	Wholesale Price Index 1967 = 100 (2)	Real Price of Gold (1) ÷ (2) (3)
1831	19.29	33.2	60.22
1832	"	33.6	57.71
1833	"	33.6	57.71
1834	20.05	31.8	63.05
1835	20.69	35.4	58.45
1836	"	40.3	51.34
1837	20.67	40.7	50.79
1838	"	38.9	53.14
1839	"	39.6	52.20
1840	"	33.6	61.52
1841	"	32.5	63.60
1842	"	29.0	71.28
1843	"	26.5	78.00
1844	"	27.2	75.99
1845	"	29.4	70.31
1846	"	29.4	70.31
1847	"	31.8	65.00
1848	"	29.0	71.28
1849	"	29.0	71.28
1850	"	29.7	65.60
1851	"	29.4	70.31
1852	"	31.1	66.46
1853	"	34.3	60.26
1854	"	38.2	54.11
1855	"	36.2	57.10
1856	"	37.1	55.71
1857	"	39.3	52.60
1858	"	32.9	62.83
1859	"	34.0	60.79
1860	"	32.9	62.83
1861	"	31.5	65.62
	Market Price		
1862	23.42	36.8	63.64
1863	30.01	47.0	63.85
1864	41.96	68.3	61.43
1865	32.45	65.4	49.62
1866	29.12	61.5	47.35
1867	28.57	57.3	49.86
1868	28.88	55.9	51.66
1869	27.49	53.4	51.48
1870	23.75	47.7	49.79

(continued)

Table SC-16 (continued)

	Price of Gold Per Ounce in U.S. Dollars (1)	Wholesale Price Index 1967 = 100 (2)	Real Price of Gold (1) ÷ (2) (3)
1871	23.09	46.0	50.20
1872	23.23	48.1	48.30
1873	23.52	47.0	50.04
1874	22.99	44.6	51.55
1875	23.75	41.7	56.95
1876	23.05	38.9	59.25
1877	21.66	37.5	57.76
1878	20.84	32.2	64.72
	Official Price		
1879	20.67	31.8	65.00
1880	"	35.4	58.39
1881	"	36.4	56.79
1882	"	38.2	54.11
1883	"	35.7	57.90
1884	"	32.9	62.83
1885	"	30.1	68.67
1886	"	29.0	71.28
1887	"	30.1	68.67
1888	"	30.4	67.99
1889	"	28.6	72.27
1890	"	29.0	71.28
1891	"	28.8	71.77
1892	"	26.9	76.84
1893	"	27.6	74.89
1894	"	24.7	83.68
1895	"	25.2	82.02
1896	"	24.0	86.13
1897	"	24.0	86.13
1898	"	25.0	82.68
1899	"	26.9	76.84
1900	"	28.9	71.52
1901	"	28.5	72.53
1902	"	30.4	67.99
1903	"	30.8	67.11
1904	"	30.8	67.11
1905	"	31.0	66.68
1906	"	31.9	64.80
1907	"	33.6	61.52
1908	"	32.5	63.60
1909	"	34.9	59.23
1910	"	36.3	56.94

(continued)

Table SC-16 (continued)

	Price of Gold Per Ounce in U.S. Dollars (1)	Wholesale Price Index 1967 = 100 (2)	Real Price of Gold (1) ÷ (2) (3)
1911	20.67	33.5	61.70
1912	"	37.7	57.90
1913	"	36.0	57.42
1914	"	35.1	58.89
1915	"	35.9	57.58
1916	"	44.1	46.87
1917	"	60.6	34.11
1918	"	67.8	30.49
1919	"	71.5	28.91
1920	"	79.7	25.93
1921	"	50.4	41.01
1922	"	49.9	41.42
1923	"	51.9	39.83
1924	"	50.6	40.85
1925	"	53.4	38.71
1926	"	51.6	40.06
1927	"	49.3	41.93
1928	"	50.0	41.34
1929	"	49.1	42.10
1930	"	44.6	46.35
1931	"	37.6	54.97
1932	"	33.6	61.52
	Average of Market and Official Prices		
1933	26.44	34.0	77.76
1934	34.94	38.6	90.52
	Official Price		
1935	35.00	41.3	84.75
1936	"	41.7	83.93
1937	"	44.5	78.65
1938	"	40.5	86.42
1939	"	39.8	87.94
1940	"	40.5	86.42
1941	"	45.1	77.61
1942	"	50.9	68.76
1943	"	53.6	65.30
1944	"	53.6	65.30
1945	"	54.6	64.10
1946	"	62.3	56.18
1947	"	76.5	45.75
1948	"	82.8	42.27
1949	"	78.7	44.47
1950	"	81.8	42.79

(continued)

Table SC-16 (concluded)

	Price of Gold Per Ounce in U.S. Dollars (1)	Wholesale Price Index 1967 = 100 (2)	Real Price of Gold (1) ÷ (2) (3)
1951	35.00	91.1	38.42
1952	"	88.6	39.50
1953	"	87.4	40.05
1954	"	87.6	39.95
1955	"	87.8	39.86
1956	"	90.7	38.59
1957	"	93.3	37.51
1958	"	94.6	37.00
1959	"	94.8	36.92
1960	"	94.9	36.88
1961	"	94.5	37.04
1962	"	94.8	36.92
1963	"	94.5	37.04
1964	"	94.7	36.96
1965	"	96.6	36.23
1966	"	99.8	35.07
1967	"	100.0	35.00
	Average of Official and Market Prices		
1968	38.64	102.5	37.70
	Market Price		
1969	41.12	106.5	38.61
1970	35.94	110.4	32.55
1971	40.81	113.9	35.83
1972	58.16	119.1	48.83
1973	97.32	134.7	72.25
1974	159.26	160.1	99.48
1975	160.90	174.9	92.00
1976	124.84	183.0	68.22
1977	148.11	194.2	76.27
1978	193.36	209.3	92.38
1979	307.82	235.6	130.65
1980	613.67	268.6	228.44

Source, by Column

1. 1800-1833: Coinage Act of April 2, 1792, which set weight of gold dollar at 24.75 grains of fine gold. 480/24.75 equals $19.39 per ounce.

1834-1836: Coinage Act of June 28, 1834, which set weight of gold dollar at 23.2 grains of fine gold. 480/23.2 equals $20.69 per ounce. For 1834, average of $19.39 for the first half of 1834 and of $20.69 for the second half of the year is $20.05.

1837-1861; 1870-1932: Coinage Act of January 18, 1837, which set weight of gold dollar at 23.22 grains of fine gold. 480/23.22 equals $20.67 per ounce.

1862-1879: $20.67 times the premium on gold, in Wesley C. Mitchell, Gold, Prices, and Wages Under the Greenback Standard, University of California Press, 1908, p. 310.

1933: Average of monthly figures in G.F. Warren and F.A. Pearson, World Prices and the Building Industry, John Wiley, 1937, p. 179.

1934-1967: For 1934, average of January figure in source for 1933 and of $35 for other months, the price derived from the Gold Reserve Act of January 31, 1934, which set weight of gold dollar at 13.71 grains of fine gold.

1968-1979: Annual averages of monthly figures in J. Aron & Company, Gold Statistics and Analysis, December 1979-January 1980, p. 76. For 1968-1969, the prices quoted are averages of the A.M. and P.M. London price fixings; for 1970-1974, P.M. fixings only; for 1975-1979, spot COMEX prices.

1980: Annual average of daily figures in Data Resources Incorporated datatape. The prices quoted are P.M. London price fixings.

Source (continued)

2. 1800-1899: U.S. Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1970, Bicentennial Edition, Part 1, Series E-52, pp. 202-203, shifted from 1910-14 to 1967 base.

1800-1960: ibid., Series E-23, p. 199.

1971-1979: U.S. Department of Labor, Bureau of Labor Statistics, Handbook of Labor Statistics, December 1980, Bulletin 2070, Table 140, p. 334.

1980: Survey of Current Business, August 1981, p. S-7, producer prices, all commodities.

Table SC - 17

London Prices of Gold, Monthly, 1968 - 1981

(dollars per fine troy ounce)

	1968	1969	1970	1971	1972	1973	1974
January	35.200	42.300	34.942	37.874	45.751	65.139	129.191
February	35.200	42.600	34.994	38.744	48.263	74.198	150.233
March	35.200	43.200	35.086	38.871	48.327	84.372	168.421
April	37.900	43.300	35.619	39.014	49.030	90.496	172.235
May	40.700	43.460	35.950	40.516	54.618	101.959	163.268
June	41.100	41.435	35.435	40.102	62.092	120.119	154.100
July	39.500	41.759	35.321	40.952	65.665	120.166	142.978
August	39.200	41.088	35.380	42.728	67.034	106.761	154.638
September	40.200	40.873	36.193	42.022	65.465	102.970	151.762
October	39.200	40.441	37.518	42.504	64.864	100.077	158.776
November	39.800	37.404	37.440	42.858	62.912	94.916	181.655
December	41.100	35.170	37.435	43.484	63.909	106.719	183.850

	1975	1976	1977	1978	1979	1980	1981
January	176.268	131.488	132.264	173.179	227.270	675.309	557.388
February	179.590	131.070	136.299	178.155	245.670	665.321	499.763
March	178.158	132.578	148.228	183.662	242.048	553.581	498.761
April	169.843	127.940	149.166	175.275	239.161	517.410	495.800
May	167.390	126.935	146.605	176.307	257.617	513.820	479.697
June	164.238	125.709	140.778	183.752	279.067	600.717	464.761
July	165.165	117.755	143.393	188.726	294.736	644.283	409.284
August	162.998	109.929	144.950	206.300	300.818	627.148	410.158
September	144.593	114.145	149.524	212.076	355.115	673.625	443.580
October	142.757	116.143	158.860	227.393	391.657	661.148	437.755
November	142.565	130.464	162.100	206.073	391.993	623.463	413.369
December	139.303	133.878	160.450	207.834	455.084	594.921	---

Source: J. Aron & Company, Gold Statistics and Analysis (Dec. 1981/Jan. 1982), p. 81.

Note: Average afternoon prices set by London bullion dealers.

ANNEX A

Supplementary and Dissenting Views

Supplementary and Dissenting Views

1. Additional Views of Senator Christopher J. Dodd.

2. Supplementary Views of Mr. Lewis Lehrman and Congressman Ronald Paul and qualified endorsement of Mr. Arthur Costamagna.

3. Dissenting Views of Congressmen Henry S. Reuss and Chalmers P. Wylie.

   Appendix to Dissenting Views of Congressman Chalmers P. Wylie

4. Additional Dissenting Views of Congressman Henry S. Reuss.

Additional Views of Senator Christopher J. Dodd

The Gold Commission majority has discharged its responsibility to "conduct a study to assess and make recommendations with regard to the policy of the U.S. Government concerning the role of gold in the domestic and international monetary systems" by rejecting most proposals to adopt a classical gold standard or otherwise enhance the monetary role of gold, particularly in a manner that could lead to adoption of a classical gold standard. Commission records indicate that the monetary policy implications of adopting these proposals range from irrelevant to catastrophic.

I wish to associate myself with the views, expressed by Congressmen Henry S. Reuss and Chalmers P. Wylie, regarding the Gold Commission's majority recommendation that the Treasury Department be authorized to mint a "gold bullion coin" exempt from capital gains and sales taxation. Increased speculation in gold, at the expense of investment in productive assets, is clearly contrary to our economic and financial interests. Furthermore, the states would find that, through federal action, they were deprived of an important source of sales tax revenue at a time when the federal government is shifting substantial program responsibilities and costs to the states. On this matter, I join with the Gold Commission minority in opposing Treasury issue of such gold bullion coins.

While I have reservations about the Gold Commission's jurisdiction over monetary policy questions not directly related to the role of gold, I would note that improved definition, measurement and control of the money supply are important issues which cannot be separated from the larger goals of long-term price stability and economic growth. Accordingly, I urge that Congress proceed with the utmost caution should it consider proposals for multi-currency systems, whether or not they involve gold.

Supplementary Views of Mr. Lewis Lehrman and Congressman Ronald Paul and qualified endorsement of Mr. Arthur Costamagna

AN ALTERNATIVE COURSE:

MINORITY REPORT

of

THE UNITED STATES GOLD COMMISSION

to

THE HOUSE OF REPRESENTATIVES and to THE SENATE

March 31, 1982

As members of the United States Gold Commission, we all subscribe to the broad principles outlined in this Report. Each of us might disagree on details or might have phrased a sentence or paragraph differently, but such disagreements are insignificant compared to the overriding importance of presenting to the Congress an alternative course, a course charted toward a sound monetary system based on gold.

Lewis Lehrman

Ronald Paul

Qualified Endorsement

While I generally endorse the broad principles presented in this Report, I believe their implementation should be delayed until the new fiscal and monetary programs of the Reagan Administration and the recommendations of the Gold Commission in its majority report are given the opportunity to succeed or fail. Should the programs recommended in the majority report fail to pass Congress within the next two years, I would endorse the plan for monetary reform presented herein.

Arthur Costamagna

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INTRODUCTION

The United States is now in the most serious recession since the 1930's. The most staid and sober magazines and newspapers are writing openly about the possibility of depression. Sectors of the economy have already entered the depression stage; more are threatening to follow. The number of personal and business failures more than doubled from 1971 to 1981, and the early figures for 1982 indicate that failures are up fifty percent over 1981. Interest rates remain near record highs; unemployment has reached nine percent and is moving upward. The only sign of improvement is a slower rate of increase--but still an increase--in the cost-of-living. Annualized increases in the Consumer Price Index are now down near the levels that prompted President Nixon to impose price and wage controls in 1971.

How did the economy get into such a poor condition? Can it be blamed on the Reagan Administration's new policies, as some would like to do? Or is there a more fundamental reason for our present crisis?

It is the conclusion of the signers of this report that there is a more fundamental reason. Our present crisis has not developed in the past year; it has been growing for at least a decade. When President Nixon imposed price and wage controls on August 15, 1971, he also, ironically enough, severed the last link between the dollar and gold. The process begun in 1913 with the formation of the Federal Reserve System, accelerated by President Franklin Roosevelt through a confiscation of privately owned gold and a devaluation of the dollar, nearly completed in the 1960's by

the withdrawing of silver certificates from circulation and the end of silver coinage, was finally completed when the international convertibility of the dollar into gold was ended in 1971.

The entire process is a catalogue of broken promises and outright theft on the part of the federal government as it sought to substitute a managed, irredeemable paper money system for a gold standard. For the past ten years we have had a monetary system unique in our national history: no circulating silver or gold coinage, but a government monopoly of politically-managed paper money. The present crisis is a result of this fundamental change in our monetary arrangements, and it will not--indeed cannot--be ended permanently unless fundamental reforms are made.

Our ten year experiment with paper money has failed; it is time that the Congress recognize that failure. Congress has violated both the principles of sound economics and the requirements of our supreme law, the Constitution.

That Constitution forbids that anything except gold and silver coin should be made a tender in payment of debt--yet Congress has made inconvertible paper a legal tender. Economics requires a recognition that there is no such thing as a free lunch, but Congress has institutionalized the money creating powers of the Federal Reserve in its efforts to perform the miracle of turning stones into bread.

Chapter One of this report presents an economic overview of the last ten years, a decade of paper money. Chapters Two and Three detail the process by which we arrived at our present state. The fourth chapter presents the case for monetary freedom; Chapter Five argues the case for a gold standard, and Chapter Six outlines the specific reforms that will be needed to correct the blunders of the past. Finally, Chapter Seven

will offer two views of the next ten years, a decade with gold and a decade without.

In 1982 Congress faces a crisis and an opportunity. We hope the arguments presented here are persuasive, and the Congress acts in a timely fashion to avert an economic calamity. For too long the federal government has been playing with monopoly money; we must move forward to a real money system, gold.

CHAPTER ONE

THE PRESENT MONETARY CRISIS

In 1784 in the debate over the money issue, Thomas Jefferson said: "If we determine that a dollar shall be our unit, we must then say with precision what a dollar is." Our founding fathers followed that advice and in 1792 the dollar was defined as $371^{4}/_{16}$ grains of silver. From 1792 until August 15, 1971 the dollar was defined as a precise weight of either silver or gold. Since 1971, the dollar has had no definition (officially the definition was not legally rejected until 1976); the advice of Thomas Jefferson has been rejected entirely. For more than ten years the dollar has been nothing more than a piece of paper with government ink on it.

More and more Americans have come to recognize this, and a loss of confidence in the currency has paralleled this recognition. The monetary authorities say it is unnecessary to have a precise definition of the dollar, claiming: "A dollar is whatever it will buy." This being the case, and the fact that the dollar buys less every day, and approximately one-third of what it bought in 1971, the dollar today is undefinable and its value is relative. It should be obvious that this loss of definition of what the monetary unit is, is directly related to the financial and economic problems we face today.

If the dollar served as the unit of account for a single South American nation, such as Chile or Brazil, the significance of this change from a precise definition to no definition would be less. However, since World War II the dollar has been the international currency of account, used throughout the world, and held as a reserve currency by most major western nations. Even though this was done unwisely, it worked temporarily up until 1971 when

the definition of the dollar was changed.

Until 1971 a "dollar" was $^{1}/_{35}$ of an ounce of gold, and all nations that held the dollar as a reserve were assured that their dollars could be redeemed for $^{1}/_{35}$ of an ounce of gold--even if American citicens were denied that same right. However, the failure of the U.S. government over many decades (Congress, the Federal Reserve and the Administration) to issue only dollars that could be redeemed, led to a massive inflation of the money supply for various political reasons. This forced the United States to default on its convertibility pledge and the dollar became only something the government claimed it was. Residual trust and blind faith have allowed the dollar to serve since 1971 as money, but with ever increasing difficulty. Understanding Jefferson's advice about a precise definition of the dollar, and analysing the problems of the last decade, during which time we have had no definition of the dollar, are crucial in our attempt to pave the way for a sound, honest and reliable monetary system.

From 1792 to 1971 we had an imperfect money and banking system, as will be shown in Chapters two and three. But during that time the dollar was always related to gold in one way or another. (It may be argued that the exception was the greenback era during the Civil War, but even then gold circulated and was used to some degree.) Even with its obvious imperfections, the gold dollar worked rather well compared to the past ten years. Though the Depression of the 1930's was ushered in by government meddling in the economy and irresponsible money management, the gold dollar per se survived, even though debased by 41%. Today the dollar is troubled by a general lack of confidence. The market is anticipating that a steady depreciation will continue, thus prompting high interest rates. The purchasing power of the dollar as compared to gold has dramatically decreased over the past decade. By historic analysis, it is clear that 1971 was a significant and unique year in

American monetary history.

This being the case, what in particular occurred on August 15, 1971? It was on this day President Nixon "closed the gold window," which meant that officially the American government would no longer honor its promise to foreign holders of dollars to redeem those dollars in gold. It became policy what was already known through the world, that the American government had created many more dollars—promises to pay--then they should have and no longer could live up to their monetary commitments by redeeming them in gold. A new agreement, the Smithsonian agreement, which lasted only fourteen months, was claimed by President Nixon to be "the most significant monetary agreement in the history of the world," promising it would create jobs, restore financial stability, help the farmers, stimulate exports, and bring prosperity to all. "Significant" it was, but in an entirely different way, for it was this agreement that ushered in the present period of fiat paper money and monetary chaos. It has brought us the exact opposite of what was intended.

In his statement in 1971 President Nixon, as many uninformed individuals do today, blamed "speculation" for our problems and not the real culprit--government inflation. He further stated on that fateful day "that the effect of this action, in other words, will be to stabilize the dollar." How can we expect those who claimed that rejecting a gold-related dollar would " stabilize the dollar" to advise us now on solving our current financial and monetary crisis? We cannot, because they are not capable. It is necessary to look elsewhere for the solution.

Even though the declaration made in August 1971 was of great significance, overall monetary policy did not change at that particular time. This was

essentially an admission of the failure of the Federal Reserve's discretionary monetary policy they had followed in various forms since 1914. Although previous deflations (particularly 1929 and 1932), and the fact we were spared from the physical destruction of World War II, prolonged the life of the dollar, the inevitable failure of discretionary policy was known by many for a long time.

When the record of the past ten years is examined, it is clear that indicting the monetary arrangements of the past decade is justified. It is clear that discretionary monetary policy, without any assistance from gold, leads to serious economic instability, lack of capital formation, high interest rates, high price inflation and intolerably high levels of unemployment. The climax of this policy came in October 1979 when the Federal Reserve was forced to change some of its management techniques. Due to international pressure, weakness of the dollar, gold at $600.00 an ounce, and silver over $25.00 an ounce, the Federal Reserve adopted a policy directed toward concentrating more on money supply than on interest rates. Monetarism was to be given a chance at solving the problems of inflation. The record from 1979 to the present offers no real hope and in many ways confirms the contention by many that the only solution will come when we have a redeemable currency.

The money supply since 1971 has been growing at unprecedented rates. Since inflation is an increase in the supply of money and credit, this is of critical importance. It tells us what many economic historians knew even before 1971, that when government is granted an unlimited power to create money out of thin air as the Federal Reserve has, that power is always abused. For various political reasons, excessive money is always created bringing only trouble to the innocent citizens not receiving the "benefits" of inflation. It is tempting to pursue inflationary policies, since during

all stages of inflation special interest groups benefit at the expense of others. History shows this temptation has never been resisted and the record of the money growth of the past decade confirms this to still be the case.

MONEY SUPPLY
(In billions of dollars)

Monetary Base[1]	
December 1971	$86.6
December 1981	$169.8
M1A[2]	
December 1971	$230.4
December 1981	$364.6
M1B[3]	
December 1971	$230.6
December 1981	$442.1
M2[4]	
December 1971	$711.1
December 1981	$1842.2
M3[5]	
December 1971	$771.1
December 1981	$2187.1

[1]Bank reserves plus currency held by the public.
[2]Currency plus demand deposits at commercial banks.
[3]M1A plus checkable deposits at all depository institutions.
[4]M1B plus savings accounts and small denomination time deposits at all depository institutions and money market mutual funds.
[5]M2 plus large denomination time deposits and repurchase agreements at all depository institutions.

All these figures indicate that the money supply in the space of ten years has more than doubled, as measured by three of the five standard statistical series produced by the Federal Reserve. This is all the more significant, for neither the population nor American productivity increased by anything approaching that rate over the same period. Since increases in productivity and population are traditionally mentioned as reasons for increasing the money supply, neither of these factors can be used as the excuse for the massive creation of new money and credit of the Federal Reserve over the past decade. In April 1970, our population was approximately 203,000,000. By April 1980, it was 226, 500, 000, a 12 percent increase. Using the lowest of the money supply statistics, our money supply increased by 58 percent over the same period. Using the largest of the money supply money figures, the money supply increased by 184 percent. Neither figure is commensurate with a 12 percent increase in population over the decade.

As for the real growth of the Gross National Product, in 1979, GNP was $1,107.5 billion; during 1981, it was $1,509.06 billion, an increase of 36 percent. Again that figure does not even remotely approach the growth of the money supply over the same decade.

It is safe to say the money supply is growing three to four times faster than the real economy. Professor Milton Friedman argues that economic growth is not always related to monetary growth and that some of the best periods of economic growth in our history were associated with minimal money growth. This fact is one of the hardest to grasp by sincere economists and politicians, and yet it is most important in order to understand why commodity money is superior to paper money. Duplicating money substitutes can never replace the benefits of a trustworthy unit of account, one that encourages saving and

prompts low interest rates. The duplication process does the opposite: it destroys trust, discourages savings, raises interest rates, slows economic growth, and does not create wealth.

PRICES

The record for prices since 1971 is not very encouraging. The standard measures of price growth are the consumer price index, the producer price index, and the implicit price deflator prepared by the Departments of Labor and Commerce. Although price increases are the consequences of the government's increasing the supply of money and credit, most people still refer to these increases as inflation per se rather than the result of the inflation. Nevertheless, price increases are measurements of the harm done and are a reflection of the dollar's depreciation. Since prices are never uniform some segments of the society suffer from them more than others.

The following price statistics dramatize vividly the sharp depreciation of the currency over the past ten years.

	December 1971	December 1981
Consumer Price Index (1967=100)	123.1	281.5
Producer Price Index (1967=100)	115.4	275.3
	1971	1981
Implicit Price Deflator for GNP (1972=100)	96.01	193.57

Retail prices, as measured by the best statistics that the government has produced, have more than doubled during the decade of inconvertible paper money. What one Federal Reserve note purchased in 1971, it now requires approximately two and one-half Federal Reserve notes to purchase. This depreciation in the value of our inconvertible paper currency is

characteristic of all such currencies throughout history. As long as the currency remains a fiat currency, one not redeemable in something of real value, we can expect the money supply to increase at unreasonable rates, depreciating its value and resulting in persistent price increases of all goods and services. There is no question whatsoever that the problem of rising prices although existing before 1971 has been made significantly worse since the closing of the gold window.

INTEREST RATES

Interest rates since 1971 tell the same story. They have reached heights never seen before in our history, including the greenback era of the Civil War. The prime rate soared to over 21% during the past decade, and higher rates are bound to occur if sound money is not restored. The supply and demand for money certainly plays a part in establishing the rate of interest, but today the inflation premium --the premium charged for the anticipation of further dollar devaluation--is the principal cause of fluctuating high interest rates. Since paper money is always depreciated by politicians, it should be expected that unless a redeemable dollar is once again established, the problem of high interest rates will not only continue but get worse. Unfortunately, high interest rates are frequently seen as a cause of inflation rather than as a result, which prompts many sincere individuals who have been victimized by these high rates to call for controls on the rates (usury laws) or for credit allocation. These policies can only make the problem worse, since they do not get to the root cause of the high interest rate: the inflation of the money supply and depreciation of the currency. Interest rates are inversely proportional to the trust the people have in the money.

Until the trust is restored in the money (and in the government which has destroyed the money), high interest rates will continue. The record for interest rates for the past ten years is a poor one and must be seen as a reflection of monetary policy.

INTEREST RATES SINCE 1971

Conventional Home Mortgage Rate

December 1971	7.67%	
December 1981	15.98%	
Low for decade	7.44%	(April 1972)
High for decade	15.98%	(December 1981)

Prime Lending Rate

December 1971	5.25%	
December 1981	15.75%	
Low for decade	4.75%	(February 1972)
High for decade	21.5%	(August 1981)

91-day Treasury Bill Rate

December 1971	4.02%	
December 1981	10.93%	
Low for decade	3.18%	(February 1972)
High for decade	16.3%	(May 1981)

Bond Rates AAA Corporate Bonds

December 1971	7.25%	
December 1981	14.23%	
Low for decade	7.08%	(December 1972)
High for decade	15.49%	(September 1981)

Public Utilities

November 1971	7.96%
November 1981	15.5%
Low for decade	7.48% (December 1972)
High for decade	16.48% (September 1981)

State and Local Tax Exempt Bonds

December 1971	5.02%
December 1981	12.91%
Low for decade	4.99% (November 1972)
High for decade	12.92% (September 1981)

U.S. Government Marketable Securities (All Maturities)

November 1971	5.37%
November 1981	12.401%
Low for decade	5.051% (March 1972)
High for decade	15.83% (October 1981)

Even with a reduction in the rate of price inflation, interest rates have remained high. This reflects the lost confidence in the currency and in the Congress to deal with the problem. With deficits soaring and the Federal Reserve able to create new money at will, the lack of confidence is justified and understandable.

BANKRUPTCY SINCE 1971

Whenever a businessman complains about the economy and the difficulties he faces in maintaining a profitable business, he speaks mainly of the burden of high interest rates. Currently he sees this expense as the crippling blow to maintaining a successful business. It is practically impossible to maintain a profitable business on borrowed capital costing more than 20%. The interest burden has in turn led to an enormous growth in the number of personal and business bankruptcies in the past decade. Many financial institutions—in particular the Savings and Loans-- are facing bankruptcy and are currently being absorbed by larger institutions with the assistance of tax dollars. The estimate of the number of Savings and Loans in danger of failing is well over 1,500. However, the proposal in Washington to "save" these institutions involves the same procedure used to "save" New York City and Chrysler --more inflation associated with a frantic effort to avoid debt liquidation by deflation.

Although bankruptcies do liquidate debt in a conventional way, large corporations, cities, states, and financial institutions are "bailed out." Financial institutions are bailed out by government mandated and regulated takeovers by "stronger" institutions.

Those allowed to fail have been and will continue to be the smaller companies and individuals. The statistics show a rapid increase in personal and business

bankruptcies since 1971--evidence of unmanageable debt service associated with high interest rates.

BUSINESS AND PERSONAL BANKRUPTCIES AND FAILURES SINCE 1971

1971	201,352
1981	519,063

These figures can be expected to increase, and they would be even worse if none were "bailed out" by government programs granting loans and guaranteeing loans (greater than $800 billion). These programs may keep the figures artificially low for a time, but they will obviously contribute to more inflation at a later day, a weaker economy, and the threat of even more bankruptcies later on.

BONDS AND MORTGAGES

In the decade of the seventies we have seen the virtual destruction of long term financing in the United States. A key to a capitalistic economy is availability of long term borrowing, and without its reestablishment economic stagnation can be expected. Long term markets cannot be restored without restoring the belief that the dollar will no longer be depreciated.

Home mortgage rates of 17 and 18 percent guarantee that very few people will qualify for the purchase of a new home. This is destroying the housing industry and is a prime contributor to the high unemployment rate we are now experiencing.

Bonds are no longer the investment of widows and orphans, but have joined the ranks of speculative investments with investors hoping to catch minor price swings, make a profit, and then quickly sell. This is no way to

build a healthy market economy. In 1945, the Standard and Poor's Index of bond prices was 121.6 for current 1945 and gold dollars. By 1981 in current dollars, it was 38, in 1945 dollars it was 9 and in gold dollars it was 2.4. It took 3.2 ounces of gold in 1945 to buy the index and .09 ounces in 1981. The bond market in Britain, which leads us by a few years in such matters has already been destroyed.

An investment in 1971 in gold would have yielded a 17.8% annual return. A similar investment in a U.S. bond would have declined 5.2% annually in real terms.

The message of the dollar's illness came sooner in the bond market than any place else. It has moved downward since 1945, but the precipitous drop occured in the decade since 1971. Without the reversal of long term bond markets, true capital formation is impossible. True savings of the future will not occur under the conditions existing today, and the only credible reassurance is a precisely defined and guaranteed monetary unit.

EMPLOYMENT AND REAL INCOME

As one would expect when a nation's currency is depreciated by creating an excessive amount of it, the real wage of the working man is bound to go down. Even though in the early, less detectable, and more modest stages of inflation, increases in productivity can stay ahead of the depreciation and give the impression that inflation is beneficial, the results noted in the 1970's were inevitable and predictable. Real income suffered more than at any other time in American history. There was a 13 percent drop over a ten-year period.

SPENDABLE AVERAGE WEEKLY EARNINGS
(1967 dollars)

December 1971	$95.04
December 1981	83.19

The recession or depression that follows periods of monetary inflation is the correction that comes as a result of malinvestment due to the false information of distorted interest rates. During a correction, as the economy tries to right itself, a period of unemployment results. If the correction is aborted and "corrected" by resumption of more inflation, each cycle will give us more unemployment. Since 1945, we can see that each cycle has gotten worse: higher interest rates, higher prices, and higher unemployment. Today, we see the unemployment levels higher than any since the Great Depression.

UNEMPLOYMENT

1971	4.695 million (5.5%)
December 1981	9.462 million (8.9%)

Unemployment is now at a critical stage, and even if another cycle is entered and this rate is temporarily reduced, it is to be expected that without the adoption of a sound monetary system, unemployment rates will continually get worse.

PERSONAL SAVINGS RATE

When a currency loses its value by deliberate and steady inflation, the tendency, as more and more citizens become knowledgeable, is for a lowered savings rate. Since the exact rate of depreciation—actual price increase of goods and services--is unpredictable, it becomes impossible to anticipate and fully protect the purchasing power of savings by correctly establishing the

inflationary premium on interest rates. There is a disincentive to save since price inflation is usually greater than the extra interest earned. But more importantly, it is unpredictable. Many figure it is better to buy something this year rather than next (when they will actually need it) when the price will be much higher.

PERSONAL SAVINGS RATE

1971	8.1%
1981	5.3%

Savings are discouraged even further if interest rates paid are artificially controlled by government regulations. The shift of funds from the savings and loans to the money market mutual funds is not much of a mystery. Even though savings and loans are starved for savings, they have championed the continued fixing of low interest rates on savings accounts, hoping that this special benefit will continue. Although this did help in the early stages of inflation, now when the spread is 7% to 12% between what savings and loans will pay and the market rate, we cannot expect that resumption of savings in the conventional manner will come quickly. Without true savings, capital formation is impossible. And without adequate savings, government officials are pressured to try to create "capital" by money creation, a policy that will only make the problem worse. There will be further depreciation of the currency, with more monetary inflation, thus increasing even further the disincentive to save. Only with the cessation of inflation through reinstitution of a hard currency will we see a significant increase in true savings. Economic growth depends on savings (and other things like low taxes and minimal regulations) not on the growth of the money supply as so many believe today.

MONETARISM--NOT THE ANSWER

The obvious failure of the discretionary monetary system has prompted the popularization of monetarism in recent years. This is the view that the federal government should manage the nation's money system and supply, increasing the number of dollars each year by between 3% and 5%. The monetarists share our view that the Federal Reserve's discretionary policy of the last several decades has been the cause of our inflation. However, we are confident that the monetarist solution is unworkable. Since October of 1979, the Federal Reserve has directed its attention to regulating the money supply and has abandoned its traditional intense concentration on manipulation of interest rates. Yet we <u>now</u> are witnessing more erratic movement in the money supply (and interest rates) then ever before.

The excuses given are: "the monetary technicians are at fault;" "the wrong parameters are being used;" "the wrong M is being watched;" "the wrong people are in charge." The excuses are unlimited as to why monetarism is failing. The explanations are always given by those monetarists who do not assume the responsibility for making monetarism work. It is certainly true that neither here in the United States nor in England has monetarist policy followed the textbook description of how monetarism should be implemented. What the monetarists will not admit nor even consider, however, it that it is not being followed because it <u>cannot</u> be followed. They prefer to believe that it is the shortcomings of the technicians rather than of the monetary system itself.

The notion that deficits do not matter so long as they are a certain percent of the gross national product, as claimed by some of the monetarists, is not acceptable. It ignores the fact that total annual borrowing of the federal government exceeds the annual deficit as the total debt is turned over more and more rapidly. A sound monetary system works hand in hand with a balanced

budget, giving the citizens assurance of no possible future plans to "break the rules" and start inflating again. Many who downplay the deficit (some supply-siders, Keynesians, and monetarists) emphasize correctly that it is not inflationary if the debt is not monetized. But they fail to consider the inflationary pressures created by the real debt; the on-budget deficit, the off-budget deficit, the guaranteed loans, and the direct loans--a much larger problem than the conventionally accepted annual federal deficit. The political pressures to monetize the debt are inexorable.

Monetarism ignores man's nature and assumes that if money managers and politicians are given the power to increase the money supply at a 5% annual rate, they will not abuse that power. History shows that governments and the people in charge will always abuse the " right" to create money if it is granted to them.

Monetarists cannot agree on the precise definition of money. Some prefer the monetary base(bank reserves plus circulating cash), other prefer M1B (cash plus checking and transfer accounts). Since M1B is no longer satisfactory, M1A and M1B have now been dropped and M1 is presently the key "M" to watch, according to some. Still others believe M2 is the key statistic to watch. Nothing guarantees that if M1 or M2 become difficult to control a new M will not be created. A sound monetary system cannot be this arbitrary.

The theory of monetarism advocates a deliberate and controlled monetary inflation of 3-5% per year to coincide with economic growth so as to produce price stability. If we don't know what the economic growth will be in the year to come--2% or 6%--we cannot know how much money to create in order to produce price stability. We cannot wait until after the growth occurs for it serves no purpose--the money then comes into the economy too late. They fully recognize that money growth as we have had it in the past decade is injurious to economic growth,but claim that a 5% growth in the money supply

would not be. The truth is that any inflation--even monetarist inflation--is harmful, and that a 4% growth of the money supply cannot produce economic growth of 4%. The two are unrelated.

The central purpose of a monetary standard is trust and honesty, not stable prices. The reason gold is superior to all forms of paper is that it provides this truth and honesty, permits and encourage savings, enhances economic growth, and as a secondary benefit allows prices to adjust freely in the marketplace (yet long term price stability is achieved more with gold, than with any other standard). "Stable" prices cannot be achieved any more easily through monetary policy than they can through wage and price controls, that is, they cannot be achieved at all.

Both monetarists and gold standard advocates want to stop the present inflation. Monetarism claims that a gradual reduction in the rate of money growth can get us to where we want to be. Gradualism has not worked in England nor in the United States so far, and there is no indication that it will. Gradualism does not ensure credibility. Restoring convertibility and defining the dollar as a precise weight of gold is the only way the psychology of inflation can be broken. Although the money supply is very important, an absolute relationship of money supply to prices does not exist. Ultimately, all prices (and the value of the dollar) are set by the market, not by the monetary authorities.

Monetarism is similar to a discretionary inflationary policy in that the government remains as the monopolist fully in charge. In contrast, with a fully convertible gold standard, the people are in charge and can call the government's bluff anytime they choose by turning in their paper certificates for gold. The unit of account, as Jefferson stated, must be defined "with precision." A gold standard does this by defining the unit in a weight of gold--a paper standard provides no definition and the unit of account is

arbitrary and is inevitably depreciated by the money managers. Trust can never be restored with a paper currency.

A NEW ATTITUDE

The final severance of our currency's link to gold in 1971 ushered in a new attitude among Americans unknown previously in our history. Even though there were short periods during wartime when an inflationary psychology existed, it never persisted for an indefinite period and it has never been as pervasive as we are experiencing now. Associated with this inflationary psychology is a general attitude toward government and life in general. Pessimism has replaced our traditional optimism. Scheming, speculation, and sophisticated tax avoidance have replaced productive efforts, savings, and planning for the future.

Trading in currencies can now be more rewarding to banks than the conventional business of brokering loans from savings. The futures and options market has turned into a giant gambling game. The new markets that have developed since the dollar lost its precise definition reflect the ingenuity of man. Now we see futures sold in currencies, betting on the monetary inflation of various governments. Instead of buying a bond or treasury bill and holding it, we now can speculate on a daily and massive basis.

Just this winter, futures and options began to be sold on stock-indexes. One is able to buy futures on large CD's as well. Outstanding European rate futures and GNMA options (GNMA futures started in 1975) will be offered also. Billions of dollars are now used in industry for the purpose of "take-overs" of other industries with no real signs of developing new industries or re-capitalizing old industries. The dollar amount involved in the speculation is into the trillions of dollars from these various ven-

tures. All this is a result of unsound money. Ten years ago, most of the futures and options markets did not exist.

With a sound currency there would be no speculation and trading in U.S. government bonds. Speculation would be minimal as compared to today. Their value would be predictable and betting on their day-to-day value would be meaningless. Yet in 1980, on the Chicago Board of Trade, far more U.S. Treasury Bond futures contracts than cattle contracts were traded. The options market is also growing by leaps and bounds and becoming more sophisticated and more complex every day. The frenzy with which the speculation is growing is literally incomprehensible and immeasurable. This tendency will continue so long as we are operating with an unsound currency that is being deliberately depreciated on a regular basis.

The speculation has spilled over into the fiscal arena as well. In 1980, $2,107,325,000 were collected by state run lotteries. It is illegal for most citizens to gamble, but it is legal for governments to operate lotteries to raise revenues.

In the past decade the definition of money has undergone continuous change, reflecting the new rules of a fiat monetary system. In 1970 the Federal Reserve had a single monetary aggregate. In 1971 the concepts of M1, M2, and M3 were introduced. By 1975 it became necessary to define two new aggregates, M4 and M5. The more chaotic money management became after the dollar-gold linkage broke down, the more the definition of money was changed. After the mid-1970's "demand" deposits were virtually impossible to calculate due to interest-bearing transaction accounts. This prompted the temporary use of a measurement called M1+ in 1978.

By 1980 a major redefinition of all the monetary aggregates was required. The turbulent international monetary crisis of 1979 convinced many that current definitions and money management were totally inadequate. Five new definitions were introduced: M1-A, M1-B, M2, M3, and L. Even this did not

suffice. In 1981 the Fed started publishing a "shift-adjusted" measure of M1B to account for the new nationwide NOW accounts. By 1982, this adjsuted measure of M1B was dropped, and M1A and M1B became M1.

It's probably safe to predict that new definitions will be invented in hopes that the impossible task of managing a fiat monetary system will be miraculously achieved by new measurements. This problem of measuring monetary aggregates would not exist under a gold standard, for there would be no purpose in it.

This decade has taught Americans to accept for the first time over a sustained period of time that their standard of living is more likely to go down than up. It is also recognized by many Americans that conditions caused by inflation and the tax code are achieving a transfer of wealth from the large middle class and the working poor to both the rich and the welfare poor. Average people can no longer buy houses, cars are smaller for the shrinking number who are still able to buy one, most people pump their own gas, and household help and other services are on the wane. These have all led to a sense of frustration and anger.

More and more Americans have resorted to the underground economy to compensate for losses they see as unfair. Law breakers have replaced law abiders. Fear of the unknown has prompted a whole subculture of survivalists--convinced by their own analysis that the government in the forseeable future will not adopt a sound monetary system. This group no longer depends on conventional news services for their information and relies on expensive newsletters for what is considered accurate information regarding what is happening to the monetary system. It is easy to write them off as speculators, but compared to "speculating" in five percent per year losses with a government bond, it seems that their existence and their success in a reflection

of our inflationary monetary policy. There is a sincere attempt by a growing number of Americans to preserve assets that have been earned over a period of time and whose value is threatened by inflation. For this reason, tens of thousands have attended hard money conferences in the past ten years in the hope that they can learn how to protect themselves from the destructiveness of a government caused inflation. This is a new phenomenon and is directly related to the breakdown of the Bretton Woods and Smithsonian Agreements. Prior to 1974, the conferences were virtually unheard of.

In 1968 and 1971 a vocal minority decried the abandonment of gold convertibility and predicted the subsequent events of the 1970's. A remnant throughout the period of the dissolution of the gold standard (1913 to 1971) steadfastly proclaimed that one day a gold standard would be required to stop inflation and restore order to monetary policy and to the financial markets. The number of Americans insisting on a sound currency is multiplying rapidly. Today's events dramatize the urgent need to lay plans for establishing a modern gold standard. A growing number of free market economists defend the wisdom of the gold standard. Their voices may not have been heard by the officials, but their impact has been felt.

The need for something better than we have today is conceded by almost everyone. The past ten years have taken a heavy toll with general confidence shattered. Most agree that this country and the Western nations appear hopelessly enmeshed in the problems of persistent inflation, high interest rates, weak economies, and high unemployment. No one expects these conditions to improve without a significant change in monetary policy. It is our purpose in this report to offer and to lay out the plans for a sound monetary system.

CHAPTER TWO

A HISTORY OF MONEY AND BANKING IN THE UNITED STATES BEFORE THE TWENTIETH CENTURY

As an outpost of Great Britain, colonial America of course used British pounds, pence, and shillings as its money. Great Britain was officially on a silver standard, with the shilling defined as equal to 86 pure Troy grains of silver, and with silver as so defined legal tender for all debts (i.e. creditors were compelled to accept silver at that rate.) However, Britain also coined gold, and maintained a bimetallic standard by fixing the gold guinea, weighing 129.4 grains of gold, as equal in value to a certain weight of silver. In that way, gold became in effect legal tender as well. Unfortunately, by establishing bimetallism, Britain became perpetually subject to the evils known as Gresham's Law, which states that when government compulsorily overvalues one money and undervalues another, the undervalued money will leave the country or disappear into hoards, while the overvalued money will flood into circulation. Hence, the popular catchphrase of Gresham's Law: "bad money drives out good." But the important point to note is that the triumph of "bad" money is the result, not of perverse free market competition but of government using the compulsory legal tender power to privilege one money above another.

In 17th and 18th century Britain, the government maintained a mint ratio between gold and silver that consistently overvalued gold and undervalued silver in relation to world market prices, with the resultant disappearance and outflow of full-bodied silver coins, and an influx of gold, and the maintenance in circulation of only eroded and "lightweight" silver coins. Attempts to rectify the

fixed bimetallic ratios were always too little and too late.[1]

In the sparsely settled American colonies, money, as it always does, arose in the market as a useful and scarce commodity and began to serve as a general medium of exchange. Thus, beaver fur and wampum was used as money in the North for exchanges with the Indians, and fish and corn also served as money. Rice was used as money in South Carolina, and the most widespread use of commodity money was tobacco, which served as money in Virginia. The pound-of-tobacco was the currency unit in Virginia, with ware-house receipts in tobacco circulating as money backed 100% by the tobacco in the warehouse.

While commodity money continued to serve satisfactorily in rural areas, as the colonial economy grew, Americans imported gold and silver coins to serve as monetary media in urban centers and in foreign trade. English coins were imported, but so too were gold and silver coins from other European countries. Among the gold coins circulating in America were the French guinea, the Portugese "joe," the Spanish doubloon, and Brazilian coins, while silver coins included French crowns and livres.

It is important to realize that gold and silver are international commodities, and that therefore, when not prohibited by government decree, foreign coins are perfectly capable of serving as standard moneys. There is no need to have a national government monopolize the coinage, and indeed foreign gold and silver coins constituted much of the coinage in the United States until Congress outlawed the use of foreign coins in 1857. Thus, if a free market is allowed to

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[1] In the late 17th and early 18th centuries, the British maintained fixed mint ratios of from 15.1:1 of silver grains in relation to gold grains, to about 15.5:1. Yet, the world market ratios of weight, set by forces of supply and demand, was about 14.9:1. Thus, silver was consistently undervalued and gold overvalued. In the 18th century, the problem got even worse, for increasing gold production in Brazil and declining silver production in Peru brought the market ratio down to 14.1:1 while the mint ratios fixed by the British government continued to be the same.

prevail in a country, foreign coins will circulate naturally. Silver and gold coins will tend to be valued in proportion to their respective weights, and the ratio between silver and gold will be set by the market in accordance with their relative supply and demand.

Shilling/Dollar Manipulations

By far the leading specie coin circulating in America was the Spanish silver dollar, defined as consisting of 387 grains of pure silver. The dollar was divided into "pieces of eight," or "bits," each consisting of one-eighth of a dollar. Spanish dollars came into the North American colonies through the lucrative trade with the West Indies. The Spanish silver dollar had been the world's outstanding coin since the early 16th century, and was spread partially by dint of the vast silver output of the Spanish colonies in Latin America. More important, however, was the fact that the Spanish dollar, from the sixteenth down to the nineteenth century, was relatively the most stable and least debased coin in the Western world.[2]

Since the Spanish silver dollar consisted of 387 grains, and the English shilling consisted of 86 grains of silver, this meant the natural, free-market ratio between the two coins would be 4 shillings 6 pence per dollar.[3]

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[2] The name "dollar" came from the "thaler," the name given to the coin of similar weight, the "Joachimsthaler" or "Schlicken thaler," issued since the early 16th century by the Count of Schlick in Joachimsthal in Bohemia. The Joachimsthalers weigh 451 Troy grains of silver. So successful were these coins that similar thalers were minted in Burgundy, Holland, France; most successful of these was the Maria Theresa thaler, which began being minted in 1751, and formed a considerable portion of American currency after that date. The Spanish "pieces of eight" adopted the name "dollar" after 1690.

[3] Since 20 shillings make £ 1, this meant that the natural ratio between the two currencies was £ 1 = $4.44.

Constant complaints, both by contemporaries and by some later historians, arose about an alleged "scarcity of money" especially of specie in the colonies, allegedly justifying numerous colonial paper money schemes to remedy that "shortage." In reality, there was no such shortage. It is true that England, in a mercantilist attempt to hoard specie, kept minting for its own prerogative and outlawed minting in the colonies; it also prohibited the export of English coin to America. But this did not keep specie from America, for, as we have seen, Americans were able to import Spanish and other foreign coin, including English from other countries. Indeed, as we shall see, it was precisely paper money issues that led, by Gresham's Law, to outflows and disappearance of specie from the colonies.

In their own mercantilism, the colonial governments early tried to hoard their own specie by debasing their shilling standards in terms of Spanish dollars. Whereas their natural weights dictated a ratio of 4 shillings 6 pence to the dollar, Massachusetts, in 1642, began a general colonial process of competitive debasement of shillings. Massachusetts arbitrarily decreed that the Spanish dollar be valued at 5 shillings; the idea was to attract an inflow of Spanish silver dollars into that colony, and to subsidize Massachusetts exports by making their prices cheaper in terms of dollars. Soon, Connecticut and other colonies followed suit, each persistently upping the ante of debasement. The result was to increase the supply of nominal units of account by debasing the shilling, inflating domestic prices and thereby bringing the temporary export stimulus to a rapid end. Finally, the English government brought a halt to this futile and inflationary practice in 1707.

But the colonial governments had already found another, and far more inflationary, arrow to their bow: the invention of government fiat paper money.

Government Paper Money

Apart from medieval China, which invented both paper and printing centuries before the West, the world had never seen government paper money until the colonial government of Massachuetts emitted a fiat paper issue in 1690.[4,5] Massachusetts was accustomed to launching plunder expeditions against the prosperous French colony in Quebec. Generally, the expeditions were successful, and the expedition would return to Boston, sell their booty and pay off the soldiers with the proceeds. This time, however, the expedition was beaten back decisively, and the soldiers returned to Boston in ill humor, grumbling for their pay. Discontented soldiers are ripe for mutiny, and so the Massachusetts government looked around in concern for a way to pay the soldiers. It tried to borrow three to four thousand pounds from Boston merchants, but evidently the Massachusetts credit rating was not of the best. Finally, Massachusetts decided in December 1690 to print £ 7000 in paper notes, and to use them to pay the soldiers. Suspecting that the public would not accept irredeemable paper, the government made a twofold pledge when it issued the notes: that it would redeem them in gold or silver out of tax revenue in a few years, and that absolutely no further paper notes would be issued. Characteristically, however, both parts of the pledge went

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[4] Government paper redeemable in gold began in the early 9th century, and after three centuries the government escalated to irredeemable fiat paper, with the usual consequence of boom-bust cycles, and runaway inflation. See Gordon Tullock, "Paper Money -- A Cycle in Cathay," Economic History Review, Vol. IX, No. 3 (1957), pp. 393-396.

[5] The only exception was a curious form of paper money issued five years earlier in Quebec, to become known as Card Money. The governing intendant of Quebec, Monsieur Mueles, divided some playing cards into quarters, marked them with various monetary denominations, and then issued them to pay for wages and materials sold to the government. He ordered the public to accept the cards as legal tender, and this particular issue was later redeemed in specie sent from France.

quickly by the board: the issue limit disappeared in a few months, and all the bills continued unredeemed for nearly forty years. As early as February 1691, the Massachusetts government proclaimed that its issue had fallen "far short" and so it proceeded to emit £ 40,000 of new money to repay all of its outstanding debt, again pledging falsely that this would be the absolutely final note issue.

But Massachusetts found that the increase in the supply of money, coupled with a fall in the demand for paper because of growing lack of confidence in future redemption in specie, led to a rapid depreciation of new money in relation to specie. Indeed, in a year after the intial issue, the new paper pound had depreciated on the market by 40% against specie.

By 1692, the government moved against this market evaluation by use of force, making the paper money compulsory legal tender for all debts at par with specie, and by granting a premium of five percent on all payment of debts to the government made in paper notes. This legal tender law had the unwanted effect of Gresham's Law: the disappearance of specie circulation in the colony. In addition, the expanding paper issues drove up prices and hampered exports from the colony. In this way, the specie "shortage" became the creature rather than the cause of the fiat paper issues. Thus, in 1690, before the orgy of paper issues began, £ 200,000 of silver money were available in New England; by 1711 however, with Connecticut and Rhode Island having followed suit in paper money issue, £ 240,000 of paper money had been issued in New England but the silver had almost disappeared from circulation.

Ironically, then, Massachusetts and her sister colonies' issue of paper created rather than solved any "scarcity of money." The new paper drove out the old specie, and the consequent driving up of prices and depreciation of paper scarcely relieved any alleged money scarcity among the public. But since the paper was issued to finance government expenditures and pay public debts, the <u>government</u> though not the public benefited from the fiat issue.

After Massachusetts had emitted another huge issue of £ 500,000 in 1711 to pay for another failed expedition against Quebec, not only was the remainder of the silver driven from circulation, but despite the legal tender law, the paper pound depreciated 30% against silver. Massachusetts pounds, officially seven shillings to the silver ounce, had now fallen on the market to nine shillings per ounce. Depreciation proceeded in this and other colonies despite fierce governmental attempts to outlaw it, backed by fines, imprisonment and total confiscation of property for the high crime of not accepting the paper at par.

Faced with a further "shortage of money" due to the money issues, Massachusetts decided to press on; in 1716, it formed a government "land bank" and issued £ 100,000 in notes to be loaned on real estate in the various counties of the province.

Prices rose so dramatically that the tide of opinion in Massachusetts began to turn against paper, as writers pointed out that the result of the issues was a doubling of prices in the past twenty years, depreciation of paper, and the disappearance of Spanish silver through the operation of Gresham's Law. From then on, Massachusetts, pressured by the Crown, tried intermittently to reduce the bills in circulation and return to a specie currency, but was hampered by its assumed obligations to honor the paper notes at par of its sister New England colonies.

In 1744, another losing expedition against the French led Massachusetts to issue an enormous amount of paper money over the next several years. From 1744 to 1748, paper money in circulation expanded from £ 300,000 to £ 2.5 million, and the depreciation of Massachusetts was such that silver had risen on the market to 60 shillings an ounce, ten times the price at the beginning of an era of paper money in 1690.

By 1740, every colony but Virginia had followed suit in fiat paper money issues, and Virginia succumbed in the late 1750's in trying to finance part of the French and Indian War against the French. Similar consequences, dramatic inflation, shortage of specie, massive depreciation despite compulsory par laws, ensued in each colony. Thus, along with Massachusetts' depreciation of 11:1 of its notes against specie compared to the original par, Connecticut's notes had sunk to 9:1 and the Carolina's at 10:1 in 1740, and the paper of virulently inflationist Rhode Island had sunk to 23:1 against specie. Even the least inflated paper, that of Pennsylvania, had suffered an appreciation of specie to eighty percent over par.

A detailed study of the effects of paper money in New Jersey shows how it created a boom-bust economy over the colonial period. When new paper money was injected into the economy, an inflationary boom would result, to be followed by a deflationary depression when the paper money supply contracted.[6]

At the end of King George's War with France in 1748, Parliament began to pressure the colonies to retire the mass of paper money and return to a specie currency. In 1751, Great Britain prohibited all further issues of legal tender paper in New England, and ordered a move toward redemption of existing issues in specie. Finally, in 1764, Parliament extended the prohibition of new issues to the remainder of the colonies, and required the gradual retirement of outstanding notes.

Following the lead of Parliament, the New England colonies apart from Rhode Island decided to resume specie payment and retire their paper notes rapidly at the current depreciated market rate. The panicky opponents of specie resumption and monetary contraction made the usual predictions in such a situation:

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[6] Donald L. Kemmerer, "Paper Money in New Jersey, 1668-1775," New Jersey Historical Society, Proceedings, Vol. 74 (April, 1956), pp. 107-144.

that the result would be a virtual absence of money in New England and the consequent ruination of all trade. Instead, however, after a brief adjustment, the resumption and retirement led to a far more prosperous trade and production -- the harder money and lower prices attracting an inflow of specie. In fact, with Massachusetts on specie and Rhode Island still on depreciated paper, the result was that Newport, which had been a flourishing center for West Indian imports for western Massachusetts, lost its trade to Boston and languished in the doldrums.[7,8]

In fact, as one student of colonial Massachusetts has pointed out, the return to specie occasioned remarkably little dislocation, recession, or price deflation. Indeed, wheat prices fell by less in Boston than in Philadelphia, which saw no such return to specie in the early 1750's. Foreign exchange rates, after the resumption of specie, were highly stable, and "The restored specie

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[7] Before Massachusetts went back to specie, it was commited to accept the notes of the other New England colonies at par. This provided an incentive for Rhode Island to inflate its currency wildly, for this small colony, with considerable purchases to make in Massachusetts, could make these purchases in inflated money at par. Thereby Rhode Island could export its inflation to the larger colony, but make its purchases with the new money before Massachusetts prices could rise in response. In short, Rhode Island could expropriate wealth from Massachusetts and impose the main cost of its inflation on the latter colony.

[8] If Rhode Island was the most inflationary of the colonies, Maryland's monetary expansion was the most bizarre. In 1733, Maryland's public land bank issued £ 70,000 of paper notes, of which £ 30,000 was <u>given away</u> in a fixed amount to each inhabitant of the province. This was done to universalize the circulation of the new notes, and is probably the closet approximation in history of Milton Friedman's "helicopter" model, in which a magical helicopter lavishes new paper money in fixed amounts or proportions to each inhabitant. The result of the measure, of course, was rapid depreciation of new notes. However, the inflationary impact of the notes was greatly lessened by tobacco still being the major money of the new colony. Tobacco was legal tender in Maryland and the paper was not receivable for all taxes.

system operated after 1750 with remarkable stability during the Seven Years War and during the dislocation of international payments in the last years before the Revolution."[9]

Not being outlawed by government decree, specie remained in circulation throughout the colonial period, even during the operation of paper money. Despite the inflation, booms and busts, and shortages of specie caused by paper issues, the specie system worked well overall: "Here was a silver standard...in the absence of institutions of the central government intervening in the silver market, and in the absence of either a public or private central bank adjusting domestic credit or managing a reserve of specie or foreign exchange with which to stabilize exchange rates. The market...kept exchange rates remarkably close to the legislated par...What is most remarkable in this context is the continuity of the specie system through the seventeenth and eighteenth centuries."[10]

Private Bank Notes

In contrast to government paper, private bank notes and deposits, redeemable in specie, had begun in Western Europe in Venice in the 14th century. Firms granting credit to consumers and businesses had existed in the ancient world and in medieval Europe, but these were "money lenders" who loaned out their own savings. "Banking" in the sense of lending out the savings of others only began in England with the "scriveners" of the early seventeenth century. The scriveners were clerks who wrote contracts and bonds and were therefore in a position to learn of mercantile transactions and engage in money lending and

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[9] Roger W. Weiss, "The Colonial Monetary Standard of Massachusetts," Economic History Review, Vol. 27 (November, 1974), p. 589.

[10] Ibid., p. 591.

borrowing.[11]

There were, however, no banks of deposit in England until the Civil War in the mid-17th century. Merchants had been in the habit of storing their surplus gold in the King's Mint for safekeeping. The habit proved to be unfortunate, for when Charles I needed money in 1638, shortly before the outbreak of the Civil War, he confiscated the huge sum of £ 200,000 of gold, calling it a "loan" from the owners. Although the merchants finally got their gold back, they were understandably shaken by the experience, and foresook the Mint, depositing their gold instead in the coffers of private goldsmiths, who, like the Mint, were accustomed to storing the valuable metal. The warehouse receipts of the goldsmiths soon came to be used as a surrogate for the gold itself. By the end of the Civil War, in the 1660's, the goldsmiths fell prey to the temptation of print pseudo-warehouse receipts not covered by gold and lend them out; in this way, fractional-reserve banking came to England.[12]

Very few private banks existed in colonial America, and they were short-lived. Most prominent was the Massachusetts Land Bank of 1740, issuing notes and lending them out on real estate. The Land Bank was launched as an inflationary alternative to government paper, which the royal governor was attempting to restrict. The land bank issued frankly irredeemable notes, and fear of its unsound

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[11] During the sixteenth century, before the rise of the scriveners, most English money-lending was not even conducted by specialized firms, but by wealthy merchants in the clothing and woollen industries, as outlets for their surplus capital. See J. Milnes Holden, The History of Negotiable Instruments in English Law (London: The Athlone Press, 1955), pp. 205-206.

[12] Once again, ancient China pioneered in deposit banking, as well as in fractional-reserve banking. Deposit banking per se began in the 8th century A.D., when shops would accept valuables, in return for warehouse receipts, and receive a fee for keeping them safe. After a while, the deposit receipts of these shops began to circulate as money. Finally, after two centuries, the shops began to issue and lend out more receipts than they had on deposit; they had caught on to fractional reserve banking. (Tullock, "Paper Money," p. 396.)

issue generated a competing private silver Bank, which emitted notes redeemable in silver. The Land Bank promptly issued over £ 49,000 in irredeemable notes, which depreciated very rapidly. In six months' time the public was almost universally refusing to accept the bank's notes, and Land Bank sympathizers vainly accepting the notes. The final blow came in 1741, when Parliament, acting at the request of several Massachusetts merchants and the royal governor, outlawed both the land and the silver banks.

One intriguing aspect of both the Massachusetts Land Bank and other inflationary colonial schemes is that they were advocated and lobbied for by some of the wealthiest merchants and land speculators in the respective colonies. Debtors benefit from inflation and creditors lose; realizing this fact, older historians assumed that debtors were largely poor agrarians and creditors were wealthy merchants and that therefore the former were the main sponsors of inflationary mostrums. But, of course, there are no rigid "classes" of debtors and creditors; indeed, wealthy merchants and land speculators are often the heaviest debtors. Later historians have demonstrated that members of the latter group were the major sponsors of inflationary paper money in the colonies.[13,14]

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[13]On the Massachusetts Land Bank, see the illuminating study by George Athan Billias, "The Massachusetts Land Bankers of 1740," University of Maine Bulletin, Vol. LXI, No. 17 (April, 1959). On merchant enthusiasm for inflationary banking in Massachusetts, see Herman J. Belz, "Paper Money in Colonial Massachusetts," Essex Institute, Historical Collections, Vol. 101 (April, 1965), pp. 146-163; and Belz, "Currency Reform in Colonial Massachusetts, 1749-1750." Essex Institute, Historical Collections, Vol. 103 (January, 1967), pp. 66-84. On the forces favoring colonial inflation in general, see Bray Hammond, Banks and Politics in America (Princeton University Press, 1957), Ch. 1; Joseph Dorfman, The Economic Mind in American Civilization, 1606-1865 (New York: Viking Press, 1946), I, 142.

[14] For an excellent bibliographical essay on colonial money and banking, see Jeffrey Rogers Hummel, "The Monetary History of America to 1789: A Historiographical Essay," The Journal of Libertarian Studies, Vol. 2, No. 4 (Winter, 1978), pp. 373-389. For a summary of colonial monetary experience, see Murray N. Rothbard, Conceived in Liberty, Vol. II, "Salutary Neglect:" The American Colonies in the First Half of the 18th Century (New Rochelle, N.Y.: Arlington House, 1975), pp. 123-140. A particularly illuminating analysis is in the classic work by Charles Jesse Bullock, Essays on the Monetary History of the United States (1900, New York: Greenwood Press, 1969), pp. 1-59. Up-to-date data on the period is in Roger W. Weiss, "The Issue of Paper Money in the American Colonies, 1720-1774," Journal of Economic History, Vol. 30 (Dec. 1970), pp. 770-784.

Revolutionary War Finance

To finance the Revolutionary War, which broke out in 1775, the Continental Congress early hit on the device of issuing fiat paper money. The leader in the drive for paper money was Gouverneur Morris, the highly conservative young scion of the New York landed aristocracy. There was no pledge to redeem the paper, even in the future, but it was supposed to be retired in seven years by taxes levied pro rata by the separate states. Thus, a heavy future tax burden was supposed to be added to the inflation brought about the the new paper money. The retirement pledge, however, was soon forgotten, as Congress, enchanted by this new, seemingly costless form of revenue, escalated its emissions of fiat paper. As one historian has phrased it, "such was the beginning of the 'federal trough', one of America's most imperishable institutions."[15]

The total money supply of the United States at the beginning of the Revolution has been estimated at $12 million. Congress launched its first paper issue of $2 million in late June 1775, and before the notes were printed it had already concluded that another $1 million was needed. Before the end of the year, a full $6 million in paper issues were issued or authorized, a dramatic increase of 50% in the money supply in one year.

The issue of this fiat "continental" paper rapidly escalated over the next few years. Congress issued $6 million in 1775, $19 million in 1776, $13 million in 1777, $64 million in 1778, and $125 million in 1779. This was a total issue of over $225 million in five years superimposed upon a pre-existing money supply of $12 million. The result was, as could be expected, a rapid price inflation in terms of the paper notes, and a corollary accelerating depreciation of the paper

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[15] Edmund Cody Burnett, The Continental Congress (New York: W.W. Norton, 1964), p. 83.

in terms of specie. Thus, by the end of 1776, the Continentals were worth $1 to $1.25 in specie; by the fall of the following year, its value had fallen to 3 to 1; by December, 1778 the value was 6.8 to 1; and by December 1779 to the negligible 42 to 1. By the spring of 1781, the Continentals were virtually worthless, exchanging on the market at 168 paper dollars to one dollar in specie. This collapse of the Continental currency gave rise to the phrase, "not worth a Continental."

To top this calamity, the several states issued their own paper money, and each depreciated at varying rates. Virginia and the Carolinas led the inflationary move, and by the end of the war, state issues added a total of 210 million depreciated dollars to the nation's currency.

In an attempt to stem the inflation and depreciation, various states levied maximum price controls and compulsory par laws. The result was only to create shortages and impose hardships on large sections of the public. Thus, soldiers were paid in Continentals, but farmers understandably refused to accept payment in paper money despite legal coercion. The Continental Army then moved to "impress" food and other supplies, seizing the supplies and forcing the farmers and shopkeepers to accept depreciated paper in return. By 1779, with Continental paper virtually worthless, the Continental Army stepped up its impressments, "paying" for them in newly issued paper tickets or "certificates" issued by the army quartermaster and commissary departments. The states followed suit with their own massive certificate issues. It understandably took little time for these certificates, federal and state, to depreciate in value to nothing; by the end of the war, federal certificate issues alone totalled $200 million.

The one redeeming feature of this monetary calamity is that the federal and state governments at least allowed these paper issues to sink into worthlessness without insisting that taxpayers shoulder another grave burden by being forced to redeem these issues in specie at par, or even to redeem them at all.[16] Continentals were not redeemed at all, and state paper was only redeemed at depreciating rates, some at the greatly depreciated market value.[17] By the end of the war, all the wartime state paper had been withdrawn from circulation.

Unfortunately, the same policy was not followed with another important device that Congress turned to after its Continental paper had become almost worthless in 1779: loan certificates. Technically, loan certificates were public debt, but they were scarcely genuine loans. They were simply notes issued by the government to pay for supplies and accepted by the merchants because the government would not pay in anything else. Hence, the loan certificates became a form of currency, and rapidly depreciated. As early as the end of 1779, they had depreciated to 24 to 1 in specie. By the end of the war, $600 million of loan certificates had been issued. Some of the later loan certificate issues were liquidated at a depreciated rate, but the bulk remained after the war to become the substantial core of the permanent, peacetime federal debt.

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[16] As one historian explained, "Currency and certificates were the 'common debt' of the Revolution, most of which at war's end had been sunk at its depreciated value. Public opinion...tended to grade claims against the government according to their real validity. Paper money had the least status...." E. James Ferguson, The Power of the Purse: A History of American Public Finance, 1776-1790 (Chapel Hill, N.C.: University of North Carolina Press, 1961), p. 68.

[17] In Virginia and Georgia, the state paper was redeemed at the highly depreciated market rate of 1,000 to 1 in specie.

The mass of federal and state debt could have depreciated and passed out of existence by the end of the war, but the process was stopped and reversed by Robert Morris, wealthy Philadelphia merchant and virtual economic and financial czar of the Continental Congress in the last years of the war. Morris, leader of the nationalist forces in American politics, moved to make the depreciated federal debt ultimately redeemable in par, and also agitated for federal assumption of the various state debts. The reason was twofold; (a) to confer a vast subsidy on speculators who had purchased the public debt at highly depreciated values, by paying interest and principal at par in specie; [18] and (b) to build up the agitation for taxing power in the Congress, which the Articles of Confederation refused to allow to the federal government. The decentralist policy of the states raising taxes or issuing new paper money to pay off the pro rata federal debt as well as their own, was thwarted by the adoption of the Constitution, which brought about the victory of the nationalist program, led by Morris's youthful disciple and former aide, Alexander Hamilton.

The Bank of North America

Robert Morris's nationalist vision was not confined to a strong central government, the power of the federal government to tax, and a massive public debt fastened permanently upon the taxpayers. Shortly after he assumed total economic power in Congress in the spring of 1781, Morris introduced a bill to create the first commercial bank, as well as the first central bank, in the history of the new Republic. This bank, headed by Morris himself, the Bank of North America, was not only the first fractional-reserve commercial bank in the U.S.; it was to be a privately-owned central bank, modelled after the Bank

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[18] As Morris candidly put it, this windfall to the public debt speculators at the expense of the taxpayers would cause wealth to flow "into those hands which could render it most productive." (Ferguson, Power of the Purse, p. 124.)

of England. The money system was to be grounded upon specie, but with a controlled monetary inflation pyramiding an expansion of money and credit upon a reserve of specie.

The Bank of North America, which quickly received a federal charter and opened its doors at the beginning of 1782, received the privilege from the government of its notes being receivable in all duties and taxes to all governments, at par with specie. In addition, no other banks were to be permitted to operate in the country. In return for its monopoly license to issue paper money, the bank would graciously lend most of its newly created money to the federal government to purchase public debt and be reimbursed by the hapless taxpayer. The Bank of North America was made the depository for all Congressional funds. The first central bank in America rapidly loaned $1.2 million to the Congress, headed also by Robert Morris.[19]

Despite Robert Morris's power and influence, and the monopoly privileges conferred upon his bank, the market saw that its notes were being inflated compared with specie. Despite the nominal redeemability of the Bank of North America's notes in specie, the market's lack of confidence in the inflated notes led to their depreciation outside its home base in Philadelphia. The Bank even tried to shore up the value of its notes by hiring people to urge redeemers of its notes not to ruin everything by insisting upon specie--a move scarcely calculated to improve ultimate confidence in the bank.

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[19] When Morris failed to raise the legally required specie capital to launch the Bank of North America, Morris, in an act tantamount to embezzlement, simply appropriated specie loaned to the U.S. by France and invested it for the government in his own Bank. In this way, the bulk of specie capital for his Bank was appropriated by Morris out of government funds. A multiple of these funds was then borrowed back from Morris's bank by Morris as government financier for the pecuniary benefit of Morris as banker; and finally, Morris channeled most of the money into war contracts for his friends and business associates. Murray N. Rothbard, Conceived in Liberty, Vol. IV, The Revolutionary War, 1775-1784 (New Rochelle, N.Y.: Arlington House, 1979), p. 392.

After a year of operation, however, Morris, his political power slipping after the end of the war, moved quickly to end his Bank's role as a central bank and to shift it to the status of a private commercial bank chartered by the state of Pennsylvania. By the end of 1783, all of the federal government's stock in the Bank of North America, which had the previous year amounted to 5/8 of its capital, had been sold by Morris into private hands, and all the U.S. government debt to the bank had been repaid. The first experiment with a central bank in the United States had ended.[20]

At the end of the Revolutionary War, the contraction of the swollen mass of paper money, combined with the resumption of imports from Great Britain, combined to cut prices by more than half in a few brief years. Vain attempts by seven state governments, in the mid-1780's, to cure the "shortage of money" and reinflate prices were a complete failure. Part of the reason for the state paper issues was a frantic attempt to pay the wartime public debt, state and pro rata federal, without resorting to crippling burdens of taxation. The increased paper issues merely added to the "shortage" by stimulating the export of specie and the import of commodities from abroad. Once again, Gresham's Law was at work. State paper issues -- despite compulsory par laws -- merely depreciated rapidly, and aggravated the shortage of specie. An historian discusses what happened to the paper issues of North Carolina:

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[20] See Rothbard, The Revolutionary War, pp. 409-410. On the Bank of North America and on Revolutionary War finance generally, see Curtis P. Nettels, The Emergence of a National Economy, 1775-1815 (New York; Holt, Rinehart, and Winston, 1962), pp. 23-34.

> In 1787-1788 the specie value of the paper had shrunk by more than 50 percent. Coin vanished, and since the paper had practically no value outside the state, merchants could not use it to pay debts they owed abroad; hence they suffered severe losses when they had to accept it at inflated values in the settlement of local debts. North Carolina's performance warned merchants anew of the menace of depreciating paper money which they were forced to receive at par from their debtors but which they could not pass on to their creditors.[21]

Neither was the situation helped by the expansion of banking following the launching of the Bank of North America in 1782. The Bank of New York and the Massachusetts Bank (Boston) followed two years later, with each institution enjoying a monopoly of banking in its region.[22] Their expansion of bank notes and deposits helped to drive out specie, and in the following year the expansion was succeeeded by a contraction of credit, which aggravated the problems of recession.[23]

The United States: Bimetallic Coinage

Since the Spanish silver dollar was the major coin circulating in North America during the colonial and Confederation periods, it was generally agreed that the "dollar" would be the basic currency unit of the new United States of America.[24] Article I, sction 8 of the new Constitution gave to Congress

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[21] Nettels, National Economy, p. 82.

[22] See Hammond, Banks and Politics, pp. 67, 87-88.

[23] Nettels, National Economy, pp. 61-62. Also see ibid, pp. 77-80, 85.

[24] As Jefferson put it at the time: "The unit or dollar is a known coin, and the most familiar of all to the mind of the public. It is already adopted from South to North, has identified our currency, and therefore happily offers itself a unit already introduced." Cited in J. Laurence Laughlin, The History of Bimetallism in the United States (4th Ed., New York: D. Appleton and Co., 1901), p. 11n.

the power "to coin money, regulate the value thereof, and of foreign coin"; the power was exclusive because the state governments were prohibited, in Article I, section 10, from coining money, emitting paper money, or making anything but gold and silver coin legal tender in payment of debts. (Evidently the Founding Fathers were mindful of the bleak record of colonial and revolutionary paper issues and provincial juggling of the weights and denominations of coin.) In accordance with this power, Congress passed the Coinage Act of 1792 on the recommendation of Secretary of Treasury Alexander Hamilton's Report on the Establishment of a Mint of the year before.[25]

The Coinage Act established a bimetallic dollar standard for the United States. The dollar was defined as both a weight of 371.25 grains of pure silver and/or a weight of 24.75 grains of pure gold -- a fixed ratio of 15 grains of silver to 1 grain of gold.[26] Anyone could bring gold and silver bullion to the Mint to be coined, and silver and gold coins were both to be legal tender at this fixed ratio of 15:1. The basic silver coin was to be the silver dollar, and the basic gold coin the ten-dollar eagle, containing 247.5 grains of pure gold.[27]

The 15:1 fixed bimetallic ratio almost precisely corresponded to the market gold/silver ration of the early 1790's,[28] but of course the tragedy of any

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[25] The text of the Coinage Act of 1792 may be found in Laughlin, History of Bimetallism, pp. 300-301. Also see ibid, pp. 21-23; Hepburn, History of Currency, pp. 43-45.

[26] The current Spanish silver dollars in use were lighter than the earlier dollars weighing 387 grains. See Laughlin, History of Bimetallism, pp. 16-18.

[27] Golden half-eagles (worth $5) and quarter-eagles (worth $2.50) were also to be coined, of corresponding proportional weights, and, for silver coins, half-dollars, quarter-dollars, dimes, and half-dimes of corresponding weights.

[28] Silver had declined in market value from the 14.1:1 ratio of 1760, largely due to the declining production of gold from Russian mines in this period and therefore the rising relative value of gold.

bimetallic standard is that the fixed mint ratio must always come a cropper against inevitably changing market ratios, and that Gresham's Law will then come inexorably into effect. Thus, Hamilton's express desire to keep both metals in circulation in order to increase the supply of money was doomed to failure.[29]

Unfortunately for the bimetallic goal, the 1780's saw the beginning of a steady decline in the ratio of the market values of silver to gold, largely due to the massive increases over the next three decades of silver production from the mines of Mexico. The result was that the market ratio fell to 15.5:1 by the 1790's, and after 1805 fell to approximately 15.75:1. The latter figure was enough of a gap between the market and mint ratios to set Gresham's Law into operation so that by 1810 gold coins began to disappear from the United States and silver coins to flood in. For the fixed government ratio now significantly overvalued silver and undervalued gold, and so it paid people to bring in silver to exchange for gold, melt the gold coins into bullion and ship it abroad. From 1810 until 1834, only silver coin, domestic and foreign, circulated in the United States.[30]

Originally, Congress in 1793 provided that all foreign coins circulating in the United States be legal tender. Indeed, foreign coins have been estimated to form 80% of American domestic specie circulation in 1800. Most of the foreign

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[29] See Laughlin, History of Bimetallism, p. 14.

[30] For a lucid explanation of the changing silver/gold ratios and how Gresham's Law operated in this period, see Laughlin, History of Bimetallism, pp. 10-51. Also see Laughlin, A New Exposition of Money, Credit and Prices (Chicago: University of Chicago Press, 1931), I, 93-111.

coins were Spanish silver, and while the legal tender privilege was progressively cancelled for various foreign coins by 1827, Spanish silver coins continued as legal tender and to predominate in circulation. [31] Spanish dollars however, soon began to be heavier in weight by 1-5% over their American equivalents, even though they circulated at face value here, and so the American mint ratio overvalued American more than Spanish dollars. As a result, the Spanish silver dollars were re-exported, leaving American silver dollars in circulation. On the other hand, fractional Spanish silver coins -- half-dollars, quarter-dollars, dimes, and half dimes -- were considerably overvalued in the U.S., since they circulated at face value and yet were far lighter weight. Gresham's Law again came into play, and the result was that American silver fractional coins were exported and disappeared, leaving Spanish silver fractional coins as the major currency. To make matters still more complicated, American silver dollars, though lighter weight than the Spanish, circulated equally by name in the West Indies. As a result, American silver dollars were exported to the Caribbean. Thus, by the complex workings of Gresham's Law, the United States was left, especially after 1820, with no gold coins and only Spanish fractional silver coin in circulation.

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[31] These "Spanish" coins were almost exclusively minted in the Spanish colonies of Latin America. After the Latin American nations achieved independence in the 1820's, the coins circulated freely in the United States without being legal tender.

[32] On the complex workings of fractional as against dollar coins in this period, see the excellent article by David A. Martin, "Bimetallism in the United States before 1850," Journal of Political Economy, Vol. 76 (May-June 1968), pp. 428-434.

The First Bank of the United States

1791-1811

A linchpin of the Hamiltonian financial program was a central bank, the First Bank of the United States, replacing the abortive Bank of North America experiment. Hamilton's Report on a National Bank of December 1790 urged such a bank, to be owned privately with the government owning one-fifth of the shares. Hamilton argued that the alleged "scarcity" of specie currency needed to be overcome by infusions of paper, and the new Bank was to issue such paper, to be invested in the assumed federal debt and in subsidy to manufacturers. The Bank notes were to be legally redeemable in specie on demand, and its notes were to be kept at par with specie by the federal government's accepting its notes in taxes -- giving it a quasi-legal tender status. Also, the federal government would confer upon the Bank the prestige of being depository for its public funds.

In accordance with Hamilton's wishes, Congress quickly established the First Bank of the United States in February 1791. The charter of the Bank was for twenty years, and it was assured a monopoly of the privilege of having a national charter during that period. In a significant gesture of continuity with the Bank of North America, the latter's long-time president and former partner of Robert Morris, Thomas Willing of Philadelphia, was made president of the new Bank of the United States.

The Bank of the United States promptly fulfilled its inflationary potential by issuing millions of dollars in paper money and demand deposits, pyramiding on top of $2 million in specie. The Bank of the United States invested heavily in loans to the United States government. In addition to $2 million invested in the assumption of pre-existing long-term debt assumed by the new federal government, the Bank of the United States engaged in massive temporary

lending to the government, which reached $6.2 million by 1796.[33] The result of the outpouring of credit and paper money by the new Bank of the United States was an inflationary rise in prices. Thus, wholesale prices rose from an index of 85 in 1791 to a peak of 146 in 1796, an increase of 72%.[34] In addition, speculation boomed in government securities and real estate values were driven upward.[35] Pyramiding on top of the Bank of the United States expansion, and aggravating the paper money expansion and the inflation, was a flood of newly created commercial banks. Whereas there were only three commercial banks before the founding of the United States, and only four by the establishment of the Bank of the United States, eight new banks were founded shortly thereafter, in 1791 and 1792, and ten more by 1796. Thus, the Bank

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[33] Schultz and Caine are severely critical of these operations: "In indebting itself heavily to the Bank of the United States, the Federal Government was obviously misusing its privileges and seriously endangering the Bank's stability." They also charged that "the Federalists had saddled the government with a military and interest budget that threatened to topple the structure of federal finances. Despite the addition of tax after tax to the revenue system, the Federal Government's receipts through the decade of the 90's were barely able to cling to the skirts of its expenditures." William J. Schultz and M.R. Caine, "Federalist Finance," in G.R. Taylor, ed. Hamilton and the National Debt (Boston: D.C. Heath and Co., 1950), pp. 6-7.

[34] Similar movements occurred in wholesale prices in Philadelphia, Charleston, and the Ohio River Valley. U.S. Department of Commerce, Historical Statistics of the United States, Colonial Times to 1957 (Washington, 1960), pp. 116, 119-121.

[35] Nettels, National Economy, pp. 121-122.

of the United States and its monetary expansion spurred the creation of eighteen new banks in five years.[36]

The establishment of the Bank of the United States precipitated a grave constitutional argument, the Jeffersonians arguing that the Constitution gave the federal government no power to establish a bank. Hamilton, in turn, paved the way for virtually unlimited expansion of federal power by maintaining that the Constitution "implied" a grant of power for carrying out vague national goals. The Hamiltonian interpretation won out officially in the decision of Supreme Court Justice John Marshall in McCulloch vs. Maryland (1819). [37]

Despite the Jeffersonian hostility to commercial and central banks, the Democratic-Republicans, under the control of quasi-Federalist moderates rather than militant Old Republicans, made no move to repeal the charter of the Bank of the United States before its expiration in 1811 and happily multiplied the number of state banks and bank credit in the next two decades.[38] Thus, in 1800

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[36] J. Van Fenstermaker, "The Statistics of American Commercial Banking, 1782-1818," Journal of Economic History (Sept. 1965), p. 401.; Van Fenstermaker, The Development of American Commercial Banking 1782-1837 (Kent, O: Kent State University, 1965), pp. 111-183; William M. Gouge, A Short History of Paper Money and Banking in the United States (1833, New York: Augustus M. Kelley, 1968), p. 42.

[37] Marshall, a disciple of Hamilton, repeated some of Hamilton's arguments virtually word for word in the decision. See Gerald T. Dunne, Monetary Decisions of the Supreme Court (New Brunswick, N.J.: Rutgers University Press, 1960), p. 30.

[38] On the quasi-Federalists as opposed to the Old Republicans, on banking and on other issues, see Richard E. Ellis, The Jeffersonian Crisis: Courts and Politics in the Young Republic (New York: Oxford University Press, 1971), P. 277 and passim.

there were 28 state banks; by 1811, the number had escalated to 117, a four-fold increase. In 1804, there were 64 state banks, of which we have data on 13, or 20% of the banks. These reporting banks had $0.98 million in specie, as against notes and demand deposits outstanding of $2.82 million, a reserve ratio of .35 (or, a notes + deposits pyramiding on top of specie of 2.88:1). By 1811, 26% of the 117 banks reported a total of $2.57 million; but the two-and-a-half fold increase in specie was more than matched by an emission of $10.95 million of notes and deposits, a nearly four-fold increase. This constituted a pyramiding of 4.26:1 on top of specie, or a reserve ratio of these banks of .23. [39]

As for the Bank of the United States, which acted in conjunction with the federal government and with the state banks, in January 1811 it had specie assets of $5.01 million, and notes and deposits outstanding of $12.87 million, a pyramid ratio of 2.57:1, or a reserve ratio of .39. [40]

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[39] Van Fenstermaker notes that there has been a tendency of historians to believe that virtually all bank emissions were in the from of notes, but that actually a large portion was in the form of demand deposits. Thus, in 1804, bank liabilities were $1.70 million in notes and $1.12 million in deposits; in 1811 they were $5.68 million and $5.27 respectively. He points out that deposits exceeded notes in the large cities such as Boston and Philadelphia, some times by two or three fold, whereas bank notes were used far more widely in rural areas for hand-to-hand transactions. Van Fenstermaker, "Statistics," pp. 406-411.

[40] Of Bank of the United States liabilities, bank notes totalled $5.04 million and demand deposits $7.83 million. John Jay Knox, A History of Banking in the United States (New York: Bradford Rhodes & Co., 1900), p.39. There are no other reports for the Bank of the United States extant except for 1809. The others were destroyed by fire. John Thom Holdsworth, The First Bank of the United States (Washington, D.C.: National Monetary Commission, 1910, pp. 111ff., 138-144.

Finally, when the time for rechartering the Bank of the United States came in 1811 the recharter bill was defeated by one vote each in the House and Senate. Recharter was fought for by the Madison Administration aided by nearly all the Federalists in Congress, but was narrowly defeated by the bulk of the Democratic-Republicans, including the hard-money Old Republican forces. In view of the widely held misconception among historians that Central Banks serve, and are looked upon, as restraints upon state or private bank inflation, it is instructive to note that the major forces in favor of re-charter were merchants, Chambers of Commerce, and most of the state banks. Merchants found that the Bank had expended credit at cheap rates, and had eased the eternal complaint about a "scarcity of money." Even more suggestive is the support of the state banks, which hailed the Bank as "advantageous" and worried about the contraction of credit if the Bank were forced to liquidate. The Bank of New York, which had been founded by Alexander Hamilton, in fact lauded the Bank of the United States because it had been able "in case of any sudden pressure upon the merchants to step forward to their aid in a degree which the state institutions were unable to do." [41]

The War of 1812 and Its Aftermath

War has generally had grave and fateful consequences for the American monetary and financial system. We have seen that the Revolutionary War occasioned a mass of depreciated fiat paper, worthless Continentals, a huge public debt, and the beginnings of central banking in the Bank of North America. The Hamiltonian financial system, and even the Constitution itself, was in large

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[41] Holdsworth, First Bank, p. 83. Also see ibid., pp. 83-90. Holds-worth, the premier historian of the First Bank of the United States, saw the over-whelming support by the state banks, but still inconsistently clung to the myth that the Bank of the United States functioned as a restraint on their expansion: "The state banks, though their note issues and discounts had been kept in check by the superior resources and power of the Bank of the United States, favored the extension of the charter, and memorialized Congress to that effect." (italics added.) Ibid., p. 90.

shaped by the Federalist desire to fund the federal and state public debt via federal taxation, and a major reason for the establishment of the First Bank of the United States was to contribute to the funding of the newly assumed federal debt. The Constitutional prohibition against state paper money, and the implicit rebuff to all fiat paper were certainly influenced by the Revolutionary War experience.

The War of 1812-15 had momentous consequences for the monetary system. An enormous expansion in the number of banks and in bank notes and deposits was spurred by the dictates of war finance. New England banks were more conservative than in other regions, and the region was strongly opposed to the war with England, so little public debt was purchased in New England. Yet, imported goods, textile manufactures, and munitions had to be purchased in that region by the federal government. The government therefore encouraged the formation of new and recklessly inflationary banks in the Middle Atlantic, Southern and Western states, which printed huge quantities of new notes to purchase government bonds. The federal government thereupon used these notes to purchase manufactured goods in New England.

Thus, from 1811 to 1815 the number of banks in the country multiplied by 117 to 212; in addition there had sprung up 35 private unincorporated banks which were illegal in most states but were allowed to function under war conditions. Specie in the 30 reporting banks, 26% of the total number in 1811, amounted to $2.57 million in 1811; this figure had risen to $5.40 million in the 98 reporting banks in 1815, or 40% of the total. Notes and deposits, on the other hand, were $10.95 million in 1811, and had increased to $31.6 million in 1815 among the reporting banks.

If we make the heroic assumption that we can estimate the money supply for the country by multiplying by the proportion of un-

reported banks and we then add in the BUS totals for 1811, specie in all banks would total $14.9 million in 1811 and $13.5 million in 1815, or a 9.4% decrease. On the other hand, total bank notes and deposits aggregated to $42.2 million in 1811, and $79.0 million four years later, so that an increase of 87.2%, pyramided on top of a 9.4% decline in specie. If we factor in the Bank of the United States, then, the bank pyramid ratio was 3.70:1 and the reserve ratio .27 in 1811; while the pyramid ratio four years later was 5.85:1 and the reserve ratio .17.

But the aggregates scarcely tell the whole story since, as we have seen, the expansion took place solely outside of New England, while New England banks continued on their relatively sound basis and did not inflate their credit. The record expansion of the number of banks was in Pennsylvania, which incorporated no less than 41 new banks in the month of March, 1814, contrasting to only four banks which had existed in that state--all in Philadelphia--until that date. It is instructive to compare the pyramid ratios of banks in various reporting states in 1815: only 1.96:1 in Massachusetts, 2.7:1 in New Hampshire, and 2.42:1 in Rhode Island, as contrasted to 19.2:1 in Pennsylvania, 18.46:1 in South Carolina, and 18.73:1 in Virginia.[42]

This monetary situation meant that the United States government was paying for New England manufactured goods with a mass of inflated bank paper outside the region. Soon, as the New England banks called upon the other banks to redeem their notes in specie, the mass of inflating banks faced imminent insolvency.

It was at this point that a fateful decision was made by the U.S. government

[42] Van Fenstermaker, "Statistics," p.408, and pp. 401-409. For the list of individual incorporated banks, see Van Fenstermaker, "Development," pp. 112-183, with Pennsylvania on pp. 169-173.

and concurred in by the governments of the states outside New England. As the banks all faced failure, the governments, in August 1814, permitted all of them to suspend specie payments--that is to stop all redemption of notes and deposits in gold or silver--and yet to continue in operation. In short, in one of the most flagrant violations of property rights in American history, the banks were permitted to waive their contractual obligations to pay in specie while they themselves could expand their loans and operations and force their own debtors to repay their loans as usual.

Indeed, the number of banks, and bank credit, expanded rapidly during 1815 as a result of this governmental carte blanche. It was precisely during 1815 when virtually all the private banks sprang up, the number of banks increasing in one year from 208 to 246. Reporting banks increased their pyramid ratios from 3.17:1 in 1814 to 5.85:1 the following year, a drop of reserve ratios from .32 to .17. Thus, if we measure bank expansion by pyramiding and reserve ratios, we see that a major inflationary impetus during the War of 1812 came during the year 1815 after specie payments had been suspended throughout the country by government action.

Historians dedicated to the notion that central banks restrain state or private bank inflation have placed the blame for the multiplicity of banks and bank credit inflation during the War of 1812 on the absence of a central bank. But, as we have seen, both the number of banks and bank credit grew apace during the period of the First BUS, pyramiding on top of the latter's expansion, and would continue to do so under the Second Bank, and, for that matter, the Federal Reserve System in later years. And the federal government, not the state banks themselves, is largely to blame for encouraging new, inflated banks to monetize the war debt. Then, in particular, it allowed them to suspend

specie payment in August 1814, and to continue that suspension for two years after the war was over, until February 1817. Thus, for two and a half years banks were permitted to operate and expand while issuing what was tantamount to fiat paper and bank deposits.

Another neglected responsibility of the U.S. government for the wartime inflation was its massive issue of treasury notes to help finance the war effort. While this treasury paper was interest-bearing and was redeemable in specie in one year, the cumulative amount outstanding functioned as money, as they were used in transactions among the public and were also employed as reserves or "high-powered money" by the expanding banks. The fact that the government received the treasury notes in all debts and taxes gave the notes a quasi-legal tender status. Most of the treasury notes were issued in 1814 and 1815, when their outstanding total reached $10.65 million and $15.46 million respectively. Not only did the treasury notes fuel the bank inflation, but their quasi-legal tender status brought Gresham's Law into operation and specie flowed out of the banks and public circulation outside of New England, and into New England and out of the country.[43]

The expansion of bank money and treasury notes during the War drove up prices in the United States. Wholesale price increases from 1811 to 1815 averaged 35%, with different cities experiencing a price inflation ranging from 28% to 55%. Since foreign trade was cut off by the war, prices of imported commodities rose far more, averaging 70%.[44] But more important than this

[43] For a perceptive discussion of the nature and consequences of treasury note issue in this period, see Richard H. Timberlake, Jr., The Origins of Central Banking in the United States (Cambridge: Harvard University Press, 1978), pp. 13-18. The Gresham Law effect probably accounts for the startling decline of specie held by the reporting banks, from $9.3 million to $5.4 million, from 1814 to 1815. Van Fenstermaker, "Statistics," p. 405.

[44] Historical Statistics, pp. 115-124; Murray N. Rothbard, The Panic of 1819: Reactions and Policies (New York: Columbia University Press, 1962), p. 4.

inflation, and at least as improtant as the wreckage of the monetary system during and after the war, was the precedent that the two-and-a-half year long suspension of specie payment set for the banking system for the future. From then on, every time there was a banking crisis brought on by inflationary expansion and demands for redemption in specie, state and federal governments looked the other way and permitted general suspension of specie payments while bank operations continued to flourish. It thus became clear to the banks that, in a general crisis,they would not be required to meet the ordinary obligations of contract law or of respect for property rights, and so their inflationary expansion was permanently encouraged by this massive failure of government to fulfill its obligation to enforce contract and defend the rights of property.

Suspensions of specie payments informally or officially permeated the economy outside of New England during the Panic of 1819, occurred everywhere outside of New England in 1837, and in all states south and west of New Jersey in 1839. A general suspension of specie payments occurred throughout the country once again in the panic of 1857.[45]

It is important to realize, then, in evaluating the American banking system before the Civil War, that even in the later years when there was no central bank, the system was not "free" in any proper economic sense. "Free" banking can only refer to a system in which banks are treated as any other business, and that therefore failure to obey contractual obligations--in this case, prompt redemption of notes and deposits in specie--must incur immediate insolvency and liquidation. Burdened by the tradition of allowing general suspensions

[45]On the suspensions of specie payments, and on their importance before the Civil War, see Vera C. Smith, The Rationale of Central Banking (London: P.S. King & Son, 1936), pp. 38-46. Also see Dunne, Monetary Decisions, p. 26.

that arose in the United States in 1814, the Pre-Civil War banking system, despite strong elements of competition when not saddled with a central bank, must rather be termed in the phrase of one economist, as "Decentralization without Freedom." [46]

From the 1814-17 experience on, the notes of state banks circulated at varying rates of depreciation, depending on public expectations of how long they would be able to keep redeeming their obligations in specie. These expectations, in turn, were heavily influenced by the amount of notes and deposits issued by the bank as compared to the amount of specie held in its vaults.

In that era of poor communications and high transportation cost, the tendency for a bank note was to depreciate in proportion to its distance from the home office. One effective if time-consuming method of enforcing redemption on nominally specie-paying banks was the emergence of a class of professional "money brokers." These brokers would buy up a mass of depreciated notes of nominally specie-paying banks, and then travel to the home office of the bank to demand redemption in specie. Merchants, money brokers, bankers and the general public were aided in evaluating the various state bank notes by

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[46] Smith, Rationale, p. 36. Smith properly defines "free banking" as "a regime where note-issuing banks are allowed to set up in the same way as any other type of business enterprise, so long as they comply with the general company law. The requirement for their establishment is not special conditional authorization from a government authority, but the ability to raise sufficient capital, and public confidence, to gain acceptance for their notes and ensure the profitability of the undertaking. Under such a system all banks would not only be allowed the same rights, but would also be subjected to the same responsibilities as other business enterprises. If they failed to meet their obligations they would be declared bankrupt and put into liquidation, and their assets used to meet the claims of their creditors, in which case the shareholders would lose the whole or part of their capital, and the penalty for failure would by paid, at least for the most part, by those responsible for the policy of the bank. Notes issued under this system would be 'promises to pay,' and such obligations must be met on demand in the generally accepted medium which we will assume to be gold. No bank would have the right to call on the government or on any other institution for special help in time of need....A general abandonment of the gold standard in inconceivable under these conditions, and with a strict interpretation of the bankruptcy laws any bank suspending payments would at once be put into the hands of a receiver." Ibid., pp. 148-149.

the development of monthly journals known as "bank note detectors." These "detectors" were published by money brokers and periodically evaluated the market rate of various bank notes in relation to specie.[47]

"Wildcat" banks were so named because in that age of poor transportation, banks hoping to inflate and not have to worry about redemption attempted to locate in "wildcat" country where money brokers would find it difficult to travel. It should be noted that, if it were not for periodic suspension, there would have been no room for wildcat banks or for varying degrees of lack of confidence in the genuineness of specie redemption at any given time.

It can be imagined that the advent of the money broker was not precisely welcomed in the town of an errant bank, and it was easy for the townspeople to blame the resulting collapse of bank credit on the sinister stranger rather than on the friendly neighborhood banker. During the panic of 1819, when banks collapsed after an inflationary boom up till 1817, obstacles and intimidation were often the lot of those who attempted to press the banks to fulfill their contractual obligation to pay in specie.

Thus, Maryland and Pennsylvania, during the panic of 1819, engaged in almost bizarre inconsistency in this area. Maryland, on February 15, 1819, enacted a law "to compel...banks to pay specie for their notes, or forfeit their charters." Yet, two days after this seemingly tough action, it passed another law relieving banks of any obligation to redeem notes held by money brokers, the major force ensuring the people of this state from the evil arising from the demands made on the banks of this state for gold and silver by brokers." Pennsylvania followed suit a month later. In this way, these states could claim to maintain

[47]See Richard H. Timberlake, Jr., Money, Banking and Central Banking (New York: Harper & Row, 1965), p. 94.

the virtue of enforcing contract and property rights while moving to prevent the most effective method of ensuring such enforcement.

During the 1814-1817 general suspension, note-holders who sued for specie payment seldom gained satisfaction in the courts. Thus, Isaac Bronson, a prominent Connecticut banker in a specie-paying region, sued various New York banks for payment of notes in specie. He failed to get satisfaction, and for his pains received only abuse in the New York press as an agent of "misery and ruin." [48]

The banks south of Virginia largely went off specie payment during the panic of 1819, and in Georgia at least general suspension continued almost continuously down to the 1830s. One customer complained during 1819 that in order to collect in specie from the largely state-owned Bank of Darien, Georgia, he was forced to swear before a justice of the peace in the bank, that each and every note he presented to the Bank was his own and that he was not a money broker or an agent for anyone else; he was forced to swear to the oath in the presence of at least five bank directors and the bank's cashier; and he was forced to pay a fee of $1.36 on each note in order to acquire specie on demand. Two years later, when a note-holder demanded $30,000 in specie at the Planters' Bank of Georgia, he was told he would be paid in pennies only, while another customer was forced to accept pennies handed out to him at the rate of $60 a day.[49]

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[48] Hammond, Banks and Politics, pp. 179-180. Even before the suspension, in 1808, a Bostonian named Hireh Durkee who attempted to demand specie for $9,000 in notes of the state-owned Vermont State Bank, was met by an indictment for an attempt by this "evil-disposed person" to "realize a filthy gain" at the expense of the resources of the state of Vermont and the ability of "good citizens thereof to obtain money." Ibid., p. 179. Also see Gouge, Short History, p. 84.

[49] Gouge, Short History, pp. 141-142. Secretary of the Treasury William H. Crawford, a Georgia politician, tried in vain to save the Bank of Darien from failure by depositing Treasury funds there during the panic. Rothbard, The Panic of 1819, p.62.

During the panic, North Carolina and Maryland in particular moved against the money brokers in a vain attempt to prop up the depreciated notes of their states' banks. In North Carolina, banks were not penalized by the legislature for suspending specie payments to "brokers," while maintaining them to others. Backed by government, the three leading banks of the state met and agreed, in June 1819, not to pay specie to brokers or their agents. Their notes immediately fell to a 15% discount outside the state. However, the banks continued to require--ignoring the inconsistency-- that their own debtors pay them at par in specie. Maryland, during the same year, moved to require a license of $500 per year for money brokers, in addition to an enormous $20,000 bond to establish the business.

Maryland tried to bolster the defense of banks and the attack on brokers by passing a compulsory par law in 1819, prohibiting the exchange of specie for Maryland bank notes at less than par. The law was readily evaded, however, the penalty merely adding to the discount as compensation for the added risk. Specie, furthermore was driven out of the state by the operation of Gresham's Law.[50]

In Kentucky, Tennessee, and Missouri, stay laws were passed requiring creditors to accept depreciated and inconvertible bank paper in payment of debts, else suffer a stay of execution of the debt. In this way, quasi-legal tender status was conferred on the paper.[51] Many states permitted banks to suspend

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[50]Rothbard, Panic of 1819, pp. 64-68. Other compulsory par laws were passed by Ohio and Delaware.

[51]The most extreme proposal was that of Tennessee politician Felix Grundy's scheme, never adopted, to compel creditors to accept bank notes of the state bank or forfeit the debt: that would have conferred full legal tender status on the bank. Rothbard, Panic of 1819, p. 91; Joseph H. Parks, "Felix Grundy and the Depression of 1819 in Tennessee," Publications of the East Tennessee Historical Society, Vol. X (1938), p. 22.

specie payment, and four Western states--Tennessee, Kentucky, Missouri, and Illinois--established state-owned banks to try to overcome the depression by issuing large issues of inconvertible paper money. In all states trying to prop up inconvertible bank paper, a quasi-legal tender status was also conferred on the paper by agreeing to receive the notes in taxes or debts due to the state. The result of all the inconvertible paper schemes was rapid and massive depreciation, disappearance of specie, succeeded by speedy liquidation of the new state-owned banks.[52]

An amusing footnote on the problem of banks being protected against their contractual obligations to pay in specie occurred in the course of correspondence between one of the earliest economists in America, the young Philadelphia State Senator Condy Raguet, and the eminent English economist David Ricardo. Ricardo had evidently been bewildered by Raguet's statement that banks technically required to pay in specie were often not called upon to do so. On April 18, 1821, Raguet replied, explaining the power of banks in the United States:

> You state in your letter that you find it difficult to comprehend, why persons who had a right to demand coin from the Banks in payment of their notes, so long forebore to exercise it. This no doubt appears paradoxical to one who resides in a country where an act of parliament was necessary to protect a bank, but the difficulty is easily solved. The whole of our population are either stockholders of banks or in debt to them. It is not the interest of the first to press the banks and the rest are afraid. This is the whole secret. An independent man who was neither a stockholder or debtor, who would have ventured to compel the banks to do justice, would have been persecuted as an enemy of society....[53]

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[52]Only New England, New York, New Jersey, Virginia, Mississippi, and Louisiana were comparatively untouched by the inconvertible paper contagion, either in the form of suspended specie banks continuing in operation or new state-owned banks emitting more paper. For an analysis of the events and controversies in each state, see Rothbard, Panic of 1819, pp. 57-111.

[53]Raguet to Ricardo, April 18, 1821, in David Ricardo, Minor Papers on the Currency Question, 1809-23, J. Hollander, ed. (Baltimore: John Hopkins Press, 1932), pp. 199-201; Rothbard, Panic of 1819, pp. 10-11. Also see Hammond, Banks and Politics, p. 242.

The Second Bank of the United States, 1816-1833

The United States emerged from the War of 1812 in a chaotic monetary state, with banks multiplying and inflating ad lib, checked only by the varying rates of depreciation of their notes. With banks freed from redeeming their obligations in specie, the number of incorporated banks increased during 1816, from 212 to 232.[54] Clearly, the nation could not continue indefinitely with the issue of fiat money in the hands of discordant sets of individual banks. It was apparent that there were two ways out of the problem: one, was the hard-money path, advocated by the Old Republicans and, for their own purposes, the Federalists. The federal and state governments would have sternly compelled the rollicking banks to redeem promptly in specie, and, when most of the banks outside of New England could not, to force them to liquidate. In that way, the mass of depreciated and inflated notes and deposits would have been swiftly liquidated, and specie would have poured back out of hoards and into the country to supply a circulating medium. The inflationary experience would have been over.

Instead, the Democratic-Republican establishment in 1816 turned to the old Federalist path: a new central bank, a Second Bank of the United States. Modelled closely after the First Bank, the Second Bank, a private corporation with one-fifth of the shares owned by the federal government, was to create a national paper currency, purchase a large chunk of the public debt, and

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[54] New note issue series by banks reached a heavy peak in 1815 and 1816 in New York and Pennsylvania. D.C. Wismar, Pennsylvania Descriptive List of Obsolete State Bank Notes, 1782-1866 (Frederick, Md.: J.W. Stovell Printing Co., 1933); and idem, New York Descriptive List of Obsolete Paper Money (Frederick, Md.: J.W. Stovell Printing Co., 1931).

receive deposits of Treasury funds. The BUS notes and deposits were to be redeemable in specie, and they were given quasi-legal tender status by the federal government's receiving them in payment of taxes.

That the purpose of establishing the BUS was to support the state banks in their inflationary course rather than crack down on them is seen by the shameful deal that the BUS made with the state banks as soon as it opened its doors in January, 1817. At the same time it was establishing the BUS in April 1816, Congress passed the resolution of Daniel Webster, at that time a Federalist champion of hard money, requiring that after February 20, 1817, the United States should accept in payments for debts or taxes only specie, Treasury notes, BUS notes, or state bank notes redeemable in specie on demand. In short, no irredeemable state bank notes would be accepted after that date. Instead of using the opportunity to compel the banks to redeem, however, the BUS, in a meeting with representatives from the leading urban banks excluding Boston, agreed to issue $6 million worth of credit in New York, Philadelphia, Baltimore, and Virginia before insisting on specie payments from debts due to it from the state banks. In return for that agreed-upon massive inflation, the state banks graciously consented to resume specie payments.[55] Moreover, the BUS and the state banks agreed to mutually support each other in any emergency, which of course meant in practice that the far stronger BUS was committed to the propping up of the weaker state banks.

The BUS was pushed through Congress by the Madison Administration and particularly by Secretary of the Treasury Alexander J. Dallas, whose appointment

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[55]On the establishment of the BUS and on the deal with the state banks, see Ralph C.H. Catterall, The Second Bank of the United States (Chicago: University of Chicago Press, 1902), pp.9-26,479-490. Also see Hammond, Banks and Politics, pp. 230-248; David R. Dewey, The Second United States Bank (Washington, D.C.: National Monetary Commission, 1910), pp. 148-176.

was lobbied for, for that purpose. Dallas, a wealthy Philadelphia lawyer was a close friend, counsel, and financial associate of Philadelphia merchant and banker, Stephen Girard, reputedly one of the two wealthiest men in the country. Toward the end of its term, Girard was the largest stockholder of the First BUS, and during the War of 1812 Girard became a very heavy investor in the war debt of the federal government. Both as a prospective large stockholder and as a way to unload his public debt, Girard began to agitate for a new BUS. Dallas's appointment as Secretary of Treasury in 1814 was successfully engineered by Dallas and his close friend, wealthy New York merchant and fur trader John Jacob Astor, also a heavy investor in the war debt. When the BUS was established, Stpehen Girard purchased the $3 million of the $28 million that remained unsubscribed, and he and Dallas managed to secure for the post of president of the new bank their good friend William Jones, former Philadelphia merchant.[56]

Much of the opposition to the founding of the BUS seems keenly prophetic. Thus, Senator William H. Wells, Federalist from Delaware, in arguing against the Bank bill, said that it was "ostensibly for the purpose of correcting the diseased state of our paper currency by restraining and curtailing the over-issue of bank paper, and yet it came prepared to inflict upon us the same evil, being itself nothing more than simply a paper-making machine."[57] In fact, the result of the deal with the state banks was that their resumption of specie payments after 1817 was more nominal than real, thereby setting the stage for

[56] On the Girard-Dallas connection, see Hammond, Banks and Politics, pp. 231-246, 252; Philip H. Burch, Jr., Elites in American History, Vol. I The Federalist Years to the Civil War (New York: Holmes & Meier, 1981), pp. 88, 97, 116-117, 119-121; Kenneth L. Brown, "Stephen Girard, Promoter of the Second Bank of the United States." Journal of Economic History (November 1942), pp. 125-132.

[57] Annals of Congress, 14 cong, 1 sess., April 1, 1816, pp. 267-270. Also see ibid., pp. 1066, 1091, 1110ff. Cited in Murray N. Rothbard, The Case for a 100 Percent Gold Dollar (Washington, D.C.: Libertarian Review Press, 1974), p. 18n. Also see Gouge, Short History, pp. 79-83.

the widespread suspensions of the 1819-21 depression. As Bray Hammond writes:

> ...specie payments were resumed, with substantial shortcomings. Apparently the situation was better than it had been, and a pretense was maintained of its being better than it was. But redemption was not certain and universal; there was still a premium on specie and still a discount on bank notes, with considerable variation in both from place to place. Three years later, February 1820, Secretary [of the Treasury] Crawford reported to Congress that during the greater part of the time that had elapsed since the resumption of specie payments, the convertibility of bank notes into specie had been nominal rather than real in the largest portion of the Union.[58]

One problem is that the BUS lacked the courage to insist on payment of their notes form the state banks. As a result, state banks had large balances piled up against them at the BUS, totalling over $2.4 million during 1817 and 1818, remaining on the books as virtual interest-free loans. As Catterall points out, "so many influential people were interested in the [state banks] as stockholders that it was not advisable to give offense by demanding payment in specie, and borrowers were anxious to keep the banks in the humor to lend." When the BUS did try to collect on state bank notes in specie, President Jones reported, "the banks, our debtors, plead inability, require unreasonable indulgence, or treat our reiterated claims and expostulations with settled indifference."[59]

From its inception, the Second BUS launched a spectacular inflation of money and credit. Lax about insisting on the required payment of its capital in specie, the Bank failed to raise the $7 million legally supposed to have been subscribed in specie; instead, during 1817 and 1818, its specie held never rose above $2.5 million. At the peak of its initial expansion, in July

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[58] Hammond, Banks and Politics, p. 248. Also see Condy Raguet, A Treatise on Currency and Banking (2nd Ed., 1840, New York: Augustus M. Kelley, 1967), pp. 302-303; Catterall, Second Bank, pp. 37-39; Walter Buckingham Smith, Economic Aspects of the Second Bank of the United States (Cambridge: Harvard University Press, 1953), p. 104.

[59] Catterall, Second Bank, p. 36.

1818, BUS specie totalled $2.36 million and its aggregate notes and deposits totalled $21.8 million. Thus, in a scant year-and-a-half of operation, the BUS had added a net of $19.2 million to the nation's money supply, for a pyramid ratio of 9.24, or a reserve ratio of .11.

Outright fraud abounded at the BUS, especially at the Philadelphia and Baltimore branches, particularly the latter. it is no accident that three-fifths of all of the BUS loans were made at these two branches.[60] Also, the BUS attempt to provide a uniform currency throughout the nation foundered on the fact that the western and southern branches could inflate credit and bank notes, and that the inflated notes would wend their way to the more conservative branches in New York and Boston, which would be obligated to redeem the inflated notes at par. In this way, the conservative branches were stripped of specie while the western branches could continue to inflate unchecked.[61]

The expansionary operations of the BUS, coupled with its laxity toward insisting on specie payment by the state banks, impelled a further inflationary expansion of state banks on top of the spectacular enlargement of the central bank. Thus, the number of incorporated state banks rose from 232 in 1816 to 338 in 1818. Kentucky alone chartered 40 new banks in the 1817-18 legislative session. The estimated total money supply in the nation rose from $67.3 million in 1816 to $94.7 million in 1818, a rise of 40.7% in two years. Most

[60] On the expansion and fraud at the BUS, see Catterall, Second Bank, pp. 28-50, 503. The main culprits were James A. Buchanan, president of the Baltimore mercantile firm of Smith & Buchanan, and the Baltimore BUS cashier James W. McCulloch, who was simply an impoverished clerk at the mercantile house. Smith, an ex-Federalist, was a Senator from Maryland and a powerful member of the national Democrat-Republican establishment.

[61] As a result of the contractionary influence on the Boston branch of the BUS, the notes of the Massachusetts banks actually declined in this period, from $1 million in June 1815 to $850,000 in June 1818. See Rothbard, Panic of 1819, p. 8.

of this increase was supplied by the BUS.[62]

The huge expanison of money and credit impelled a full-scale inflationary boom throughout the country. Import prices had fallen in 1815, with the renewal of foreign trade after the war, but domestic prices were another story. Thus, the index of export staples in Charleston rose from 102 in 1815 to 160 in 1818; the prices of Louisiana staples at New Orleans rose from 178 to 224 in the same period. Other parts of the economy boomed; exports rose from $81 million in 1815 to a peak of $116 million in 1818. Prices rose greatly in real estate, land, farm improvement projects, and slaves, much of it fueled by the use of bank credit for speculation in urban and rural real estate. There was a boom in turnpike construction, furthered by vast federal expenditures on turnpikes. Freight rates rose on steamboats, and shipbuilding shared in the general prosperity. Also, general boom conditions expanded stock trading so rapidly that traders, who had been buying and selling stocks on the curbs on Wall Street for nearly a century, found it necessary to open the first indoor stock exchange in the country, the New York Stock Exchange, in March 1817. Also, investment banking began in the United States buring this boom period.[63]

Starting in July, 1818, the government and the BUS began to see what dire straits they were in; the enormous inflation of money and credit, aggravated by the massive fraud, had put the BUS in real danger of going under

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[62] Total notes and deposits of 39% of the nation's reporting state banks was $26.3 million in 1816, while 38% of the banks had total notes and deposits of $27.7 million two years later. Converting this pro rata to 100% of the banks, gives an estimated $67.3 million in 1816, and $72.9 million in 1818. Add to the latter figure $21.8 million for BUS notes and deposits, and this yields $94.7 million in 1818, or a 40.7% increase. Adapted from tables in Van Fenstermaker, "Statistics," pp. 401, 405, 406.

[63] Rothbard, Panic of 1819, p. 6-10; Historical Statistics, pp. 120, 122, 563. Also see George Rogers Taylor, The Transportation Revolution, 1815-1860 (New York: Rinehart & Co., 1951), pp. 334-336.

and illegally failing to sustain specie payments. Over the next year, the BUS began a series of heroic contractions, forced curtailment of loans, contractions of credit in the south and west, refusal to provide uniform national currency by redeeming its shaky branch notes at par, and seriously enforcing the requirement that its debtor banks redeem in specie. In addition, it purchased millions of dollars of specie from abroad. These heroic actions, along with the ouster of President William Jones, managed to save the BUS, but the massive contraction of money and credit swiftly brought the United States its first widespread economic and financial depression. The first nationwide "boom-bust" cycle had arrived in the United States, impelled by rapid and massive inflation, quickly succeeded by contraction of money and credit. Banks failed, and private banks curtailed their credits and liabilities and suspended specie payments in most parts of the country.

Contraction of money and credit by the BUS was almost unbelievable, total notes and deposits falling from $21.9 million in June 1818 to $11.5 million only a year later. The money supply contributed by the BUS was thereby contracted by no less than 47.2% in one year. The number of incorporated banks at first remained the same, and then fell rapidly from 1819 to 1822, falling from 341 in mid-1819 to 267 three years later. Total notes and deposits of state banks fell from an estimated $72.0 million in mid-1818 to $62.7 million a year later, a drop of 14.0% in one year. If we add in the fact that the U.S. Treasury contracted total treasury notes from $8.81 million to zero during this period, we get the following estimated total money supply: in 1818, $103.5 million; in 1819, $74.2 million, a contraction in one year of 28.3%[64]

[64] These estimates are adapted from the tables in Van Fenstermaker, "Statistics, " pp. 401-406; Van Fenstermaker, Development, pp. 66-68. The data for 38% of incorporated banks in 1818, and for 54% in 1819, are converted pro rata to 100% figures. BUS figures are in Catterall, Second Bank, p. 502. On the contraction by the BUS see ibid., pp. 51-72.

The result of the contraction was a massive rash of defaults, bankruptcies of business and manufactures, and liquidation of unsound investments during the boom. There was a vast drop in real estate values and rents, and in the prices of freight rates and of slaves. Public land sales dropped greatly as a result of the contraction: declining from $13.6 million in 1818, to $1.7 million in 1820.[65] Prices in general plummeted: the index of export staples fell from 158 in November 1818 to 77 in June 1819, an annualized drop of 87.9% during those seven months. South Carolina export staples dropped from 160 to 96 from 1818 to 1819, and commodity prices in New Orleans dropped from 200 in 1818 to 119 two years later.

Falling money incomes led to a precipitous drop in imports, which fell from $122 million in 1818 to $87 million the year later. Imports from Great Britain fell from $43 million in 1818 to $14 million in 1820, and cotton and woolen imports from Britain fell from over $14 million each in the former year to about $5 million in the latter.

The great fall in prices aggravated the burden of money debts, reinforced by the contraction of credit. Bankruptices abounded, and one observer estimated that $100 million of mercantile debts to Europe were liquidated by bankruptcy during the crisis. Western areas, shorn of money by the collapse of the previously swollen paper and debt, often returned to barter conditions, and grain and whiskey were used as media of exchange.[66]

In the dramatic summing up of the hard-money economist and historian William Gouge, by its precipitous and dramatic contraction "the Bank was saved,

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[65] On Treasury note contraction in this period, see Timberlake, Origins, pp. 21-26.

[66] See Rothbard, Panic of 1819, pp. 11-16.

and the people were ruined."[67]

The Jacksonian Movement and the Bank War

Out of the bitter experiences of the Panic of 1819 emerged the beginnings of the Jacksonian movement, dedicated to hard money, the eradication of fractional-reserve banking in general, and of the Bank of the United States in particular. Andrew Jackson himself, Senator Thomas Hart ("Old Bullion") Benton of Missouri, future President James K. Polk of Tennessee, Jacksonian economists Amos Kendall of Kentucky and Condy Raguet of Philadelphia, were all converted to hard money and 100% reserve banking by the experience of the Panic of 1819.[68] The Jacksonians adopted, or in some cases pioneered in, the Currency School analysis which pinned the blame for boom-bust cycles on inflationary expansions followed by contractions of bank credit. Far from being the ignorant bumpkins that most historians have depicted, the Jacksonians were steeped in the knowledge of sound economics, particularly of the Ricardian Currency School.

Indeed, no movement in American politics has been as flagrantly misunderstood by historians as the Jacksonians. Ther were emphatically not, as historians until recently have depicted, either "ignorant anti-capitalist agrarians," or "representatives of the rising entrepreneurial class," or "tools of the inflationary state banks," or embodiments of an early proletarian anti-capitalist movement or a non-ideological power group or "electoral machine." The Jacksonians were libertarians, plain and simple. Their program and ideology were libertarian; they strongly favored free enterprise and free markets, but

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[67] Gouge, Short History, p. 110.

[68] Rothbard, Panic of 1819, p. 188.

they just as strongly opposed special subsidies and monopoly privileges conveyed by government to business or to any other group. They favored absolutely minimal government, certainly at the federal level, but also at the state level. They believed that government should be confined to upholding the rights of private property. In the monetary sphere, this meant the separation of government from the banking system, and a shift from inflationary paper money and fractional-reserve banking to pure specie and banks confined to 100% reserves.

In order to put this program into effect, however, the Jacksonians faced the grueling task of creating a new party out of what had become a one-party system after the War of 1812, in which the Democrat-Republicans had ended up adopting the Federalist program, including the reestablishing of the Bank of the United States. The new party, the Democratic Party, was largely forged in the mid-1820's by New York political leader, Martin Van Buren, newly converted by the aging Thomas Jefferson to the laissez-faire cause. Van Buren cemented an alliance with Thomas Hart Benton of Missouri and the Old Republicans of Virginia, but he needed a charismatic leader to take the Presidency away from Adams and what was becoming known as the National Republican Party. He found that leader in Andrew Jackson, who was elected President under the new Democratic banner in 1828.

The Jacksonians eventually managed to put into effect various parts of their free-market and minimal government economic program, including a drastic lowering of tariffs, and for the first and probably the last time in American history, paying off the federal debt. But their major concentration was on the issue of money and banking. Here they had a coherent program, which they proceeded to install in rapidly succeeding stages.

The first important step was to abolish central banking, in the Jacksonian view the major inflationary culprit. The object was not to eliminate the BUS in order to free the state banks for inflationary expansion, but on the contrary to eliminate the major source of inflation before proceeding, on the state level, to get rid of fractional reserve banking. The BUS charter was up for renewal in 1836, but Jackson denounced the Bank in his first annual message, in 1829. The imperious Nicholas Biddle,[69] head of the BUS, decided to precipitate a showdown with Jackson before his reelection effort, and so Biddle filed for renewal early, in 1831. The host of National Republicans and non-Jacksonian Democrats proceeded to pass the recharter bill, but Jackson, in a dramatic message, vetoed the bill, and Congress failed to pass it over his veto.

Triumphantly reelected on the Bank issue in 1832, President Jackson lost no time in disestablishing the BUS as a central bank. The critical action came in 1833, when Jackson removed the public Treasury deposits from the BUS and placed them in a number of state banks (soon labelled as "pet banks") throughout the country. The original number of pet banks was seven, but the Jacksonians were not interested in creating a privileged bank oligarchy to replace the previous monopoly; and so the number of pet banks had increased to 91 by the end of 1836.[70] In that year, Biddle managed to secure a Pennsylvania charter for his Bank, and the new United States Bank of Pennsylvania functioned as a much reduced but still influential state bank for a few years thereafter.

Orthodox historians have long maintained that, by his reckless act of

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[69] Biddle continued the chain of control over both BUS's by the Philadelphia financial elite, from Robert Morris and William Bingham, to Stephen Girard and William Jones. See Burch, Elites, p. 147. Also see Thomas P. Govan, Nicholas Biddle: Nationalist and Public Banker, 1786-1844 (Chicago: University of Chicago Press, 1959), pp. 45, 74-75, 79.

[70] Hammond, Banks and Politics, p. 420.

destroying the BUS and shifting government funds to the numerous pet banks, Andrew Jackson freed the state banks from the restraints imposed on them by a central bank. Thus the banks were supposedly allowed to pyramid notes and deposits rashly on top of existing specie, and precipitate a wild inflation that was later succeeded by two bank panics and a disastrous deflation.

Recent historians, however, have totally reversed this conventional picture.[71] In the first place, the record of bank inflation under the regime of the BUS was scarcely ideal. From the depth of the post-1819 depression in January 1820 to January 1823, under the regime of the conservative Langdon Cheves, the BUS increased its notes and deposits at an annual rate of 5.9%. The nation's total money supply remained about the same in that period. Under the far more inflationist regime of Nicholas Biddle, however, BUS notes and deposits rose, from January 1823, from $12 million to $42.1 million, an annual rate increase of 27.9%. As a consequence of this base of the banking pyramid inflating so sharply, the total money supply during this period vaulted from $81 million to $155 million, an annual increase of 10.2%. It is clear that the driving force for monetary expansion was the BUS, which acted as an inflationary rather than restraining force upon the state banks. Looking at the figures another way, the 1823 data represented a pyramid ratio of money liabilities to specie of 3.86:1 on the part of the BUS, and 4:1 of the banking system as a whole, or respective reserve ratios of .26 and .25. By 1832, in contrast, the BUS reserve ratio had fallen to .17 and the country as a whole to .15. Both sets of institutions had inflated almost precisely proportionately on top of

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[71] For an excellent bibliographical essay and critique of historical interpretations of Jacksonism and the Bank War, see Jefferey Rogers Hummel, "The Jacksonians, Banking, and Economic Theory: A Reinterpretation," The Journal of Libertarian Studies, Vol. 2 (Summer 1978), pp. 151-165.

specie.[72]

The fact that wholesale prices remained about the same over this period is no indication that the monetary inflation was not improper and dangerous. As "Austrian" business cycle theory has pointed out, any bank credit inflation sets up conditions for boom-and-bust; there is no need for prices actually to rise. The reason that prices did not rise was that the increased production of goods and services sufficed to offset the monetary expansion during this period. But similar conditions of the 1920s precipitated the great crash of 1929, an event which shocked most economists, who had adopted the proto-monetarist position of Irving Fisher and other economists of the day that a stable wholesale price level cannot, by definition, be inflationary. In reality, the unhampered free market economy will usually increase the supply of goods and services, and thereby bring about a gently falling price level, as happened in most of the 19th century except during wartime.

What, then, of the consequences of Jackson's removal of the deposits? What of the fact that wholesale prices rose from 84 in April 1934, to 131 in February 1837, a remarkable increase of 52% in a little less than three years? Wasn't that boom due to the abolition of central banking?

An excellent reversal of the orthodox explanation of the boom of the 1830s, and indeed of the ensuing panic, has been provided by Professor Temin.[73] First, he points out that the price inflation really began earlier, when wholesale prices reached a trough of 82 in July 1930 and then rose by 20.7% in three years to reach 99 in the fall of 1833. The reason for the price rise is simple:

[72]For the BUS data, see Catterall, Second Bank, p. 503; for total money supply, see Peter Temin, The Jacksonian Economy (New York: W.W. Norton, 1969), p.71.

[73]Temin, Jacksonian Economy, passim. Also see Hugh Rockoff, "Money, Prices, and Banks in the Jacksonian Era," in R. Fogel and S. Engerman, eds., The Reinterpretation of American Economic History (New York: Harper & Row, 1971), pp. 448-458.

the total money supply had risen from $109 million in 1830 to $159 million in 1833, an increase of 45.9% or an annual rise of 15.3%. Breaking the figures down further, the total money supply had risen from $109 million in 1830 to $155 million a year and a half later, a spectacular expansion of 35%. Unquestionably, this monetary expansion was spurred by the still flourishing BUS, which increased its notes and deposits from January 1830 to January 1832, from a total of $29 million to $42.1 million, a rise of 45.2%.

Thus, the price and money inflation in the first few years of the 1830s were, again, sparked by the expanison of the still dominant central bank. But what of the notable inflation after 1833? There is no doubt that the cause of the price inflation was the remarkable monetary inflation during the same period. For the total money supply rose from $150 million at the beginning of 1833 to $267 million at the beginning of 1837, an astonishing rise of 84%, or 21% per annum.

But, as Temin points out, this monetary inflation was not caused by the liberated state banks expanding to a fare-thee-well. If it were true that the state banks used their freedom and their new federal government deposits to pyramid wildly on the top of specie, then their pyramid ratio would have risen a great deal, or, conversely, their reserve ratio of specie to notes and deposits would have fallen sharply. Yet the banks' reserve ratio was .16 at the beginning of 1833, and was still .16 at the beginning of 1837. During the intervening years, the reserve ratio was never below this figure. But this means that the state banks did no more pyramiding after the demise of the BUS as a central bank than they had done before.[74]

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[74] Temin, Jacksonian Economy, pp. 68-74.

Conventional historians, believing that the BUS must have restrained the expansion of state banks, naturally assumed that they were hostile to the central bank. But now Jean Wilburn has discovered that the state banks overwhelmingly supported the BUS:

> We have found that Nicholas Biddle was correct when he said, "state banks in the main are friendly." Specifically, only in Georgia, Connecticut, and New York was there positive evidence of hostility. A majority of state banks in some states of the South, such as North Carolina and Alabama, gave strong support to the Bank as did both the Southwest States of Louisiana and Mississippi. Since Virginia gave some support, we can claim that state banks in the South and Southwest for the most part supported the Bank. New England, contrary to expectations, showed the banks of Vermont and New Hampshire behind the Bank, but support of Massachusetts was both qualitatively and quantitatively weak. The banks of the Middle states all supported the Second Bank except for those of New York.[75]

What, then, was the cause of the enormous monetary expansion of the 1830s? It was a tremendous and unusual expansion of the stock of specie in the nation's banks. The supply of specie in the country had remained virtually constant at about $32 million, from the beginning of 1823 until the beginning of 1833. But the proportion of specie to bank notes held by the public as money dropped during this period from 23% to 5%, so that more specie flowed from the public into the banks to fuel the relatively moderate monetary expansion of the 1820s. But, starting at the beginning of 1833, the total specie in the country rose swiftly from $31 million to $73 million at the beginning of 1837, for a rise of 141.9% or 35.5% per annum. Hence, even though increasing distrust of banks led the public to withdraw some specie from them, so that the public now held 13% of its money in specie instead of 5%, the banks

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[75] Jean Alexander Wilburn, Biddle's Bank: The Crucial Years (New York: Columbia University Press, 1970), pp. 118-119. Quoted in Hummel, "Jacksonians," p. 155.

were able to increase their notes and deposits at precisely the same rate as the expansion of specie flowing into their coffers.

Thus, the Jackson Administration is absolved from blame for the 1833-37 inflation. In a sense, the state banks are as well; certainly, they scarcely acted as being "freed" by the demise of the BUS. Instead, they simply increased their money issues proportionately with the huge increase of specie. Of course, the basic fractional reserve banking system is scarcely absolved from responsibility, since otherwise the monetary expansion in absolute terms would not have been as great.[76]

The enormous increase in specie was the result of two factors: first and foremost, a large influx of silver coin from Mexico, and secondly, the sharp cut in the usual export of silver to the Orient. The latter was due to the substantial increases in China's purchase of opium instead of silver from abroad. The influx of silver was the result of paper money inflation by the Mexican government, which drove Mexican silver coins into the United States, where they circulated as legal tender. The influx of Mexican coin has been attributed to a possible increase in the productivity of the Mexican mines, but this makes little sense, since the inflow stopped permamently as soon as 1837. The actual cause was an inflation of the Mexican currency by the Santa Anna regime, which financed its deficits during this period by minting highly debased copper coins. Since the debased copper grossly overvalued copper and undervalued gold and silver, both of the latter metals proceeded to flow rapidly out of Mexico until they virtually disappeared. Silver, of course, and not gold, was flowing into the United States during this period. Indeed,

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[76] Moreover, if the Jacksonians had been able to move more rapidly in returning the banking system to a 100% specie basis, they could have used the increase in specie to ease the monetary contraction required by a return to a pure specie money.

the Mexican government was forced to rescind its actions in 1837 by shifting the copper coinage to its proper ratio. The influx of Mexican silver into the U.S. promptly ceased.[77]

A bank credit inflation of the magnitude of the 1830s is bound to run into shoals that cause the banks to stop the expansion and begin to contract. As the banks expand, and prices rise, specie is bound to flow out of the country and into the hands of the domestic public, and the pressure on the banks to redeem in specie will intensify, forcing cessation of the boom and even monetary contraction. In a sense, the immediate precipating cause is of minor importance. Even so, the Jackson Administration has been unfairly blamed for precipitating the Panic of 1837 by issuing the Specie Circular in 1836.

In 1836, the Jackson Administration decided to stop the enormous speculation in Western public lands that had been fueled, during the past two years, by the inflation of bank credit. Hence, Jackson decreed that public land payments would have to be made in specie. This had the healthy effect of stopping public land speculation, but recent studies have shown that the Specie Circular had very little impact in putting pressure on the banks to pay specie.[78] From the point of view of the Jacksonian program, however, it was important as moving

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[77]Mexico was pinpointed as the source of the inflow of specie by Temin, Jacksonian Economy, p. 80, while the disclosure of the cause in Mexican copper inflation came in Rockoff, "Money, Prices, and Banks," p. 454.

[78]Public land sales by the federal government, which had been going steadily at approximately $4-6 million per year, suddenly spurted upward in 1835 and 1836, to $16.2 million and $24.9 million respectively. The latter was the largest sale of public lands in American history, and the 1835 figure was the second largest. Temin, Jacksonian Economy, p. 124. The first demonstration of the negligible impact of the Specie Circular on the position of the banks was Richard H. Timberlake, Jr., "The Specie Circular and Distribution of the Surplus," Journal of Political Economy, Vol. 68 (April 1960), pp. 109-117, reprinted in Timberlake, Origins, pp. 50-62. Timberlake defended his thesis in idem, "The Specie Circular and the Sale of Public Lands: A Comment," Journal of Economic History, Vol. 25 (September, 1965), pp. 414-416.

toward putting the U.S. government finances on a purely specie basis.

Another measure advancing the Jacksonian program was also taken in 1836. Jackson, embarrassed at the government having amassed a huge budget surplus during his eight years in office, ordered the Treasury to distribute the surplus proportionately to the states. The distribution was made in notes presumably payable in specie. But again, Temin has shown that the distribution had little impact on movements of specie between banks and therefore in exerting contractionist pressure upon them.[79]

What, then, was the precipitating factor in triggering the Panic of 1837? Temin plausibly argues that the Bank of England, worried about inflation in Britain, and the consequent outflow of gold, tightened the money supply and raised interest rates in the latter half of 1836. As a result, credit contraction severely restricted the American cotton export trade in London, exports declined, cotton prices fell, capital flowed into England, and contractionist pressure was put upon American trade and the American banks. Banks throughout the United States--including the BUS--promptly suspended specie payments in May 1837, their notes depreciated at varying rates, and interregional trade within the country was crippled.

While banks were able to evade specie payments and continue operations, they were still obliged to contract credit in order to go back on specie eventually, since they could not hope to be creating fiat money indefinitely and be allowed to remain in business. Finally, the New York banks were compelled by law to resume paying their contractual obligations, and the other banks followed in the fall of 1838. During the year 1837, the money supply fell from $276 million to $232 million, a large drop of 15.6% in one year. Total specie in the country continued to increase in 1837, up to $88 million, but increased public distrust of the banks (reflected in an increased proportion of money held as specie

[79]Temin, Jacksonian Economy, pp. 128-136.

from 13 to 23%), put enough pressure upon the banks to force the contraction. The banks' reserve ratio rose from .16 to .20. In response to the monetary contraction, wholesale prices fell precipitately, by over 30% in seven months, declining from 131 in February 1837 to 98 in September of that year.

In 1838, the economy revived. Britain resumed easy credit that year, cotton prices rose, and a short-lived boomlet began. Public confidence in the banks unwisely returned as they resumed specie payment, and as a result, the money supply rose slightly during the year, and prices rose by 25%, increasing from 98 in September 1837 to 125 in February 1839.

Leading the boom of 1838 were state governments, who, finding themselves with the unexpected windfall of a distributed surplus from the federal government, proceeded to spend the money wildly and borrow even more extravagantly on public works and other uneconomic forms of "investment." But the state governments engaged in rashly optimistic plans that their public works would be financed heavily from Britain and other countries, and the cotton boom on which these hopes depended again collapsed in 1839. The states had to abandon their projects en masse. Cotton prices declined and severe contractionist pressure was put on trade. Furthermore, the Philadelphia-based BUS had heavily invested in cotton speculation, and the falling price of cotton forced the BUS, once again, to suspend payments in October, 1839. This touched off a wave of general bank suspensions to the South and West, but this time the banks of New York and New England continued to redeem their obligations in specie. Finally, the Bank of the United States, having for the last time played a leading role in generating a recession and monetary crisis, was forced to close its doors two years later.

There ensued, with the crisis of 1839, four years of massive monetary and price deflation. Unsound banks were finally eliminated, unsound investments generated in the boom were liquidated. The number of banks, during these four years, fell

by 23%. The money supply fell from $240 million at the beginning of 1839 to $158 million in 1843, a seemingly cataclysmic drop of 34%, or 8.5% per annum. Prices fell even further, from 125 in February 1839 to 67 in March 1843, a tremendous drop of 42%, or 10.5% per year.

During the boom, as we have indicated, state governments went heavily into debt, issuing bonds to pay for wasteful public works. In 1820, the total indebtedness of American states was a modest $12.8 million; by 1830, it rose to $26.5 million. But then, it started to escalate, reaching $66.5 million in 1835 and skyrocketing to $170 million by 1839. The collapse of money, credit banking , and prices after 1839 brought these state debts into jeopardy. At this point, the Whigs, taking a leaf from their forbears the Federalists, agitated for the federal government to bail out the states and assume their debts.[80] After the crisis of 1839 arrived, some of the southern and western states were clearly in danger of default, their plight made worse by the fact that the bulk of the debt was held by British and Dutch capitalists, and that specie would have to be sent abroad to meet the heavy interest payments. The Whigs pressed further for federal assumption of the debt, the federal government to issue $200 million worth of bonds in payment. Furthermore, British bankers put severe pressure on the United States to assume the state debts if it expected to float further loans abroad.

The American people, however, spurned federal aid, including even the citizens of the states in difficulty, and the advent of the Polk Administration ended any prospects for federal assumption. The British noted in wonder that the average American was far more concerned about his personal debts to other individuals and banks than about the debts of his state. In fact, the people were quite

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[80]See Reginald C. McGrane, Foreign Bondholders and American State Debts (New York: Macmillan, 1935), pp. 6-7, 24ff.

willing to have the states repudiate their debts outright. Demonstrating an astute perception of the reckless course the states had taken, the typical American response to the problem: "suppose foreign capitalists did not lend any more to the states?," was the sharp retort: "Well who cares if they don't? We are now as a community heels over head in debt and can scarcely pay the interest."[81] The implication was that the disappearance of foreign credit to the states would have the healthy effect of cutting off their wasteful spending--as well as avoiding the imposition of a crippling tax burden to pay for the interest and principal. There was in this response an awareness by the public that they and their government were separate and sometimes even hostile entities rather than one and the same organism.[82]

By 1847, four western and southern states (Mississippi, Arkansas, Michigan, and Florida) had repudiated all or part of their debts. Six other states (Maryland, Illinois, Indiana, Louisiana, Arkansas, and Pennsylvania) had defaulted from three to six years before resuming payment.

It is evident, then, that the 1839-43 contraction was healthy for the economy, in liquidating unsound investments, debts and banks, including the pernicious Bank of the United States. But didn't the massive deflation have catastrophic effects--on production, trade, employment, as we have been led to believe? In a fascinating analysis and comparison with the deflation of 1929-33 a century later, Professor Temin shows that the percentage of deflation over the comparable four years (1839-43, and 1929-33), was almost the same.[83] Yet, the

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[81] McGrane, Foreign Bondholders, pp. 39-40.

[82] The Americans also pointed out that the banks, including the Bank of the United States, who were presuming to denounce repudiation of state debt, had already suspended specie payments and were largely responsible for the contraction. "Let the bondholders look to the United States Bank and to the other banks for their payment declared the people." McGrane, Foreign Bankholders, p. 48.

[83] From 1839-43, the money supply, as we have seen, fell by 34%, wholesale prices by 42%, and the number of banks by 23%. In 1929-33, the money supply fell by 27%, prices by 31%, and the number of banks by 42%. Temin, Jacksonian Economy, pp. 155ff.

effects on real production of the two deflations were very different. Whereas in 1929-33, real gross investment fell catastrophically by 91%, real consumption by 19%, and real GNP by 30%; in 1839-43, investment fell by 23%, but real consumption increased by 21% and real GNP also rose by 16%. The interesting problem is to account for the enormous fall in production and consumption in the 1930s, as contrasted to the rise in production and consumption in the 1840s. It seems that only the initial months of the contraction worked a hardship on the American public, and that most of the earlier deflation was a period of economic growth. Temin properly suggests that the reason can be found in the downward flexibility of prices in the nineteenth century, so that massive monetary contraction would lower prices but not particularly cripple the world of real production or standards of living. In contrast, in the 1930s government placed massive roadblocks on the downward fall of prices and wage rates, and hence brought about severe and continuing depression of production and living standards.

The Jacksonians had no intention of leaving a permanent system of pet banks, and so, after the retirement of Jackson, his successor Martin Van Buren fought to establish the Independent Treasury System, in which the federal government conferred no special privilege or inflationary prop on any bank; instead of a central bank or pet banks, the government was to keep its funds purely in specie, in its own treasury vaults--or its "subtreasury" branches--and simply take in and spend funds from there. Van Buren finally managed to establish the Independent Treasury System, which would last until the Civil War. At long last, the Jacksonians had achieved their dream of severing the federal government totally from the banking system, and placing its finances on a purely hard-money, specie basis.

The Jacksonians and the Coinage Legislation of 1834

We have seen that the Coinage Act of 1792 established a bimetallic system, in which the dollar was defined as equalling both 371.25 grains of pure silver and 24.75 grains of pure gold--a fixed weight ratio of 15 grains of silver to 1 grain of gold. But bimetallism foundered on Gresham's Law. After 1805, the world market value of silver fell to approximately 15.75 to 1, so that the U.S. fixed mint ratio greatly undervalued gold and overvalued silver. As a result. gold flowed out of the country and silver flowed in, so that, after 1810, only silver coin, largely overvalued Spanish-Amercan fractional silver coin, circulated within the United States. The rest of the currency was inflated bank paper in various stages of depreciation.

The Jacksonians, as we have seen were determined to eliminate inflationary paper money and substitute a hard-money consisting of specie—or, at the most--of paper 100%-backed by gold or silver. On the federal level, this meant abolishing the Bank of the United States and establishing the Independent Treasury. The rest of the fight would have to be conducted, during the 1840s and later, at the state level where the banks were chartered. But one thing the federal government could do was readjust the specie coinage. In particular, the Jacksonians were anxious to eliminate small denomination bank notes ($20 and under) and substitute gold and silver coins for them. They reasoned that the average American largely used these coins, and they were the ones bilked by inflated paper money. For a standard to be really gold and silver, it was vital that gold or silver coins circulate and be used as a meduim of exchange by the average American.

To accomplish this goal, the Jacksonians set about to establish a comprehensive program. As one vital step, one of the Coinage Acts of 1834 readjusted the old

mint ratio of 15:1 that had undervalued gold and driven it out of circulation. The Coinage Act devalued the definition of the gold dollar from the original 24.75 grains to 23.2 grains, a debasement of gold by 6.26%. The silver dollar was left at the old weight of 371.25 grains, so that the mint ratio between silver and gold was now fixed at a ratio of 16:1, replacing the old 15:1. It was unfortunate that the Jacksonians did not appreciate silver (to 396 grains) instead of debasing gold, for this set a precedent for debasement that was to plague America in 1933 and after.[84]

The new ratio of 16:1, however, now undervalued silver and overvalued gold, since the world market ratio had been approximately 15.79:1 in the years before 1834. Until recently, historians have assumed that the Jacksonians deliberately tried to bring in gold and expel silver, and establish a monometallic gold standard by the back door. Recent study has shown, however, that the Jacksonians only wanted to give gold inflow a little push through a slight undervaluation, and that they anticipated a full coin circulation of both gold and silver.[85] In 1833, for example, the world market ratio was as high as 15.93:1. Indeed, it turns out that for two decades the Jacksonians were right, and that the slight 1% premium of silver over gold was not enough to drive the former coins out of circulation.[86] Both silver and gold were imported from then on, and silver and

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[84]Probably the Jacksonians did so in order to preserve the illusion that the original silver dollar, the "dollar of our fathers" and the standard currency of the day, remained fixed in value. Laughlin, History of Bimetallism, p. 70.

[85]For the illuminating discovery that the Jacksonians were interested in purging small bank notes by bringing in gold, see Paul M. O'Leary, "The Coinage Legislation of 1834," Journal of Political Economy, Vol. 45 (February 1937), pp. 80-94. For the development of this insight by Martin, who shows that the Jacksonians anticipated a coinage of both gold and silver, and reveals the comprehensive Jacksonian coinage program, see David A. Martin, "Metallism, Small Notes, and Jackson's War with the B.U.S.," Explorations in Economic History, Vol. 11 (Spring 1974), pp. 227-247.

[86]For the next 16 years, from 1835-1850, the market ratio averaged 15 8:1, a silver premium of only 1% over the 16:1 mint ratio. For the data, see Laughlin, History of Bimetallism, p. 291.

gold coins both circulated successfully side-by-side until the early 1350s. Lightweight Spanish fractional silver remained overvalued even at the mint ratio, and so it flourished in circulation, replacing depreciated small notes. Even American silver dollars were now retained in circulation, since they were "shielded" and kept circulating by the presence of new heavyweight Mexican silver dollars, which were exported instead.[87]

In order to stimulate the circulation of both gold and silver coin instead of paper notes, the Jacksonians also passed two companion Coinage Acts in 1834. The Jacksonians were not monetary nationalists; specie was specie, and they saw that there was no reason that foreign gold or silver coins should not circulate with the same full privileges as American-minted coins. Hence, the Jacksonians, in two separate measures, legalized the circulation of all foreign silver and gold coins, and they flourished in circulation until the 1850s.[88,89]

A third plank in the Jacksonian coinage platform was to establish branch U.S. mints so as to coin the gold found in newly-discovered mines in Georgia and North Carolina. The Jackson Administration finally succeeded in getting Congress to do so in 1835, when it set up branch mints to coin gold in North

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[87]Martin, "Bimetallism," pp. 435-437. Spanish fractional silver coins were from 5 to 15% underweight, and so their circulation in the U.S. at par by name (or "tale") meant that they were still considerably overvalued.

[88]As Jackson's Secretary of the Treasury Levi Woodbury explained the purpose of this broad legalization of foreign coins: "to provide a full supply and variety of coins, instead of bills below five and ten dollars," for this would be "particularly conducive to the security of the poor and middling classes, who, as they own but little in, and profit but little by, banks, should be subjected to as small risk as practicable by their bills." Quoted in Martin, "Metallism," p.242.

[89]In 1837 another Coinage Act made a very slight adjustment in the mint ratios. In order to raise the alloy composition of gold coins to have them similar to silver, the definition of the gold dollar was raised slightly from 23.2 to 23.22 grains. With the weight of the silver dollar remaining the same, the silver/gold ratio was now very slightly lowered from 16.002:1 to 15.998:1. Further slight adjustments in valuations of foreign coins in another Coinage Act of 1843 resulted in the undervaluation of many foreign coins, and their gradual disappearance. The major ones--Spanish fractional silver--continued however to circulate widely. Martin, "Bimetallism," p. 436.

Carolina and Georgia, and silver and gold at New Orleans.[90]

Finally, on the federal level, the Jacksonians sought to levy a tax on small bank notes and to prevent the federal government from keeping its deposits in state banks, issuing small notes, or from accepting small bank notes in taxes. They were not successful, but the Independent Treasury eliminated public deposit in state banks and the Specie Circular, as we have seen, stopped the receipt of bank notes for public land sales. From 1840 on the hard-money battle would be waged at the state level.

In the early 1850s, Gresham's Law finally caught up with the bimetallist idyll that the Jacksonians had forged in the 1830s, replacing the earlier de facto silver monometallism. The sudden discovery of extensive gold mines in California, Russia, and Australia greatly increased gold production, reaching a peak in the early 1850s. From the 1720s through the 1830s, annual world gold production averaged $12.8 million, never straying very far from that norm. Then, world gold production increased to an annual average of $38.2 million in the 1840s, and spurted upward to a peak of $155 million in 1853. World gold production then fell steadily from that peak to an annual average of $139.9 million in the 1850s and to $114.7 million from 1876-1890. It was not to surpass this peak until the 1890s.[91]

The consequence of the burst in gold production was, of course, a fall in the price of gold relative to silver in the world market. The silver/gold ratio declined from 15.97 in January 1849 to an average of 15.70 in 1850 to 15.46 in 1851 and to an average of 15.32:1 in the eight years from 1853 to 1860.[92]

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[90] Martin, "Metallism," p. 240.

[91] On gold production, see Laughlin, History of Bimetallism, pp. 283-286; David A. Martin, "1853: The End of Bimetallism in the United States," Journal of Economic History, Vol. 33 (December 1973), p. 830.

[92] The silver/gold ratio began to slide sharply in October and November 1850. Laughlin, History of Bimetallism, pp. 291, 194.

As a result, the market premium of American silver dollars over gold quickly rose above the one percent margin which was the estimated cost of shipping silver coin abroad. That premium, which had hovered around 1% since the mid-1830s, suddenly rose to 4.5% at the beginning of 1851, and after falling back to about 2% at the turn of 1852, bounced back up and remained at the 4-5% level.

The result was a rapid disappearance of silver from the country, the heaviest and therefore most undervalued coins vanishing first. Spanish milled dollars, which contained 1% to 5% more silver than American dollars, commanded a premium of 7%, and went first. Then went the full weight American silver dollars, and after that American fractional silver coins, which were commanding a 4% premium by the fall of 1852. The last coins left were the worn Spanish and Mexican fractions, which were depreciated by 10 to 15 percent. By the beginning of 1851, however, even these worn foreign silver fractions had gone to a one percent premium, and were beginning to go.

It was clear that America was undergoing a severe small coin crisis. Gold coins were flowing into the country, but they were too valuable to be technically usable for small denomination coins. The Democratic Pierce Administration saw with horror a flood of millions of dollars of unauthorized private small notes flood into circulation in early 1853 for the first time since the 1830s. The Jacksonians were in grave danger of losing the fight for hard-money coinage, at least for the smaller and medium denominations. Something had to be done quickly.[93]

The ultimate breakdown of bimetallism had never been clearer. If bimetallism is in the long-run not viable, this leaves two free-market, hard money alternatives: (a) silver monometallism with the dollar defined as a weight of silver only, and gold circulating freely by weight at freely-fluctuating market rates; or

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[93]Martin, "Metallism," p. 240

(b) gold monometallism with the dollar defined only as a weight of gold, with silver circulating by weight. Each of these is an example of what has been called "parallel standards" or "free metallism," in which two or more metal coins are allowed to fluctuate freely within the same area, and exchange at free market prices. As we have seen, colonial America was an example of such parallel standards, since foreign gold and silver coins circulated freely, and at fluctuating market prices.[94]

The United States could have taken this opportunity of monetary crisis to go on either version of a parallel standard.[95] Apparently, however, few thought of doing so. Another viable though inferior solution to the problem of bimetallism was to establish a monometallic system, either de facto or de jure, with the

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[94]For an account of how parallel standards worked in Europe from the medieval period through the eighteenth century, see Luigi Einaudi, "The Theory of Imaginary Money from Charlemagne to the French Revolution," in F. Lane and J. Riemersma, eds. Enterprise and Secular Change (Homewood, Ill.: Irwin, 1953), pp. 229-261. Robert Lopez contrasts the ways in which Florence and Genoa each returned to gold coinage in the mid-thirteenth century, after a gap of half a millenium: "Florence, like most medieval states, made bimetallism and trimetallism a base of its monetary policy....it committed the government to the Sysiphean labor of readjusting the relations between different coins as the ratio between the different metals changes, or as one or another coin was debased....Genoa, on the contrary, in conformity with the principle of restricting state intervention as much as possible [italics ours], did not try to enforce a fixed relation between coins of different metals....Basically, the gold coinage of Genoa was not meant to integrate the silver and bullion coinages but to form an independent system." Robert Sabatino Lopez, "Back to Gold, 1252," Economic History Review (April 1956), p.224. Also see James Rolph Edwards, "Monopoly and Competition in Money," The Journal of Libertarian Studies, Vol. IV (Winter 1980), p. 116. For an analysis of parallel standards, see Ludwig von Mises, The Theory of Money and Credit, (3rd Ed., Indianapolis: Liberty Classics, 1980), pp. 87, 89-91, 205-207.

[95]Given parallel standards, the ultimate, admittedly remote solution would be to eliminate the term "dollar" altogether, and simply have both gold and silver coins circulate by regular units of weight: "Grain," "Ounce," or "Gram." If that were done, all problems of bimetallism, debasement, Gresham's Law, etc., would at last disappear. While such a pure free-market solution seems remote today, the late 19th century saw a series of important international monetary conferences trying to move toward a universal gold or silver gram, with each national currency beginning as a simple multiple of each other, and eventually only units of weight being used. Before the conferences foundered on the gold/silver problem, such a result was not as remote or Utopian as we might now believe. See the fascinating account of these conferences in Henry B. Russell, International Monetary Conferences (New York:Harper & Bros., 1898).

other metal circulating in the form of lightweight, and therefore overvalued, or "token" coinage. Silver monometallism was immediately unfeasible, since it was rapidly flowing out of the country, and because gold, being far more valuable than silver, could not technically function easily as a lightweight, subsidiary coin. The only feasible solution, then, within a monometallic framework, was to make gold the basic standard, and let highly overvalued, essentially token, silver coins, function as subsidiary small coinage. Certainly, if a parallel standard was not to be adopted, the latter solution would be far better than allowing depreciated paper notes to function as small currency.

Under pressure of the crisis, Congress decided, in February 1853, to keep the de jure bimetallic standard but to adopt a de facto gold monometallic standard, with fractional silver coins circulating as a deliberately overvalued subsidiary coinage, legal tender up to a maximum of only five dollars. The fractional silver coins were debased by 6.91%. With silver commanding about a 4% market premium over gold, this meant that fractional silver was debased 3% below gold. At that depreciated rate, fractional silver was not overvalued in relation to gold, and remained in circulation. By April, the new subsidiary quarter dollars proved to be popular, and by early 1854 the problem of the shortage of small coins in America was over.

In rejecting proposals either to go over completely to de jure gold monometallism, or to keep the existing bimetallic system, Congress was choosing a gold standard temporarily, but keeping its options open. The fact that it continued the old fullbodied silver dollar, the "dollar of our fathers," demonstrates that an eventual return to de facto bimetallism was by no means being ruled out--albeit Gresham's Law could not then maintain the American silver dollar in

circulation.[96]

In 1857, an important part of the Jacksonian coinage program was repealed, as Congress, in an exercise of monetary nationalism, eliminated all legal tender power of foreign coins.[97]

Decentralized Banking from the 1830's to the Civil War

After the central bank was eliminated in the 1830s, the battle for hard money largely shifted to the state governmental arena. During the 1830s, the major thrust was to prohibit the issue of small notes, which was accomplished for notes under five dollars in ten states by 1832, and subsequently five others restricted or prohibited such notes.[98]

The Democratic Party became ardently hard-money in the various states after the shock of the financial crisis of 1837 and 1839. The Democratic drive was toward the outlawry of all fractional reserve bank paper. Battles were fought, also, in the late 1840s, at constitutional conventions of many states, particularly in the West. In some Western states the Jacksonians won temporary success, but soon the Whigs would return and repeal the bank prohibition. The Whigs, trying to find some way to overcome the general revulsion against banks after the crisis of the late 1830s, adopted the concept of "free" banking, which had been enacted by New York and Michigan in the late 1830s. From New York, the idea spread outward to the rest of the country, and triumphed in fifteen states by the early 1850s. On the eve of the Civil War, 18 out of the 33 states in the Union had adopted "free" banking laws.[99]

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[96]For an excellent portrayal of the Congressional choice in 1853, see Martin, "1853," pp. 825-844.

[97]Only Spanish-American fractional silver coins were to remain legal tender, and they were to be received quickly at government offices and immediately re-minted into American coins. Hepburn, History of Currency, pp. 66-67.

[98]See Martin, "Metallism," pp. 242-243.

[99]Hugh Rockoff, The Free Banking Era: A Re-Examination (New York: Arno Press, 1975), pp. 3-4.

It must be realized that "free" banking, as it came to be known in the United States before the Civil War, was unrelated to the philosophic concept of free banking analyzed by economists. As we have seen earlier, genuine free banking is a system where entry into banking is totally free, the banks are neither subsidized nor regulated, and at the first sign of failure to redeem in specie payments, the bank is forced to declare insolvency and close its doors.

"Free" banking before the Civil War, on the other hand, was very different.[100] As we have pointed out, the government allowed periodic general suspensions of specie payments whenever the banks over expanded and got into trouble—the latest episode was in the Panic of 1857. It is true that bank incorporation was now more liberal, since any bank which met the legal regulations could become incorporated automatically without lobbying for special legislative charters, as had been the case before. But the banks were now subject to a myriad of regulations, including edicts by state banking commissioners, and high minimum capital requirements which greatly restricted entry into the banking business. But the most pernicious aspect of "free" banking was that the expansion of bank notes and deposits was directly tied to the amount of state government securities which the bank had invested in and posted as bond with the state. In effect, then, state government bonds became the reserve base upon which the banks were allowed to pyramid a multiple expansion of bank notes and deposits. Not only did this system provide explicitly or implicitly for fractional reserve banking; but the pyramid was tied rigidly to the amount of government bonds purchased by the banks. This provision deliberately tied banks and bank credit expansion to the public debt; it meant that the more public debt the banks

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[100]Rockoff goes so far as to call free banking the "antithesis of laissez-faire banking laws." Hugh Rockoff, "Varieties of Banking and Regional Economic Development in the United States, 1840-1860," Journal of Economic History, Vol. 35 (March 1975), p. 162. Quoted in Hummel, "Jacksonians," p. 157.

purchased, the more they could create and lend out new money. Banks, in short, were encouraged to monetize the public debt, state governments were thereby encouraged to go into debt, and government-and-bank inflation were hence intimately linked.

In addition to allowing periodic suspension of specie payments, federal and state governments conferred the privilege upon the banks of their notes being accepted in taxes. Moreover, the general prohibition of interstate branch banking--and often of intrastate branches as well--greatly inhibited the speed by which one bank could demand payment from other banks in specie. In addition, state usury laws, pushed by the Whigs and opposed by the Democrats, made credit excessively cheap for the riskiest borrowers, and encouraged inflation and speculative expansion of bank lending.

Furthermore, the desire of state governments to finance internal improvements was an important factor in subsidizing and propelling expansion of bank credit. As Hammond admits: "The wild-cats lent no money to farmers and served no farmer interest. They arose to meet the credit demands not of farmers (who were too economically astute to accept wildcat money) but of states engaged in public improvements."[101]

Despite the flaws and problems, the decentralized nature of the pre-Civil War banking system meant that banks were free to experiment on their own with improving the banking system. The most successful such device was the creation of the Suffolk System.

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[101]Hammond, Banks and Politics, p. 627. On free banking, see Hummel, "Jacksonians," pp. 154-160; Smith, Rationale, pp. 44-45; and Hugh Rockoff, "American Free Banking Before the Civil War: A Reexamination," Journal of Economic History, Vol. 32 (March 1972), pp. 417-420. On the effect of usury laws, see William Graham Sumner, A History of American Currency (New York: Henry Holt & Co., 1876), p. 125. On the Jacksonians versus their opponents on the state level after 1839, see William G. Shade, Banks or No Banks: The Money Issue in Western Politics, 1832-1865 (Detroit: Wayne State University Press, 1972); Herbert Ershkowitz and William Shade, "Consensus or Conflict? Political Behavior in the State Legislatures During the Jacksonian Era," Journal of American History Vol. 58 (December 1971), pp. 591-621; and James Roger Sharp,

A Free-Market "Central Bank"

It is a fact almost never recalled that there once existed an American private bank that brought order and convenience to a myriad of privately issued banknotes. Further, the Suffolk Bank restrained the over-issuance of these notes. In short, it was a private central bank that kept the other banks honest. As such it made New England an island of monetary stability in an America contending with currency chaos.

Chaos was, in fact, that state in which New England found herself just before the Suffolk bank was established. There were a myriad of banknotes circulating in the area's largest financial center, Boston. Some were issued by Boston banks which all in Boston knew to be solvent. But others were issued by state-chartered banks. These could be quite far away, and in those days such distance impeded both general knowledge about their solvency and easy access in bringing the banks' notes in for redemption into gold or silver. Thus, while at the beginning these country notes were accepted in Boston at par value, this just encouraged some far-away banks to issue far more notes than they had gold to back them. So country bank notes began to be generally traded at discounts to par, of from 1% to 5%.

City banks finally refused to accept country bank notes altogether. This gave rise to the money brokers mentioned earlier in this chapter. But it also caused hardship for Boston merchants, who had to accept country notes whose real value they could not be certain of. When they exchanged the notes with the brokers, they ended up assuming the full cost of discounting the bills they had

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Jacksonians versus the Banks: Politics in the States After the Panic of 1837 (New York: Columbia University Press, 1970).

accepted at par.

A False Start

Matters began to change in 1814. The New England Bank of Boston announced it too would go into the money broker business accepting country notes from holders and turning them over to the issuing bank for redemption. The note holders, though, still had to pay the cost. In 1818, a group of prominent merchants formed the Suffolk bank to do the same thing. This enlarged competition brought the basic rate of country note discount down from 3% in 1814 to 1% in 1818 and finally to a bare ½ of 1% in 1820. But this did not necessarily mean that country banks were behaving more responsibly in their note creation. By the end of 1820 the business had become clearly unprofitable, and both banks stopped competing with the private money brokers. The Suffolk became just another Boston bank.

Operation Begins

During the next several years city banks found their notes representing an ever smaller part of the total New England money supply. Country banks were simply issuing far more notes in proportion to their capital (i.e. gold and silver) than were the Boston banks.

Concerned about this influx of paper money of lesser worth, both Suffolk and New England Bank began again in 1824 to purchase country notes. But this time they did so not to make a profit on redemption, but simply to reduce the number of country notes in ciruclation in Boston. They had the foolish hope that this would increase their (better) notes' use thus increasing their own loans and profits.

But the more they purchased country notes, the more notes of even worse quality (particularly from faraway Maine Banks) would replace them. Buying these

latter involved more risk, so the Suffolk proposed to six other city banks a joint fund to purchase and send these notes back to the issuing bank for redemption. These seven banks, known as the Associated Banks, raised $300,000 for this purpose. With the Suffolk acting as agent and buying country notes from the other six, operations began March 24, 1824. The volume of country notes bought in this way increased greatly, to $2 million per month by the end of 1825. By then, Suffolk felt strong enough to go it alone. Further, it now had the leverage to pressure country banks into depositing gold and silver with the Suffolk, to make note redemption easier. By 1838, almost every bank in New England did so, and were redeeming their notes through the Suffolk Bank.

The Suffolk ground rules from beginning (1825) to end (1858) were as follows: Each country bank had to maintain a permanent deposit of specie of at least $2000 for the smallest bank, plus enough to redeem all its notes that Suffolk received. These gold and silver deposits did not have to be at Suffolk, so long as they were at some place convenient to Suffolk, so that the notes would not have to be sent home for redemption. But in practice, nearly all reserves were at Suffolk. (City banks had only to deposit a fixed amount, which decreased to $5,000 by 1835.) No interest was paid on any of these deposits. But in exchange the Suffolk began performing an invaluable service: It agreed to accept at par all the notes it received as deposits from other New England banks in the system, and credit the depositor banks' accounts on the following day.

With the Suffolk acting as a "clearing bank," accepting, sorting, and crediting bank notes, it was now possible for any New England bank to accept the notes of any other bank, however far away, and at face value. This drastically cut down on the time and inconvenience of applying to each bank separately for specie redemption. Moreover, the certainty spread that the notes of the Suffolk member banks would be valued at par: It spread at first among other

bankers, and then to the general public.

The Country Banks Resist

How did the inflationist country banks react to this? Not very well, for as one can see the Suffolk system put limits on the amount of notes they could issue. They resented par redemption, and detested systematic specie redemption, because that forced them to stay honest. But the country banks knew that any bank which did not play by the rules would be shunned by the banks that did; (or at least see their notes accepted only at discount, and not in a very wide area, at that). All legal means to stop Suffolk failed: The Massachusetts Supreme Court upheld in 1827 Suffolk's right to demand gold or silver for country bank notes, and the State legislature refused to charter a clearing bank run by country banks; probably rightly assuming that these banks would run much less strict operations. Stung by these set-backs, the country banks played by the rules, bided their time, and awaited their revenge.

Suffolk's Stabilizing Effects

Even though Suffolk's initial objective had been to increase the circulation of city banks, this did not happen. In fact, by having their notes redeemed at par, country banks gained a new respectability. This came, naturally, at the expense of the number of notes issued by the worst former inflationists. But at least in Massachusetts, the percentage of city bank notes in circulation fell from 48.5% in 1826 to 35.8% in 1833.

Circulation of the Notes of Massachusetts Banks (In Thousands)

Date	All Banks	Boston Banks	Boston Percentage
1823	$3,129	$1,354	43.3
1824	3,843	1,797	46.8
1825	4,091	1,918	46.9
1826	4,550	2,206	48.5
1827	4,936	2,103	42.6
1828	4,885	2,067	42.3
1829	4,748	2,078	43.8
1830	5,124	2,171	42.3
1831	7,139	3,464	44.8
1832	7,123	3,060	43.0
1833	7,889	2,824	35.8

Source: Wilfred S. Lake, The End of the Suffolk System, p. 188.

The biggest, most powerful weapon Suffolk had to keep stability was the power to grant membership into the system. It accepted only banks whose notes were sound. While Suffolk could not prevent a bad bank from inflating, denying it membership ensured that the notes would not enjoy wide circulation. And the member-banks which were mismanaged could be stricken from the list of Suffolk-approved New England banks in good standing. This caused the offending bank's notes to trade at a discount at once, even though the bank itself might be still redeeming its notes in specie.

In another way, Suffolk exercised a stabilizing influence on the New England economy. It controlled the use of overdrafts in the system. When a member bank needed money, it could apply for an overdraft, that is, a portion of the excess reserves in the banking system. If Suffolk decided that a member bank's loan policy was not conservative enough, it could refuse to sanction that bank's application to borrow reserves at Suffolk. The denial of overdrafts to profligate banks thus forced those banks to keep their assets more liquid. (Few government central banks today have succeeded in that.) This is all the more remarkable when

one considers that Suffolk--or any central bank--could have earned extra interest income by issuing overdrafts irresponsibly.

But Dr. George Trivoli, whose excellent monograph on The Suffolk Bank we rely on in this study, states that by providing stability to the New England banking system "it should not be inferred that the Suffolk bank was operating purely as public benefactor." Suffolk in fact made handsome profits. At its peak in 1858, the last year of existence, it was redeeming $400 million in notes, with a total annual salary cost of only $40,000. The healthy profits were derived primarily from loaning out those reserve deposits which Suffolk itself, remember, did not pay interest on. These amounted to over $1 million in 1858. The interest charged on overdrafts augmented that. Not surprisingly, Suffolk stock was the highest price bank stock in Boston, and by 1850, regular dividends were 10 percent.

The Suffolk Difference

That the Suffolk system was able to provide note redemption much more cheaply then the U.S. government was stated by a U.S. Comptroller of the Currency. John Jay Knox compared the two systems from a vantage point of half a century: "...in 1857 the redemption of notes by the Suffolk Bank was almost $400,000,000 as against $137,697,696 in 1875, the highest amount ever reported under the National Banking system. The redemptions in 1898 were only $66, 683,476, at a cost of $1.29 per thousand. The cost of redemption under the Suffolk system was ten cents per $1,000, which does not appear to include transportation. If this item is deducted from the cost of redeeming National Bank notes, it would reduce it to about ninety-four cents. This difference is accounted for by the relatively small amount of redemptions by the Treasury, and the increased expense incident to the necessity of official checks by the Government, and by the higher salaries paid. But allowing for these differences, the fact is established that private

enterprise could be entrusted with the work of redeeming the circulating notes of the banks, and it could thus be done as safely and much more economically than the same services can be performed by the Government."[102]

The volume of redemptions was much larger under Suffolk than under the National Banking system. During Suffolk's existence (1825-57)they averaged $229 million per year. The average of the National system from its start in 1863 to about 1898 is put by Mr. Knox at only $54 million. Further, at its peak in 1858, $400 million was redeemed. But the New England money supply was only $40 million. This meant that, astoundingly, the average note was redeemed ten times per year, or once every five weeks.

Bank capital, note circulation and deposits considered together as "banking power" grew in New England on a per capita basis much faster than in any other region of the country from 1803 to 1850. And there is some evidence that New England banks were not as susceptible to disaster during the several banking panics during that time. In the Panic of 1837, not one Connecticut bank failed, nor did any suspend specie payments. All remained in the Suffolk system. And when in 1857, specie payment was suspended in Maine, all but three banks remained in business. As the Bank Commission of Maine stated, "The Suffolk system, though not recognized in banking law, has proved to be a great safeguard to the public; whatever objections may exist to the system in theory, its practical operation is to keep the circulation of our banks within the bounds of safety."

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[102]John Jay Knox, A History of Banking in the United States, (New York, 1903), pp. 368-69.

The Suffolk's Demise

The extraordinary profits--and power--that the Suffolk had by 1858 attained spawned competitors. The only one to become established was a Bank for Mutual Redemption in 1858. This bank was partially a response to the somewhat arrogant behavior of the Suffolk by this time, after 35 years of unprecedented success. But further, and more importantly, the balance of power in the state legislature had shifted outside of Boston, to the country bank areas. The politicians were more amenable to the desires of the over-expanding country banks. Still, it must be said that Suffolk acted toward the Bank of Mutual Redemption with spite where conciliation would have helped. Trying to force Mutual Redemption out of business, Suffolk, starting October 9, 1858, refused to honor notes of banks having deposits in the newcomer. Further, Suffolk in effect threatened any bank withdrawing deposits from it. But country banks rallied to the newcomer, and on October 16, Suffolk announced that it would stop clearing any country bank notes, thus becoming just another bank.

Only the Bank for Mutual Redemption was left, and though it soon had half the New England banks as members, it was much more lax toward over-issuance by country banks. Perhaps the Suffolk would have returned amid dissatisfaction with its successor, but in 1861, just over two years after Suffolk stopped clearing the Civil War began and all specie payments were stopped. As a final nail in the coffin, the National Banking System Act of 1863 forbade the issuance of any state bank notes, giving a monopoly to the government that has continued ever since.

While it lasted, though, the Suffolk banking system showed that it is possible in a free market system to have private banks competing to establish themselves as efficient, safe and inexpensive clearing houses limiting over-issue of paper money.

The Civil War

The Civil War exerted an even more fateful impact on the American monetary and banking system than had the War of 1812. It set the United States, for the first time except for 1814-17, on an irredeemable fiat currency that lasted for two decades and led to reckless inflation of prices. This "greenback" currency set a momentous precedent for the post-1933 United States, and even more particularly for the post-1971 experiment in fiat money.

Perhaps an even more important consequence of the Civil War was the permanent change wrought in the American banking system. The federal government in effect outlawed the issue of state bank notes, and created a new quasi-centralized, fractional reserve national banking system which paved the way for the return of outright central banking in the Federal Reserve system. The Civil War, in short, ended the separation of the federal government from banking, and brought the two institutions together in an increasingly close and permanent symbiosis. In that way, the Republican Party, which inherited the Whig admiration for paper money and governmental control and sponsorship of inflationary banking, was able to implant the soft-money tradition permanently into the American system.

Greenbacks

The Civil War led to an enormous ballooning of federal expenditures, which skyrocketed from $66 million in 1861 to $1.30 billion four years later. To pay for these swollen expenditures, the Treasury initially attempted, in the fall of 1861, to float a massive $150 million bond issue, to be purchased by

the nation's leading banks. However, Secretary of the Treasury Salmon P. Chase, a former Jacksonian, tried to require the banks to pay for the loan in specie which they did not have. This massive pressure on their specie, as well as an increased public demand for specie due to a well-deserved lack of confidence in the banks, brought about a general suspension of specie payments a few months later, at the end of December, 1861. This suspension was followed swiftly by the Treasury itself, which suspended specie payments on its Treasury notes.

The U.S. government quickly took advantage of being on an inconvertible fiat standard. In the Legal Tender Act of February 1862, Congress authorized the printing of $150 million in new "United States Notes" (soon to be known as "greenbacks") to pay for the growing war deficits. The greenbacks were made legal tender for all debts, public and private, except that the Treasury continued its legal obligation of paying the interest on its outstanding public debt in specie.[103] The greenbacks were also made convertible at par into U.S. bonds, which remained a generally unused option for the public, and was repealed a year later.

In creating greenbacks in February, Congress resolved that this would be the first and last emergency issue. But printing money is a heady wine, and a second $150 million issue was authorized in July, and still a third $150 million in early 1863. Greenbacks outstanding reached a peak in 1864 of $415.1 million.

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[103] To be able to keep paying interest in specie, Congress provided that customs duties, at least, had to be paid in gold or silver. For a comprehensive account and analysis of the issue of greenbacks in the Civil War, see Wesley Clair Mitchell, A History of the Greenbacks (Chicago: University of Chicago Press, 1903). For a summary, see Paul Studenski and Herman E. Kross, Financial History of the United States (New York: McGraw-Hill, 1952), pp. 141-149.

Greenbacks began to depreciate in terms of specie almost as soon as they were issued. In an attempt to drive up the price of government bonds, Secretary Chase eliminated the convertibility of greenbacks in July 1863, an act which simply drove down their value further. Chase and the Treasury officials, instead of acknowledging their own premier responsibility for the continued depreciation of the greenbacks, conveniently placed the blame on anonymous "gold speculators." In March, 1863, Chase began a determined campaign, which would last until he was driven from office, to stop the depreciation by controlling, assaulting, and eventually eliminating the gold market. In early March, he had Congress levy a stamp tax on gold sales, and to forbid loans on a collateral of coin above its par value. This restriction on the gold market had little effect, and when depreciation resumed its march at the end of the year, Chase decided to de facto repeal the requirement that customs duties be paid in gold. In late March 1864, Chase declared that importers would be allowed to deposit greenbacks at the Treasury and receive gold in return at a premium below the market. Importers could then use the gold to pay the customs duties. This was supposed to reduce greatly the necessity for importers to buy gold coin on the market and therefore to reduce the depreciation. The outcome, however, was that the greenback, at 59 cents in gold when Chase began the experiment, had fallen to 57 cents by mid-April. Chase was then forced to repeal his customs duties scheme.

With the failure of this attempt to regulate the gold market, Chase promptly escalated his intervention. In mid-April, he sold the massive amount of $11 million in gold in order to drive down the gold premium of greenbacks. But the impact was trifling, and the Treasury could not continue this policy indefinitely, because it had to keep enough gold in its vaults to pay interest on its bonds. At the end of the month, the greenback was lower than ever, having sunk to below 56 cents in gold.

Indefatigably, Chase tried yet again. In mid-May, 1864, he sold foreign exchange in London at below-market rates in order to drive down pounds in relation to dollars, and, more specifically, to replace some of the U.S. export demand for gold in England. But this, too, was a failure, and Chase ended this experiment before the end of the month.

Finally, Secretary Chase decided to take off the gloves. He had failed to regulate the gold market; he would therefore end the depreciation of greenbacks by destroying the gold market completely. By mid-June, he had driven through Congress a truly despotic measure to prohibit under pain of severe penalties all futures contracts in gold, as well as all sales of gold by a broker outside his own office.

The result was disaster. The gold market was in chaos, with wide ranges of prices due to the absence of an organized market. Businessmen clamored for repeal of the "gold bill," and, worst of all, the object of the law -- to lower the depreciation of the paper dollar -- had scarcely been achieved. Instead, public confidence in the greenback plummeted, and its depreciation in terms of gold got far worse. At the beginning of June, the greenback dollar was worth over 52 cents in gold. Apprehensions about the emerging gold bill drove the greenback down slightly to 51 cents in mid-June. Then, after the passage of the bill, the greenback plummeted, reaching 40 cents at the end of the month.

The disastrous gold bill was hastily repealed at the end of June, and perhaps not coincidentally, Secretary Chase was ousted from office at the same

time. The war against the speculators was over. [104, 105]

As soon as greenbacks depreciated to less than 97 cents in gold, fractional silver coins became undervalued, and so were exported to be exchanged for gold. By July 1862, in consequence, no coin higher than the copper/nickel penny remained in circulation. The U.S. government then leaped in to fill the gap with small tickets, first issuing postage stamps for the purpose, then bits of unglued paper, and finally, after the spring of 1863, fractional paper notes.[106]

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[104] Chase and the Administration should have heeded the advice of Senator Jacob Collamer (R-VT): "Gold does not fluctuate in price...because they gamble in it; but they gamble in it because it fluctuates...But the fluctuation is not in the gold; the fluctuation is in the currency, and it is a fluctuation utterly beyond the control of individuals." Mitchell, History of Greenbacks, pp. 229-230.

[105] On the war against the gold speculators, see Mitchell, History of Greenbacks, pp. 223-235. The greenbacks fell further to 35 cents in mid-July on news of military defeats for the North. Military victories, and consequently rising prospects of possible future gold redemption of the greenbacks, caused a rise in greenbacks in terms of gold, particularly after the beginning of 1865. At war's end the greenback dollar was worth 69 cents in gold. Ibid. pp. 232-238, 423-428.

[106] Some of the greenbacks had been decorated with portraits of President Lincoln ($5) and Secretary Chase ($1). However, when Spencer Clark, chief clerk of the Treasury's National Currency Division, put his own portrait on 5 cent fractional notes, the indignant Representative Martin R. Thayer (R-PA) put through a law, still in force, making it illegal to put the picture of any living American on any coin or paper money. See Gary North, "Greenback Dollars and Federal Sovereignty, 1861-1865," in H. Sennholz, ed., Gold Is Money (Westport, Conn.: Greenwood Press, 1975) pp. 124,150.

A total of $28 million in postage currency and fractional notes was issued by the middle of 1864. Even the nickel/copper pennies began to disappear from circulation, as greenbacks depreciated, and the nickel/copper coin began to move toward being undervalued. The expectation and finally the reality of undervaluation drove the coins into hoards and then into exports. Postage and fractional notes did not help matters, because their lowest denominations were 5 cents and 3 cents respectively. The penny shortage was finally alleviated when a debased and lighter weight penny was issued in the spring of 1864, consisting of bronze instead of nickel and copper.[107]

As soon as the nation's banks and the Treasury itself suspended specie payments at the end of 1861, Gresham's Law went into operation and gold coin virtually disappeared from circulation, except for the government's interest payments and importers' customs duties. The swift issuance of legal tender greenbacks, which the government forced creditors to accept at par, insured the continued disappearance of gold from then on.

The fascinating exception was California. There were very few banks during this period west of Nebraska, and in California the absence of banks was insured by the fact that note-issuing banks, at least, were prohibited by the California constitution of 1849.[108] The California gold discoveries of the late 1840's insured a plentiful supply for coinage.

Used to a currency of gold coin only, with no intrusion of bank notes, California businessmen took steps to maintain gold circulation and avoid coerced payment in greenbacks. At first, the merchants of San Francisco, in November 1862, jointly agreed to refrain from accepting or paying out greenbacks at any but the

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[107] See Mitchell, History of Greenbacks, pp. 156-163.

[108] Banks of deposit existed in California, but of course they could not supply the public's demand for cash. See John Jay Knox, A History of Banking in the United States (New York: Bradford Rhodes & Co., 1900), pp. 843-845.

(depreciated) market value, and to keep gold as the monetary standard. Any firms that refused to abide by the agreement would be blacklisted and required to pay gold in cash for any goods which they might purchase in the future.

Voluntary efforts did not suffice to overthrow the federal power standing behind legal tender, however, and so California merchants obtained the passage in California legislature of a "specific contract act" at the end of April 1863. The specific contract provided that contracts for the payment of specific kinds of money would be enforceable in the courts. After passage of that law, California businessmen were able to protect themselves against tenders of greenbacks by inserting gold coin payment clauses in all their contracts. Would that the other states, and even the federal government, had done the same![109] Furthermore, the private banks of deposit in California refused to accept greenbacks on deposit, newspapers used their influence to warn citizens about the dangers of greenbacks, and the state government refused to accept greenbacks in payment of taxes. In that way, all the major institutions in California joined in refusing to accept or give their imprimatur to federal inconvertible paper.

Judicial institutions also helped maintain the gold standard and repel the depreciated U.S. paper. Not only did the California courts uphold the constitutionality of the specific contracts act, but the California Supreme Court ruled in 1862 that greenbacks could not be accepted in state or county taxes, since the state constitution prohibited any acceptance of paper money for taxes.

The state of Oregon was quick to follow California's lead. Oregon's constitution had also outlawed banks of issue, and gold had for years been the exclusive currency. Two weeks after the agreement of the San Francisco merchants,

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[109]This experience illustrates a continuing problem in contract law: it is not sufficient for government to allow contracts to be made in gold or gold coin. It is necessary for government to enforce specific performance of the contracts, so that debtors must pay in the wieght or value of the gold (or anything else) required in the contract, and not in some paper dollar equivalent decided by law or the courts.

the merchants of Salem Oregon, unanimously backed gold as the monetary standard and refused to accept greenbacks at par. Two months later, the leading merchants of Portland agreed to accept greenbacks only at rates current in San Francisco; the merchants in the rest of the state were quick to follow suit. The Portland merchants issued a circular warning of a blacklist of all customers who insisted on settling their debts in greenbacks, and they would be quickly boycotted and dealings with them would only be in cash.

Oregon deposit banks also refused to accept greenbacks, and the Oregon legislature followed California a year and a half later in passing a specific performance law. Oregon, too, refused to accept greenbacks in taxes, and strengthened the law in 1864 by requiring that "all taxes levied by state, counties, or municipal corporations therein, shall be collected and paid in gold and silver coin of the United States and not otherwise."[110]

In the same year, the Oregon Supreme Court followed California in ruling that greenbacks could not constitutionally be received in payment of taxes.

The banking story during the Civil War is greatly complicated by the advent of the national banking system in the latter part of the War. But it is clear that the state banks, being able to suspend specie and to pyramid money and credit on top of the federal greenbacks, profited greatly by being able to expand during this period. Thus, total state bank notes and deposits were $510 million in 1860, and by 1863 the amount rose to $743 million, an increase in state bank demand liabilities in those three years of 15.2% per year.[111]

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[110] Cited in Richard A. Lester, Monetary Experiments (1939, London: David & Charles Reprints, 1970), p. 166. On the California and Oregon maintenance of the gold standard during this period, see ibid, pp. 161-171. On California, see Bernard Moses, "Legal Tender Notes in California," Quarterly Journal of Economics, Vol. Vii (October 1892), pp. 1-25; Mithell, History of Greenbacks, pp. 142-144. On Oregon, see James H. Gilbert, Trade and Currency in Early Oregon (New York: Columbia University Press, 1907), pp. 101-122.

[111] Historical Statistics, pp. 625, 648-649.

It is no wonder, then, that contrary to older historical opinion, many state banks were enthusiastic about the greenbacks, which provided them with legal tender which could function as a reserve base upon which they could expand. As Hammond puts it, "Instead of being curbed (as some people supposed later), the powers of the banks were augmented by the legal tender issues. As the issues increased, the deposits of the banks would increase."[112] Indeed, Senator Sherman (R-OH) noted that the state banks favored greenbacks. And the principal author of the greenback legislation, Rep. Elbridge G. Spaulding (R-NY), the chairman of the House Ways and Means Subcommittee that introduced the bill, was himself a Buffalo banker.

The total money supply of the country (including gold coin, state bank notes, subsidiary silver, U.S. currency including fractional and greenbacks) amounted to $745.4 million in 1860. By 1863, the money supply had skyrocketed to $1.435 billion, an increase of 92.5% in three years, or 30.8% per annum. By the end of the war, the money supply, which now included national bank notes and deposits, totalled $1.773 billion, an increase in two years of 23.6%, or 11.8% per year. Over the entire war, the money supply rose from 45.4 million to $1.773 billion, an increase of 137.9%, or 27.69

The response to this severe monetary inflation was a massive inflation of prices. It is no wonder that the greenbacks, depreciating rapidly in terms of gold, depreciated in terms of goods as well. Wholesale prices rose from 100 in 1860, to 210.9 at the end of the war, a rise of 110.9% or 22.2% per year.[114]

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[112] Bray Hammond, Sovereignty and an Empty Purse: Banks and Politics in the Civil War (Princeton: Princeton University Press, 1970), pp. 246, 249-250. Also see North, "Greenback Dollars," pp. 143-148.

[113] Historical Statistics, pp. 625, 648-649. In a careful analysis North estimates the total money supply at approximately $2 billion, and also points out that counterfeit notes in the Civil War have been estimated to amount to no less than one-third of the total currency in circulation. North, "Greenback Dollars," p. 134. The counterfeiting estimates are in William P. Donlon, United States Large Size Paper Money, 1861 to 1923 (2nd Ed. Iola, Wis.: Krause, 1970), p. 15.

[114] Ralph Andreano, ed., The Economic Impact of the American Civil War (Cambridge, Mass: Schenckman, 1961), p. 178.

The Republican Administration argued that their issue of greenbacks was required by stern wartime "necessity." The spuriousness of this argument is seen by the fact that greenbacks were virtually not issued after the middle of 1863. There were three alternatives to the issuance of legal tender fiat money: 1) the government could have issued paper money but not made it legal tender; it would have depreciated even more rapidly. At any rate, they would have had quasi-legal tender status by being receivable in federal dues and taxes; 2) it could have increased taxes to pay for the war expenditures; 3) it could have issued bonds and other securities and sold the debt to banks and non-bank institutions. In fact, the government employed both the latter alternatives, and after 1863 stopped issuing greenbacks and relied on them exclusively, especially a rise in the public debt. The accumulated deficit piled up during the war was $2.614 billion, of which the printing of greenbacks only financed $431.7 million. Of the federal deficits during the war, greenbacks financed 22.8% in fiscal 1862, 48.5% in 1863, 6.3% in 1864, and none in 1865.[115]

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[115] The Confederacy, on the other hand, financed virtually all of its expenditures through mammoth printing of fiat paper, the Southern version of the greenback. Confederate notes, which were first issued in June 1861 to a sum of $1.1 million, skyrocketed until the total supply of confederate notes in January 1864 was no less than $826.8 million, an increase of 750.6% for three and a half years, or 214.5% per year. Bank notes and deposits in the Confederacy rose from $119.3 million to $268.1 million in this period, so that the total money supply rose from $120.4 million to $1.095 billion, or an increase of 1060% -- 302.9% per year. Prices in the Eastern Confederacy rose from 100 in early 1861 to no less than over 4,000 in 1864, and 9,211 at the end of the war in April, 1865. Thus, in four years, prices rose by 9100%, or an average of 2275% per annum. See Eugene M. Lerner, "Inflation in the Confederacy, 1861-65," in M. Friedman, ed., Studies in the Quantity Theory of Money (Chicago: University of Chicago Press, 1956), pp. 163-175; Lerner, "Money, Prices and Wages in the Confederacy, 1861-65," in Andreano, Economic Impact, pp. 11-40.

This is particularly striking if we consider that the peak deficit came in 1865, totalling $963.8 million. All the rest was financed by increased public debt. Taxes also increased greatly, revenues rising from $52 million in 1862 to $333.7 million in 1865. Tax revenues as a percentage of the budget rose from the minuscule 10.7% in fiscal 1862 to over 26% in 1864 and 1865.

It is clear, then, that the argument from "necessity" in the printing of greenbacks was specious, and, indeed the greenback advocates conceded that it was perfectly possible to issue public debt, provided that the Administration was willing to see the prices of its bonds rise and its interest payments rise considerably. At least for most of the war, they were not willing to take their chances in the competitive bond market.[116]

The Public Debt and the National Banking System

The public debt of the Civil War brought into American financial history the important advent of one Jay Cooke. The Ohio-born Cooke had joined the moderately successful Philadelphia investment banking firm of Clark and Dodge as a clerk at the age of eighteen. In a few years, Cooke worked himself up to the status of junior partner, and, in 1857, he left the firm to branch out on his own in canal and railroad promotion and other business ventures. There he doubtless would have remained, except for the lucky fact that he and his brother Henry, editor of the leading Republican newspaper in Ohio, the Ohio State Journal, were close friends of U.S. Senator Salmon P. Chase. Chase, a veteran leader of the anti-slavery movement, fought for and lost the Republican Presidential nomination in 1860 to Abraham Lincoln. At that point, the Cookes determined that they would feather

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[116] Mitchell, History of the Greenbacks, pp. 61-74; 119f., 128-131. Also see Don C. Barrett, The Greenbacks and Resumption of Specie Payments, 1862-1879 (Cambridge: Harvard University Press, 1931), pp. 25-57.

their nest by lobbying to make Salmon Chase Secretary of the Treasury. After heavy lobbying by the Cookes, the Chase appointment was secured, and so Jay Cooke quickly set up his own investment banking house of Jay Cooke & Co.

Everything was in place; it now remained to seize the opportunity. As the Cooke's father wrote of Henry: "I took up my pen principally to say that H.S.'s [Henry's] plan in getting Chase into the Cabinet and [John] Sherman into the Senate is accomplished, and that now is the time for making money, by honest contracts out of the government."[117]

Now indeed was their time for making money, and Cooke lost no time in doing so. It did not take much persuasion, including wining and dining, for Cooke to induce his friend Chase to take an unprecendented step in the fall of 1862: granting the House of Cooke a monopoly on the underwriting of the public debt. With enormous energy, Cooke hurled himself into the task of persuading the mass of public to buy U.S. government bonds. In doing so, Cooke perhaps invented the art of public relations and of mass propaganda; certainly, he did so in the realm of selling bonds. As Kirkland writes:

> With characteristic optimism, he [Cooke] flung himself into a bond crusade. He recruited a small army of 2,500 subagents among bankers, insurance men, and community leaders and kept them inspired and informed by mail and telegraph. He taught the American people to buy bonds, using lavish advertising in newspapers, broadsides, and posters. God, destiny, duty, courage, patriotism -- all summoned "Farmers, Mechanics, and Capitalists" to invest in loans -- [118]

loans which of course they had to purchase from Jay Cooke.

And purchase the loans they did, for Cooke's bond sales soon reached the enormous figure of one to two million dollars a day. Perhaps $2 billion in bonds were bought and underwritten by Jay Cooke during the war. Cooke lost his monopoly

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[117] In Henrietta Larson, Jay Cooke, Private Banker (Cambridge: Harvard University Press, 1936), p. 103. Also see Edward C. Kirkland, Industry Comes of Age: Business, Labor and Public Policy, 1860-1897 (New York: Holt, Rinehart and Winston, 1961), p. 20.

[118] Kirkland, Industry, pp. 20-21.

in 1864, under pressure of rival bankers; but a year later he was reappointed, to keep that highly lucrative post until the House of Cooke crashed in the Panic of 1873.

In the Civil War, Jay Cooke began as a moderately successful promoter; he emerged at war's end a millionaire, a man who had spawned the popular motto, "as rich as Jay Cooke." Surely he must have counted the $100,000 he had poured into Salmon Chase's political fortunes by 1864 one of the most lucrative investments he had ever made.

It is not surprising that Jay Cooke acquired enormous political influence in the Republican Administration of the Civil War and after. Hugh McCulloch, Secretary of the Treasury from 1865 to 1869, was a close friend of Cooke's, and when McCulloch left office he assumed the post of head of Cooke's London office. The Cooke brothers were also good friends of General Grant, and so they wielded great influence during the Grant Administration.

No sooner had Cooke secured the monopoly of government bond underwriting than he teamed up with his associates Secretary of the Treasury Chase and Ohio's Senator John Sherman to drive through a measure which was destined to have far more fateful effects than greenbacks on the American monetary system: the National Banking Acts. The National Banking Acts destroyed the previous decentralized and fairly successful state banking system, and substituted a new, centralized and far more inflationary banking system under the aegis of Washington and a handful of Wall Street banks. Whereas the effects of the greenbacks were finally eliminated by the resumption of specie payments in 1879, the effects of the national banking system are still with us. Not only was this system in place until 1913, but it paved the way for the Federal Reserve System by instituting a quasi-central banking type of monetary system. The "inner contradictions" of the national banking system were such that the nation was driven either to go

onward to a frankly central bank or else to scrap centralized banking altogether and go back to decentralized state banking. Given the inner dynamic of state intervention to keep intensifying, coupled with the almost universal adoption of a statist ideology after the turn of the twentieth century, which course the nation would take was unfortunately inevitable.

Chase and Sherman drove the new system through under cover of war necessity, but it was designed to alter the banking system permanently. The wartime ground was to set up national banks which were so structured as to necessarily purchase large amounts of U.S. government bonds. Patterned after the "free" banking systems, this tied in the nation's banks with the federal government and the public debt in a close symbiotic relationship. The Jacksonian embarrassment of the independent treasury was de facto swept away, and the Treasury would now keep its deposits in a new series of "pets": the national banks, chartered directly by the federal government. In this way, the Republican Party was able to use the wartime emergency, coupled with the virtual disappearance of the Democrats from Congress, to fulfill the Whig-Republican dream of a centralized banking system, able to inflate the supply of money and credit in a uniform manner, controlled by the federal government. Meshing with this was a profound political goal: as Sherman expressly pointed out, a vital object of the national banking system was to eradicate the embarrassing doctrine of state's rights, and to nationalize American politics.[119]

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[119] In his important work on Northern intellectuals and the Civil War, George Fredrickson discusses an influential article by one Samuel Fowler written at the end of the war: "' The Civil War which has changed the current of our ideas, and crowded into a few years the emotions of a lifetime,' Fowler wrote, 'has in measure given to the preceding period of our history the character of a remote state of political existence.' Fowler described the way in which the war, a triumph of nationalism and a demonstration of 'the universal tendency to combination,' had provided the coup de grace for the Jefferson philosophy of government with its emphasis on decentralization and the protection of local and individual liberties." George Frederickson, The Inner Civil War: Northern Intellectuals and the Crisis of the Union (New York: Harper & Row, 1965), p. 184. Also see Merrill D. Peterson, The Jeffersonian Image in the American Mind (New York: Oxford University Press, 1960), pp. 217-218.

As established in the Bank Acts of 1863 and 1864, the national banking system provided for the chartering of national banks by the Comptroller of the Currency in Washington, D.C. The banks were "free" in the sense that any institution meeting the requirements could obtain a charter, but the requirements were so high (from $50,000 for rural banks to $200,000 in the bigger cities) that small national banks were ruled out, particularly in the large cities.[120]

The national banking system created three sets of national banks: central reserve city, which was only New York; reserve city, other cities with over 500,000 population; and country, which included all other national banks.

Central reserve city banks were required to keep 25% of their notes and deposits in reserve of vault cash or "lawful money," which included gold, silver, and greenbacks. This provision incorporated the "reserve requirement" concept which had been a feature of the "free" banking system. Reserve city banks, on the other hand, were allowed to keep one-half of their required reserves in vault cash, while the other half could be kept as demand deposits (checking deposits) in central reserve city banks. Finally, country banks only had to keep a minimum reserve ratio of 15% to their notes and deposits; and only 40% of these reserves had to be in the form of vault cash. The other 60% of the country banks' reserves could be in the form of demand deposits either at the reserve city or central reserve city banks.

The upshot of this system was to replace the individualized structure of the pre-Civil War state banking system by an inverted pyramid of country banks expanding on top of reserve city banks, which in turn expanded on top of New York city banks. Before the Civil War, every bank had to keep its own specie reserves,

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120 For a particularly lucid exposition of the structure of the national banking system, see John J. Klein, Money and the Economy (2nd Ed., New York: Harcourt, Brace and World, 1970), pp. 140-147.

and any pyramiding of notes and deposits on top of that was severely limited by calls for redemption in specie by other, competing banks as well as by the general public. But now, reserve city banks could keep half of their reserves as deposits in New York City banks, and country banks could keep most of theirs in one or the other, so that as a result, all the national banks in the country could pyramid in two layers on top of the relatively small base of reserves in the New York banks. And furthermore, those reserves could consist of inflated greenbacks as well as specie.

A simplified schematic diagram can portray the essence of this revolution in American banking:

Figure 1

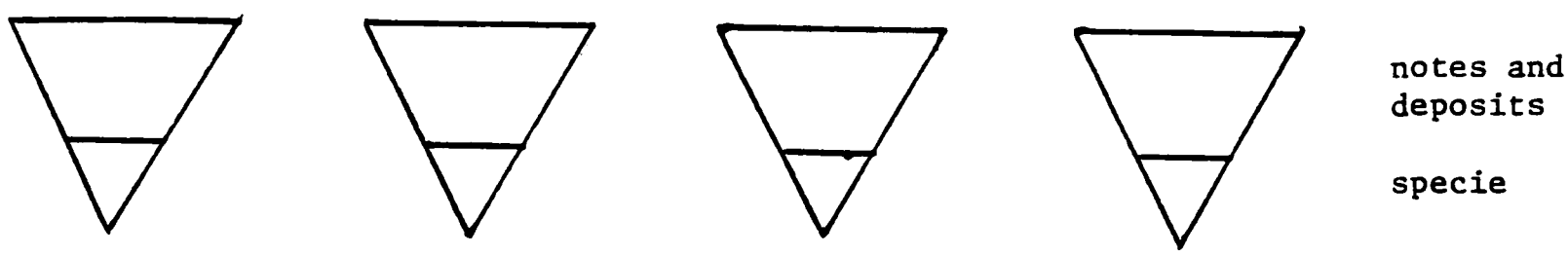

Figure 1 shows state banks in the decentralized system before the Civil War. Every bank must stand or fall on its bottom. It can pyramid notes and deposits on top of specie, but its room for such inflationary expansion is limited, because any bank's expansion will cause increased spending by its clients on the goods or services of other banks. Notes or checks on the expanding bank will go into the coffers of other banks, which will call on the expanding bank for redemption. This will put severe pressure on the expanding bank, which cannot redeem all of its liabilities as it is, and whose reserve ratio has declined, and so it will be forced to contract its loans and liabilities or else go under.

Figure 2

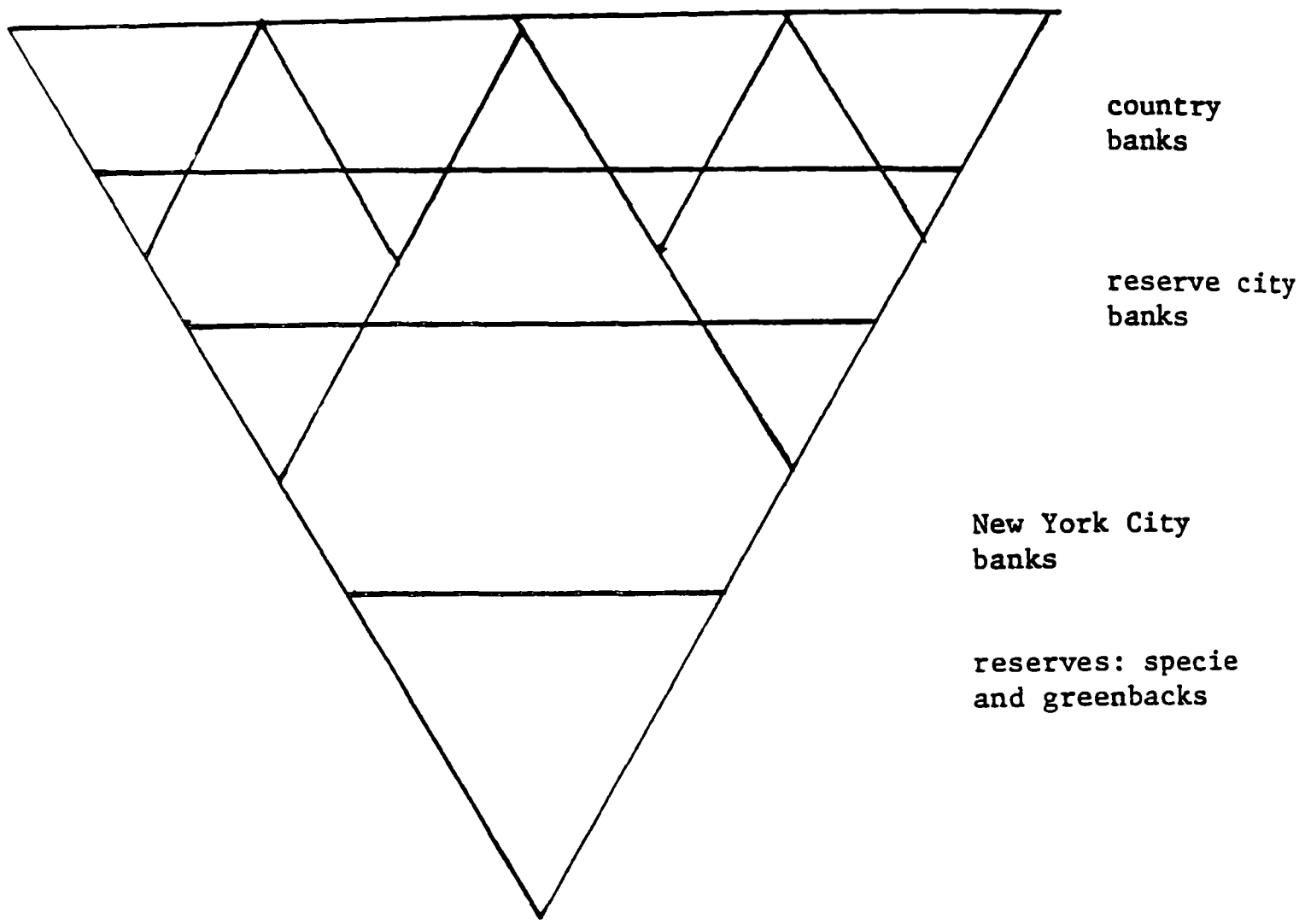

Figure 2 depicts the inverted pyramid of the national banking system. New York City banks pyramid notes and deposits on top of specie and greenbacks; reserve city banks pyramid their notes and deposits on top of specie, greenbacks and deposits at New York City; and country banks pyramid on top of both. This means that, for example, if New York City banks inflate and expand their notes and deposits, they will not be checked by other banks calling upon them for redemption. Instead, reserve city banks will be able to expand their own loans and liabilities by pyramiding on top of their own increased deposits at New York banks. In turn, the country banks will be able to inflate their credit by

pyramiding on top of their increased deposits at both reserve city and New York banks. The whole nation is able to inflate uniformly and relatively unchecked by pyramiding on top of a few New York City banks.

The national banks were not compelled to keep part of their reserves as deposits in larger banks, but they tended to do so -- in the long run, so that they could expand uniformly on top of the larger banks, and in the short run because of the advantages of having a line of credit with a larger "correspondent" bank as well as earning interest on demand deposits at that bank.[121]

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[121] Banks generally paid interest on demand deposits until the practice was outlawed in 1934.

Let us illustrate in another way how the national banking system pyramided by centralizing reserves. Let us consider the hypothetical balance sheets of the various banks.[122] Suppose that the country banks begin with $1 million in vault cash as their reserves. With the national bank system in place, the country banks can now deposit three-fifths, or $600,000 of their cash in reserve city banks, in return for interest-paying demand deposits at those banks.

The balance-sheet changes are now as follows:

Country Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	-$600,000		
Deposits at Reserve City banks	+$600,000		

Reserve City Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	+$600,000	Demand deposits due country banks	+$600,000

Total reserves for the two sets of banks have not changed. But now because the country banks can use as their reserves deposits in reserve city banks, the same total reserves can now be used by the banks to expand far more

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122 Adapted from Klein, Money and the Economy, pp. 144-145.

of their credit. For now $400,000 in cash supports the same total of notes and deposits that the country banks had previously backed by $1 million, and the reserve city banks can now expand $2.4 million on top of the new $600,000 in cash -- or rather, $1.8 million in addition to the $600,000 due to the city banks. In short, country bank reserves have remained the same, but reserve city bank reserves have increased by $600,000, and they can engage in 4:1 pyramiding of credit on top of that.

But that is not all. For the reserve city banks can deposit half of their reserves at the New York banks. When they do that, the balance sheets of the respective banks change as follows:

Reserve City Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	+$300,000		
		Demand deposits due country banks	+$600,000
Deposits at central reserve city banks	+$300,000		

Central Reserve City Banks

Assets		Liabilities + Equity	
Reserves			
Vault cash	+$300,000	Demand deposits due reserve city banks	+$300,000

Note that since the reserve city banks are allowed to keep half of their reserves in the central reserve city banks, the former can still pyramid $2.4 million on top of their new $600,000, and yet deposit $300,000 in cash at the New York banks. The latter, then, can expand another 4:1 on top of the new cash of $300,000, or increase their total notes and deposits to $1.2 million.

In short, not only did the national banking system allow pyramiding of the entire banking structure on top of a few large Wall Street banks, in addition, the very initiating of the system allowed a multiple expansion of all bank liabilities by centralizing a large part of the nation's cash reserves from the individual state banks into the hands of the larger, and especially the New York, banks. For the expansion of $1.2 million on top of the new $300,000 at New York banks, served to expand the liabilities going to the smaller banks, which in turn could pyramid on top of their increased deposits. But even without that further expansion, $1 million which, we will assume, originally supported $6 million in notes and deposits, will now support, in addition to that $6 million, $2.4 million issued by the reserve city banks, and $1.2 million by the New York Banks--to say nothing of further expansion by the latter two sets of banks which will allow country banks to pyramid more liabilities.

In June 1874, the fundamental structure of the national banking system was changed when Congress, as part of an inflationist move after the Panic of 1873, eliminated all reserve requirements on notes, keeping them only on deposits. This released over $20 million of lawful money from bank reserves, and allowed a further pyramiding of demand liabilities.[123] In the long run, it severed the treatment of notes from deposits, with notes tied rigidly to bank holdings of government debt, and demand deposits pyramiding on top of reserve ratios in specie and greenbacks.

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[123] See Hepburn, History of Currency, pp. 317-318.

But this centralized inverse pyramiding of bank credit was not all. For, in a way modeled by the "free" banking system, every national bank's expansion of notes was tied intimately to its ownership of U.S. Government bonds. Every bank could only issue notes if it deposited an equivalent of U.S. securities as collateral at the U.S. Treasury, [124] so that national banks could only expand their notes to the extent that they purchased U.S. Government bonds. This provision tied the national banking system intimately to the federal government, and, more particularly, to its expansion of public debt. The federal government had an assured, built-in market for its debt, and the more the banks purchased that debt, the more the banking system could inflate. Monetizing the public debt was not only inflationary per se, it provided the basis -- when done by the larger city banks -- of other banks pyramiding on top of their own monetary expansion.

The tie-in and the pyramiding process were cemented by several other provisions. Every national bank was obliged to redeem the obligations of every other national bank at par. Thus, the severe market limitation on the circulation of inflated notes and deposits -- depreciation as the distance from the bank increases -- was abolished. And while the federal government could not exactly make the notes of a private bank legal tender, it conferred quasi-legal tender status on every national bank by agreeing to receive all its notes and deposits at par for dues and taxes.[125]

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[124] Originally, national banks could only issue notes to the value 90 per cent of its U.S. Government bonds. This limitation was changed to 100 per cent in 1900.

[125] Except, of course, as we have seen with the greenbacks, for payment of customs duties, which had to be paid in gold, to build up a fund to pay interest on the government debt in gold.

It is interesting and even heartening to discover that, despite these enormous advantages conferred by the federal government, national bank notes fell below par with greenbacks in the financial crisis of 1867, and a number of national banks failed the next year.[126]

Genuine redeemability, furthermore, was made very difficult under the national banking system. Laxity was insured by the fact that national banks were required to redeem the notes and deposits of every other national bank at par, and yet it was made difficult for them to actually redeem those liabilities in specie; for one of the problems with the pre-Civil War state banking system is that interstate or even intrastate branches were illegal, thereby hobbling the clearing system for swiftly redeeming another bank's notes and deposits. One might think that a national banking system would at least eliminate this problem, but on the contrary, branch banking continued to be prohibited, and interstate branch banking is illegal to this day. A bank would only have to redeem its notes at its own counter in its home office. Furthermore, the redemption of notes was crippled by the fact that the federal government imposed a maximum limit of $3 million a month by which national bank notes could be contracted.[127]

Reserve requirements are now considered a sound and precise way to limit bank credit expansion, but the precision can work two ways. Just as government safety codes can <u>decrease</u> safety by setting a lower limit for safety measures and inducing private firms to reduce safety <u>downward</u> to that common level, so reserve

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[126] See Smith, <u>Rationale</u>, p. 48.

[127] See Smith, <u>Rationale</u>, p. 132.

requirements can and ordinarily do serve as lowest common denominators for bank reserve ratios. Free competition can and generally will result in banks voluntarily keeping higher reserve ratios. But a uniform legal requirement will tend to push all the banks down to that minimum ratio. And indeed we can see this now in the universal propensity of all banks to be "fully loaned up," that is, to expand as much as is legally possible up to the limits imposed by the legal reserve ratio. Reserve requirements of less than 100 per cent are more an inflationary than a restrictive monetary device.

The national banking system was intended to replace the state banks, but many state banks continued aloof and refused to join, despite the special privileges accorded to the national banks. The reserve and capital requirements were more onerous, and at that period, national banks were prohibited from making loans on real estate. With the state banks refusing to come to heel voluntarily, Congress, in March 1865, completed the Civil War revolution of the banking system by placing a prohibitive 10 per cent tax on all bank notes -- which had the desired effect of virtually outlawing all note issues by the state banks. From 1865 on, the national banks had a legal monopoly on the issue of bank notes.

At first, the state banks contracted and disappeared under the shock, and it looked as if the United States would only have national banks. The number of state banks fell from 1,466 in 1863 to 297 in 1866, and total notes and deposits in state banks fell from $733 million in 1863 to only $101 million in 1866. After several years, however, the state banks readily took their place as an expanding element in the banking system, albeit subordinated to the national banks. In order to survive, the state banks had to keep deposit accounts at national banks, from whom they could "buy" national bank notes in order to redeem their deposits. In short, the state banks now became the fourth layer of the national pyramid of money and credit, on top of the country and other banks, for the reserves of the

state banks became, in addition to vault cash, demand deposits at national banks, which they could redeem in cash. The multi-layered structure of bank inflation under the national banking system was intensified.

In this new structure, the state banks began to flourish. By 1873, the total number of state banks had increased to 1,330, and their total deposits were $789 million. [128]

The Cooke-Chase connection with the new national banking system was simple. As Secretary of the Treasury, Chase wanted an assured market for the government bonds that were being issued so heavily during the Civil War. And as the monopoly underwriter of U.S. Government bonds for every year except one from 1862 to 1873, Jay Cooke was even more directly interested in an assured and expanding market for his bonds. What better method of obtaining such a market than creating an entirely new banking system, the expansion of which was directly tied to the banks' purchase of government bonds -- from Jay Cooke?

The Cooke brothers played a major role in driving the National Banking Act of 1863 through a reluctant Congress. The Democrats, devoted to hard-money, opposed the legislation almost to a man. Only a majority of Republicans could be induced to agree on the bill. After John Sherman's decisive speech in the Senate for the measure, Henry Cooke -- now head of the Washington office of the House of Cooke -- wrote jubilantly to his brother: "It will be a great triumph, Jay, and one to which we have contributed more than any other living man. The bank had been repudiated by the House, and was without a sponsor in the Senate, and was thus virtually dead and buried when I induced Sherman to take hold of it, and we went to work with the newspapers." [129]

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[128] Historical Statistics, pp. 628-629.

[129] Quoted in Robert P. Sharkey, Money, Class and Party: An Economic Study of Civil War and Reconstruction, (Baltimore: Johns Hopkins Press, 1959), p. 245.

Going to work with the newspapers meant something more than mere persuasion for the Cooke brothers; for as monopoly underwriter of government bonds, Cooke was paying the newspapers large sums for advertising, and so the Cookes thought -- as it turned out correctly -- that they could induce the newspapers to grant them an enormous amount of free space "in which to set forth the merits of the new national banking system." Such space meant not only publicity and articles, but even more important, the fervent editorial support of most of the nation's press. And so the press, implicitly bought for the occasion, kept up a drumfire of propaganda for the new national banking system. As Cooke himself related: "For six weeks or more nearly all the newspapers in the country were filled with our editorials [written by the Cooke brothers] condemning the state bank system and explaining the great benefits to be derived from the national banking system now proposed." And every day the indefatigable Cookes put on the desks of every Congressman the relevant editorials from newspapers in their respective districts.[130]

While many state bankers, especially the conservative old-line New York bankers, opposed the national banking system, Jay Cooke, once the system was in place, plunged in with a will. Not only did he sell the national banks their required bonds, he also set up new national banks which would have to buy his government securities. His agents formed national banks in the smaller towns of the South and West. Furthermore, he set up his own two large national banks, the First National Bank of Philadelphia and the First National Bank of Washington, D.C.

But the national banking system was in great need of a mighty bank in New York City to serve as the base of the inflationary pyramid for a host of country and reserve city banks. Shortly after the inception of the system, three national

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[130] See Hammond, Sovereignty pp. 289-290.

banks had been organized in New York, but none of them was large or prestigious enough to serve as the key fulcrum of the new banking structure. Jay Cooke, however, was happy to oblige, and he quickly established the Fourth National Bank of New York, capitalized at a huge $5 million. After the war, Jay Cooke favored resumption of specie payments, but only if greenbacks could be replaced one-to-one by new national bank notes. In his unbounded enthusiasm for national bank notes and their dependence on the federal debt, Cooke urged repeal of the $300 million legal limit on national bank note issue. In 1865, he published a pamphlet proclaiming that in less than 20 years national bank note circulation would total $1 billion. [131]

The title of the pamphlet Cooke published is revealing: How Our National Debt May Be A National Blessing. The Debt is Public Wealth, Political Union, Protection of Industry, Secure Basis for National Currency. [132]

By 1866, it was clear that the national banking system had replaced the state banks as the center of the monetary system of the United States. Only a year earlier, in 1865, state bank notes had totaled $142.9 million; by 1866 they had collapsed to $20 million. On the other hand, national bank notes grew from a mere $31.2 million in 1864, their first year of existence, to $276 million in 1866. And while, as we have seen, the number of state banks in existence was falling drastically from 1466 to 297, the number of national banks grew from 66 in 1863 to 1,634 three years later.

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[131] Actually, Cooke erred, and national bank notes never reached that total. Instead, it was demand deposits that expanded, and reached the billion-dollar mark by 1879.

[132] See Sharkey, Money, Class, and Party, p. 247.

The Post-Civil War Era: 1865-1879

The United States ended the war with a depreciated inconvertible greenback currency, and a heavy burden of public debt. The first question on the monetary agenda was what to do about the greenbacks. A powerful group of industrialists calling for continuation of greenbacks, opposing resumption and, of course, any contraction of money to prepare for specie resumption, was headed by the Pennsylvania iron and steel manufacturers. The Pennsylvania iron masters, who had been in the forefront of the organized protective tariff movement since its beginnings in 1820, [133] were led here and instructed by their intellectual mentor -- himself a Pennsylvania iron master -- the elderly economist Henry C. Carey. Carey and his fellow iron manufacturers realized that during an inflation, since the foreign exchange market anticipates further inflation, domestic currency tends to depreciate faster than domestic prices are rising. A falling dollar and rising price of gold, they realized, make domestic prices cheaper and imported prices higher, and hence functions as a surrogate tariff. A cheap money, inflationist policy, then, could not only provide easy credit for manufacturing, it could also function as an extra tariff because of the depreciation of the dollar and the rise in the gold premium.

Imbibers of the Carey gospel of high tariffs and soft money were a host of attendees at the famous "Carey Vespers" -- evenings of discussion of economics and politics. Influential Carey disciples included: economist and Pennsylvania ironmaster Stephen Colwell; Eber Ward, president of the Iron and Steel Association; John A. Williams, editor of the Association's journal Iron Age; Rep. Daniel Morrell, Pennsylvania iron manufacturer; I. Smith Homans, Jr., editor of the

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[133] The leader of the protectionists in Congress in 1820 was Representative Henry Baldwin, a leading iron manufacturer from Pittsburgh. Rothbard, Panic of 1819, pp. 164ff.

Bankers' Magazine; and the powerful Rep. William D. Kelley of Pennsylvania, whose lifelong devotion to the interest of the ironmasters earned him the proud sobriquet of "Old Pig Iron." The Carey circle also dominated the American Industrial League and its successor, the Pennsylvania Industrial League, which spread the Carey doctrines of protection and paper money. Influential allies in Congress, if not precisely Carey followers, were the Radical leader Rep. Thaddeus Stevens, himself a Pennsylvania ironmaster, and Rep. John A. Griswold, an ironmaster from New York.

Also sympathetic to greenbacks were many manufacturers who desired cheap credit, gold speculators who were betting on higher gold prices, and railroads, who as heavy debtors to their bondholders, realized that inflation benefits debtors by cheapening the dollar whereas it also tends to expropriate creditors by the same token. One of the influential Carey disciples, for example, was the leading railroad promoter, the Pennsylvanian Thomas A. Scott, leading entrepreneur of the Pennsylvania and Texas & and Pacific Railroads. [134]

One of the most flamboyant advocates of greenback inflation in the post-war era was the Wall Street stock speculator Richard Schell. In 1874, Schell became a member of Congress, where he proposed an outrageous pre-Keynesian scheme in the

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[134] On the Carey circle and its influence, see Irwin Unger, The Greenback Era: A Social and Political History of American Finance, 1865-1879 (Princeton: Princeton University Press, 1964), pp. 53-59; and Joseph Dorfman, The Economic Mind in American Civilization, Vol. III, 1864-1918 (New York: Viking Press, 1949), pp. 7-8. Dorfman notes that Kelley dedicated his collected Speeches, Addresses and Letters of 1872 to "The Great Master of Economic Science, the Profound Thinker, and the Careful Observer of Social Phenomena, My Venerable Friend and Teacher, Henry C. Carey." Ibid., p. 8. On the link between high tariffs and greenbacks for the Pennsylvania ironmasters, see Sharkey, Money, Class and Party, Ch. IV.

spirit of Keynes' later dictum that so long as money is spent, it doesn't matter what the money is spent on, be it pyramid-building or digging holes in the ground.[135] Schell seriously urged the federal government to dig a canal from New York to San Francisco, financed wholly by the issue of greenbacks. Schell's enthusiasm was perhaps only matched by the notorious railroad speculator and economic adventurer George Francis Train, who called repeatedly for immense issues of greenbacks. "Give us greenbacks we say," Train thundered in 1867, "and build cities, plant corn, open coal mines, control railways, launch ships, grow cotton, establish factories, open gold and silver mines, erect rolling mills....Carry my resolution and there is sunshine in the sky." [136]

The Panic of 1873 was a severe blow to many overbuilt railroads, and it was railroad men who led in calling for more greenbacks to stem the tide. Thomas Scott, Collis P. Huntington, leader of the Central Pacific Railroad, Russel Sage, and other railroad men joined in the call for greenbacks. So strong was their influence that the Louisville Courier-Journal, in April 1874, declared: "The strongest influence at work in Washington upon the currency proceeded from the railroads....The great inflationists after all, are the great trunk railroads." [137]

The greenback problem after the Civil War was greatly complicated by the massive public debt which lay over the heads of the American people. A federal debt, which had tallied only $64.7 million in 1860, amounted to the huge amount of $2.32 billion in 1866. Many ex-Jacksonian Democrats, led by Senator George H.

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[135] Thus, Keynes wrote: "'To dig holes in the ground,' paid for out of savings will increase, not only employment, but the real national dividend of useful goods and services." John Maynard Keynes, The General Theory of Employment Interest and Money (New York: Harcourt, Brace, 1936), p. 220. On pyramid-building, see ibid., pp. 220 and 131.

[136] Unger, Greenback Era, pp. 45-58.

[137] Unger, Greenback Era, p. 222.

Pendleton of Ohio, began to agitate for further issue of greenbacks solely for the purpose of redeeming the principal of federal debts contracted in greenbacks during the war.[138] In a sense, then, hard-money hostility to both inflation and the public debt were now at odds. In a sense, the Pendletonians were motivated by a sense of poetic justice, of paying inflated debts in inflated paper, but in doing so they lost sight of the broader hard money goal.[139] This program confused the party struggles of the post-Civil War period, but ultimately it is safe to say that the Democrats had a far greater proportion of Congressmen devoted to hard money and to resumption than did the Republicans. Thus, Secretary of the Treasury Hugh McCulloch's Loan Bill of March 1866, which provided for contraction of greenbacks in preparation for resumption of specie payments, was passed in the House by a Republican vote of 56-52, and a Democratic vote of 27-1. And in April, 1874, the "Inflation Bill," admittedly vetoed later by President Grant, which provided for expansion of greenbacks and of national bank notes, was passed in the House by a Republican vote of 105 to 64, while the Democrats voted against by the narrow margin of 35 to 37.[140]

In the meantime, despite repeated resolutions for resumption of specie payments in 1865 and 1869, the dominant Republican Party continued to do nothing for actual resumption. The Pendleton Plan was adopted by the Democrats in their 1868 platform, and the Republican victory in the presidential race that year was generally taken as a conclusive defeat for that idea. Finally, however, the Democratic sweep in the Congressional elections of 1874 forced the Republicans into a semblance of unity on monetary matters, and, in the lame duck Congressional

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138 The federal government had contracted to redeem the interest on the wartime public debt in gold, but nothing was contracted about the repayment of the principal.

139 Similar motivations had impelled many hard-money anti-Federalists during the 1780's to advocate the issue of state paper money for the sole purpose of redeeming swollen wartime public debts.

140 On the McCulloch Loan Bill, see Sharkey, Money, Class, and Party p. 75; on the Inflation Bill, see Unger, Greenback Era, p. 410.

session, led by Senator John Sherman, they came up with the Resumption Act of January 1875.

Despite the fact that the Resumption Act ultimately resulted in specie resumption, it was not considered a hard-money victory by contemporaries. For Sherman had forged a compromise between hard and soft money forces. It is true that the U.S. government was supposed to buy gold with government bonds to prepare for resumption on January 1, 1879. But this resumption was four years off, and Congress had expressed intent to resume several times before. And in the meantime, the soft money men were appeased by the fact that the bill immediately eliminated the $300 million limit on national bank notes, in a provision known as "free banking." The only hard-money compensation was an 80% pro-rata contraction of greenbacks to partially offset any new national bank notes. [141] The bulk of the opposition to the Resumption Act was by hard-money Congressmen, who, in addition to pointing out its biased ambiguities, charged that the contracted greenbacks could be reissued instead of retired. Hard-money forces throughout the country had an equally scornful view of the Resumption Act. In a few years, however, they rallied as resumption drew near.

That the Republicans were generally less than enthusiastic about specie resumption was revealed by the Grant Administration's reaction to the Supreme Court's decision in the first Legal Tender Case. After the end of the war, the question of the constitutionality of legal tender came before the courts (we have seen the California and Oregon courts decided irredeemable paper to be unconstitutional). In the large number of state court decisions on greenbacks before 1870, every Republican judge but one upheld their constitutionality, whereas every

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[141] This political and compromise interpretation of the Resumption Act successfully revises the previous hard-money view of this measure. See Unger, Greenback Era, pp. 249-263.

Democratic judge but two declared them unconstitutional.[142]

The greenback question reached the U.S. Supreme Court in 1867, and was decided in February 1870, in the case of Hepburn vs. Griswold. The Court held, by a vote of 5 to 3, with all the Democratic judges voting with the majority and the Republicans in the minority. Chief Justice Salmon P. Chase, who delivered the decision denouncing his own action as Secretary of the Treasury as unnecessary and unconstitutional, had swung back to the Democratic Party and had actually been a candidate for the presidential nomination at the 1868 convention.

The Grant Administration was upset by Hepburn vs. Griswold, as were the railroads, who had accumulated a heavy long-term debt which would now be payable in more valuable gold. As luck would have it, however, there were two vacancies on the Court, one of which was created by the retirement of one of the majority judges. Grant appointed not only two Republican judges, but two railroad lawyers whose views on the subject were already known.[143] The new 5-4 majority dutifully and quickly reconsidered the question, and, in May 1871, reversed the previous Court in the fateful decision of Knox vs. Lee. From then on, paper money would be held consonant with the U.S. Constitution.

The national banking system was ensconced after the Civil War. The number of banks, national bank notes, and deposits all pyramided upward, and after 1870, state banks began to boom as deposit-creating institutions. With lower requirements

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[142] See Charles Fairman, "Mr. Justice Bradley's Appointment to the Supreme Court and the Legal Tender Cases," Harvard Law Review (May 1941), p. 1131; cited in Unger, Greenback Era, p. 174.

[143] The first new justice, William Strong of Pennsylvania, had been a top attorney for the Philadelphia and Reading Railroad, and a director of the Lebanon Valley Railroad. The second jurist, Joseph P. Bradley, was a director of the Camden and Amboy Railroad and of the Morris and Essex Railroad, in New Jersey. On the railroad ties of Strong and Bradley, see Philip H. Burch, Jr., Elites in American History, Vol. II, The Civil War to the New Deal, (New York: Holmes & Meier, 1981), pp. 44-45. On the reaction of the Grant Administration, see Unger, Greenback Era, pp. 172-178. For a legal analysis of the decisions see Hepburn, History of Currency, pp. 254-264; and Henry Mark Holzer, ed., Government's Money Monopoly (New York: Books in Focus, 1981), pp. 99-168.

and fewer restrictions than the national banks, they could pyramid on top of national banks. The number of national banks increased from 1294 in 1865 to 1968 in 1873, while the number of state banks rose from 349 to 1330 in the same period. Total state and national bank notes and deposits rose from $835 million in 1865 to $1.964 billion in 1873, an increase of 135.2% or an increase of 16.9% per year. The following year, the supply of bank money leveled off, as the Panic of 1873 struck, and caused numerous bankruptcies.

As a general overview of the national banking period, we can agree with Klein that "The financial panics of 1873, 1884, 1893, and 1907 were in large part an outgrowth of...reserve pyramiding and excessive deposit creation by reserve city and central reserve city banks. These panics were triggered by the currency drains that took place in periods of relative prosperity when banks were loaned up." [144] And yet, it must be pointed out that the total money supply, even merely the supply of bank money, did not decrease after the Panic, but merely levelled off.

Orthodox economic historians have long complained about the "Great Depression" that is supposed to have struck the United States in the Panic of 1873 and lasted for an unprecedented six years in 1879. Much of this stagnation is supposed to have been caused by a monetary contraction leading to the resumption of specie payments in 1879. Yet what sort of "depression" is it which saw an extraordinarily large expansion of industry, of railroads, of physical output, of net national product, or real per capital income? As Friedman and Schwartz admit, the decade 1869 to 1879 saw a 3.0% per annum increase in money national product, an outstanding real national product growth of 6.8% per year in this period, and a phenomenal rise of 4.5% per year in real product per capita. Even the alleged

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[144] Klein, Money and the Economy, pp. 145-146.

"monetary contraction" never took place, the money supply increasing by 2.7% per year in this period. From 1873-1878, before another spurt of monetary expansion, the total supply of bank money rose from $1.964 billion to $2.221 billion -- a rise of 13.1%, or 2.6% per year. In short, a modest but definite rise, and scarcely a contraction.

It should be clear, then, that the Great Depression of the 1870's is merely a myth -- a myth brought about by the misinterpretation of the fact that prices in general fell sharply during the entire period. Indeed they fell from the end of the Civil War until 1879. Friedman and Schwartz estimated that prices in general fell, from 1869 to 1879 by 3.8% per annum. Unfortunately, most historians and economists are conditioned to believe that steadily and sharply falling prices must result in depression: hence their amazement at the obvious prosperity and economic growth during this era. For they have overlooked the fact that, in the natural course of events, when government and the banking system do not increase the money supply very rapidly, free market capitalism will result in an increase of production and economic growth so great as to swamp the increase of money supply. Prices will fall, and the consequences will be, not depression or stagnation, but prosperity (since costs are falling, too) economic growth, and the spread of the increased living standard to all the consumers.[145]

Indeed, recent research has discovered that the analogous "Great Depression" in England in this period was also a myth, and due to a confusion between a contraction of prices and its alleged inevitable effect on a depression of prices and its alleged inevitable effect on a depression of business activity.[146]

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[145] For the bemusement of Friedman and Schwartz, see Milton Friedman and Anna Jacobson Schwartz, A Monetary History of the United States, 1867-1960 (New York: National Bureau of Economic Research, 1963), pp. 33-44. On totals of bank money, see Historical Statistics, pp. 624-625.

[146] S.B. Saul, The Myth of the Great Depression, 1873-1896 (London: Macmillan, 1969).

It might well be that the major effect of the Panic of 1873 was, not to initiate a Great Depression, but to cause bankruptcies in overinflated banks and in railroads riding on the tide of vast government subsidy and bank speculation. In particular, we may note Jay Cooke, one of the creators of the national banking system and paladin of the public debt. In 1866, he favored contraction of the greenbacks and early resumption because he feared that inflation would destroy the value of government bonds. By the late 1860's, however, the House of Cooke was expanding everywhere, and in particular had gotten control of the new Northern Pacific Railroad. Northern Pacific had been the recipient of the biggest federal largesse to railroads during the 1860's: a land grant of no less than 47 million acres.

Cooke sold Northern Pacific bonds as he had learned to sell government securities: hiring pamphleteers to write propaganda about the alleged Mediterranean climate of the Northwest. Many leading government officials and politicians were on the Cooke/Northern Pacific payroll, including President Grant's private secretary, General Horace Porter.

In 1869, Cooke expressed his monetary philosophy in keeping with his enlarged sphere of activity: "Why," he asked, "should this Grand and Glorious Country be stunted and dwarfed -- its activities chilled and its very life blood curdled by these miserable 'hard coin' theories -- the musty theories of a bygone age -- These men who are urging on premature resumption know nothing of the great and growing west which would grow twice as fast if it was not cramped for the means necessary to build railroads and improve farms and convey the produce to market."

But in 1873, a remarkable example of poetic justice struck Jay Cooke. The overbuilt Northern Pacific was crumbling, and a Cooke government bond operation proved a failure. So the mighty House of Cooke -- "stunted and dwarfed" by the market economy -- crashed and went bankrupt, touching off the Panic of 1873.[147]

After passing the Resumption Act in 1875, the Republicans finally stumbled their way into resumption in 1879, fully fourteen years after the end of the Civil War. The money supply did not contract in the late 1870's because the Republicans did not have the will to contract in order to pave the way for resumption. Resumption was finally achieved after substantial sales of U.S. bonds for gold in Europe by Secretary of the Treasury Sherman.

Return to the gold standard in 1879 was almost blocked, in the last three years before resumption, by the emergence of a tremendous agitation, heavily in the West but also throughout the country, for the free coinage of silver. The United States mint ratios had been undervaluing silver since 1834, and in 1853 de facto gold monometallism was established because silver was so far undervalued as to drive fractional silver coins out of the country. Since 1853, the United States, while de jure on a bimetallic standard at 16:1, with the silver dollar still technically in circulation though non-existent, was actually on a gold monometallic standard with lightweight subsidiary silver coins for fractional use.

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147 Unger, Greenback Era, pp. 46-47, 221.

In 1872, it became apparent to a few knowledgeable men at the U.S. Treasury that silver, which had held at about 15.5 to 1 since the early 1860's was about to suffer a huge decline in value. The major reason was the realization that European nations were shifting from a silver to a gold standard, thereby decreasing their demand for silver. A subsidary reason was the discovery of silver mines in Nevada and other states in the Mountain West. Working rapidly, these Treasury men, along with Senator Sherman, slipped through Congress in February 1873, a seemingly innocuous bill which in effect discontinued the minting of any further silver dollars. This was followed by an act of June, 1874, which completed the demonetization of silver by ending the legal tender quality of all silver dollars above the sum of $5. The timing was perfect, since it was in 1874 that the market value of silver fell to greater than 16:1 to gold for the first time. From then on, the market price of silver fell steadily, declining to nearly 18:1 in 1876, over 18:1 in 1879, and reaching the phenomenal level of 32:1 in 1894.

In short, after 1874, silver was no longer undervalued, but overvalued, and increasingly so, in terms of gold at 16:1. Except for the acts of 1873 and 1874, labelled by the pro-silver forces as "The Crime of 1873," silver would have flowed into the United States, and the country would have been once again on a de facto monometallic silver standard. The champions of greenbacks, the champions of inflation, saw a "hard-money" way to increase greatly the amount of American currency: the remonetization of a flood of new overvalued silver. The agitation was to remonetize silver by "the free and unlimited coinage of silver at 16 to 1."

It should be recognized that the silverites had a case. The demonetization of silver was a "crime" in the sense that it was done shiftily, deceptively,

by men who knew that they wanted: to demonetize silver before it was too late and silver would replace gold. The case for gold over silver was a strong one, particularly in an era of rapidly falling value of silver, but it should have been made openly and honestly. The furtive method of demonetizing silver, the "crime against silver," was in part responsible for the vehemence of the silver agitation for the remainder of the century.[148]

Ultimately, the Administration was able to secure the resumption of payments in gold, but at the expense of submitting to the Bland-Allison Act of 1878, which mandated that the Treasury purchase $2-$4 million of silver per month from then on.

It should be noted that this first silver agitation of the late 1870's, at least, cannot be considered an "agrarian" or a particularly southern and western movement. The silver agitation was broadly based throughout the nation, except in New England, and was, moreover, an urban movement. As Weinstein points out:

> Silver began as an urban movement, furthermore, not an agrarian crusade. Its original strongholds were the large towns and cities of the Midwest and middle Atlantic states, not the country's farming communities. The first batch of bimetallist leaders were a loosely knit collection of hard money newspaper editors, businessmen, academic reformers, bankers, and commercial groups.[149]

With the passage of the Silver Purchase Act of 1878, silver agitation died out in America, to spring out again in the 1890's.

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[148] For the best discussion of the crime against silver, see Allen Weinstein, Prelude to Populism: Origins of the Silver Issue, 1867-1878 (New Haven: Yale University Press, 1970), pp. 8-32. Also see Paul M. O'Leary, "The Scene of the Crime of 1873 Revisited: A Note," Journal of Political Economy, Vol. 68 (1960), pp. 388-392.

[149] Weinstein, Prelude to Populism, p. 356.

The Gold Standard Era with the National Banking System, 1879-1913

The record of 1879-1896 is very similar to the first stage of the alleged "Great Depression," from 1873 to 1879. Once again, we have a phenomenal expansion of American industry, production, and real output per head. Real reproducible tangible wealth per capita rose at the decadel peak in American history in the 1880's, at 3.8% per annum. Real net national product rose at the rate of 3.7% per year from 1879 to 1897, while per capita net national product increased by 1.5% per year.

Once again, orthodox economic historians are bewildered; for there should have been a "Great Depression," since prices fell at a rate of over 1 percent per year in this period. Just as in the previous period, the money supply grew, but not fast enough to overcome the great increase in productivity and the supply of products. The major difference in the two periods is that money supply rose more rapidly from 1879-1897, by 6% per year, compared to the 2.7% per year in the earlier era. As a result, prices fell by less, by over 1 per cent per annum as contrasted to 3.8%. Total bank money, notes and deposits, rose from $2.45 billion to $6.06 billion in this period, a rise of 10.45% per annum -- surely enough to satisfy all but the most ardent inflationists. [150]

For those who persist in associating a gold standard with deflation, it should be pointed out that price deflation in the gold standard 1879-1897 period was considerably less than price deflation from 1873 to 1879, when the United States was still on a fiat greenback standard.

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[150] Friedman and Schwartz, Monetary History, pp. 91-93; Historical Statistics, p. 625.

After specie resumption occurred successfully in 1879, the gold premium to greenbacks fell to par, and the appreciated greenback promoted confidence in the gold-backed dollar. More foreigners willing to hold dollars meant an inflow of gold into the United States and greater American exports. Some historians have attributed the boom of 1879-1882, culminating in a financial crisis in the latter year, to the inflow of gold coin in the U.S., which rose from $110.5 million in 1879 to $358.3 million in 1882.[151] In a sense this is true, but the boom would never have taken on considerable proportions without the pyramiding of the national banking system, the deposits of which increased from $2.149 billion in 1879 to $2.777 billion in 1882, a rise of 29.2%, or 9.7% per annum. Wholesale prices were driven up from 90 in 1879 to 108 three years later, a 22.5% increase, before resuming their long-run downward path.

A financial panic in 1884, coming during a mild contraction after 1882, lowered the supply of bank money in 1884. Total bank notes and deposits dropped slightly, from $3.19 billion in 1883 to $3.15 billion the following year. The panic was triggered by an outflow of gold abroad, as foreigners began to lose confidence in the willingness of the United States to remain on the gold standard. This understandable loss of confidence resulted from the inflationary sop to the pro-silver forces in the Bland-Allison Silver Purchase Act of 1878. The shift in Treasury balances from gold to silver struck a disquieting note in foreign financial circles. [152]

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[151] Friedman and Schwartz, Monetary History, pp. 98-99.

[152] See Rendigs Fels, American Business Cycle, 1865-1897 (Chapel Hill, N.C.: University of North Carolina Press, 1959), pp. 130-131.

Before examining the critical decade of the 1890's, it is well to point out in some detail the excellent record of the first decade after the return to gold, 1879-1889.

America went off the gold standard in 1861 and remained off after the war's end. Arguments between "hard-money" advocates who wanted to eliminate unbacked greenbacks and "soft-money" men who wanted to increase them raged through the 1870's until the Grant Administration decided in 1875 to resume redemption of paper dollars into gold at pre-war value on the first day of 1879. At the time (1875) greenbacks were trading at a discount of roughly 17% against the pre-war gold dollar. A combination of outright paper-money deflation and increase in official gold holdings enabled a return to gold four years later, which set the scene for a decade of tremendous economic growth.

Economic record-keeping a century ago was not nearly as well developed as today, but a clear picture comes through nonetheless. The Encyclopedia of American Economic History calls the period under review "one of the most expansive in American history. Capital investment was high;...there was little unemployment; and the real costs of production declined rapidly."

Prices, Wages, and Real Wages

This is shown most graphically with a look at wages and prices during the decade before and after convertibility. While prices fell during the 1870's and 1880's, wages fell only during the greenback period, and rose from 1879 to 1889. (See Table I).

TABLE I

WHOLESALE PRICE INDEX

Year	Index	(1910-1914=100) % change
1869	151	----
1879	90	-40.4%
1889	81	-10.0%

CONSUMER PRICE INDEX

1869	138	----
1879	97	-28.8%
1889	93	- 4.2%

WAGES

(1910-1914=100)

	Urban Labor	Farm Labor	Combined
1869	77	96	87
1879	61	61	61
1889	72	78	75

These figures tell a remarkable story. Both consumer prices and nominal wages fell about 30% during the last decade of greenbacks. But from 1879-1889, while prices kept falling, wages rose 23%. So real wages, after taking inflation -- or the lack of it -- into effect, soared.

No decade before or since produced such a sustainable rise in real wages. Two possible exceptions are the period from 1909-1919 (when the index rose from 99 to 140) and 1929-1939 (134-194). But during the first decade real wages plummeted the next year -- to 129 in 1920, and did not reach 1919's level until 1934. And during the 1930's real wages also soared, for those fortunate enough to have jobs.

In any event, the contrast to this past decade is astonishing. And while there are many reasons why real wages increase, three necessary conditions must be present. Foremost, an absence of sustained inflation. This contributes to the second condition, a rise in savings and capital formation.

People will not save if they believe their money will be worth less in the future. Finally, technological advancement is obviously important. But it is not enough. The 1970's saw this third factor present, but the absence of the first two caused real wages to fall.

Interest Rates

Sidney Homer writes in his monumental History of Interest Rates, 2000 B.C. to the Present that "during the last two decades of the nineteenth century (1880-1900), long-term bond yields in the United States declined almost steadily. The nation entered its first period of low long-term interest rates" finally experiencing the 3-3½ long-term rates which had characterized Holland in the 17th century and Britain in the 18th and 19th: in short, the economic giants of their day.

To gauge long-term rates of the day, it is best not to use the long term government bonds we would use today as a measure. The National Banking Acts of 1863-1864 stipulated that these bonds had to be used to secure bank notes. This created such a demand for them that, as Homer says, "by the mid 1870's [it] put government bond prices up to levels where their yields were far below acceptable rates of long-term interest." But the Commerce Department tracks the unadjusted index of yields of American railroad bonds. We list the yields for 1878, the year before gold, 1879, and 1889.

Railroad Bond Yields

1878	6.45%
1879	5.98%
1889	4.43%

We stress that with consumer prices about 7% lower in 1889 than they had been the decade before, the real rate of return by decade's end was well into double-digit range, a bonanza for savers and lenders.

Short-term rates during the last century were considerably more skittish than long-term rates. But even here the decennial averages of annual averages of both 3-6 month commercial paper rates and (over-night) call money during the 1880's declined from what it had been the previous decades:

	commercial paper	call money
1870-1879	6.46%	5.73%
1880-1889	5.14%	3.98%

A Burst in Productivity

By some measures the 1880's was the most productive decade in our history. In their A Monetary History of the United States, 1867-1960, Professors Friedman and Schwartz quote R.W. Goldsmith on the subject: "'The highest decadal rate [of growth of real reproducible tangible wealth per head from 1805 to 1950] for periods of about ten years was apparently reached in the eighties with approximately 3.8%'." The statistics give proof to this outpouring of new wealth.

Gross National Product

(1958 prices)

	Total (billions of dollars)	Per capita (in dollars)
decade average 1869-78	$23.1	$531
decade average 1879-88	$42.4	$774
decade average 1889-98	$49.1	$795

This dollar growth was occuring, remember, in the face of general price declines.

Gross Domestic Product

(1929 prices in billions of dollars)

1869-1878	$11.6	(average per year)
1879-1888	$21.2	(average per year)

Gross domestic product almost doubled from the decade before, a far larger percentage jump decade-on-decade than anytime since.

Labor Productivity

Manufacturing Output per man-hour
(1958=100)

1869	14.7
1879	16.2
1889	20.5

The 26.5% increase here ranks among the best in our history. Labor productivity reflects increased capital investment.

Capital Formation

From 1869 to 1879 the total number of business establishments barely rose. But the next decade saw a 39.4% increase. Not surprisingly, a decade of falling prices, rising real income and lucrative interest returns made for tremendous capital investment, insuring future gains in productivity.

Purchase of Structures and Equipment

(Total, in 1958 prices, in billions of dollars)

1870	$ .4
1880	$ .4
1890	$2.0

This massive 500% decade-on-decade increase has never since been even closely rivalled. It stands in particular contrast to the virtual stagnation witnessed by the 1970's.

Private and Public Capital Formation

(Total Gross, in billions; 1929 prices)

Average	1872-1876	$2.6
"	1877-1881	$3.7
"	1882-1886	$4.5
"	1887-1891	$5.9

These five-year averages are not as "clean" as some other figures, but still show a rough doubling of total capital formation from the seventies to the eighties.

It has repeatedly been alleged that the late 19th century, the "golden age of the gold standard" in the United States, was a period especially harmful to farmers. The facts, however, tell a different story. While manufacturing in the 1880's grew more rapidly than did agriculture ("The Census of 1890," report Friedman and Schwartz, "was the first in which the net value added by manufacturing exceeded the value of agricultural output"), farmers had an excellent decade.

Number of Farms

(in thousands)

1880	4,009
1890	4,565

Farm Land

(in millions of acres)

1880	536,182
1890	623,219

Farm Productivity

(persons supplied by farm worker)

1880	5.1
1890	5.6

Value of Farm Gross Output and Product

(1910-1914 dollars, in millions)

1880	$4,129
1890	$4,990

So farms, farmland, productivity, and production all increased in the 1880's, even while commodities prices were falling. And as we see below, farm wage rates, even in nominal terms, rose during this time.

Farm Wage Rates

(per month, with board and room, in 1879, 1889 dollars)

1879 or 1880	$11.50
1889 or 1890	$13.50

This phenomenal economic growth during the decade immediately after the return to gold convertibility cannot be attributed solely to the gold standard. Indeed all during this time there was never a completely free-market monetary system. The National Banking Acts of 1863-1864 had semi-cartellized the banking system.

Only certain banks could issue money, but all other banks had to have accounts at these. The financial panics throughout the late 19th century were a result of the arbitrary credit-creation powers of the banking system. While not as harmful as today's inflation mechanism, it was still a storm in an otherwise fairly healthy economic climate.

The fateful decade of the 1890s saw the return of the agitation for free silver, which had lain dormant for a decade. The Republican Party intensified its long-time flirtation with inflation, by passing the Sherman Silver Purchase Act of 1890,which roughly doubled the Treasury purchase requirement of silver. The Treasury was now mandated to buy 4.5 million ounces of silver per month. Futhermore, payment was to be made in a new issue of redeemable greenback currency, Treasury Notes of 1890, which were to be a full legal tender, redeemable in either gold or silver at the discretion of the Treasury. Not only was this an increased commitment to silver, it was a significant step on the road to bimetallism which--at the depreciated market rates--would mean inflationary silver monometallism. In the same year, the Republicans passed the high McKinley Tariff Act of 1890, which reaffirmed their commitment to high tariffs and soft money.

Another unsettling inflationary move made in the same year was that the New York Subtreasury altered its long-standing practice of settling its clearing house balances in gold coin. Instead, in August 1890, it began using the old greenbacks and the new Treasury notes of 1890. As a result, these paper currencies largely replaced gold paid in customs receipts in New York.[153]

Uneasiness about the shift from gold to silver and the continuing free-silver agitation caused foreigners to lose further confidence in the U.S. gold standard, and to cause a drop in capital imports and severe gold outflows from the country. This loss of confidence exerted contractionist pressure on the American economy and reduced potential economic growth during the early 1890s.

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[153]See Friedman and Schwartz, Monetary History, pp. 106, 106n.

Fears about the American gold standard were intensified in March 1891, when the Treasury suddenly imposed a stiff fee on the export of gold bars taken from its vaults, so that most gold exported from then on was American gold coin rather than bars. A shock went through the financial community, in the U.S. and abroad, when the United States Senate passed a free silver coinage bill in July 1892; the fact the bill went no further was not enough to restore confidence in the gold standard. Banks began to insert clauses in loans and mortgages requiring payment in gold coin; clearly the dollar was no longer trusted. Gold exports intensified in 1892, the Treasury's gold reserve declined, and a run ensued on the U.S. Treasury. In February 1893, the Treasury persuaded New York banks, which had drawn down $6 million on gold from the Treasury by presenting treasury notes for redemption, to return the gold and re-acquire the paper. This act of desperation was scarcely calculated to restore confidence in the paper dollar. The Treasury was paying the price for specie resumption without bothering to contract the paper notes in circulation. The gold standard was therefore inherently shaky, resting only on public confidence, and that was giving way under the silver agitation and under desperate acts by the Treasury.

Poor Grover Cleveland, a hard-money Democrat, assumed the Presidency in the middle of this monetary crisis. Two months later, the stock market collapsed, and a month afterwards, in June 1893, distrust of the fractional-reserve banks led to massive bank runs and bank failures throughout the country. Once again, however, many banks, national and state, especially in the West and South, were allowed to suspend specie payments. The Panic of 1893 was on. In a few months, Eastern bank suspension occurred, beginning with New York City. The total money supply--gold coin, treasury paper, national bank notes,

and national and state bank deposits--fell by 6.3% in one year, from June 1892 to June 1893. Suspension of specie payments resulted in deposits--which were no longer immediately redeemable in cash--going to a discount in relation to currency during the month of August. As a result, deposits became less useful, and the public tried its best to intensify its exchange of deposits for currency.

By the end of 1893, the Panic was over, as foreign confidence rose with the Cleveland Administration's successful repeal of the Sherman Silver Purchase Act in November of that year. Further silver agitation of 1895 endangered the Treasury's gold reserve, but heroic acts of the Treasury, including buying gold from a syndicate of bankers headed by J.P. Morgan and August Belmont, restored confidence in the continuance of the gold standard. The victory of the free-silver Bryanite forces at the 1896 Democratic convention caused further problems for gold, but the victory of the pro-gold Republicans put an end to the problem of domestic and foreign confidence in the gold standard.

1896: The Transformation of the American Party System

Orthodox economic historians attribute the triumph of William Jennings Bryan in the Democratic Convention of 1896, and his later renominations for President, as a righteous rising up of the "people" demanding inflation over the "interests" holding out for gold. Friedman and Schwartz attribute the rise of Bryanism to the price contraction of the last three decades of the nineteenth century, and the triumph of gold and disappearance of the "money" issue to the price rise after 1896.[155]

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[154] On silver agitation, the gold reserves, and the Panic of 1893 see Friedman and Schwartz, Monetary History, pp. 104-133, 705.

[155] Friedman and Schwartz, Monetary History, pp. 113-119.

This conventional analysis overlooks several problems. First, if Bryan represented the "people" versus the "interests," why did Bryan lose and lose soundly, not once but three times? Why did gold triumph long before any price inflation became obvious, in fact at the depths of price contraction in 1896?

But the main neglect of the conventional analysis is the disregard of the highly illuminating insights provided in the past fifteen years by the "new political history" of nineteenth century American politics and its political culture. The new political history began by going beyond national political issues (largely economic) and investigating state and local political contests.[156] It also dug into the actual voting records of individual parishes, wards, and counties, and discovered how people voted and why they voted the way they did. The work of the new political history is truly interdisciplinary, for its methods range from sophisticated techniques for voting analysis to illuminating insights into American ethnic religious history.

In the following pages, we shall present a summary of the findings of the new political history on the American party structure of the late nineteenth century and after, and on the transformation of 1896 in particular.

First, the history of American political parties is one of successive "party systems." Each "party system" lasts several decades, with each particular party having a certain central character; in many cases, the name of the

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[156] The locus classicus of the new political history in late 19th century politics is Paul Kleppner, The Cross of Culture: A Social Analysis of Mid-western Politics, 1850-1900 (New York: The Free Press, 1970). Also see other writings of the prolific Kleppner, especially his magnum opus, The Third Electoral System, 1853-1892: Parties, Voters, and Political Cultures (Chapel Hill, N.C.: University of North Carolina, 1979). On the late nineteenth century, see also Richard J. Jensen, The Winning of the Midwest: Social and Political Conflict, 1888-1896 (Chicago: University of Chicago Press, 1971). On the Civil War period and earlier, see the works of Ronald Formisano, Joel Sibley, and William Shade. For Eastern confirmation of the Kleppner and Jensen findings on the Middle West, see Samuel T. McSeveney, The Politics of Depression: Political Behavior in the Northeast, 1893-1896 (New York, 1972).

party can remain the same but its essential character can drastically change--in the so-called "critical elections." In the nineteenth century, the Second Party System (Whigs vs. Democrats) lasting from about 1832 to 1854, was succeeded by the Third Party System (Republicans vs. Democrats) lasting from 1854 to 1896.

Characteristic of both party systems was that each party was committed to a distinctive ideology clashing with the other, and these conflicting world-views made for fierce and close contests. Elections were particularly hard-fought. Interest was high since the parties offered a "choice not an echo," and so the turnout rate was remarkably high, often reaching 80 to 90 percent of eligible voters. More remarkably, candidates did not, as we are used to in the twentieth century, fuzz their ideology during campaigns in order to appeal to a floating, ideologically indifferent, "independent voter." There were very few independent voters. The way to win elections, therefore, was to bring out your vote, and the way to do that was to intensify and strengthen your ideology during campaigns. Any fuzzing over would lead the Republican or Democratic constituents to stay home in disgust, and the election would be lost. Very rarely would there be a crossover to the other, hated party.

One problem that strikes anyone interested in nineteenth century political history is: How come the average person exhibited such great and intense interest in such arcane economic topics as banking, gold and silver, and tariffs? Thousands of half-literate people wrote embattled tracts on these topics, and voters were intensely interested. Attributing the answer to inflation or depression, to seemingly evident economic interests as do Marxists and other economic determinists, simply won't do. For the far greater depressions

and inflations of the twentieth century have not educed nearly as much mass interest in economics as did the milder economic crises of the past century.

Only the findings of the new political historians have cleared up this puzzle. it turns out that the mass of the public was not necessarily interested in what the elites, or national politicians, were talking about. The most intense and direct interest of the voters was applied to local and state issues, and on these local levels the two parties waged an intense and furious political struggle that lasted from the 1830s to the 1890s.

The beginning of this century-long struggle began with the profound transformation of American Protestantism in the 1830s. This transformation swept like wildfire across the Northern states, particularly Yankee territory, during the 1830s, leaving the South virtually untouched. The transformation found particular root among Yankee culture, with its aggressive and domineering spirit.[157]

This new Protestantism--called "pietist"--was born in the fires of Charles Finney and the great revival movement of the 1830s. Its credo was roughly as follows: Each individual is responsible for his own salvation, and it must come in an emotional moment of being "born again." Each person can achieve salvation, each person must do his best to save everyone else. This compulsion to save others was more than simple missionary work; it meant that one would go to hell unless he did his best to save others. But since each person is alone and facing the temptation to sin; this role can only be done by the use of the

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[157]"Yankees" originated in rural New England, and then emigrated westward in the early 19th century, settling in upstate (particularly western) New York, northern Ohio, northern Indiana, and northern Illinois.

State. The role of the State is to stamp out sin and create a new Jerusalem on Earth.[158,159]

The pietists defined sin very broadly. In particular, the most important politically was Demon Rum, which clouded men's minds and therefore robbed them of their theological free will. In the 1830's, the evangelical pietists launched a determined and indefatigable prohibitionist crusade on the state and local level which lasted a century. Second was any activity on Sunday except going to Church, which led to a drive for Sabbatarian blue laws. Drinking on Sunday was of course a double sin, and hence particularly heinous. Another vital thrust of the new Yankee pietism was to try to extirpate Roman Catholicism, which robs communicants of their theological free will by subjecting them to the dictates of priests who are agents of the Vatican. If Roman Catholics could not be prohibited <u>per se,</u> their immigration could be slowed down or stopped. And since their adults were irrevocably steeped in sin, it became vital for crusading pietists to try to establish public schools as compulsory forces for Protestantizing society or, as the pietists liked to put it, to "Christianize the Catholics." If the adults are hopeless, the children must be saved by the public school and compulsory attendance laws.

Such was the political program of Yankee pietism. Not all immigrants were scorned. British, Norwegian, or other immigrants who belonged to pietist churches (whether nominally Calvinist or Lutheran or not) were welcomed as

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[158] These pietists have been called "evangelical pietists" to contrast them with the new Southern pietists, called "salvational pietists" who did not include the compulsion to save everyone else in their doctrine.

[159] These pietists are distinguished from contemporary "fundamentalists" because the former were "post-millenialists" who believe that the world must be shaped up and Christianized for a millenium before Jesus will return. In contrast, contemporary fundamentalists are "pre-millenials" who believe that the Second Coming of Jesus will usher in the millenium. Obviously, if everyone must be shaped up before Jesus can return, there is a much greater incentive to wield State power to stamp out sin.

"true Americans." The Northern pietists found their home, almost to a man, first in the Whig Party, and then in the Republican Party. And they did so, too, among the Greenback and Populist parties, as we shall see further below.

There came to this country during the century an increasing number of Catholic and Lutheran immigrants, especially from Ireland and Germany. The Catholics and High Lutherans, who have been called "ritualists" or "liturgicals," had a very different kind of religious culture. Each person is not responsible for his own salvation directly; if he is to be saved, he joins the church and obeys its liturgy and sacraments. In a profound sense, then, the Church in responsible for one's salvation, and there is no need for the State to stamp out temptation. These Churches, then, especially the Lutheran, had a laissez-faire attitude toward the State and morality. Furthermore, their definitions of "sin" were not nearly as broad as the pietists. Liquor is fine in moderation; drinking beer with the family in beer parlors on Sunday after Church was a cherished German (Catholic and Lutheran) tradition; and parochial schools were vital in transmitting religious values to their children in a country where they were in a minority.

Virtually to a man, Catholics and High Lutherans[160] found their home, during the 19th century, in the Democratic Party. It is no wonder that the Republicans gloried in calling themselves, throughout this period, "the party of great moral ideas," while the Democrats declared themselves to be "the party of personal liberty." For nearly a century, the bemused liturgical-Democrats fought a defensive struggle against people whom they considered

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[160]Lutherans, then as now, were split into many different synods, some highly liturgical, others highly pietist, and still others in between. Paul Kleppner has shown a one-to-one correlation between the degree of liturgicalness and the percentage of Democratic Party vote among the different synods.

"pietist-fanatics" constantly swooping down trying to outlaw their liquor, their Sunday beer parlors, and their parochial schools.

How did all this relate to the economic issues of the day? Simply that the leaders of each party went to their voting constituents and "raised their consciousness" to get them vitally interested in national economic questions. Thus, the Republican leaders would go to their rank-and-file and say: "Just as we need Big Paternalistic Government on the local and state level to stamp out sin and compel morality, so we need Big Government on the national level to increase everyone's purchasing power through inflation, keeping out cheap foreign goods (tariffs), or keeping out cheap foreign labor (immigration restrictions)."

And for their part, the Democratic leaders would go to their constituents and say: "Just as the Republican fanatics are trying to take away your liquor, your beer parlors, and your parochial schools, so the same people are trying to keep out cheap foreign goods (tariffs), and trying to destroy the value of your savings through inflation. Paternalistic government on the federal level is just as evil as it is at home."

So statism and libertarianism were expanded to other issues and other levels. Each side infused its economic issues with a moral fervor and passion stemming from their deeply held religious values. The mystery of the passionate interest of Americans in economic issues in the epoch is solved.

Both in the Second Party and Third Party Systems, however, the Whigs and then the Republicans had a grave problem. Partly because of demographics--greater immigration and higher birth rates--the Democrat/liturgicals were slowly but surely becoming the majority party in the country. The Democrats were split asunder by the slavery question in the 1840s and 50s. But now, by 1890, the

Republicans saw the handwriting on the wall. The Democratic victory in the Congressional races in 1890, followed by the unprecedented landslide victory of Grover Cleveland carrying both houses of Congress in 1892--indicated to the Republicans that they were becoming doomed to be a permanent minority.

To remedy the problem, the Republicans, in the early 1890s, led by Ohio Republicans William McKinley and Marc Hanna, launched a shrewd campaign of reconstruction. In particular, in state after state, they ditched the prohibitionists, who were becoming an embarrassment and losing the Republicans large numbers of German Lutheran votes. Also, they modified their hostility to immigration. By the mid-1890s, the Republicans had moved rapidly toward the center, toward fuzzing over their political pietism.

In the meanwhile, an upheaval was beginning to occur in the Democratic Party. The South, by now a one-party Democratic region, was having its own pietism transformed by the 1890's. Quiet pietists were now becoming evangelical, and Southern Protestant organizations began to call for prohibition. Then, the new sparsely settled Mountain states, many of them with silver mines, were also largely pietist. Moreover, a power vacuum, which would ordinarily have been temporary, had been created in the national Democratic party. Poor Grover Cleveland, a hard-money laissez-faire Democrat, was blamed for the Panic of 1893, and many leading Cleveland Democrats lost their gubernatorial and senatorial posts in the 1894 elections. The Cleveland Democrats were temporarily weak, and the Southern-Mountain coalition was ready to hand. Seizing his opportunity, William Jennings Bryan and his pietist coalition seized control of the Democratic Party at the momentous convention of 1896. The Democratic Party was never to be the same again.[161]

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[161] Grover Cleveland himself, of course, was neither a Roman Catholic nor a Lutheran. But he was a Calvinist Presbyterian who detested the take-over of the Presbyterian Church by the pietists.

The Catholics, Lutherans, and the laissez-faire Cleveland Democrats were in mortal shock. The "party of our fathers" was lost. The Republicans, who had been moderating their stance anyway, saw the opportunity of a lifetime. At the Republican convention, Representative Henry Cabot Lodge, representing the Morgans and the pro-gold standard Boston financial interests, told McKinley and Hanna: Pledge yourself to the gold standard--the basic Cleveland economic issue--and drop your silverite and greenback tendencies, and we will all back you. Refuse, and we will support Bryan or a third party. McKinley struck the deal, and from then on, the Republicans, in nineteenth century terms, were a centrist party: Their principles were now high tariffs and the gold standard, and prohibition was quietly forgotten.

What would the poor liturgicals do? Many of them stayed home in droves, and indeed the election of 1896 marks the beginning of the great slide downward in voter turnout rates that continues to the present day. Some of them, in anguish at the pietist, inflationist, and prohibitionist Bryanites, actually conquered their anguish and voted Republican for the first time in their lives. The Republicans, after all, had dropped the hated prohibitionists and adopted gold.

The election of 1896 inaugurated the Fourth Party System in America. From a third party system of closely fought, see-sawing races between a pietist/statist Republican vs. a liturgical/libertarian Democratic Party, the Fourth Party System consisted of a majority centrist Republican party as against a minority pietist Democratic party. After a few years, the Democrats lost their pietist nature, and they too became a centrist, though usually minority party, with a moderately statist ideology scarcely distinguishable from the Republicans. And so the Fourth Party System went until 1932.

A charming anecdote, told us by Richard Jensen, sums up much of the 1896

election. The heavily German city of Milwaukee had been mainly Democratic for years. The German Lutherans and Catholics in America were devoted, in particular, to the gold standard and were bitter enemies of inflation. The Democratic nomination for Congress in Milwaukee had been obtained by a Populist-Democrat, Richard Schilling. Sounding for all the world like modern monetarists or Keynesians, Schilling tried to explain to the assembled Germans of Milwaukee in a campaign speech that it didn't really matter what commodity was chosen as money, that "gold, silver, copper, paper, sauerkraut or sausages" would do equally well as money. At that point, the German masses of Milwaukee laughed Schilling off the stage, and the shrewdly opportunistic Republicans adopted as their campaign slogan "Schilling and Sauerkraut" and swept Milwaukee.[162]

The Greenbackers and later the pro-silver, inflationist, Bryanite Populist Party were not "agrarian parties;" They were collections of pietists aiming to stamp out personal and political sin. Thus, as Kleppner points out, "The Greenback Party was less an amalgamation of economic pressure groups than an ad hoc coalition of 'True Believers,' 'ideologues,' who launched their party as a 'quasi-religious' movement that bore the indelible hallmark of 'a transfiguring faith.'" The Greenbackers perceived their movement as the "religion of the Master in motion among men." And the Populists described their 1890 free-silver contest in Kansas, as not a "political campaign," but as " a religious revival, a crusade, a pentecost of politics in which a tongue of flame sat upon every man, and each spake as the spirit gave him utterance...." The people had "heard the word and could preach the gospel of Populism." It was no accident, we see now, that the Greenbackers almost invariably endorsed prohibition, compulsory public schooling, and crushing of parochial schools.

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[162]So intense was the German-American devotion to gold and hard money that even German communist-anarchist Johann Most, leader of a movement that sought the abolition of money itself, actually came out for the gold standard during the 1896 campaign! See Jensen, Winning of the Midwest, pp. 293-295.

Or that Populists in many states "declared unequivocally for prohibition" or entered various forms of fusion with the Prohibition Party.[163]

The Transformation of 1896 and the death of the Third Party System meant the end of America's great laissez-faire, hard money and libertarian party. The Democratic Party was no longer the party of Jefferson, Jackson, and Cleveland. With no further political embodiment for laissez-faire in existence, and with both parties offering an echo not a choice, public interest in politics steadily declined. A power vacuum was left in American politics for the new corporate statist ideology of progressivism, which swept both parties (and created a short-lived Progressive Party) in America after 1900. The Progressive Era of 1900-1918 fastened a welfare-warfare state on America which has set the mould for the rest of the twentieth century. Statism arrived after 1900 not because of inflation or deflation, but because a unique set of conditions had destroyed the Democrats as a laissez-faire party and left a power vacuum for the triumph of the new ideology of compulsory cartellization through a partnership of big government, business, unions, technocrats, and intellectuals.

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[163]Kleppner, Third Electoral System, pp. 291-296.

CHAPTER 3

MONEY AND BANKING IN THE UNITED STATES IN THE TWENTIETH CENTURY

After 1896 and 1900, then, America entered a progressive and predominantly Republican era. Compulsory cartellization in the name of "progressivism" began to invade every aspect of American economic life. The railroads had begun the parade with the formation of the ICC in the 1880's, but now field after field was being centralized and cartellized in the name of "efficiency," "stability," "progress," and the general welfare. Theodore Roosevelt, Taft and Wilson were each in his way progressives, and each advanced the cause of cartellization, with the process culminating in the presidency of Woodrow Wilson. In particular, various big business groups, led by the J. P. Morgan interests often gathered in the National Civic Federation and other think tanks and pressure organizations, saw that the voluntary cartels and the industrial merger movements of the late 1890's had failed to achieve monopoly prices in industry. Therefore, they decided to turn to governments, state and federal, to curb the winds of competition and to establish forms of compulsory cartels, in the name, of course, of "curbing big business monopoly" and advancing the general welfare.[1]

America's bankers had long chafed to cartellize the banking industry still further. The national banking system was a long step forward, from their point of view, but it was still only quasi-centralized. Bank credit and money pyramided on top of New York (and after 1887, also Chicago and St. Louis) banks. But this system was, to use a universally adopted term, "inelastic" -- that is, it could not assure the pumping in of more money during

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[1] See in particular, Gabriel Kolko, The Triumph of Conservatism: A Reinterpretation of American History, 1900-1916 (Glencoe, III.: The Free Press, 1963.) While in less harsh a form, variants of this interpretation have now swept the field in Progressive Era historiography. Thus, see the works of Samuel Hays, James Weinstein, Arthur Ekrich, Louis Galambos, William Graebner, Jordan Schwarz, Ellis Hawley, Joan Hoff Wilson, and many others.

contractions or runs on banks. "Inelastic" was a code word for not enough assured inflation of the money supply. [2] The growing consensus, then, was to re-direct the banking system by establishing, at long last, a central bank. The central bank would have an absolute monopoly of the note issue, and reserve requirements would then ensure a multi-layered pyramiding on top of these central bank notes, which could bail out banks in trouble, and, moreover, could inflate the currency in a smooth, controlled, and uniform manner throughout the nation.

In addition to this chronic problem, the large banks, particularly in Wall Street, saw financial control slipping away from them. The state banks and other non-national banks began to grow instead and outstrip the nationals. Thus, while in the 1870's and the 1880's, most banks were national, by 1896 non-national banks comprised 61 percent of the total number of banks, and by 1913, 71 percent. By 1896, these non-national banks had 54 per cent of the total banking resources of the country, and 57 per cent in 1913. The inclusion of Chicago and St. Louis as central reserve city banks after 1887 diluted Wall Street's power. With Wall Street no longer able to cope, it was time to turn to the United States government to do the centralizing, cartellizing, and controlling instead.[3]

It often takes a crisis to focus one's mind and it takes a financial crisis or notable event to move men to institutional reform. The Civil War

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[2] National banks also had a particular form of "inelasticity": Their issue of notes was limited by their deposit of government bonds at the Treasury. Yet government bonds were generally 40% over par, which imposed a penalty on further issue. See Robert Craig West, Banking Reform and the Federal Reserve, 1863-1923. (Ithaca: Cornell University Press, 1977).

[3] See Kolko, Triumph, p. 140.

was the previous occasion for overhaul of the nation's money and banking system. The Panic of 1907 provided the spark for a return to central banking.

The Republicans fulfilled their promise, and, in March 1900, finally placed the United States officially on a monometallic gold standard. All paper was to be redeemable in gold, and silver continued as a subsidiary metal.

An unusual increase in gold production from discoveries in South Africa and Alaska doubled the world's gold stock from 1890 to 1914, causing a rise of U.S. prices of nearly 50% from 1897 to 1914, or 2 1/2% per year. Until after World War II, this was the largest sustained rise in prices in peacetime, but still the rise only returned to approximately 1882 levels. In the United States, the gold supply rose at a rate of 7 1/2% per year in this period. But despite this impact, the bulk of the increase in the supply of money in the period came from bank deposits pyramiding on top of the increase in gold. Thus, from June 1896 to June 1914, total bank deposits rose from $3.43 billion to $14.32 billion, or an increase of 317.5% or an annual rise of 17.6% -- a substantially greater percentage than the 7 1/2% year increase of the gold stock. Once again, fractional-reserve banking under the national banking system was far more to blame for price rises than international movements in gold.

There were several mini-panics, averted or stopped by infusions of Treasury money, after 1900; but the Panic of 1907 frightened the banks into calling for a new central banking system. Wall Street and the Morgans could not save the New York banks themselves. There was general speculation of specie payment throughout the country, and premiums of currency over deposits. Again, the Treasury was called upon to intervene. The Wall Street banks now knew that they could not cope, and federal government cartellization and support

for fractional reserve banking would be necessary.[4]

All banks, and both parties, now agreed on some form of central banking, and the rest of the story is jockeying for minor advantage. The Wilson Administration finally established central banking with the creation of the Federal Reserve System in 1913 -- the symbolic end of the Jacksonian hard-money heritage in the Democratic Party. From 1913 until 1933, the United States would be formally under a gold standard, but actually governed by a Federal Reserve System designed to inflate uniformly and bail out banks in trouble. The banking system would now be pyramiding on the U.S. issue of paper money.

By establishing the Federal Reserve System, the federal government changed the base of the banking pyramid to the Federal Reserve Banks. Only the Federa Reserve could now print cash, and all member banks could now multiply their deposits on top of Federal Reserve deposits. All national banks were required to join the Federal Reserve, and their gold and other lawful money reserves had to be transferred to the Federal Reserve. The Federal Reserve, in turn, could pyramid its deposits by three to one on top of gold. This centralization created an enormous potential for inflationary expansion of bank deposits. Not only that, reserve requirements for the nation's banks were deliberately cut in half in the course of establishing the Federal Reserve System, thereby inviting the rapid doubling of the money supply. Average reserve requirements for all banks prior to the Federal Reserve Act is estimated to be 21%. In the original Act of 1913, these were cut to 11.6% and three years later to 9.8%. It is clear then that the Federal Reserve was designed from the very beginning to be an instrument for an uniform and coordinated inflation of bank money. [5]

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[4] See Kolko, Triumph, pp. 153-158; Friedman and Schwartz, Monetary History, pp. 156ff.

[5] See the illuminating discussion in C. A. Phillips, T.F. McManus, and R. W. Nelson, Banking and the Business Cycle (New York: McMillan, 1937), pp. 23-29.

Indeed, total bank deposits were $14.0 billion at the beginning of the Federal Reserve System in January 1914; after six years, in January 1920, total bank deposits had reached $29.4 billion, an enormous increase of 110% or 18.3% per year. The creation of the Federal Reserve had made that expansion possible.

The Gold-Exchange Standard

Faced with a global inflation of unprecedented volume and destruction--both during World War I and immediately after it, the world attempted to restore monetary stability. But while most officials wanted gold to reappear as the monetary anchor, they also wanted to be able to keep inflating. Put another way, they wanted to have their cake and eat it too.

Preeminent victims of this delusion were the British; with a burgeoning welfare state in the early 1920's, and especially with rigid wage rates, it was difficult politically to end inflation. Further, Britain wanted to return to gold, but for reasons of national "prestige" she wanted to go back at the pre-war, pre-inflation rate of $4.86 per pound. In effect, she wanted to pretend that the inflation had never happened. There was only one way Britain could get away with enthroning an artifically overvalued pound: By making other countries play along. Other nations had to be persuaded (or forced) into either likewise returning to gold at an unrealistic rate or inflating their monies so as not to cripple Britain's exports (also priced artificially high).

Britain accomplished this at the Genoa Conference of 1922. Emerging from that first post-war economic meeting was not a gold standard, but a more slippery "gold-exchange" standard. Here's how it worked: Only the United States stayed on the old gold-coin standard, where anyone could present notes totalling $20.67 to the Treasury and receive an ounce of gold in return. But Britain began redeeming pounds not just in gold,but in Federal Reserve notes or dollars. Further, the other nations began predominantly using British pounds as their backing. And importantly, when they did pay gold they only paid in large bullion bars, not coins, so the average citizen was not able to redeem his currency. The Genoa Accord made the pound as well as the dollar as good as gold, even though sterling

was not in fact a sound currency. Britain now printed its "gold" with American support--the U.S. agreed to inflate enough to keep Britain's reserves of dollars or gold from flowing to America.

This inflationary charade was played to buttress Britain's fading dreams as an imperialist world power. But also involved was the rise of the new doctrines of John Maynard Keynes, who by the early 1920's had become a foe of the "barbarous relic" gold and extolled instead the alleged virtues of a politically managed paper currency. That these ideas became so influential so fast in London banking circles was due in no small part to the catastrophic loss suffered during World War I of truly the finest minds of a generation. These would have normally become leaders during the 1920's. This left a gap which affected Britain as it did few other countries. For, at the risk of broad brush painting, the British are a people which have always put more stock in practical knowledge than the more philosophical French or Germans. But pragmatism depends less on book-knowledge than on skills handed down orally. The annihilation of a generation thus created a gap in the continuity of knowledge those more bookish nations escaped. So as one contemporary observer of London financial circles perceptively explained, by the mid-1920's, there would be few remaining grandfathers who remembered the virtues of sound money. And there would be their grandsons "miseducated by Keynes." Between them was a gap, which created such "a barrier in ideas that it was not easy for tradition and practical knowledge to pass." [6]

American Inflation 1922-28

With the "discovery" of open market operations around 1922, the Federal Reserve thought it had found a way to smooth out business cycles. In practice,

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[6] Benjamin Anderson, Economics and the Public Welfare, (Indianapolis: Liberty Press, 1979), p. 174.

it caused a substantial 6-year bank credit inflation by buying securities on the open market and printing the money to pay for them. This money -- bank reserves --was pyramided several-fold by means of the fractional reserve banking system. This policy of stabilizing the price level, was deliberately engineered by the leader of the Federal Reserve System, Benjamin Strong, to follow the proto-monetarist theory of Yale economist Irving Fisher.

The 1920's are not often seen as an inflationary period because prices did not rise. But the money supply can rise even without prices rising in absolute terms. The 1920's saw such a burst of American technological advancement and cheaper ways of producing things that the natural tendency was for prices to fall (i.e., more goods chasing the same number of dollars). But the inflation caused prices to rise relative to what they would have done. So a "stable" price level was masking the fact that inflation was going on, and creating distortions throughout the economy.

Between mid-1922 and April 1928, bank credit expanded by over twice as much as it did to help finance World War I. As with all inflations, this caused speculative excess; in this case new money poured into the stock market and real estate. The cooling of this speculative fever in 1928 by officials who tightened the money supply because they were finally afraid of the overheated economy led to the Depression, which in turn led to the world's abandonment of the gold standard. We would do well to examine this period closer.

Bailing Out Britain

Britain during this time used her power to treat the pound like gold as one might expect, keeping interest rates artifically low and inflating recklessly, thus piling up billions of pounds at the Bank of France, which finally began asking for gold instead. Panicked, the Bank of England in mid-1927 induced the New York Federal Reserve Bank to lower its interest rates and step up open-market purchases of securities, thus fueling inflation further. (This move to make unnecessary the payment of British gold obligations to France and to keep

England inflating by causing America to inflate was disguised as "helping the farmer." It was the Kansas City Federal Reserve Bank which first lowered its discount rate, the others following.)

A major reason for the inflationary pro-British policies of the 1920's was the close personal connections formed between Benjamin Strong, the dominant leader of the Federal Reserve System, and Montagu Norman, head of the Bank of England. In several secret conferences with Norman, unknown to the rest of the Federal Reserve or the American government, Strong agreed to inflate money and credit in order to bail out England. The ties between Norman and Strong were not only personal; both were intimately allied with the House of Morgan. Before he became the first leader of the Federal Reserve, Strong was head of the Morgan-created Bankers Trust Company in New York. He was urged to accept the post by his two closest personal friends, Henry P. Davison and Dwight Morrow, both partners at the Morgan Bank. The Morgan connection with Britain was very close; J. P. Morgan and Company was the fiscal agent for the Bank of England, and underwrote the massive sale of British bonds in the United States during World War I. Montagu Norman himself had close personal connections with the United States investment banks and had worked in the offices of Brown Brothers in New York. Only the death of Strong in 1928 ended the inflationary Federal Reserve policy designed to help Britain.

By April of 1928, the new Governors of both the Federal Reserve Board and the New York Federal Reserve Bank, made an effort to hold down bank credit expansion. But those efforts were stymied by following two conflicting goals. Federal Reserve officials wanted both to reduce credit going into stock market speculation yet at the same time not to tighten money either at home or abroad (this latter for fear of pulling gold out of Britain).

And while the anti-inflationist policy predominated, it is not easy to reduce inflation in an economy grown accustomed to it, which by 1928 America had. Further, 1928 was a Presidential election year, with great pressure to inflate. It therefore took about a year before the money supply was under control. But as the tables below show, the long money-supply inflation was over by the end of 1928. At mid-1929 money supply growth was creeping at an annual rate of only 0.7%, a marked deceleration from previous years. The depression caused by years of inflation was about to begin, and with it would come the end of the American gold standard.

Total Money Supply of the United States, 1921-29
(in billions of dollars)

Date	Total Money Supply	Per Cent Annual Change From Previous
1921 - June 30	45.30	....
1922 - June 30	47.16	4.1
1923 - June 30	51.79	9.8
1923 - Dec. 31	53.06	4.9
1924 - June 30	54.67	6.1
1924 - Dec. 31	57.85	11.6
1925 - June 30	59.86	7.1
1925 - Dec. 31	62.59	9.2
1926 - June 30	63.62	3.3
1926 - Dec. 31	64.96	4.2
1927 - June 30	66.91	6.0
1927 - Dec. 31	69.61	8.1
1928 - June 30	71.12	4.4
1928 - Dec. 31	73.00	5.2
1929 - June 30	73.26	0.7

Federal Reserve Bank Credit, 1914-1934

($ millions)

End of Year	Reserve bank credit outstanding	
	Total loans and securities	Through purchase of bills and securities
1914	11	0
1915	84	40
1916	222	184
1917	1060	395
1918	2291	526
1919	3090	874
1920	3235	547
1921	1524	379
1922	1326	708
1923	1211	489
1924	1249	927
1925	1395	749
1926	1335	696
1927	1591	1009
1928	1783	717
1929	1548	903
1930	1352	1093
1931	1825	1156
1932	2128	1888
1933	2670	2570
1934	2457	2436

Source: U.S. Department of Commerce, Historical Statistics of the United States, Colonial Times to 1957 (1961), series X 245-254, p.642.

The International Crisis: 1931

The stock market collapse in late 1929 was only a harbinger of things to come. It was not until 1931 that international bank collapses caused abandonment of gold. The first to go was Austria.

Kredit-Anstalt, Austria's largest bank and supported by the Austrian government, had for years been making bad loans on a meagre reserve base. Austria had been part of the "sterling-bloc," buttressed by Britain, a development resented by France, heavy with gold claims on Britain. The formation of an Austrian customs union with Germany in late March 1931 was feared by France, who saw it as a step to political union. The French central bank now insisted upon immediate repayment of her short-term debts from Austria and Germany. Austrian banks clearly could not meet their liabilities, and in late May, Kredit-Anstalt went bankrupt, taking Austria off the gold standard. A run on German banks now started. That country had been quickly affected by the tightened American credit conditions in mid-1928, and was quite vulnerable. Runs continued and even though President Hoover declared on June 20 a moratorium on German debt, France was not immediately inclined to go along. She delayed too long; and on July 15 Germany declared national bankruptcy by going off the gold standard.

It must be said that both these nations fought desperately to maintain gold redemption, and when the end came, each regarded the act with shame. Not so with Britain. The country which had caused the others to inflate for her and did more than any other to bring on the crisis went off the gold standard without a fight.

As runs on British gold increased through the summer, Britain refused to defend the pound by raising interest rates. Instead, as gold flowed out of the banks, the Bank of England created new money to replenish the banks' reserves. The Bank of France cooperated loyally, and didn't present many

claims. The French bank held sterling claims worth fully seven times its capital, and thus feared for a Britain off the gold standard. Indeed, France joined America in offering massive loans to Britain. But the Bank of England didn't even take full advantage of these credit lines, and two days after assuring the Netherlands Bank (with all its capital in sterling) that England would not go off the gold standard, that is exactly what happened. The announcement was made on Sunday September 20, 1931, thus capping 17 years of gradual monetary disintegration.

Britain had for centuries been the world's premier financial power, so the announcement left the world stunned. Moreover, other governments had been deliberately deeeived. The capital of the central banks of France and Holland had been made worthless in one day. Governments could no longer trust each other's financial promises, and the stage was set for perhaps the most treacherous decade in international economic relations, a decade from which we have not yet recovered. As Chase economist and contemporary eyewitness Benjamin Anderson recalled, "An immense world asset was destroyed when the Bank of England and the British government broke faith with the world. Years later after we in the United States had also broken faith with the world, the head of the national bank of one of the Scandinavian countries said, 'I have lost money in sterling. I have lost money in dollars. I have never lost money by holding gold.'" [7]

America Breaks Faith

If sterling was not good, the world asked itself, what was? It looked nervously at America, and had presented claims for $728 million of our gold by the end of October 1931. But Americans thought any such fears

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[7] Anderson, op. cit., p. 254.

were silly. After all, we had continued to pay gold to foreigners even in the crisis of 1895, with a low point of only $41 million of gold in the Treasury. Alone among belligerents we had not gone off gold in World War I, although we had stopped the export of gold. Certainly, few Americans cashed in notes for gold in late 1931. They may have doubted the solvency of some banks, but few if any doubted the good faith of the American government's promise to redeem notes for gold. The platforms of both parties in 1932 contained vows that the gold standard would be maintained. The Democratic platform was largely written by Senator Carter Glass of Virginia and Cordell Hull, later Secretary of State. As events proved, both these men were sincere.

The first sign of shakiness in the American position was a foolish and false statement by President Hoover one month before the November election. He charged that the Federal Reserve had been within two weeks of going off the gold standard earlier that year. The statement was soon proved untrue, but it aroused doubts for the first time in people's minds.

These grew into rumors beginning in late-December that President-elect Roosevelt was going to take the country off the gold standard. Roosevelt would not deny them, and American hoarding of gold started for the first time on a grand scale.

The feelings of disquietude were made worse by a paralyzed government. The new President was not to take office until March 4 (the old Inauguration date) and a lame-duck Congress had many members due to retire. In the cabinet departments, anyone whose job was not protected by civil-service rules was preparing to find a new job in the midst of a terrible depression.

Runs on banks by depositors anxious to get cash and runs on the Federal Reserve Banks by cash holders eager to turn their paper into gold

accelerated. It should not have come as a surprise when on February 14 Michigan became the first state to declare a bank "holiday," i.e., to close the banks to depositors: Michigan had been the home of some of the more reckless lending by banks during the boom. Nine days later Indiana followed, and then a score of states in a cluster. Late on the night of March 3, the big New York banks reluctantly agreed to close, though they were not in trouble, smaller upstate banks were. Roosevelt became President the next day with almost every bank in America closed. He kept them all closed until March 13, when the Federal Reserve banks opened, with others a day or two later. The public, assuaged by FDR's promise that the reopened banks would be good, poured both gold and cash back into the banks. But on March 9 Congress passed, at Roosevelt's request, a bill "to provide relief in the existing national emergency in banking, and other purposes." It gave him the power to do all he pleased regarding money and banking, including authority to seize the American people's gold coins, bullion, and gold certificates.

America Off the Gold Standard

Within a month this power was used. On April 5, it became illegal to own or hold any form of monetary gold, either coins, bullion, or certificates. (Industrial users of gold were not affected.) The banking crisis had been brought on by past inflation. But that crisis, ironically, was made the excuse to abandon the gold standard.

At first, it was stressed that these measures were temporary, only to be used as long as the crisis lasted. But on May 12 a law was passed (the Thomas Amendment to the Agriculture Adjustment Act) which gave the President the ability to increase vastly the money supply and to reduce by up to half the weight of gold dollar. Democratic Senator Glass called it "dishonor... This

great government, strong in gold, is breaking its promises to pay gold to widows and orphans to whom it has sold government bonds with a pledge to pay gold coin of the present standard of value. It is breaking its promise to redeem its paper money in gold coin of the present standard of value. It's dishonor, sir."[8] Another Democratic Senator, Thomas Gore of Oklahoma, was asked by the President for his opinion about another law (signed on June 5) abolishing the gold clause in all past debt obligations: "Why, that's just plain stealing, isn't it, Mr. President?" Later in Senate debate, Gore also added that "Henry VIII approached total depravity but the vilest thing he ever did was to debase the coin of the realm."[9]

One final step remained. Using the Gold Reserve Act of January 30, 1934, President Roosevelt arbitrarily reduced the weight of gold that would define each dollar. The "old" dollar had been defined as 25.8 grains of gold, nine-tenths fine. The new devalued dollar would only be worth 15 5/21 grains, nine-tenths fine. So even the act of abandoning gold was done with the implicit admission that the dollar was still defined in terms of it.

The London Conference

Just as he had taken America off gold, Roosevelt took steps to ensure that there would be no international return to gold. The Gold Bloc of remaining gold standard nations, France, Belguim, Switzerland, Holland, and Italy, had called the London Conference for June 1933 to persuade Great Britain and the United States that "gold should be reestablished as the international measure of exchange value"--and that non-gold countries should agree that their ultimate objective was to restore the gold standard. Even

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[8] Anderson, p. 315.

[9] Anderson, p. 317.

the official American delegation, which included Secretary of State Cordell Hull, approved this declaration, and all were shocked when Roosevelt's reply rejected the proposals. Said he, "The sound internal economic system of a nation is a greater factor in its prosperity than the price of its currency in changing terms of other nations." He thus missed the point of a gold standard, which defines all currencies as an unchanging weight of gold. Incredibly, the President stated that the new order would mean currency stability: "Let me be frank in saying that the United States seeks the kind of dollar which a generation hence will have the same purchasing and debt-paying power as the dollar value we hope to maintain in the near future." Seven months later, the dollar was devalued by 40.9%. And we of "a generation hence" know what has happened to the purchasing power of the dollar.

Gold Remains the World's Money

Finding no support, all the remaining Gold Bloc countries stopped redeeming their paper for gold, Holland and Switzerland being the last in 1936. But gold was far from banished. The deteriorating European political situation after 1936 caused everyone from homeless Jews to central bankers to trust gold over any paper currency and to transfer gold to the United States, the safest haven. Further, the stabilization funds set up by governments to stabilize now floating currencies settled their differences in gold. Remembering British and American actions to change arbitrarily the value of their currencies, no one would trust anything else.

Nor was there reason to. Beggar-thy-neighbor policies were the order of the day. International economic peace was shattered during the 1930s by economic nationalism, competitive devaluation, high tariffs, and exchange controls. Moreover, this poisoned atmosphere played its part in causing World War II.

The Coming of Bretton Woods

Try as they might, countries just before World War II were unable to carry on unsound currency and fiscal policies without seeing their currencies depreciate in terms of gold, their capital flee, or their credit markets crippled. The only pre-war exception was Nazi Germany, which achieved those goals at the cost of a complete and unprecedented economic regimentation. With the coming of war, other nations as well achieved far-reaching control over internal and foreign exchange. The end of war found government officials wishing they could retain those controls which allowed them to inflate and run budget deficits as they pleased while still having access to easy credit, stable foreign exchange rates and an absence of international "flight capital."

This was the root idea behind the international monetary conference in mid-1944 at Bretton Woods, New Hampshire, which set up the monetary order that would break down 25 years later. For while the new Bretton Woods system was supposed to restore the currency stability of the gold standard it was designed to do so without gold. The system placed its trust, not in the workings of the marketplace, but in the judicious restraint of the American government. It therefore contained within itself the seeds of its own destruction.

The Rules of the Game

While the dollar would be convertible into gold at $35 an ounce, it would be so only to foreigners, and after 1962 only to foreign governments. All other currencies were defined in terms of the dollar, which itself was defined as 1/35 of an ounce of gold. But the upshot of the arrangement gave America the power to have the dollar treated as gold. The Bretton Woods rules called for stable currency values: No currency was allowed to either rise or fall more than one percent. The Swiss franc, for example, was, at the time of the agreement (1944), fixed at 22.9 cents; it could go no lower than 22.7 cents and no higher than 23.1

cents. If the franc threatened to break these limits, the Swiss central bank was obliged to enter the exchange market and either buy or sell francs to hold its currency within the narrow margin. As the franc was usually bumping against the upper limits of this margin, Swiss authorities were usually selling francs and buying dollars. Most other governments were doing the same, especially those whose currencies were not inflating as much as the dollar was. But all of these nations were soothed with the promise that the dollar was indeed "as good as gold," and that any foreign holder of dollars, individual or government, could present American currency to the U.S. Treasury at any time to collect one ounce of gold for 35 of their paper dollars. Many, of course, took advantage of this opportunity. The U.S. government continued inflating the dollar, and our gold supply plummeted from a peak of 701 million ounces in 1949 to 296 million ounces in March 1968.

No government in history had held the kind of power handed to the United States in 1944: having its paper money treated like gold. But this action overlooked the stark reality that paper is not gold, that gold cannot be printed wildly as paper could. Another effect of the Bretton Woods regime was to subsidize American consumers at the expense of foreigners. For a long time, America prospered at the expense of her trading partners. For years, the dollar's value was artificially high, and therefore actually bought more than it should have been able to buy. This meant that foreign products were available to Americans at bargain prices. This left foreign consumers less to enjoy. Moreover, the foreigners had to pay more for their own goods, thanks to American "exporting" of inflation by , in effect, forcing foreign central banks to print more of their own currency to absorb the unwanted, overvalued dollars they accepted.

Predictably, those nations who had managed their own monetary affairs

most conservatively were the one hardest hit by the American action. Switzerland, that paragon of monetary restraint, now madly printed francs to pay for all dollars shunned by Swiss commercial banks. Switzerland's money supply soared 22 percent in 1971 alone. (Ironically, Switzerland had never signed the Bretton Woods agreement, but chose nevertheless to continue to adhere to the strictures--to its own great detriment--long after the system's founder and chief beneficiary, the United States, had broken its commitment). Switzerland could not be expected to continue this suicidal policy forever; as we will see later, it was Swiss action which finally brought the injustice of the post-war system to an abrupt end.

The London Gold Pool

Dollars flooded the world through the 1950s, and few worried about the gold reserves leaving the U.S. Treasury. But sometime in the early 1960s the market price of gold threatened to rise above the official $35 per ounce figure. For many years, the $35 figure was above the market price, making holding dollars attractive. In response to this rise in gold's price, the West's major central banks in 1961 established the London Gold Pool. With the U.S. in the lead, the banks agreed to sell gold whenever the price threatened to rise above $35. But this was successful only as long as world inflation fears abated. However, by the late 1960's the world had paused to assess the effects of a massive dollar inflation to pay for both the Great Society programs and the Vietnem War. The U.S. dollar had now clearly become overvalued; gold's price undervalued.

Britain was the first major nation to violate the fixed-exchange regime by devaluing in November of 1967. This caused a massive flight into gold, the first of the post-war era. Billions of dollars were spent by central banks in the next four months trying to force the market gold price down.

Finally in March, governments threw in the towel and gave up suppressing the market's wishes.

The Approaching Crisis

From March 1968 to August 1971, during the period of the "two-tier" gold market, the political world pretended that the dollar was still convertible, and for most of that time, the monetary scene was placid. This was due in part to the moderate lessening of American inflation during the recession of 1969-1970. But after that brief respite, the printing presses again went into high gear. The results were predictable. By early 1971, astute financial observers began to sense the imminent collapse of the dollar. One of the signs they saw was the lowering of American interest rates compared to European ones. When any nation inflates, money usually becomes cheaper, if only in the beginning, and therefore easier to borrow. The interest rate charged by banks to borrowers of money declines, and the interest rate paid by banks to depositors of money also declines. Money then flows out of those low-interest rate countries into countries where it can enjoy higher returns. During the beginning months of 1971 the outflow of funds from New York to European money markets accelerated. This forced most European currencies hard against their upper ceiling. Because Germany in particular had maintained a very tight credit stance -- a low inflation rate -- the mark was besieged with an unprecendented flood of buyers. Events now began to move swiftly.

In early May, on the heels of a joint report by major German economic institutes that the mark should be inflated or revalued upward, massive speculation hit that currency. Dollars poured into Germany and the Bundesbank was forced to buy them in mounting volume -- more than $1 billion on May 3-4 and a further $1 billion during the first 40 minutes of trading on May 5. At that point the German central bank gave up the

struggle, withdrew from the market, and let the mark float. Neighboring countries, afraid of seeing now-homeless dollars careen across their own borders, were quick to join Germany.

The following weekend the central banks of the Netherlands, Switzerland, Belgium, and Austria likewise ceased support operations and set their currencies afloat. In the cases of Austria and Switzerland, revaluations of 5 to 7 percent were also realized. Not surprisingly, the newly-floated currencies continued appreciating, most of them rather sharply. There were rumblings inside the Nixon administration--especially in Treasury Department-- that the gold "window" ought to be slammed unequivocally shut.

It is important to realize that while other governments theoretically could redeem their dollars for gold, most handled the U.S. Treasury with kid gloves: Only a golden trickle left Washington. Some nations, such as Germany, did this because they were obliquely threatened with U.S. troop pullbacks, but there were others who sincerely believed that their sacrifices were going toward the maintenance of the world monetary order.

As in any unnatural economic imbalance, speculators had jumped into the fray and began betting against the dollar. The reasons for their position were justified by every piece of economic news emerging from the United States by mid-1971. Each monthly figure was worse than its predecessor: the nation had slipped into severe trade and payments deficits. But the allies were patient; only a relatively paltry $300 million in gold left the U.S. from January to early August, 1971. Rumors spread among foreign central banks that the gold window was about to be shut. Rumblings from the Bank of England suggested that they were preparing to turn in dollars for gold in huge amounts. As Treasury Secretary Connally said (privately) at the

time, "We're completely exposed. Anybody can topple us anytime they want to."

On August 6, a congressional subcommittee report concluded that the dollar had become overvalued and called outright for an exchange rate realignment. That same day more than $1 billion in gold or other reserve assets were drained from the treasury, and over that next week almost $4 billion fled the country.

During the week ending Friday, August 13, the U.S. Treasury borrowed almost $3 billion in foreign currency to try to halt the dollar's decline (by buying dollars with that currency). But it soom became obvious that the anti-dollar forces had too much strength.

President Nixon responded by declaring international bankruptcy. In a televised address on Sunday, August 15, 1971, he announced that no more gold would be given in exchange for dollars. There were now absolutely no checks on the ability of the United States to inflate.

Nixon's speech to the world that night was a cunning attempt to lay the burden of guilt for this assault upon the shoulders of America's trading partners, who had maintained, Nixon astonishingly asserted, "unfair exchange rates." The cause of the problem had indeed been inequitable exchange rates, but not in the way that Nixon meant. The injustice of this statement is unsettling even ten years after it was made.

"Unfair" Japan

It is interesting to trace the immediate reactions of one of those "unfair" partners, Japan. Unlike Western Europe, whose exchanges were closed when news of the announcement came, it was Monday morning in the Far East. Trading was already underway when Nixon stepped before the cameras. Paralyzed by the news, the Japanese nevertheless kept their foreign exchange market open—not only for the rest of the day, but for two weeks afterward. As the European markets had sensibly remained closed, Tokyo became the dumping ground for anyone who wanted to get rid of dollars. During those two weeks the Bank of Japan absorbed $4.5 billion. Finally, on August 28, they threw in the towel and joined the other currencies in floating.

The European markets had remained closed, stunned and confused by the president's action. But they could not remain shut forever, and after efforts to decide upon a common course of action failed, they opened on August 23 on an uncoordinated basis. Even though they all continued to adhere officially to their pre-August 15 parities with the dollar, virtually all of them stopped defending the upper limits of their exchange rates.

In the months that followed, the spotlight turned on the United States as other nations waited for an American move. Their view was the understandable one that since the United States had thrown the monetary system out of kilter, it was up to America to make the first move.

American officials finally revealed a plan whereby most other currencies would be revalued upward against the dollar; no mention at all was made of the United States devaluing its dollar by raising the official price of gold. This overture naturally struck America's trading partners as still

one more affront. When the director of the IMF, Pierre-Paul Scheitzer, suggested that the U.S. might share in this realignment by a minor increase in the gold price, he was immediately moved onto the "most wanted" column of the Nixon administration's enemy list. But the Europeans were intransigent; the American plan made no headway.

The "Greatest Agreement"

Massive runs continued on the dollar, belying Nixon's August 15 claim that a dollar cut from gold would "never again be subject to international speculation." By mid-December--four months later—the dollar had declined by 12.5 percent against the mark, 12.3 percent against the yen, and had even lost ground to the lire and the pound, falling by 5.4 percent and 4.1 percent respectively. The world monetary situation not only continued in disarray, it seemed to be getting worse.

On December 18, 1971, the Smithsonian agreement was announced. For the first time in the post-war era, the dollar was devalued by raising the official gold price from $35 to $38 an ounce (8.6 percent). But gold convertibility was not restored, so the devaluation meant little.

Nixon's aim was to recreate an international order with fixed exchange rates--but without gold. He referred to this as "the greatest monetary agreement in the history of the world," but it was clear that no system would break down faster than a system of fixed rates fixed to nothing: neither to gold nor to anything else.

Nixon's "greatest monetary agreement" was smashed on the shoals of economic reality barely fourteen months later, because the dollar and pound sterling continued to be drastically overvalued in terms of the other industrialized nations' currencies and, most importantly, in terms of gold. The lack of confidence in the dollar sent gold prices soaring

to $90 an ounce, almost tripling the formerly sacred $35 figure. There continued to be periodic flights from the dollar.

Finally, on January 24, 1973, the Swiss government stopped supporting the dollar. Other governments quickly followed: They had all had enough. One month later, the entire fixed-rate order collapsed. The actual story of how it happened would be a dreary repetition of the tales recounted above billions of unwanted dollars reluctantly bought; another frantic but fundamentally ineffective dollar devaluation in an unsuccessful attempt to restore tranquility; and ultimately, closure of the world exchange markets. When those markets reopened, they did so without fixed rates. And the absence of fixed rates meant, logically, de facto floating rates. Floating rates had not really been adopted; rather, fixed rates had been abandoned.

Floating and Sinking

Since 1973 we haven't had the former condition of "public crises" where inflationist governments would be forced to spend millions in the foreign exchange markets defending their currencies until finally giving up and devaluing their currencies. For all its messiness, that system at least called people's attention to the fact that offending governments were in effect publicly confessing their sins. What we have had since is rather a quiet but constant withering away of values of those currencies which are inflated more than others, and a large drop in the value of all currencies in terms of gold. While the dollar--and even the Swiss franc--is not today what it was in 1973, an ounce of gold remains an ounce of gold.

Even under the flawed Bretton Woods fixed rates, there were limits to how far governments could inflate. Granted, it took a quarter-century, but the U.S. eventually inflated to such a degree it lost too much gold.

The floating rate system has given, however, complete control of the value of each currency to the respective government. They need not worry about gold flowing into other central banks. There are thus no institutional limits to inflate, and it should come as no surprise that the past decade has seen a marked jump in average annual world inflation.

The only effect of internal inflation now is a drop in the currency exchange rate; a currency falling in value. But in each country, there are special interests who desire just that. These include domestic businessmen who can't compete with the better-made or lower-cost products of other lands. If these inefficient firms' goods are priced in a currency becoming cheaper, consumers of stronger-currency countries can more easily buy those goods. But the reverse of this is that goods from those stronger-

currency countries, priced as they are in currencies rising in value, become more expensive for the consumers of the nation whose currency is falling. Their living standards thus fall as they are in effect forced to subsidize inefficient domestic producers. Also gainers in a depreciating currency country are all export firms, inefficient or otherwise. They can exert powerful pressure in favor of international inflation.

But as one can guess, this system does not exactly promote international harmony. Temptations are great for the "competitive" devaluations which so upset world economic peace in the 1930's. As we enter the 1980's unpleasant rumblings in favor of protectionism and high tariff barriers are being heard on a grand scale for the first time in half a century. The world economy is being pulled apart. It in no coincidence that world trade wars are threatened more now than at any time since the last regime of floating exchange rates, during the depression-ridden 1930's.

Islands of Calm in a Churning Sea

There have been attempts to operate localized fixed rate systems amidst the generalized floating. Foremost among these attempts have been the two efforts of that most cohesive and interdependent group of countries, the European Common Market.

Being linked by culture, geography and the need for trade, they realize more than America does what havoc floating rates have wreaked and it is a hopeful sign that these nations are more and more including gold in their dealings.

The first of these stabilizing attempts was the Common Market "snake," so-called because all the currencies moving up or down within predetermined

limits called to mind the undulations of a moving snake. Begun in 1972, it was over by 1976 simply because several different governments, each with their own inflation rates, from the start moved away from each other, flinging accusations of bad faith at each other while they did.

Having more flexible limits, Western Europe tried again and in March 1979 inaugurated the European Monetary System. While the EMS enables countries to revalue more easily, each time a member does it strains the very cohesion the system was meant to foster. It was nonetheless successful during its first two and one half years of operation. Traditionally strong currencies like the German mark weakened while perpetually weak ones like the French franc and Italian lira were strong.

There was therefore only one major realignment until October 1981. Since then though, there have been two (the most recent on February 21, 1982) and signs point to European currencies falling back into their usual patterns. But while EMS is likely in for hard time, in the background of this latest attempt at monetary union has been a gradual but clear remonetization of gold, the only stable unifying force among currencies.

Even before EMS's 1979 birth, both Italy and Portugal borrowed billions of dollars from other European nations and used as collateral part of their gold holdings. But in those cases in the mid-70's, the gold was valued at around 20% below the prevailing free market price.

With EMS's founding, things took a turn. In exchange for member gold deposits, nations received a new currency called the European Currency Unit (ECU). The hope is that one day ECU will be the European currency. This currency not only represents deposits in gold, but the gold is valued at the free market rate. Further, under European Monetary System rules gold can

act as a means of settlement between members. So gold now fulfills in the EMS two of three functions of money: It is both a reserve instrument and an instrument of payment. Gold only lacks the final prerequisite for money, a standard of value. This is so because current IMF rules (effective April 1, 1978) forbid all reference to gold in defining currency values. This has led to the absurd situation where currency A is defined in terms of B, C, and D; B in terms of A, C, and D, and so on. Each currency is thus defined in terms of others which themselves depend for definition upon it.

The market has not been fooled by any of this. It knows how to value currencies--in terms of gold. And that valuation has been since 1971 embarrassing for every currency. One-tenth of an ounce of gold will today buy as many dollars as one ounce did ten years ago.

The market has delivered its verdict on the battle between gold and the dollar waged throughout the 1970's by the American government. First the 1971 suspension of any remaining convertibility, and then two devaluations in rapid succession. At the Jamaica Conference of 1976, the IMF approved the U.S. wish to demonetize gold by abolishing the official price and selling over 600 tons, one-sixth of all IMF holdings (returning another one-sixth to member nations). The U.S. Treasury itself announced in January 1978 that it would sell gold beginning that May. But all during the time of the sales (which totalled about 500 tons) gold's price rose. Finally realizing it was throwing away a precious resource, Treasury gold sales ceased after November 1979. The Treasury thus implicitly backed-up the enhanced roles which Europeans had given gold earlier that year.

Indeed, as pointed out by Yves Laulan, chief economics of Societe Generale (one of France's largest banks), the U.S. Treasury, in an attempt to demonetize gold, authorized its sale to end circulation among individual Americans. Paradoxically, that act caused people to value it even more.

This subjective revaluation of gold has since spread to the Treasury, which now realizes that it holds far more gold reserves than any other country. Those who wish to reestablish American dominance in the world are not blind to the fact that gold is a powerful weapon. It is thus unlikely that Washington will wage last decade's war on gold again.

Conclusion

Our historical experience illustrates the overwhelmingly superior case for the gold standard as against any form of paper standard. There has never, in peacetime American history, been any sustained rate of inflation to match the inflation since 1941. The same, in fact, is true of wartime, which at least has never lasted more than a few years. And it is not an accident that the highest, most accelerated rate of inflation has taken place since 1971, when the United States went off the international aspects of the gold standard and went over completely to fiat paper.

The same conclusion is true if we consider price stability. Even deflation has been more acute under the fiat standard than under gold, as happened in the fiat standard wea of 1873-79 as contrasted to the gold standard period from 1879-1896.

Bimetallism doesn't work either, as America learned painfully from a century's experience. Gresham's Law, driving out undervalued moneys, works there as it does whenever the government overvalues one money and undervalues another. The dollar must be defined once again as a fixed weight of gold, with coinage and paper dollars always redeemable one into another at that weight. Ideally, full bodied silver would fluctuate freely alongside the gold dollar; short of that, fractional, subsidiary silver, as well as other metals such as copper would circulate in minor capacity along with gold.

The dollar must be redefined as a unit of weight of gold again, and gold coins should be encouraged to actually circulate among the public, to be used not simply as long-range investment but as a medium of exchange functioning as money. As Mises' "regression theorem" showed in 1912, new currency units cannot be imposed de novo from above, by politicians or economists.[10] They must emerge out of the experience and the valuations of the public on the market. The public is now long used to the "dollar" as the money-unit, and therefore the "gold gram" or "gold ounce" cannot be simply adopted by the public as a money out of the clear blue sky. The eventual adoption of a gold-gram or gold-ounce is basically a two-phase process: First, the "dollar," now of course the common currency unit, must be firmly and permanently tied to gold at a fixed weight; the public must become accustomed to this concept; and then finally, the currency unit can become that fixed weight directly.

What weight we choose to define the dollar is a matter of convenience, since any initial definition is arbitrary and we can pick the most useful one. This is no more "fixing the price of gold" and violating the free market than defining two nickels as equal to one dime "fixes the prices" of these two entities, or any more than defining 1 pound as equal to 16 ounces "fixes the price" of ounces and pounds. What the definition should be depends on the preferred use, and what the remainder of the monetary and banking system will look like.

Eventually, too, we must abolish the central government's monopoly of the minting business. Surely the idea that the sovereignty of the king must be expressed through stamping his face on a coin can now be discarded as a relic

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10 See Ludwig Mises, The Theory of Money and Credit.

of a bygone age. There is no reason why private firms cannot mint coins as well, or better, than the national mint. Free competition should come, at long last, to the minting business. The cost would be far cheaper, and the quality of the coins much improved.

From our historical analysis, it becomes clear that the problems of money and the business cycle under the gold standard, of inflation and contraction in the 1818-36 era, of World War I inflation, the boom of the 1920's and the disasters of the Great Depression of 1929-33, stemmed not from the gold standard but from the inflationary fractional-reserve banking system within it. This inflationary banking system was made possible by the government's imposition of a central bank: the Federal Reserve, the Bank of the United States, or by the quasi-centralized system of the national banking era after the Civil War. These boom and busts would not have occurred under "free-banking", i.e., the system in which banks are decentralized, able to issue either notes or deposits, no lender of last resort bails them out, and they are forced to close their doors permanently if they fail to redeem their liabilities in specie. The quasi-free banking period from the 1830's to the Civil War was far sounder and more stable than any period before or since in American history -- as historians are now coming to recognize. It would have been far better but for the periodic suspensions of specie payment that governments continued to permit. The legalization of branch banking would have made it far easier to call upon banks for redemption.

Once again, it was the intervention of government that caused the difficulty, not the market. Laissez-faire has not been consistently applied to banking. The historical evidence shows that monetary freedom does not fail, intervention by the government does.

CHAPTER 4

THE CASE FOR MONETARY FREEDOM

America's First Free Market Gold Coins

Most people assume that governments must be the only parties allowed to mint money. Private minters, the argument goes, will put out coins of uncertain quality, and take advantage of people. But not only have privately minted coins flourished, in at least one instance admitted by the U.S. Treasury's Mintmaster, the private minter had the edge over the government.

The first coiners of American copper and silver money were private citizens. The former was done by one John Higley of Granby, Connecticut. From 1737 to 1739 he issued coins that first were marked with a three pence value. But as he minted more of them, and used them mostly to buy drinks at the neighborhood bar, objections were raised to valuing them at his "high" rate. So he "lowered" his price, and the legend was changed to read "VALUE ME AS YOU PLEASE - I AM GOOD COPPER."[1] Actually, after he stopped minting them, they came to be valued by the market at 2 shillings, six pence -- or 30 pence.

The first American silver was coined after the Revolution in 1783 by I. Chalmers, an Annapolis goldsmith. There had been a shortage of silver with Spanish silver circulating by being cut into "pieces of eight," that is into eight "eights." But unscrupulous cutters were cutting the coin into nine or ten "eights," and Chalmers' idea of minting American Shillings and pence was well-received. Unfortunately, Chalmers succumbed to the same temptation that has afflicted national money issuers: he started putting in less silver for the same face value.

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[1] F. Crosby, Early Coins in America.

Coin shortages plagued early America, with all the minor inconveniences associated with that state. People responded by making their own money. As William Wooldridge wrote, in his fine chapter on private coinage in Uncle Sam the Monopoly Man, people made money "in whatever quantity suited the need or the impulse of the moment, out of whatever medium they found most convenient, and emblazoned it with whatever device, portrait or motto they fancied. They passed it on to whoever would take it and then made some more. Not only did the United States have a private coinage, it had dozens, at one point hundreds, of private coinages simultaneously."

Many of these have survived. One particularly affecting copper coin has on its obverse a kneeling slave woman in chains with the legend, "AM I NOT A WOMAN AND A SISTER[?]." On the reverse is "UNITED STATES OF AMERICA," and "LIBERTY/1838" within an olive wreath. Some copper coins cleverly skirted the counterfeit laws, rarely enforced in times of shortage. One penny size coin says "NOT ONE CENT, BUT JUST AS GOOD." At least some of these coins, minted before 1840, were still found in circulation as late as 1879.

Gold Coins

By their nature, gold coins don't usually serve as small change. Therefore, we find private gold much less frequently than silver and copper. And their issuance was local, only in places where the U.S. Mint had not provided adequate assaying or coining facilities. Further, because gold is much more valuable, any private mintmaster would have to build up his reputation for integrity over many years. This also limited the number of minters.

There were some private gold coins, however. The first were minted by Templeton Reid in Lumpkin county, Georgia. He produced $10, $5, and

$2.50 gold pieces roughly the same in weight and fineness as "official coins" of like value. All his coins are dated 1830, but he minted after that, but no one knows for how long. It is known that he was doing business in California in 1849.

The brightest name in American private gold coinage is Christopher Bechtler, a German Immigrant who arrived in Rutherfordton, in western North Carolina in 1830, then the premier gold-producing area in America. He began minting coins one year later, and continued until he died in 1842. There was a crying need: The nearest federal mint was in Philadelphia, too far to provide much circulating gold or to enable miners to travel there easily and have their gold coined.

Bechtler minted, along with $2.50 and $5 coins, the first American gold one dollar, 18 years before the United States did. By 1840 he had minted $2,241,840.50 worth of gold--roughly one-fourth of the total North Carolina coin values from the first mint record in 1804 through 1839. He coined for a profit of $2^{1}/_{2}\%$ of the bullion he handled. But he never accumulated great wealth, and his integrity became legendary. A book published in London in 1847 by G.W. Featherstonebaugh (A Canoe Voyage Up the Minnay Sotor)related how impressed people were with his honesty in making his coins the same value as official U.S. coins.

Both Bechtler's coins and his reputation were known far and wide. The emigrations of the 1850's brought many of his coins out West. And in Massachusetts constitutional lawyer Lysander Spooner argued that if Bechtler was allowed to coin money constitutionally then surely Spooner's private American Letter Mail Company (which made him a folk hero for carrying mail faster and cheaper than the Post Office) should be allowed to carry mail privately.

In fact, only a legislative oversight long since changed kept Bechtler out of jail. While private coinage of copper was considered counterfeiting, there was at that time no similar prohibition on silver and gold coinage.

So highly regarded was the Bechtler dollar that even when the United States Mint opened an office in Charlotte, North Carolina in 1838, Bechtler successfully competed with it. His equipment is now in museums: his dies at the North Carolina Hall of History at Raleigh, and his press at the American Numismatic Society in New York. They act as proof that someone once successfully competed with the government in money, the service which "everyone knows" only the government can provide.

Other Gold Coins

During the California gold rush government minting offices were sometimes slow in appearing and private firms filled the breach. By 1852, 14 companies had sprung up. While the absolute amount coined by these firms ($4,240,000) was larger than Bechtler, they handled a much smaller percentage share of the roughly $260,000,000 worth of gold coined by 1854.

But though the general appearance of these $5, $10, $20, and $50 coins resembled each other, their value was not uniform, and some of the firms were not completely honest in their minting. In any case, in 1854 the San Francisco mint was established, and private coinage was discouraged. But at least $2 million worth of these coins circulated for years to come.

Other Western states were host to private gold coinage. The Orange Exchange Company in Oregon City, Oregon issued $5 and $10 coins in 1842. The Mormons struck $2.50, $5, $10, and $20 coins in 1849 and 1860. They bore the legend "HOLINESS TO THE LORD" on one side, and the letters "G.S.L.C.P.G."(Great Salt Lake City Pure Gold) on the other. In discussing one assay of these coins Bankers' Magazine (Vol. 4, 1849-50, page 669) opined, "If this assay at the mint be a fair test of the value of the whole of of the Great Salt Lake manufacture of coin--the Mormons seem to know what they are about, and to be determined to make the best of their gold mines."

Three Colorado companies minted $2.50, $5, and $10 coins in 1860-61. They made quite a bit of it, and the coins had circulation all over the West. They were larger than "official" gold coins, but had more of a silver alloy in them, making them paler in color than other gold coins. Of the three minters, only those coins of Clark, Gruber and Company tested out well against government coins. The others presumably traded at discount. The desire for these coins continued until the Denver mint was established in 1863. Finally, a Leavenworth, Kansas mint issued in 1871 a half-dollar gold piece (which must have been very small). But it tested out at only 17 cents, and its creators were prosecuted--not for fraud which they should have been, but for counterfeit. The state of Kansas had passed in

June 1864 the first act prohibiting private gold coinage.

Altogether, then, we find private gold coins minted in seven states and territories. In 1851 when the Philadelphia Mint assayed 27 different kinds of gold coins no less than 15 private mints were represented. That was the peak of private gold activity, because with the Civil War the nation went off the gold standard, though in the West gold continued to circulate. And by 1879, when gold redemption was restored, non-governmental minting of gold coins was generally illegal.

Granted, the short history of private gold contains instances of dishonest minters. Gold Rush California in particular was the site of fly-by-night operations. And yet the example of Bechtler hints to us that if the government would have gotten out of the way, and private minters given more time to establish their reputations, a sturdy system of private coins of sound repute and wide circulation would have arisen. They could have done so either by weight or stamped dollar value. Without doubt, not all of them would have kept honest. The temptation to debase coins has always been strong. And yet the firms doing so would have lost business to Bechtlers of the trade. In a system of competing private money when one goes bad, consumers can always turn to another. But today, when only Washington has the monopoly on money, what protects us when the government debases its currency?

Free Banking in Scotland (1714-1844)

Not only does economic freedom work with regard to coinage, it has had spectacular results when applied to banking. As shown in chapter two, one of the prime causes of economic instability in the 19th century was the special privilege conferred on banks by either the state or federal governments. These privileges, which protected the banks from their creditors and allowed them to pyramid money supplies, caused the banking panics of the last century. But if one were to eliminate those privileges, the resulting instability would also disappear.

There once was a country with a stable banking system the envy of the rest of the world. While there's nothing so extraordinary in that, it was a system with aspects almost everyone would call - were it proposed to them - unworkable. Not only was there no central bank, there were no legal tender laws, no political banking regulations, no monetary policy and no restrictions on the right of anyone to form a bank and issue his own money. The country was Scotland from 1714-1844. When English law put an effective end to this "free-banking" regime, there were 19 different banks issuing their own notes.

The Bank of England, the first central bank, was founded in 1694. A year later, a Bank of Scotland was founded by the Scottish Parliament. (They were still technically two different countries.) The Bank was given a monopoly of issuing paper money for 21 years. This expired in 1716 and no effort was made to renew it. All apparently thought that there would never be any other note-issuers.

It's important to realize that despite its official-sounding name, the Bank of Scotland was a completely private institution, with no governmental connection. Indeed, the Act creating the Bank prohibited it from lending to the Scottish government. But after 1707, there was no more sovereign Scottish government, as the two Parliaments merged into one, in London. This was in the reign of Queen

Anne, a (Scottish) Stuart. When she died a few years later, the German Hanovers acceded to the throne, and their descendants still sit upon it. But this did not sit well with many Scots, who longed for a Stuart king. Their men were called Jacobites, and England would wage war upon them until "Bonnie Prince Charlie" was finally defeated in 1745.

All this is important to our story. In 1727, the Bank of Scotland's first real rival in note issuance was formed, the Royal Bank of Scotland. The Bank of Scotland petitioned the English king for monopoly status, but the English ignored the request, aware of the Bank's Jacobite sympathies.

There now began something unprecedented: a "note-duel" whereby each bank would send large quantities of the other's bank notes back to it and demand specie redemption. The old Bank, having less silver, lost the duel and for several months in 1728, suspended silver payments. It intended to reopen, though, and it did. All the while it paid a 5% interest rate to its note holders to keep demand from collapsing. The Bank's notes traded at par all this time. The Royal Bank soon began paying interest rates on deposits; this long before English banks did. It was an obvious benefit of competition in banking.

The two banks remained the only rivals until 1750. Each were Edinburgh banks and each sponsored a Glasgow bank to act as its note "salesman" in that city. To the surprise of each, both banks soon began issuing their own money. Neither note-dueling or a cartelization attempt to divide the nation into two "districts" worked, and a proliferation of "banks of issue" occurred. There were a few who issued far more paper than they had silver to back it, and they soon went bankrupt. But most were successful. One of these newcomers, the British Linen Company (later Bank), became the world's first innovator in branch-banking, having 12 branches by 1793.

During this time, there were sporadic attempts by the first two or three banks to obtain a money-issuing monopoly for themselves, but these failed. What laws did pass left the system largely intact. The Act of 1765 outlawed notes in smaller denominations than one pound, and insured that all notes were to be redeemable in gold on demand. The total number of Scottish banks (issuing money or otherwise) climbed from 5 in 1740 to 32 in 1769. In that year the Ayr bank was founded on the inflationist schemes which the Scotsman John Law had tried unsuccessfully to get the Bank of Scotland to adopt in 1705. (He later got the French government to listen to him, and caused the first nation-wide paper money inflation.) Law's idea was for a bank to issue notes not backed by gold or silver, but on the reputation of the issuer and "backed" by land.

In a mere three years, the Ayr bank managed to create a tremendous amount of unbacked paper and when it finally collapsed in 1772, losses amounted to two-thirds of a million pounds, a staggering amount for those days.

But the intriguing thing is that the Ayr bank's collapse had limited repercussions. It took with it only 8 small private banks in Edinburgh. This is largely because of a well-developed clearing house mechanism that the large Scottish banks employed. They accepted each others' notes and returned those notes to the issuing bank. Suspicious of the Ayr bank's issue, other banks made a practice of quickly returning Ayr's notes to it. When the collapse came, they were not affected.

Nevertheless, to insure public confidence (and get their own notes into wider circulation) the two largest banks, Royal Bank and the Bank of Scotland, announced that they would accept the bankrupt bank's notes. This was not as mad as it may appear. The collapse had few rippling effects because of Scotland's extraordinary practice of unlimited liability on the part of the bank's shareholders. So Ayr's loss was borne completely by the 241 shareholders, who paid all creditors in full.

Scottish banking grew apace, and around 1810 a new development occurred. This was the founding of the Commercial Bank of Scotland on joint-stock principles. Joint-stock banks, unlike private banks, raise their capital by selling shares of stock. This development grew, and with it branch banking. By 1845, there were 19 banks of issue with a total of 363 branches across Scotland, or one branch for every 6600 Scots. This compares with one for every 9405 Englishman and one for every 16,000 Americans at that time.

This was the heyday of Scottish free banking. The arrangement approached the ideal: many competing banks with none disproportionately large; their notes circulating throughout the country (and even in northern England) being exchanged effectively by the banks themselves through a clearinghouse; and competition keeping profits down, with small spreads between what the interest they paid depositors and the interest they charged borrowers.

These banks were the envy of thoughtful Englishmen. Scottish banks consistently proved themselves more stable than their English counterparts. While English provincial, or "country" banks were able to issue their own notes until 1845, there were many differences. The Bank of England (a state institution) limited their size, and refused to accept their notes. Further, the Bank did not branch out of London until an 1826 law encouraged it to do so. So for years, England was bedevilled with small unstable country banks and an uncompetitive Bank of England (which unlike Scottish banks paid no interest not only on demand deposits, but even on six-month certificates).

During the financial panics of 1793, 1797, 1815, 1825-26 and 1837, English country banks collapsed right and left, while the record for Scotland was always far better. When in trouble, Scottish banks could always turn to each other for help, which the stronger banks would give for reasons of self-interest as we saw in the extreme case of the Ayr bank. English country banks had no one to turn to.

English and Scottish Bank Failures, 1809-1830

Year	English bankruptices/1000	Scottish bankruptcies/1000
1809	5.7	0
1810	25.6	0
1811	5.1	0
1812	20.6	0
1813	8.7	14.3
1814	28.7	0
1815	27.3	9
1816	44.5	14.1
1817	4.0	0
1818	3.9	0
1819	16.5	0
1820	5.2	13.2
1821	12.8	0
1822	11.6	13.0
1823	11.6	0
1824	12.8	0
1825	46.4	12.0
1826	53.1	11.0
1827	11.9	0
1828	4.5	0
1829	4.4	11.4
1830	20.9	0
Avg/yr.	18.1	4.0

In computing the Scottish bank failure rate, up to three branches of a bank were similarly included in the computation, while non-issuing banks were excluded. The number of branches was estimated by interpolation where figures for a particular year were not available. No more than one Scottish bank failed during any year in the sample.

From 1797 to 1821, England suspended gold payments. Scotland went along not because it had to but because it realized that its gold would be drained if it didn't. And there is evidence that Scottish banks quietly continued gold payments to their best customers.

This difference between the 2 nations is graphically illustrated by a cartoon published in the Northern Looking Glass in 1825, a year of severe panic in Britain. (This is reproduced in Checkland's Scottish Banking, A History: 1695-1973, Collins, 1975, p. 407.) Entitled "State of the Money Market," it shows two scenes, "England" with a fat banker in the midst of banks and paper crashing down around him; and "Scotland", where 2 tartaned Scots are happily dealing in coin, with bags more of it visible across the banker's desk. While 60 English banks collapsed in 1825-26 none in Scotland did, although some partners sustained severe losses.

As an interesting aside, counterfeiting was never a problem for Scottish banks; a situation unlike the Bank of England, especially during the latter's suspension of gold payments. Perhaps this is due to the much shorter average life of Scottish notes. Turnover was heavy and the issuing bank quick to catch on. Even so, Scotch banks would honor counterfeits if turned in by innocent parties. To do anything else would have been bad business in a truly business-like atmosphere.

The first editor of the London Economist, James Wilson, wrote in 1847 that "we have only to look at Scotland to see what has been the effect of a long career of perfect freedom and competition upon the character and credit of the banking establishment of that country."

And yet two years before those words were written, legal action finally brought the "career of perfect freedom" to an end. Peel's Act of 1844 and the Scottish Banking Act of 1845 abolished freedom of entry into banking and the right of those remaining banks of freedom of note issue. However, Bank of England notes were not forced upon Scotland as legal tender; only gold was

so established.

Abolition of free entry caused a gradual reduction in banks issuing notes, and Scottish pound notes today have long since become like those of any other part of Great Britain. That is, with one exception: If you go to Scotland today, you will see pound notes issued by the three remaining banks of issue in business before 1845: The Bank of Scotland, the Royal Bank of Scotland, and Clydesdale Bank. These are actually as good - or as bad - as the Bank of England's notes circulating throughout the rest of the United Kingdom, because everything else about them is dictated by the Bank of England. But they provide daily proof that once there was a free market in money issuance with no legal tender laws, and that the system worked very well.

CHAPTER 5

REAL MONEY: THE CASE FOR THE GOLD STANDARD

In chapters two and three, on the history of the gold standard in the United States it was made clear that the economic shortcomings of the past were due to abuse of the gold standard, not to the standard itself. Men and governments have failed in the past; gold has not. The rule of law has been challenged by the rule of men throughout history, and this will continue. But the rule of law and the sovereignty of the people are much more likely to prevail with gold than with paper. For many economic reasons it is critical that the rule of law and gold win the great debate on monetary policy.

Low Interest Rates

The most pressing problem today for consumers and businessmen is high interest rates. Even those who do not understand the process of inflation easily recognize the great harm brought to an economy through high interest rates. The real interest rate, usually 3 per cent - 5 per cent, the cost of using another's capital, remains relatively stable. The inflationary premium charged in an age of inflation changes inversely to the confidence the market places in the monetary authorities and the spending habits of Congress. Contrary to popular belief, this premium is not equivalent to the current rate of price increases. This is certainly a factor, but only one of many in determining the anticipation of the future purchasing power of the currency. If prices are accelerating at an annual rate of 10 per cent, the inflation premium can still be 15 per cent if the market anticipates a more rapid rate of currency depreciation in the future. The further a nation is down the road of inflationary policies

the more difficult it is to reverse the expectations of more inflation by the people. In the early stages of inflation, more people are deceived and interest rates are actually lower than one would project if only computer analysis were used. In the later stages the rates, some claim, "are higher then they should be." This is what we are hearing today.

The inflationary premium is completely removed if a true gold standard exists. There would be no need to anticipate a depreciation of the currency, for the record is clear that gold maintains or increases its purchasing power. This ought not to be confused with sharp fluctuations in dollar-denominated prices of gold in a period of dollar speculation. The problem under those circumstances is the inflationary policies of the government, not the natural variation in the purchasing power of gold. Dr. Roy Jastram, in his book, The Golden Constant, has demonstrated quite clearly that gold maintains its value over both long and short periods of time.

With the classical gold standard long-term interest rates were in the range of 3 per cent - 4 per cent. There is no reason to believe that these same rates or lower rates would not occur with a modern gold standard. The economic benefit of low rates of interest is obvious to every American citizen. Accelerated real economic growth would result from such interest rates, and it cannot be achieved apart from these low rates.

Increased Savings

When a currency sustains steady and prolonged depreciation as the dollar has for decades, the incentive to save is logically decreased. Savings by American citizens have been one of the lowest in the world. If the dollar were guaranteed not to lose any value, and 3 per cent interest were paid on savings, as under a gold standard, a high savings rate would be quickly achieved. Getting $1.03 of

purchasing power after one year for every dollar saved is much better than getting $.94, as happens if $1 is saved in a conventional savings account today. A 9 per cent differential provides a real incentive to save under a gold standard and a strong disincentive under an irredeemable paper standard. The benefits of a gold standard for savings -- the source of capital in a growing economy -- should be obvious to all doubters. One reason it is hard to accept is that the market place -- the people and voluntary exchange -- is compatible with the gold standard, while government management and coercion are relied on with a paper standard. We as a nation have grown to mistrust and misunderstand a free system and have become dependent upon and misled by the money managers and central planners found in all interventionistic economies.

Revival of Long-Term Financing

Under the gold standard bonds were sold for 100 years for 4 per cent - 5 per cent. Today the long-term bond market is moribund. Mortgages for houses are so costly that few Americans can qualify. With lower interest rates, increasing savings, and trust that the money will maintain its value, the long-term financial markets will be revitalized -- all without government subsidies or temporary government programs. Reviving the economy without restoring a sound currency is a dream. Only with a currency that is guaranteed not to depreciate will we ever be able to have once again low long-term rates of interest.

Debt Held in Check

During the time we were on a gold standard federal deficits were very small or nonexistent. Money that the government did not have, it could not spend nor could it create. Taxing the people the full amount for extravagant expenditures would prove too unpopular and a liability in the next election.

Justifiably the people would rebel against such an outrage. Under the gold standard, inflation for the purpose of monetizing debt is prohibited, thus holding government size and power in check and preventing significant deficits from occurring. The gold standard is the enemy of big government. In time of war, in particular those wars unpopular with the people, governments suspend the beneficial restraints placed on the politicians in order to inflate the currency to finance the deficit. Strict adherence to the gold standard would prompt a balanced budget, yet it would still allow for "legitimate" borrowing when the people were willing to loan to the government for popular struggles. This would be a good test of the wisdom of the government's policy.

Finally, the inflationary climate has encouraged huge deficits to be run up by governments at all levels, as well as by consumers and corporations. The unbelievably large federal contingent liabilities of over $11 trillion are a result of inflationary policies, pervasive government planning, and unwise tax policies.

Full Employment

In a growing economy, labor is in demand. In a recession or depression, unemployment apparently beyond everyone's control plagues the nation. The unemployment is caused by the correction that the market must make for the misdirection of investment brought on by government inflation and artificial wage levels mandated by "full employment" policies. Full employment occurs when maximum economic growth is achieved with a sound monetary system, and wages are allowed to be determined by the market place.

Some would suggest that at times those rates are too low and must be raised by law. This can be done only at the expense of someone else losing a job to pay another a higher wage than deserved. The forced increases in wage benefits

increase corporate debt and contribute to their need for more inflationary credit to help keep them afloat. Although only government can literally inflate, higher than market wages in certain businesses prompts the accommodation of monetary policy to keep these companies going, Chrysler Corporation being a prime example. High wages contributed to Chrysler's financial plight and government guaranteed loans (inflation) were used to "solve" the problem. It's well to remember that working for $8 an hour is superior to having a wage of $16 an hour but no job. For awhile the artificially high wage seems to be beneficial, but the employment and the recession that eventually come makes the program a dangerous one. For years it was believed that "inflation" stimulated the economy and lowered unemployment rates. But in the later stages of inflation its ill effects are felt and unemployment increases while real wages fall. More inflation and wage controls to keep wages high will make the problem significantly worse and only raise the unemployment rates. Only a sound currency and a market determination of wages can solve this most explosive social problem of ever-increasing unemployment.

Economic Growth Enhanced

The record for real economic growth while we were on a gold standard surpasses the growth we have experienced during the past ten years. Current economic statistics show the conditions worsening with no end to the crisis in sight. Only with a gold standard will we see revitalization of a productive economic activity.

The "Austrian" economists, and in particular Ludwig Mises, have demonstrated clearly that the business cycle is a result of unwise monetary policy (frequently compounded by other unwise government policies such as wage controls and protectionist legislation). The business boom results from periods of monetary growth; the recession results from the restraints that are eventually placed on this money

growth, either by the government or the market. As government increases the money supply, false signals are sent to the market with lower than market interest rates and ready access to investment funds causing a misdirection of investment. This misdirection must later be corrected by market forces. This whole process is aggravated by massive disruption in the market direction of investment by government guaranteeing hundreds of billions of dollars of loans which prompts more monetary growth. Government becomes a direct participant in credit allocation in an inflationary economy. Although during all stages and in isolated cases "benefits" are demonstrated, the overall economic harm done by inflation and malinvestment is overwhelming. We are seeing those results all around us today.

Money Growth Not Necessary

Advocates of discretionary and monetarist monetary policies claim that money growth is needed to "accommodate" economic growth. Economic growth is not dependent on money growth. Economic growth comes from productive efforts which are encouraged by savings, low interest rates, reliable currency and minimal taxes. Attempting to control and stimulate economic growth with monetary growth does the opposite; it destroys the environment required for real growth to occur.

With the gold standard and the free market, investments are strictly made by enterprising individuals eager to make a profit. Those done carefully and prudently are encouraged. Successful investments bring rewards, and mistakes bring penalties to the investors. In contrast, a government-directed economy, backed up by unlimited supplies of paper money and fabricated credit, prompts the bailing out of unsuccessful enterprises and promotes investments for political, not economic reasons. It is inevitable that the system of inflation and government-directed investment will fail.

With a gold standard the money supply would probably increase on an average of 2 per cent per year. If the growth is smaller or larger, prices will adjust posing no limitation on economic growth due to a "shortage" of capital. With the gold standard, confidence in the monetary unit would exist, and credit extended from one business to another, to consumers and purchasers, would be greatly encouraged. Information on the credit needs of the market would be available immediately, in contrast to the late information the Federal Reserve always receives. (The Federal Reserve never planned to increase the money supply at a rate of 19 per cent in January 1982 -- it was only able to react to it after the fact.) Under a real gold standard "controlling" the money supply is irrelevant as long as the market is allowed to adjust the perceived value of gold by an absolutely free pricing mechanism and no wage or price controls of any sort instituted.

Price "Stability"

Prices are never rigid in a free market. A gold standard permits price adjustments to accommodate the flow of gold into and out of a country as well as to regulate new production of gold. In contrast to popular belief, the goal of stable -- that is, rigid -- price levels as proclaimed by paper money managers is not the goal of the gold standard. The irony, however, is that the goal of rigid prices set by the paper money managers is completely elusive, but a gold standard, in which the goal is honesty and freedom and flexibility of prices, achieves significant price "stability."

Economic Calculation

A precisely defined unit of account by weight, an ounce of gold for instance, provides a needed objective measurement to allow reasonable economic calculations. Under socialism, economic calculation is impossible. Without a gold standard economic calculation is extremely difficult. Without this tool, a precise unit of account, sound economic planning becomes practically impossible, resulting in only speculative ventures and barter. Having a unit of account that has no definition or one that changes continually produces a situation equivalent to a carpenter using a yardstick that on an hourly basis changes the number of inches it contains. It is easy to see how foolish it would be to have any other unit of measurement changing in definition on a constant basis, yet many believe that a whole nation's economy can operate with a monetary system in which the "dollar" has no definition and its measurement and value depend on politicians and bureaucrats.

Trade is enhanced domestically and internationally when a precise unit of account is used. The failure of the Confederation was due principally to the absence of a unit of account that all the colonies could use to facilitate exchange. This problem was solved when the Constitutional Convention precisely defined the dollar. The chaotic conditions that are developing today will only be solved when we once again accept a sound monetary system.

Internationally, all payments with the gold standard could be made by the actual transferring of gold. Such a policy would limit the ability of nations to export their inflation. The decrease in the gold supply of an importing nation would prompt prices to drop allowing for more competitive prices and more competition in world markets. The key to third world economic success is not their gold supply (or imported inflation in terms of Eurodollars) but whether or not they can work and produce a product that is exportable. This is dependent

on the degree of economic freedom that the people have and their right to own property. The policy that guarantees a continuation of third world starvation and poverty is the present policy of continued worldwide inflation and centrally-controlled economies.

Economic Limitations of Gold

The economic advantages of the gold standard are many and compelling. However, it is important that one does not expect from the gold standard something that cannot be achieved. The errors of a government-planned economy cannot be cancelled out by instituting a gold standard alone. Abusive tax policies must be changed to allow an economy to thrive. And although sound money goes a long way toward protecting a worker's real income, it will not overcome bad labor laws.

Gold is used as money in a free market because the people throughout history have chosen gold. Although historically a free market means a gold standard, a gold standard by itself will not ensure a free market. When a market economy is in place, a gold standard holds in check the ability of the government officials to expand their power.

Some claim that a gold standard cannot be put into place until big government is brought under control and the budget is balanced; they further claim that it <u>then</u> becomes unnecessary. It is necessary to balance the budget and institute a gold standard together. The discipline and determination required for one mandates the other. If government is to be limited in size, the budget balanced and the market free, gold will be a necessary adjunct. It will give assurance that the size and scope of government will be held in check. If government is to continue running the economy and accumulating massive deficits,

inflationary monetary policy will persist. A gold standard cannot exist in a vacuum; it must be part of a broader freedom philosophy. When we as a nation reject political control of the economy and the money, the gold standard will return in a modern version — far surpassing all previous attempts at establishing sound money. Until then, as we opt for more and more ad hoc "solutions" to the government-created problems, freedom will be further diminished, the economy will deteriorate further, and inflation will accelerate. Gold must be allowed to perform its vital service in building a healthy economy and restraining the tendency of all governemnts to become large and oppressive.

Common Objections to Gold

In any debate about the gold standard, certain objections are repeatedly raised by opponents of monetary freedom, even though those objections have been refuted many times before. Some of these objections are:

1. There is not enough gold.
2. The Soviet Union and South Africa, since they are the principal producers of gold, would benefit from our creation of a gold standard.
3. The gold standard causes panics and crashes.
4. The gold standard causes inflation.
5. Gold is subject to undesirable speculative influences.

The first objection, there isn't enough gold, is based upon a misunderstanding of a gold standard. It assumes that the present exchange ratio (or a lower ratio) between a weight of gold and a greenback is the exchange ratio that must prevail in a gold standard. Such obviously is not the case. Doubling the exchange ratio, for example, doubles the money supply. Lower prices under a gold standard eliminate the necessity for such large sums. One can buy a suit that costs 400 paper dollars with 20 gold dollars.

In 1979, there were a total of 35,000 metric tons of gold in central bank and non-Communist government treasuries alone. The United States Government, officially holding 264 million ounces (8,227 tons) owns about 1/4 of that total. The best estimate on the total amount of gold in the world is three billion ounces, meaning that about one-third of the world's gold is held by governments and central banks, and two-thirds by private persons. Far from being a dearth of gold, there are enormous amounts in existence. Gold, unlike most commodities, remains in existence. It is not burned or consumed, and the amounts actually lost are insignificant when compared to the amounts now in public and private possession.

The second objection, concerning the Soviet Union and South Africa, is equally groundless. These nations, as the world's largest producers of gold, have profited handsomely from the massive increase in gold prices in the past ten years. Such increases do not occur under a gold standard.

Recently a newsmagazine reported that "The Soviet Union holds an estimated 60 million ounces of gold and has unmined reserves of perhaps 250 million ounces more. At today's prices that would give the Soviets a $146 billion stranglehold on western economies." But let us put these figures in perspective. Below is a table showing the gold holdings of major central banks.

Official Gold Holdings
September 30, 1979
(tons)

United States	8,227
Canada	657
Austria	657
Belguim	1,063
France	2,546
German Federal Republic	2,961
Italy	2,074
Japan	754
Netherlands	1,367
Portugal	689
South Africa	374
Switzerland	2,590
U.K.	584
OPEC	1,207
Other Asia	607
Other Europe	1,209
Other Middle East	461
Other Western Hemisphere	654
Rest of World	320
Unspecified	113
Total	29,110
IMF	3,217
European Monetary Cooperation Fund	2,664

This table, taken from the Annual Bullion Review 1980 of Samuel Montagu & Co., is based on IMF statistics.

The Soviet Union's alleged 60 million ounces is less than 1900 tons, less than 1/4 of the U.S. official gold holdings. Even the alleged 250 million ounces of "unmined reserves" are less than the U.S. has in Fort Knox and our other bullion depositories.

Consolidated Gold Fields Ltd. of London has estimated the net outflow of gold from the Communist empire:

Year	Net Outflow
1970	-3
1971	54
1972	213
1973	275
1974	220
1975	149
1976	412
1977	401
1978	410
1979	199
1980	90

In 1976, the Soviets produced 412 tons, 1.2 per cent of the governmental holdings of the non-Communist world. Assuming they could produce at this rate continously -- a very doubtful assumption -- it would take them almost a century just to match current official holdings. If one includes private holdings, the percentage drops to about 1/2 of 1 per cent, and the time required extends to more than two centuries. The fear of the Soviet Union and South Africa either dumping or withholding gold and thereby wrecking a gold standard by altering significantly the purchasing power of gold is baseless. The only reasons sales by such governments now influence the market is that official holdings are immobilized and the value of the paper dollar fluctuates violently. Were we to institute a gold standard, those holdings would once again enter the market. We should stop giving such windfalls to the Soviets and South Africans as they have enjoyed during the last ten years.

The real fear should be the massive increase in the money supply caused by the Federal Reserve in the last ten years, and the probability of still further massive inflation. The red herring of external shock destroying a gold standard is designed to distract one's attention from the threat of internal shock caused by the Federal Reserve.

The third objection, that the gold standard causes panics and crashes, is also false. The extensive examination of the monetary history of the United States during the 19th-century demonstrated that it was not the gold standard, but government intervention in the banking system that caused the problems. The legal prohibition of branch and interstate banking prevented the prompt and convenient clearing of notes issued by those banks. Frequent suspensions of specie payments were special privileges extended to the banks by the government. Fractional reserves, wildcat banking, the national banking system, and the issuance of greenbacks all contributed to the instability experiences during the 19th-century.

But even with these interventions, as long as the dollar was defined as a weight of gold, the benevolent influences of the gold standard were felt. Chapter two of the Commission's Report indicates that the problems of the 19th-century were due to abuses and lapses of the gold standard, not the standard itself. Victor Zarnowitz has found evidence that the so-called recessions of 1845, 1869, 1887, and 1899 were mere pauses in growth.[1] Jeffrey Sachs categorized recessions since 1893 by their severity. He found only one strong and one moderate contraction in the period of 1893-1913. Since the institution of the Federal Reserve, however, we have had three strong contractions and three -- now four -- moderate contractions.[2]

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[1] "Business Cycles and Growth: Some Reflections and Measures," (NBER Working Paper #665, April 1981).

[2] "The Changing Cyclical Behavior of Wages and Prices: 1890-1975" (NBER Working Paper #304, December 1978).

Economist Alan Reynolds has pointed out that "Michael Parly found that unemployment rates in the 1930's had been exaggerated by failure to count those on government work programs...as employed. When the adjusted unemployment rate is added to the consumer inflation rate to arrive at Art Okun's 'discomfort index,' the last two administrations experienced the worst combination of inflation and unemployment (16 per cent) of any in this century except for Franklin Roosevelt's first term (15.7 per cent) and President Wilson's second (19.6 per cent). Unemployment averaged more than 7 per cent from 1975 to date. From 1899 to 1929, unemployment reached 7 per cent in only two years. We are in no position to be smug about the relative performance of a seemingly old-fashioned monetary standard. The fact is that it worked very well under conditions more difficult than those we face today."[3]

In a report prepared by EMB Ltd. and submitted to the Commission, it was stated that "In the United States there were 12 panics and crises between 1815 and 1914." Dr. Roy Jastram's testimony to the Commission demolished that popular myth:

> This draws upon a book by Willard Thorp, Business Annals, published by the National Bureau of Economic Research in 1926. Year-by-year Thorp gleaned his characterization of the year stated from the contemporary press and writers of the day. When I was at the National Bureau we considered Professor Wesley C. Mitchell as the patron saint of objectivity. Mitchell wrote in the Introduction to Thorp's book: "'Crisis,' then, is a poor term to use... But sad experience shows how much misunderstanding comes from the effort to use familiar words in new technical senses."
>
> Both the Commission Staff and I agree that the true gold standard ran between 1834-1861 and 1879-1914. Even with Professor Mitchell's admonition about the use of the terms, this leaves us with 8 instead of EMB's 12 "crises" or "panics" associated with a real gold standard. A consultation of the original Thorp volume shows that EMB is simply wrong about 1882 and 1890 - Thorp does not label either

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[3] Testimony Before the United States Gold Policy Commission, Washington, D.C., November 13, 1981.

> of them as "crisis" or "panic." So the count is reduced to 6. In 4 of these 6, part of the year is called by Thorp "prosperity." Hence we have only 2 out of the EMB's original 12 that were labeled in the original source as being unmitigated crises or panics during an actual gold standard. This kind of misinformation cannot go unchallenged.
>
> And I might close with a thought of my own: if we were to use today these terms in their archaic sense, every week of the past two years could have been labeled a "panic."[4]

The fourth objection, the gold standard causes inflation, can also easily be disposed of. Dr. Alan Reynolds, in his appearance before the Commission, did so:

> When the 1968-1980 period is compared with the "purest" gold standard, 1879-1914, it is not at all clear that even short-term price stability was superior in recent years. Average changes in consumer prices were zero under gold, over 7% under paper; the standard deviation of those prices was 2.2% under gold, 3.1% under paper. Annual variations appear slightly wider under the old wholesale price index for 1879-1914 than under the recent producer price index for finished goods, but that is probably due to the greater importance of volatile farm commodities and crude materials a century ago. As Sachs points out, farm prices were 43% of the wholesale index as late as 1926, but only 21% in 1970.
>
> Perfect short-term price stability has never been achieved anywhere, so the issue is relative stability and predictability. By comparing unusual peak years to recession lows, as Professor Allan Meltzer does, it is possible to show annual rates of inflation or deflation of 2-3% in wholesale prices under the gold standard. Exaggerated as that is, it still doesn't sound too bad for price indexes dominated by farm products. The most persistent inflation under a gold standard was from 1902-07, when Gallman's estimate of the price deflator rose by 2.4% a year.

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[4] Testimony Before the Gold Commission, Washington, D.C., November 13, 1981.

> Long-term interest rates were much lower and more stable under any form of gold standard than in recent years, and annual price changes were typically smaller. James Hoehn of the Federal Reserve Bank of Dallas concludes that, "Short-run monetary stability is no better today than it was in the gold standard period. This result is surprising and difficult to explain in view of the greater present day stability of the banking system."
>
> One indication of the loss of long-term stability was provided by Benjamin Klein, who found that the average maturity of new corporate debt fell from over 37 years in 1900-04 to 20 years in 1968-72.[5]

Now that the market for long-term bonds has been destroyed by ten years of paper money, and the U.S. has experienced its worst price inflation in its national history, it is difficult to take the charge that the gold standard causes inflation seriously.

Dr. Roy Jastram, in his seminal work, The Golden Constant, presents the statistical evidence that gold provides protection against inflation, and actually results in gently falling prices. Such gentle falls in turn cause increases in the real wages of workers. Below is a table showing the index of whole commodity prices for the United States from 1800-1981. The figures are quite surprising to anyone who has come to regard continual price inflation as a fact of life to which we all must adjust.

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[5] Loc. cit.

The Index of Wholesale Commodity Prices

United States 1800-1981

(1930 = 100.0)

Year	Index	Year	Index	Year	Index
1800	102.2	1841	72.9	1882	85.7
1801	112.6	1842	65.0	1883	80.0
1802	92.8	1843	59.4	1884	73.8
1803	93.5	1844	61.0	1885	67.5
1804	100.0	1845	65.9	1886	65.0
1805	111.9	1846	65.9	1887	67.5
1806	106.3	1847	71.3	1888	68.2
1807	103.1	1848	65.0	1889	64.1
1808	91.3	1849	65.0	1890	65.0
1809	103.1	1850	66.6	1891	64.6
1810	103.8	1851	65.9	1892	60.3
1811	100.0	1852	69.7	1893	61.9
1812	103.8	1853	76.9	1894	55.4
1813	128.5	1854	85.7	1895	56.5
1814	144.4	1855	87.2	1896	53.8
1815	134.8	1856	83.2	1897	53.8
1816	119.7	1857	88.1	1898	56.1
1817	119.7	1858	73.8	1899	60.3
1818	116.6	1859	76.3	1900	64.8
1819	99.1	1860	73.8	1901	63.9
1820	84.1	1861	70.6	1902	68.2
1821	84.1	1862	82.5	1903	69.1
1822	84.1	1863	105.4	1904	69.1
1823	81.6	1864	153.1	1905	69.5
1824	77.8	1865	146.6	1906	71.5
1825	81.6	1866	137.9	1907	75.3
1826	78.5	1867	128.5	1908	72.9
1827	77.8	1868	125.3	1909	78.3
1828	76.9	1869	119.7	1910	81.4
1829	76.2	1870	107.0	1911	75.1
1830	72.2	1871	103.1	1912	80.0
1831	74.4	1872	107.8	1913	80.7
1832	75.3	1873	105.4	1914	78.7
1833	75.3	1874	100.0	1915	80.5
1834	71.3	1875	93.5	1916	98.9
1835	79.4	1876	87.2	1917	135.9
1836	90.4	1877	84.1	1918	152.0
1837	91.3	1878	72.2	1919	160.3
1838	87.2	1879	71.3	1920	178.7
1839	88.8	1880	79.4	1921	113.0
1840	75.3	1881	81.6	1922	111.9

Year	Index	Year	Index	Year	Index
1923	116.4	1943	120.2	1963	211.9
1924	113.5	1944	120.2	1964	212.3
1925	119.7	1945	122.4	1965	216.6
1926	115.7	1946	139.7	1966	223.8
1927	110.5	1947	171.5	1967	224.2
1928	112.1	1948	185.7	1968	229.8
1929	110.1	1949	176.5	1969	238.8
1930	100.0	1950	183.4	1970	247.5
1931	84.3	1951	204.3	1971	255.4
1932	75.3	1952	198.7	1972	267.0
1933	76.2	1953	196.0	1973	302.0
1934	86.5	1954	196.4	1974	359.0
1935	92.6	1955	196.9	1975	392.2
1936	93.5	1956	203.4	1976	410.2
1937	99.8	1957	209.2	1977	435.5
1938	90.8	1958	212.1	1978	469.3
1939	89.2	1959	212.6	1979	528.2
1940	90.8	1960	212.6	1980	602.8
1941	101.1	1961	212.1	1981	657.8
1942	114.1	1962	212.6		

In the 67 years prior to the beginning of the Federal Reserve system in 1913 the consumer price index in this country increased by 10 per cent, and in the 67 years subsequent to 1913 the Consumer Price Index increased 625 per cent. This growth has accelerated since 1971 when President Nixon cut our last link to gold by closing the gold window.

In 1833, the index of wholesale commodity prices in the U.S. was 75.3 In 1933, just prior to our going off the domestic gold standard, the index of wholesale commodity prices in the U.S. was 76.2: a change in 100 years of nine-tenths of 1 per cent. The index of wholesale commodity prices in 1971 was 255.4. Today, the index is 657.8. For 100 years on the gold standard wholesale prices rose only nine-tenths of 1 per cent. In the last 10 years of paper money they have gone up 259 per cent.

The final objection to the gold standard, that gold is subject to speculative influence and therefore too unstable to be used as a standard for anything, is also spurious. During the past decade, gold has become a major hedge against inflation. The runup in gold prices from $35 to $850 per ounce came as a result of fears about the value of paper currencies and developing international crises. This speculation -- actually a seeking of protection from the continual devaluation of paper currencies -- has markedly accelerated in recent years. Not only is the decline of the paper dollar causing larger investments in gold coins, but also in real estate, collectibles of all types, and any other good that promises to retain its value. The Commodity Exchange reports that there are now over 100 different futures contracts offered by the nation's 11 exchanges. Since 1975, 42 new futures contracts have been introduced, and 37 proposed contracts are currently pending government approval. This enormous growth in speculation has occurred during the last ten years. People who object to gold because it is speculative confuse cause and effect. Were we on a gold standard, there would be no speculation in gold at all. Gold is currently an object of "speculation" precisely because we have an irredeemable paper money system and people are trying to protect themselves from it. The real speculation is in the anticipation of the further depreciation of the dollar.

All these objections to gold cannot shake the overwhelming historical and theoretical arguments for a gold standard. But there are other arguments for gold as well. We will now take them up in turn.

MONEY AND THE CONSTITUTION

In addition to the compelling economic case for the gold standard, a case buttressed by both historical and theoretical arguments, there is a compelling argument based upon the Constitution. The present monetary arrangements of the United States are unconstitutional--even anti-constitutional--from top to bottom.

The Constitution actually says very little about what sort of monetary system the United States ought to have, but what it does say is unmistakably clear. Article I section 8 clause 2 provides that "The Congress shall have power...to borrow money on the credit of the United States...[clause 5:] to coin money, regulate the value thereof, and of foreign coin, and fix the standards of weights and measures... [and clause 6:] to provide for the punishment of counterfeiting the securities and current coin of the United States...". Further, Article I section 10 clause 1 provides that "No state shall...coin money; emit bills of credit; [or] make anything but gold and silver coin a tender in payment of debts...".

When the Founding Fathers wrote the Constitution in the summer of 1787, they had fresh in their minds the debacle of the paper money printed and issued by the Continental Congress during the Revolutionary War. The paper notes, "Continentals" as they were called, eventually fell to virtually zero percent of their original value because they were not redeemed in either silver or gold. They were "greenbacks," and were the first of three major experiments with "greenbacks" that this nation has conducted.[6] The Continental greenback failed miserably, giving rise to the popular phrase "not worth a Continental."

Consequently, when the Constitutional Convention met in 1787, the opposition to paper money was strong. George Mason, a delegate from Virginia,

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[6] The other two experiments were during the Civil War, 1862-1879, and the present period from 1971. The second experiment had a happy conclusion because the Civil War greenbacks were paid off dollar for dollar in gold. As Chapter two shows, the colonies also frequently experimented with papermoney.

stated that he had a "mortal hatred to paper money." Delegate Oliver Ellsworth from Connecticut thought the Convention "a favorable moment to shut and bar the door against paper money." James Wilson, a delegate from Pennsylvania, argued that "It will have a more salutary influence on the credit of the United States to remove the possibility of paper money." Delegate Pierce Butler from South Carolina pointed out that paper was not a legal tender in any country of Europe and that it ought not be made one in the United States. Mr. John Langdon of New Hampshire said that he would rather reject the whole Constitution than allow the federal government the power to issue paper money. On the final vote on the issue, nine states opposed granting the federal government power to issue paper money, and only two favored granting such power.

The framers of the Constitution made their intention clear by the use of the word "coin" rather than the word "print," or the phrase "emit bills of credit." Thomas M. Cooley's Principles of Constitutional Law elaborates on this point: "To coin money is to stamp pieces of metal for use as a medium of exchange in commerce according to fixed standards of value."

Congress was given the exclusive power (as far as governments are concerned) to coin money; the states were explicitly prohibited from doing so. Furthermore, the states were explicitly forbidden from making anything but gold and silver coin a tender in payment of debt, while the federal government was not granted the power of making anything legal tender.

In his explanation of the Constitutional provisions on money, James Madison, in Federalist No. 44, referred to the "pestilent effects of paper money on the necessary confidence between man and man, on the necessary confidence in the public councils, on the industry and morals of the people, and on the character of republican government." His intention, and the

intention of the other Founders, was to avoid precisely the sort of paper money system that has prevailed for the past ten years.

This intention was well understood throughout the 19th century, and was denied only when the Supreme Court found it expedient to do so. For example, Daniel Webster wrote:

> If we understand, by currency, the legal money of the country, and that which constitutes a lawful tender for debts, and is the statute measure of value, then undoubtedly, nothing is included but gold and silver. Most unquestionably, there is no legal tender, and there can be no legal tender in this country under the authority of this government or any other, but gold and silver, either the coinage of our mints or foreign coins at rates regulated by Congress. This is a constitutional principle, perfectly plain and of the very highest importance. The states are expressly prohibited from making anything but gold and silver a tender in payment of debts, and although no such expressed prohibition is applied to Congress, yet as Congress has no power granted to it in this respect but to coin money and to regulate the value of foreign coins, it clearly has no power to substitute paper of anything else for coin as a tender in payment of debts in a discharge of contracts....
>
> The legal tender, therefore, the constitutional standard of value, is established and cannot be overthrown. To overthrow it would shake the whole system. (Emphasis added.)

In 1832, the Select Committee on Coins of the House of Representatives reported to the Congress that "The enlightened founders of our Constitution obviously contemplated that our currency should be composed of gold and silver coin....The obvious intent and meaning of these special grants and restrictions [in the Constitution] was to secure permanently to the people of the United States a gold or silver currency, and to delegate to Congress every necessary authority to accomplish or perpetuate that beneficial institution."

The Select Committee stated its conclusion that "The losses and deprivation inflicted by experiments with paper currency, especially during the Revolution; the knowledge that similar attempts in other countries... were equally delusive, unsuccessful, and injurious; had likely produced the conviction [in the minds of the framers of the Constitution] that gold and

silver alone could be relied upon as safe and effective money."

Twelve years later, in 1844, the House Committee of Ways and Means concluded that:

> The framers of the Constitution intended to avoid the paper money system. Especially did they intend to prevent Government paper from circulating as money, as had been practised during the Revolutionary War. The mischiefs of the various expedients that had been made were fresh in the public mind, and were said to have disgusted the respectable part of America...The framers [of the Constitution]...designed to prevent the adoption of the paper system under any pretext or for any purpose whatsoever; and if it had not been supposed that such object was effectively secured, in all probability the rejection of the Constitution might have followed.

Later in the century, Justice Stephen Field presciently wrote in the case Julliard v. Greenman (1884):

> There have been times within the memory of all of us when the legal tender notes of the United States were not exchangeable for more than half of their nominal value. The possibility of such depreciation will always attend paper money. This inborn infirmity, no mere legislative declaration can cure. If Congress has the power to make the [paper] notes legal tender and to pass as money or its equivalent, why should not a sufficient amount be issued to pay the bonds of the United States as they mature? Why pay interest on the millions of dollars of bonds now due when Congress can in one day make the money to pay the principal; and why should there be any restraint upon unlimited appropriations by the government for all imaginary schemes of public improvement if the printing press can furnish the money that is needed for them?

Justice Field foresaw exactly what would happen in the 20th century when the federal government has used the printing press—and the computer—as the means of financing all sorts of "imaginary schemes of public improvement."

Under the Constitution, Congress has power to coin money, not print money substitutes. Such money is to be gold and silver coin, nothing else. It is significant that this power of coining money is mentioned in the same sentence in the Constitution as the power to "fix the standards of

weights and measures," for the framers regarded money as a weight of metal and a measure of value. Roger Sherman, a delegate to the Constitutional Convention, wrote that "If what is used as a medium of exchange is fluctuating in its value, it is no better than unjust weights and measures...which are condemned by the Laws of God and man...".

The Founders were greatly influenced by both the English common law and Biblical law. Sherman's comment about unjust weights and measures, and the juxtaposition of the powers to coin money and fix the standards of weights and measures in the Constitution are examples of that influence.

For the framers of the Constitution, money was a weight of precious metal, not a weightless piece of paper with green ink printed on it. The value of the money was its weight and fineness, and its value could be accurately determined.

Today's paper money system, issued by a coercive banking monopoly, has no basis in the Constitution. It is precisely the sort of government institution--one far more clever than the bumbling efforts of Charles I to confiscate wealth--that can forcibly exact financial support from the people without their consent. As such it is a form of taxation without representation, and a denial of the hard fought and won principle of consent before payment of taxes.

Remarkably enough, the Supreme Court has not decided any cases challenging the constitutionality of the present irredeemable paper money system; in fact such a case has not yet been adjudicated before the Court or at the federal appellate level.

It is to be hoped that this will soon change, and the Court forced to recognize, as was recognized throughout history, that the states may make only "gold and silver coin a tender in payment of debt." Anything else is unconstitutional. As for the Congress, we strongly recommend that the Congress abide by the supreme law of the land by repealing those laws that contravene it.

THE MORAL AGRUMENT FOR GOLD

A monetary standard based on sound moral principles is one in which the monetary unit is precisely defined in something of real value such as a precious metal. Money that obtains its status from government decree alone is arbitrary, undefinable, and is destined to fail, for it will eventually be rejected by the people. Since today's paper money achieves its status by government declaration and not by its value in itself, eventually total power over the economy must be granted to the monopolists who manage the monetary system. Even with men of good will, this power is immoral, for men make mistakes, and mistakes should never have such awesome consequences as they do when made in the management of money. Through the well-intentioned mismanagement of money, inflation and depression are created. Political control of a monetary system is a power bad men should not have and good men would not want.

Inflation, being the increase in the supply of money and credit, can only be brought about in an irredeemable paper system by money managers who create money through fractional reserve banking, computer entries, or the printing press. Inflation bestows no benefits on society, makes no new wealth, and creates great harm; and the instigators, whether acting deliberately or not, perform an immoral act. The general welfare of the nation is not promoted by inflation and great suffering results.

Gold is honest money because it is impossible for governments to create it. New money can only come about by productive effort and not by political and financial chicanery. Inflation is theft, and literally steals wealth from one group for the benefit of another. It is possible to have an increase in the supply of gold; but the historical record is clear that all great inflations occur with paper currency. But an increase in the supply of gold-presuming

that it is not accomplished through theft-is quite different from an increase in the supply of irredeemable paper currency. The latter is a creature of politics; the former is a result of productive labor, both mental and physical. Gold is wealth; it is not just exchangeable for wealth. Today's notes are not wealth. They are claims on wealth that the owners of wealth must accept as payment.

No wealth is created by paper money creation; only shifts of wealth occur, and these shifts, although significant and anticipated by some, cannot always be foreseen. They are tantamount to theft in that the assets gained are unearned. The victims of inflation suffer through no fault of their own. The beneficiaries of the inflation are not necessarily the culprits in the transfer of wealth; the policy makers who cause the inflation are.

Legally increasing the money supply is just as immoral as the counterfeiter who illegally prints money. The new paper money has value only because it steals its "value" from the existing stock of paper money. (This is not true of gold, however. New issues of paper money are necessarily parasitic; they depend on their similarity to existing money for their worth. But gold does not. It carries its own credentials.) Inflation of paper money is one way wealth can be taken against another's wishes without an obvious confrontation; it is a form of embezzlement. After a while, the theft will be reflected in the depreciation of money and the higher prices that must be paid. The guilty are difficult to identify due to the cleverness of the theft. They are never punished because of the legality of their actions. Eventually, though, as the paper money becomes more and more worthless, the "legalized counterfeiting" becomes obvious to everyone. Anger and frustration over the theft results and is justified, but it is frequently misdirected, and may even lead to a further aggrandizement of governmental power.

Ideally, the role of government in a sound monetary system is minimal. Its purpose should be to guarantee a currency and assure that it cannot be debased. The role would be similar whether it is protecting a government gold standard or private monies. Neither the government nor private issuers of money can be permitted to defraud the people by depreciating the currency. The honesty and integrity of the money should be based on a contract; the government's only role should be to see that violators of the contract are punished. Depreciating the currency by increasing the supply and diluting its value is comparable to the farmer who dilutes his milk with water yet sells it for whole milk. We prosecute the farmer, but not the Federal Reserve Open Market Committee. Those who must pay the high prices from the inflation are like those who must drink the diluted milk and suffer from its "debased" content.

The Coinage Act of 1792 recognized the importance of not debasing the currency and prescribed the death penalty for anyone who would steal by debasing the metal coins. Yet today the Treasury is closing the very office set up to assure honest money, the New York Assay Office. Though largely symbolic since 1933, this office is the most important office of the federal government if we are ever again to commit ourselves to money that cannot be arbitrarily destroyed by the politicians in office.

Throughout history, rulers have used inflation to steal from the people and pursue unpopular policies, welfarism, and foreign military adventurism. Likewise throughout history, as they are doing today, the authorities who inflated resort to blaming innocent citizens who try to protect themselves from the government caused inflation as "speculators" and the real cause for the turmoil the authorities themselves caused. This is done both out of ignorance as well as from a deliberate desire to escape deserved blame.

Gold money is always rejected by those who advocate significant government intervention in the economy. Gold holds in check the government's tendency to accumulate power over the economy. Paper money is a device by which the unpopular programs of government intervention, whether civilian or military, foreign or domestic, can be financed without the tax increases that would surely precipitate massive resistance by the people. Monetizing massive debt is more complex and therefore more politically acceptable, but it is just as harmful, in fact, more harmful, than if the people were taxed directly.

This monetizing of debt is literally a hidden tax. It is unevenly distributed throughout the population, one segment paying much more than another. It is equivalent to a regressive tax, forcing the working poor to suffer more than the speculating rich.

Deliberately debasing the currency for political reasons, that is, paying for programs that the politicians need in order to be re-elected, is the most immoral act of government short of deliberate war. The tragedy is that the programs that many believe helpful to the poor, usually end up making the poor poorer, destroying the middle class, and enriching the wealthy. Sincere persons vote for programs for the poor not fully understanding the way in which the inflation used to finance the programs brings economic devastation to those intended to be the beneficiaries.

Great power is granted to the politicians and the monetary managers with this authority to create money. Bankers, through fractional reserve banking laws, can create new money. The initial users of the new money as it is created benefit the most, and have a vested interest in continuing the process of inflation and opposing a gold standard: the government, large corporations, large banks, and welfare recipients. Paper money is political money with the politician in charge; gold is free market money with the people in charge.

John Locke argued for the gold standard the same way he argued for the moral right to own property. To him the right to own and exchange gold was a civil liberty equal in importance to the liberty to speak, write, and practice one's own religion. Free people always choose to trade their goods or services for a marketable commodity. Money is the most marketable of all commodities, and gold the best of all money. Gold has become money by a moral commitment to free choice and honest trade, not by government edict. Locke claimed the right to own property was never given to the individual by society but that government was established to ensure integrity in contracts and honest money - not to be the principal source of broken contracts or the instigators of a depreciating currency. Gold is not money because government says it is: It is money because the people have chosen to use it in a free country.

Eliminating honest money - commodity money defined precisely by weight - is a threat to freedom itself. It sets the stage for serious economic difficulties and interferes with the humanitarian goal of a high standard of living for everyone, a standard which results from a free market and a sound monetary standard. For centuries kings have used the debasement of coins to raise funds for foreign and aggressive wars that otherwise would not have been supported by people voluntarily loaning money to the government or paying taxes. Even recently inflation has been resorted to in order to finance wars about which the people were less than enthusiastic. Inflation is related to preventable wars in another way. As the economy deteriorates in countries that have inflated and forced to go through recession and depressions, international tensions build. Protectionism (tariffs) and militant nationalism generally develope and contribute to conditions that precipitate armed conflict. The immorality of inflation is closely linked to the immorality of preventable and aggressive wars.

Money, when it is a result of a moral commitment to honesty and integrity, will be trusted. Trustworthy money is required in a moral soceity. This requires all paper money and paper certificates to be convertible into something of real worth. Throughout history, money has repeatedly failed to maintain trust due to unwise actions of governments whose responsibility was to protect that trust, not destroy it. Without trust in money gained by a moral commitment to integrity, a productive economy is impossible. Inflation premiums built into the interest rates cannot be significantly altered by minor manipulations in the growth rate of the supply of money nor by the painful decreases in the demand for money brought on by a weak economy. Only trust in the money can remove the inflation premium from our current financial transactions.

Trust is only restored when every citizen is guaranteed convertibility of money substitutes into tangible money at will. False promises and hopes cannot substitute for a moral commitment of society to honest money - ingrained in the law and not alterable by the whims of any man. The rule of moral law must replace the power of man in order for sound money to circulate once again. Ignoring morality in attempts to stop inflation and restore the country's economic health, guarantees failure. A moral commitment to honest money guarantees success.

In the seventh century before Christ the Greeks began the first coinage, striking silver into pieces of uniform weight. Greek mints were located in temples. The Athens mint was either in or adjacent to the temple of Athene. This was done for a purpose, for the temple marks were designed - and accepted- as evidence of the honesty of the coins. In Rome, the coinage began in the temple of Juno Monere, from which we get our word "money."

Biblical law, which informs the Common Law and has shaped the legal institutions of Western Europe and North America, regards money as a weight, either of silver or gold, and stern commands against dishonest weights and measures were enforced with severe punishments. The prophet Isaiah condemned

Israel because "your silver is become dross, your wine mixed with water." Debasement of the money was very severely condemned. In his Commentary on the Epistle to the Romans, Martin Luther wrote, "Today we may apply the Apostle's words [Romans 2:2-3] first to those [rulers] who without cogent cause inflict exorbitant taxes upon the people, or by changing and devaluating the currency, rob them, while at the same time they accuse their subjects of being greedy and avaricious."

It is not surprising, then, given this background, that the Congress of 1792 imposed the death penalty on anyone convicted of debasing the coinage. Debasement, depreciation, devaluation, inflation - all stand condemned by the moral law. The present economic crisis we face is a direct consequence of our violations of that law.

CHAPTER 6

THE TRANSITION TO MONETARY FREEDOM

Our present monetary system is failing. The time is ripe for fundamental monetary reform. Yet there are two distinct and different processes through which this reform may be achieved. We have already discussed the type of monetary system most desirable, yet there are different methods of reaching that goal. For simplicity's sake, we shall refer to these procedures as "descending" reform and "ascending" reform. The first term refers to action taken by the government directly to create the system desired; it is from the top down. The danger of this type of reform is that the government will not create a real gold standard but a pseudo-gold standard. The second term refers to the absence of government action and the subsequent appearance of the reforms despite the government's inaction; it is bottom-up reform. There is a third type of reform which mixes both the ascending and the descending procedures whereby the government clears the obstacles now impeding reform from the bottom up. It is our opinion that this third type of reform would be the least painful for reasons shortly to be made clear.

During the course of a monetary crisis -- such as we are experiencing now -- there comes a time when descending reform becomes much more difficult. It is our belief that we have not yet reached that point, but that we are rapidly approaching it. There is still time to proceed with the reforms outlined below, but that time is rapidly slipping away. In order to achieve this descending reform, the Congress must quickly repeal certain laws that have created our present crisis: the legal tender laws, the authority of the Federal Reserve to conduct open market operations, and so forth. Failure to do so will result in a complete collapse of our economic system.

The process of mixed reform is preferable because it can achieve the desired end with a minimum of injury to the people. It can avert an economic calamity if executed in time; but should descending reform not occur in time -- and it now appears that it will not, given the unwillingness of the Commission to make more far-reaching recommendations to the Congress -- we can hope that ascending reform will still be possible.

Should the Congress not adopt the reforms we advocate, we can expect our economic situation to deteriorate further. First, there will be a continuation of both price increases and high interest rates. Such prices and rates may fluctuate in a cyclical pattern, but they will not secularly decline. The prime rate has already reached 21.5 per cent. Perhaps within a year it will move to 25 per cent, fall back, and then surge ahead to 30 per cent. The exact figures are not as important as realizing that the present irredeemable paper money system is just that: irredeemable. Such systems have not and cannot work for any significant period of time.

Further cyclical price and interest rate increases will, in turn, trigger many more bankruptcies, both commercial and personal. Bank runs, panics, and holidays will occur as the people lose confidence in the financial institutions. Such collapses will, in turn, trigger higher unemployment -- reaching levels not seen since the 1930's -- larger federal deficits, and further inflation. The paper economy is a circle of dominoes; once they start to fall, they bring others down with them. Real wage rates will slide; applications for welfare will accelerate.

These economic events will have social and political consequences; inflations always do. The inflation of the 1920's led to the rise of Hitler in Germany, and that of the 1940's to the victory of Mao Tse Tung in China. The increase in the size and scope of government is a significant effect of such crises, yet it is the effect that threatens to choke off any possibility of ascending reform. Such reform, when it comes, will have to emerge from the

marketplace, either through the legalization of competing currencies, or through development in the underground (illegal) economy. Economists already believe that there may be an underground economy in the U.S. one-fifth the size of the official economy. With the collapse of the official money and the official economy, the underground economy might be able to shift to using silver and gold coins, and thus some ascending reforms might be possible.

However, simply waiting for the present system to collapse is neither responsible nor moral. As members of the Gold Commission, we must urge Congress to act upon our specific suggestions for reform as speedily as possible. We do not believe that we overestimate the gravity of the present situation, and we think it is better by far to be two years too early than two days too late.

Specific Reforms Required

The growth of the American government in the late 19th and 20th centuries is reflected in its increasing presence and finally monopolization of the monetary system. Any attempt at restoring monetary freedom must be part of a comprehensive plan to roll back government and once again confine it within the limits of the Constitution. That comprehensive plan may be divided into four sections: monetary legislation, the budget, taxation, and regulation. We shall begin with monetary reforms, and conclude with a word about international cooperation and agreement.

MONETARY LEGISLATION

Legal Tender Laws

As we have seen, the Constitution forbids the states to make anything but gold and silver coin a tender in payment of debt, nor does it permit the federal government to make anything a legal tender. One of the most important pieces of legislation that could be enacted would be the repeal of all federal legal tender laws. Such laws, which have the effect of forcing creditors to accept something in payment for the debts due them that they do not wish to accept, are one of the most tyrannical devices of the present monetary authorities.

Not only does the Federal Reserve have a coercive monopoly in issuing "money," but every American is forced to accept it. Each Federal Reserve note bears the words "This note is legal tender for all debts, public and private." The freedom to conduct business in something else--such as gold and silver coin--cannot exist so long as the government forces everyone to accept its paper notes. Monetary freedom ends where legal tender laws begin.

The United States had no such laws until 1862, when the Congress--in violation of the Constitution--enacted them in order to ensure the acceptance of the Lincoln greenbacks, the paper notes printed by the U.S. Treasury during the wartime emergency. That "emergency" has now lasted for 120 years; it is time that this unconstitutional action by the Congress be repealed. Freedom of contract--and the right to have such contracts enforced, not abrogated by the government--is one of the fundamental pillars of a free society.

Defining the Dollar

A second major reform needed is a legal definition of the term "dollar." The Constitution uses the word "dollar" at least twice, and it is quite clear that by it the framers meant the Spanish milled dollar of 371 1/4 grains of silver. Since 1968, however, there has been no domestic definition of "dollar," for in that year redemption of silver certificates and delivery of silver in exchange for the notes ended, and silver coins were removed from circulation.

In 1971, the international definition of the "dollar" as 1/42 of an ounce of gold was also dropped. The Treasury and Federal Reserve still value gold at $42.22 per ounce, but that is a mere accounting device. In addition, IMF rules now prohibit any member country from externally defining its currency in terms of gold. The word "dollar," quite literally, is legally meaningless, and it has been meaningless for the past decade. Federal Reserve notes are not "dollars;" they are notes denominated in "dollars." But what a "dollar" is, no one knows.

This absurdity at the basis of our monetary system must be corrected. It is of secondary importance whether we define a "dollar" as a weight of gold or as a weight of silver. What is important is that it be defined. The current situation permits the Federal Reserve--and the Internal Revenue

Service for that matter--to use the word any way they please, just like the Red Queen in Alice in Wonderland. I think that was the Cheshire Cat.

No rational economic activity can be conducted when the unit of account is undefined. The use of the meaningless term "dollar" has all but wrecked the capital markets of this country. If the "dollar" changes in meaning from day-to-day, even hour-to-hour, long-term contracts denominated in "dollars" become traps which all wish to avoid. The breakdown of long-term financing and planning in the past decade is a result of the absurd nature of the "dollar." There is very little long-term planning occuring at the present. The only way to restore rationality to the system is to restore a definition for the term "dollar." We suggest defining a "dollar" as a weight of gold of a certain fineness, .999 fine. Such a fixed definition is the only way to restore confidence in the markets and in the "dollar." Capitalism cannot survive the type of irrational surd that lies at the basis of our present monetary arrangements.

A New Coinage

We are extremely pleased that the Gold Commission has recommended to the Congress a new gold goinage. It has been almost fifty years since the last United States gold coins were struck, and renewing this Constitutional function would indeed be a cause for celebration and jubilee.

We believe that the coins should be struck in one ounce, one-half ounce, one-quarter ounce, and one-tenth ounce weights, using the most beautiful of coin designs , that designed by Augustus Saint Gaudens in 1907. A coinage in such weights would allow Americans to exchange their greenbacks for genuine American coins; there would no longer be any need for purchasing Canadian, Mexican, South African or other foreign coins. Combined

with the removal of capital gains taxation on the coins, and the elimination of all transaction taxes, such as excise and sales taxes, the new American coinage could quickly become an alternative monetary system to our present paper monopoly.

In addition to the new official coinage private mints should also be permitted to issue their own coins under their own trademarks. Such trademarks should be protected by law, just as other trademarks are. Furthermore, private citizens should once again enjoy the right to bring gold bullion to the Treasury and exchange it for coins of the United States for a nominal minting fee.

In the last six years, Nobel Laureate Friedrich Hayek has called attention once again to the economic advantages of a system of competing currencies. In two books, Choice in Currency, and Denationalization of Money, Professor Hayek proposes that all legal obstacles be removed and that the people be allowed to choose freely what they wish to use in transactions. Those competing monies might be foreign currencies, private coins, government coins, private bank notes, and so on. Such unrestricted freedom of choice would result in the most reliable currencies or coins winning public acceptance and displacing less reliable competitors. Good money - in the absence of government coercion - drives out bad. The new coinage that the Gold Commission has recommended and which we strongly endorse is a first step in the direction of allowing currencies to compete freely.

The Failure of Central Banking

By a strict interpretation of the Constitution, one of the most unconstitutional (if there are degrees of unconstitutionality) of federal agencies

is the Federal Reserve. The Constitution grants no power to the Congress to set up such an institution, and the Fed is the major cause of our present monetary problems. The alleged constitutional authority stems from a loose and imaginative interpretation of the implied powers clause.

Functioning as the central bank of the United States, the Federal Reserve is an anachronism. It was created at a time when faith in control of the economy by Washington was growing, but since it started operations in 1914, it has caused the greatest depressions (1929-1939), recessions (too numerous to mention), inflations, and unemployment levels in our nation's history. The only useful function if performs, the clearing of checks between banks, could be much better handled through private clearing houses or eliminated entirely by electronic funds transfer. Given its record, there simply is no good reason for allowing the Federal Reserve a monopoly over the nation's money and banking system. Eliminating the power to conduct market operations must be achieved if we expect to stop inflation and restore monetary freedom.

Such a step may alarm some, however. They might be concerned about what will happen to all the Federal Reserve notes now in circulation, and what they will be replaced with. First: the present Federal Reserve notes would be retired and replaced by notes redeemable in gold or silver or some other commodity. Such notes would be similar to travelers checks now in use which are, at the present time, redeemable only in paper notes. Like travelers checks, such notes would not be legal tender and no one would be forced to accept them in payment. And since they would be promises to pay, any institution that issued them and then failed to redeem them as promised, would be subject to both civil and criminal prosecution, unlike the Federal Reserve, which is subject to neither.

As for the present circulating Federal Reserve notes, they could be made redeemable for gold once a "dollar" is defined as a weight of gold. Anyone who wishes to redeem them could simply do so by exchanging them for gold coins at his bank.

It is important to note that should we institute a gold standard before the Federal Reserve System is ended, that System must function along classical gold standard lines. As Friedman and Schwartz pointed out, it was the failure of the Federal Reserve to abide by the classical gold standard rules that caused the panic of 1929 and the subsequent depression.

In chapters two and three, we demonstrated the disruptive effects fractional reserve banking has caused in the United States. Since we still suffer with that system, it is imperative that a fundamental reform of it be made. That reform is simply that all promises to pay on demand, whether made in the form of notes or deposits, be backed 100% by whatever is promised, be it silver, gold or watermelons. If there is any failure to carry 100% reserves or to make delivery when demanded, such persons or institutions would be subject to severe penalties. The fractional reserve system has created the business cycle, and if that is to be eliminated, its cause must be also.

Audit, Inventory, Assay, and Confiscation

One of the areas in which we believe a majority of the Gold Commission erred is in not requiring a thorough and complete assay, inventory and audit of the gold reserves of the United States on a regular basis. Perhaps there is less of an argument for such a procedure when the gold reserves are essentially stable, but when there is any significant change in them -- as will happen when a new coinage is issued -- careful scrutiny of the government's gold supplies is necessary.

There have been cases of employee thefts at government bullion depositories, unrecorded shipments of gold from one depository to another, and numerous press reports about millions of dollars worth of gold missing.

It seems elementary that the government ought to ascertain accurately its reserves of this precious metal, and that the present ten year "audit" of the gold inventory is totally inadequate for this purpose. We are quite sure that the Federal Reserve has a much better idea now many Federal Reserve notes are printed and circulating than the Treasury does of the weight and fineness of its gold assets. This irrational treatment of paper and gold must be corrected immediately.

Finally, there are laws on the books empowering the President to compel delivery, that is, to confiscate, privately owned gold bullion, gold coins, and gold certificates in time of war. There can be no monetary freedom when the possibility of such a confiscation exists.

THE BUDGET

One of the standard objections raised against a gold standard is that while it may have worked in the 19th century, it would not work today, for government has grown much larger in the past one hundred years.

There is an element of truth in such an argument, for the gold standard is not compatible with a government that continually incurs deficits and lives beyond its means. Growing governments have always sought to be rid of the discipline of gold; historically they have abandoned gold during wars in order to finance them with paper dollars, and during other periods of massive government growth--the New Deal, for example.

Because gold is honest money, it is disliked by dishonest men. Politicians, prevented from buying votes with their own money, have learned how to buy votes with the people's money. They promise to vote for all sorts of programs, if elected, and they expect to pay for those programs through deficits and through the creation of money out of thin air, not higher taxes. Under a gold standard, such irresponsibility would immediately result in high interest rates (as the government borrowed money) and subsequent unemployment. But through the magic of the Federal Reserve, these effects can be postponed for awhile, allowing the politicians sufficient time to blame everyone else for the economic problems they have caused. The result is, as John Maynard Keynes said many years ago, that not one man in a million understands who is to blame for inflation.

Because the gold standard would be incompatible with deficit financing, a major reform needed would be a balanced budget. Such a balance could easily be achieved by cutting spending---surprising as it may be, no cuts have been made yet--to the level of revenue received by the government.

But beyond that, there should be massive cuts in both spending and taxes, something on the order of what President Truman did following World War II, when 75% of the federal budget was eliminated over a period of three years. Honest money and limited government are equally necessary in order to end our present economic crisis.

As part of this budget reform, the government should eventually be required to make all its payments in gold or in gold denominated accounts. No longer would it be able to spend "money" created out of thin air by the Federal Reserve.

TAXATION

In order to make such gold payments, the government should begin accepting gold as payment for all taxes, duties, and dues. As a tax collector, the government must specify in what form taxes may be paid (or must be paid), and it should specify that taxes must be paid in either gold or silver coins or certificates. Such an action should occur, of course, as one of the last actions in moving toward a sound monetary system. All of the other reforms discussed here should be accomplished first. Such a requirement to pay taxes in gold or silver would yield the necessary flow to put the government on the gold standard and allow it to make all payments in gold.

But long before this is achieved, since gold is money, there should be no taxation of any sort on either gold coins or bullion. The Commission has judged rightly in recommending that capital gains and sales taxes be eliminated from the new American coinage. We would go further, in the interest of monetary freedom, and urge that all taxation of whatever sort be eliminated on all gold and silver coins and bullion. That would mean the elimination of not only capital gains and sales taxes, but also the discriminatory treatment of gold coins in Individual Retirement Accounts, for example. Persons saving for their retirement should be free to keep their savings in gold coins without incurring a penalty. One reform that might be accomplished immediately would be to direct the Internal Revenue Service to accept all U.S. money at face value for both the assessment and collection of taxes. At the present time, the IRS accepts pre-1965 silver coins at face value in the collection of taxes, but at market value in the assessment of taxes. This policy is grossly unfair, has no basis in law, and should be corrected immediately.

REGULATIONS

Together with monetary, tax, and budget reforms, a comprehensive plan for a gold standard and monetary freedom requires several improvements in our present regulatory structure.

For example, mining regulations which make it difficult and expensive to open or operate gold and silver mines would have to be eliminated. All regulations on the export, import, melting, minting and hoarding of gold coins would also have to be repealed.

But the major reforms needed are in our banking laws. Under present law, there is no free entry into the banking industry; it is largely cartelized by the Federal Reserve and other federal and state regulatory agencies. Deregulation of banking, including free entry by simply filing the legal documents with the proper government clerk, is a must for monetary freedom. All discretion on the part of the regulators must be ended.

At the same time, there would need to be stricter enforcement of the constitutional prohibition against states "emitting bills of credit." It must be clearly recognized that the states, neither directly not indirectly through their creatures, state chartered banks, may get into the paper money business.

A CONSTITUTIONAL AMENDMENT

Although we believe that there is actually nothing in the Constitution that legitimizes our present banking and monetary arrangements, the present system has been with us for so long that a Constitutional Amendment is probably needed to reaffirm what the Constitution says.

We propose that the following language become Article 27 to the

Constitution:

> Neither Congress nor any state shall make anything a tender in payment of private debts, nor shall thev charter any bank or note-issuing institution, and states shall make only gold and silver coins a tender in payment of public taxes, duties, and dues.

AN INTERNATIONAL AGREEMENT

While the achievement of monetary freedom can be accomplished without any international conferences or agreements, there is no need to spurn such conferences should they be requested by other nations, or should they be thought advisable simply as a way of informing other nations of our plans. Were we to adopt the proposals outlined in this Report, the dollar would once again become as good as gold, and paper currencies would fall in value against it on the international exchanges. In that case, one would expect other nations to define their currencies also as weights of gold, simply out of self-defense. Were that to happen, we would see the end of the worldwide inflation that has plagued us since 1971. Fixed exchange rates--though not fixed by any international agreement--would also result, simply because currencies would be defined as weights of gold.

Thus the wholly dòmestic reforms suggested here would have worldwide repercussions, international effects that would solve one of our most troubling problems: worldwide inflation and the breakdown of world trade.

THE TRANSITION TO GOLD

The transition from the present monetary system to a sound system will probably not be painless, as some have suggested. Whenever the increase in the supply of money slows, there are always recessions. They are the inevitable consequences of the previous inflationary boom. The present system, relying as it does on the political creation of new purchasing power rather than the economic creation of such power, has distorted and disrupted the pattern of economic activity that would result were the markets for goods and money allowed to function freely. In any transition to a sound monetary system there will, of necessity, have to be readjustments made in various sectors of the economy. Such readjustments will temporarily hurt certain individuals and enterprises. The alternative, of course, is to continue with our present system and destroy the entire economy with the evils of hyperinflation and depression. It is our conclusion that the temporary economic hazards of the gold standard are far less significant than those posed by a continued attempt to make the paper system work.

We have a precedent for a return to gold in the 19th century. During the Civil War, the Union had issued United States notes that were not redeemable in gold. In that respect they were somewhat similar to the Federal Reserve notes that circulate today. A major difference between the experience following the Civil War and our situation today is, of course, that the U.S. gold coinage continued to circulate during and after the war. Today, such coins have been removed from circulation by law, and they must be restored to circulation by law. That is essentially the recommendation of the Commission, a recommendation that we fully support. Such an action will facilitate the transition to a full gold coin standard. Once it is achieved, the transition to a full gold standard could be done as simply as during the 19th century, with the economic consequences roughly the same.

We must now discuss the transition effect -- not the long term effects --

of monetary reform on various sectors of the economy. We have selected six sectors for brevity's sake: real estate, agriculture, heavy industry, small business, exports, and banking. Let us begin with real estate.

Transition Effects on the Real Estate Sector

The concern of many people with monetary reform is that it will affect them or their businesses adversely. They would prefer to continue with the present system, hoping that it will not collapse, rather than seeking to correct it through fundamental change. In this attitude, they are similar to the patient with an abdominal pain who refuses to be examined by a doctor, hoping that the discomfort will cease or at least not worsen. When his appendix bursts, however, the patient realizes that he would have been much better off to have the needed examination and surgery in time. At least the surgery--the timely correction of the problem--would not have threatened his life.

How will a transition to gold affect the real estate market? It is important to realize that there is no one real estate market, but several. The commercial market is quite different from the residential, for example. Within the residential, the single-family housing market is quite different from the rental housing market. While there may be factors that affect all markets, it is necessary to realize that the various markets will be affected differently by the same factors, and also by different factors.

During the last ten years of paper inflation, real estate of all sorts has become both an inflation hedge and a haven against exorbitant taxation. In a transition to gold, there will be falling inflationary expectations, and, if our recommendations are pursued, lower taxes. Both these effects will gradually eliminate the desire to use real estate as a shield against inflation and taxation. The result generally will be falling prices for

real estate of all kinds, as people shift from protecting their capital in real estate to more productive enterprises. It is likely the paper values of both residential and commercial properties will fall during the transition to a sound money system.

This in turn would have several effects. First, as residential prices fall, more young couples who cannot afford a house at the present time would be able to purchase. More houses--but at lower prices--would be sold during each year of the transition to gold. For state and local governments this would mean an expanding property tax base, but it would also offer some relief to the badgered homeowners who have seen their property taxes skyrocket because of inflated housing prices. The passage of Proposition 13 in California in 1978 was a result of this property tax rise. With a transition to gold, homeowners across the whole nation, not just California, would be afforded some tax relief.

Lower home prices will eventually translate into a booming market for both single-family and rental units, spurring new construction. Lower prices would also affect all forms of commercial property, allowing more economical expansion of the business use of property.

Along with lower prices, there will be lower interest rates. Market interest rates are ordinarily divided into three components by economists: originary interest, the risk premium, and the inflation premium. As the transition toward gold is accomplished, the inflation premium would gradually disappear, as the people's confidence in money was restored. It is also probable that both the risk and originary components would decrease, although not nearly so much as the inflation component, for people will once again begin to plan for longer than twelve months into the future. And as the size of government shrinks, the risk premium will also shrink. One great area of risk and uncertainty--actions by federal bureaucrats and regulators--will be eliminated.

Falling interest rates would also encourage greater activity in all real estate markets. The result would be greater access by first-time-owners--younger couples and small businessmen.

Transition Effect on Agriculture

Closely related to real estate is agriculture. Speculation in real estate in the past 10 years--speculation resulting from inflation and taxation by the government--has caused the price of prime farmland to be bid up to levels higher than prevailed ten years ago. One serious consequence of this has been the almost total inability of new, small farmers to buy farms, and of older small farmers to retain farms. High land values, while giving many farmers paper wealth, have raised property taxes exorbitantly, and have forced more and more small farmers to sell out to larger competitors. The result has been the growth of agribusiness and the euthanasia of the family farmer.

During the transition to a gold system, interest rates and land values would both fall, the former primarily because of lower inflation expectations; the latter primarily because there would be far less demand for land as an inflation hedge.

A parallel may be found in the 19th century. From 1880 to 1890, immediately after the return to the gold standard, the number of farms in the U.S. increased by over 500,000, the number of acres on these farms by almost 90 million, farm productivity by 10% and the value of farm output by over $800 million.

During this time, however, farm commodity prices were falling, an effect of the transition to gold that many fear. But wholesale prices for the goods farmers used were falling as well, faster than were prices for the goods they produced. The real income of farmers--and of all workers--

was actually rising during this period, unlike, for example, the past ten years. The transition to a sound monetary system, while it may adversely affect a few farmers and real estate holders, will enormously benefit most, and will allow more entry into farming.

Transition Effects on Heavy Industry

One of the prime benefits of sound money and small government is the low long-term interest rates that prevail in such an environment. During the 19th century it was common for 100 year bonds to be offered and sold at 4% and 5%, and even for bonds in perpetuity to be sold at those rates. Today, after a decade of paper money, long-term means three years, and the prime rate is $16^1/_2$%. Transition to a gold system will include a fall in interest rates from their present historically unprecedented levels to levels approximating those of the late 19th and early 20th centuries. For the decade 1880-1889, three to six month commercial paper averaged 5.14%. Call money averaged 3.98%. Railroad bond yields averaged 4.43% in 1889.

Such rates will once again allow heavy industry to expand, perhaps even matching the unsurpassed real growth rate for the economy in the decade 1879-1889. The recent concern about the revitalization of America, or the "reindustrialization of America" is a genuine and legitimate concern. What is important to realize, however, is that it is the paper money, high tax, and regulatory policies of the government that have impeded long-term planning and capital investment. Anyone who expresses concern about the industrial strength of America and advocates a continuation of the policies that have caused the present recession/depression has not yet learned elementary economics.

Some heavy industries that have been "protected" by government action may suffer some setbacks when that "protection" is removed. However, if

regulatory burdens and subsidies are eliminated in an evenhanded fashion during the transition, those industries, as well as others, should quickly enjoy rapid growth.

Further, there will be a desire of investors, now concerned about sheltering their capital in the unproductive areas of real estate, collectibles, and gold coins, to invest in productive enterprises. There would be a market shift of investment from such "speculative" areas to industry.

Transition Effects on Small Business

The shift of capital investment from the more "speculative" areas to the more productive will directly affect small business. The stock market would come to life, perhaps even making up for the horrendous losses in constant dollars it has suffered since 1965. Business investment would skyrocket, and a great deal of this investment would flow to smaller businesses. As with real estate and farming, it would be the newcomer--the young couple buying a house, the young farmer, and the small businessmen--who would benefit most during the transition to economic and monetary freedom.

Small businesses would no longer be crushed by large corporations and bloated government absorbing all the capital in the capital markets. Funds would flow to establish new enterprises rather than being invested in Treasury securities at 14% or 15%. A gold system would see the gradual elimination of "hot money"--a phenomenon that did not exist before the formation of the Federal Reserve in 1914--racing from investment to investment as interest rates fluctuated.

The growth in small business would, of course, mean the creation of new jobs. The unemployment that is an inevitable product of a paper money system--after all, John Maynard Keynes liked the system because it was a

device to cheat the workers--would be eliminated and fall to the frictional rate, perhaps 2% or 3%.

The transition to freedom would also mean the gradual elimination of the "underground economy," for the reasons for its existence, high taxes and inflation, would disappear. Such illegal economic activities would once again become part of the official economy. The elaborate bartering systems that have evolved in the past ten years would be ended. It is ironic that opponents of gold deride transactions made in gold as a form of barter, for it is precisely the high tax, paper money system that encourages barter as a way to avoid both taxation and inflation.

Transition Effects on Exports

To understand the effects of the reforms we recommend on export industries, it is necessary to keep two more fundamental effects of the transition in mind: no more general price increases will occur, and interest rates will actually fall by at least 50%. Price stability in all products, including those for export, will open up greater overseas markets for U.S. goods. On the other hand, the present complicated system of export subsidies--such as guaranteed loans and direct loans--will come to an end during the transition to freedom, and those companies (and banks) that benefitted from such sweetheart deals with the government will have to make it on their own or fail.

The government's policies for the past ten years and longer have diverted a great deal of capital, that should and would have been invested in the U.S., to foreign nations. This misdirected investment would be corrected during transition, as foreign aid programs were phased-out, the Export-Import Bank eliminated, and the various other government programs that have put us

in a very precarious financial position are terminated.

In the long run, of course, exports are not a worry. No one worries about the balance-of-trade or the balance-of-payments between Texas and California or New Jersey and New York. With the end of a paper system with its chaotic exchange rates, some semblance of order will return to the world economy. The exporting of inflation will be gradually eliminated, and rather than moving toward protectionism and isolationism, the international economy will gradually open up to further investment and trade.

Export industries may be the most affected of all industries during a transition to a sound money system, but that is only because they have been so heavily subsidized by a government that has had to print the paper to subsidize them. In the long run, such industries also will benefit from a return to freedom.

Transition Effects On Banking

The last of the six sectors is perhaps the one that will be most adversely (in the short run) affected by the reforms we propose. To understand why this is so, one must understand the cartelization of the financial industries in the 1930's, accomplished primarily by the McFadden Act and the Glass-Steagall Act. The breakdown of this cartel has already begun, as a result of the high interest rates now prevailing, and it will proceed whether the reforms here suggested are adopted or not. The only question is whether a new cartel arrangement will be created or whether freedom will be allowed to flourish.

The McFadden Act, among other things, forbade interstate branching Chase Manhattan could open a branch in Moscow, for example, but not in

Minneapolis. This resulted in a great deal of interest in overseas loans with a tremendous diversion of capital from domestic to foreign investment. The Glass-Steagall Act, among other things, erected a wall of separation between banking and commercial enterprises, a wall that now more resembles a Swiss cheese. But such a separation, combined with other restrictions on free entry, enhanced the privilege and profitability of banks.

The reforms we advocate include free entry into banking. Anyone would be permitted to open a bank and issue 100% redeemable notes simply upon filing the legal documents with the county (or state or federal) clerk. Such free entry will result in greater competition in the banking industry, and lower margins of profit. Not only would the competition benefit consumers financially, more and more services would also be offered. Thus if Anytown Savings and Loan wished to give away toasters for new deposits, the Depository Institutions Deregulation Committee could not stop them from doing so. And if their neighbors, Anytown Credit Union wished to offer electronic funds transfer and free travelers checks, no regulator would prevent that from happening.

But there are further effects that would become apparent during transition to a gold system. As interest rates fell, the current crisis among financial institutions would be alleviated. Unless such a transition begins quickly we can expect to see the most massive failure of depository institutions in our history. A movement toward sound money, while opening up all financial institutions to the sort of competition they should have faced all along, will, at the same time, relieve some of the pressure on the most critical of these institutions. The alternative, of course, is massive government bailouts costing tens -- perhaps hundreds -- of billions of dollars.

Conclusion

We have selected these six sectors of the economy as bases for discussing what effects a transition to monetary freedom will have on the economy. While the results have not been uniformly optimistic, it is clear that the major effects of stable prices and falling interest rates will open all sectors up to newcomers: new farmers, new homeowners, new small businessmen, and new bankers. Those companies that have been subsidized by the government will suffer most from a movement toward freedom. Those that have profited from the misdirection of capital investment by the government will also suffer. A "gold standard recession," however, would be quite different from a paper money recession, such as we are now suffering. Were the government to refuse to interfere with the adjustment process, the recession would be over very rapidly, as we saw in the last "free market recession" of 1921.[1] And while the recession would be short, it would also not be sharp. There would undoubtedly be a tremendous outpouring of new savings and investments in response to the new confidence in honest money and the realization that inflation was a thing of the past. The transition to a gold system will bring increasing prosperity, real growth, lower unemployment, higher real wages, and greater capital investment. The transition to freedom, in short, is the only way out of the economic crisis we are now in.

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[1] See Benjamin M. Anderson, "The Road Back to Full Employment," in P. Homan and F. Machlup, eds., Financing American Prosperity. (New York: Twentieth Century Fund, 1945), pp. 25-28.

CHAPTER 7

THE NEXT TEN YEARS

The transition to gold, as we have outlined it in chapter five, should be accomplished in no more than three years, with any resulting recession lasting about a year. The following ten years should be ones of prosperity, high real economic growth, and low levels of unemployment. Inflation and the business cycle would be things of the past, as a genuine free banking system would eliminate the possibility of national inflations and contractions. Interest rates would fall to the "normal" interest rates that prevailed for centuries before our national and international experiment with paper money.

Confidence in the monetary unit - the gold dollar - would elicit enormous savings and investments. Prices could be expected to fall gently, resulting in large real wage increases for all workers. In short, the next ten years with gold would be similar to the prosperity, full employment, and rapid economic growth this nation experienced in the last third of the 19th century. If anyone would like to know what the next ten years with a gold standard and monetary freedom would be like, he can get a pretty good idea from studying the American economy in the last portion of the last century.

In their Monetary History of the United States, Friedman and Schwartz write:

> Both the earlier [1879-1897] and the later [1897-1914] periods were characterized by rapid economic growth. The two final decades of the nineteenth century saw a growth of population of over 2 percent per year, rapid extension of the railway network, essential completion of continental settlement, and an extraordinary increase both in the acreage of land in farms and the output of farm products. The number of farms rose by nearly 50 per cent, and the total value of farm lands and buildings by over 60 per cent - despite the price decline. Yet at the same time, manufacturing industries were growing even more rapidly, and the Census of 1890 was the first in which the net value added by manufacturing exceeded the value of agricultural output. A feverish boom in western land swept the country during the eighties. "The highest decadal rate

> [of growth of real reproducible tangible wealth per head from 1805 to 1950] for periods of about ten years was apparently reached in the eighties with approximately 3.8 per cent."... [G]enerally declining [at 1 per cent per year] or generally rising [at 2 per cent per year] prices had little impact on the rate of growth, but the period of great monetary uncertainty in the early nineties produced sharp deviations from the longer-term trend.[1]

It was the return of the United States to the gold standard in 1879 that stimulated this real economic growth, and it was the "monetary uncertainty in the early nineties" that slowed and almost stopped that growth. Today it is once again "monetary uncertainty" that has brought us to our present crisis.

The pre-1914 gold standard was invented by no one. More important, it was also managed by no one. Modern economists too often look upon the classical gold standard and attribute its success to the Bank of England's ability to follow the "rules of the game." But in fact, the system worked to the extent the authorities let it work. Of course there had to exist an environment where governments kept their promises to define and redeem their currencies in a specific weight of gold, and would allow gold to be traded freely. But to call their success in doing this managing gold is to play with language. Gold can manage itself if governments do not hinder it.

The best of all worlds would be to have Bank and State separated the way Church and State are. That is what we propose. For a gold standard still coupled with government monopoly on note issue would only be as sound as the promise of the government to redeem their notes.

In the classical gold standard before 1914, promises made by governments were kept. Everyone expected that they would be. And not only the promises

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[1] Milton Friedman and Anna J. Schwartz, Monetary History, pp. 92-93.

of governments to their citizens, but to other governments. Those governments who broke faith with other governments were treated as parians. Treaties were taken seriously.

If it is too much to expect that governments will always be honest, at least we can improve matters whereby governments are condemned and punished for breaking promises. If the government debases its paper money, there ought to be alternatives which people can use for exchange.

The contrast is stark between a regime of money regulated by the marketplace and our system manipulated by politicians. John Maynard Keynes rhapsodized on the world before 1914 in his 1920 book The Economic Consequences of the Peace:

> What an extraordinary episode in the economic progress of man that age was which came to an end in August, 1914! The greater part of the population, it is true, worked hard and lived at a low standard of comfort, yet were, to all appearances, reasonably contented with this lot. But escape was possible, for any man of capacity or character at all exceeding the average, into the middle and upper classes, for whom life offered, at a low cost and with the least trouble, conveniences, comforts, and amenities beyond the compass of the richest and most powerful monarchs of other ages. The inhabitant of London could order by telephone, sipping his morning tea in bed, the various products of the whole earth, in such quantity as he might see fit, and reasonably expect their early delivery upon his doorstep; he could at the same moment and by the same means adventure his wealth in the natural resources and new enterprises of any quarter of the world, and share, without exertion or even trouble, in their prospective fruits and advantages; or he could decide to couple the security of his fortunes with the good faith of the townspeople of any substantial municipality in any continent that fancy or information might recommend. He could secure forthwith, if he wished it, cheap and comfortable means of transit to any country or climate without passport or other formality, could despatch his servant to the neighboring office of a bank for such supply of the precious metals as might seem convenient, and could then proceed abroad to foreign quarters, without knowledge of their religion, language, or customs, bearing coined wealth upon his person, and would consider himself greatly aggrieved and much surprised at the least interference. But, most important of all, he regarded this state of affairs as normal, certain, and permanent, except in the direction of further improvement, and any deviation from it as aberrant, scandalous, and avoidable. The

> projects and politics of militarism and imperialism, of racial and cultural rivalries, of monopolies, restrictions, and exclusion, which were to play the serpent to this paradise, were little more than the amusements of his daily newspaper, and appeared to exercise almost no influence at all on the ordinary course of social and economic life, the internationalization of which was nearly complete in practice.[2]

The next ten years with gold hold great promise. But to realize that promise, Congress must act quickly to clear the legal underbrush and obstacles out of the way of free men. Their failure to do so will result in a totally unnecessary and totally avoidable tragedy.

Ten Years Without Gold

Since 1971, America's monetary unit has been both undefined and undefinable. The meaning of the term "dollar" has changed from year-to-year, month-to-month, even day-to-day. The economic consequences of this irrationality are clear; there is no need to review them again. The question we must attempt to answer in this concluding section is, quite simply, what will happen if the American people are forced to endure another decade without gold and monetary freedom? What is likely to occur should Congress fail to act on the recommendations we have made in chapters five and six?

Without a gold standard, and continuing roughly with the present system, we can expect more of the same -- except worse. For every year, as inflationary expectations become more and more embedded, we can expect the central "core" rates of both inflation and unemployment to rise. We should never forget that Richard Nixon imposed price-wage controls in 1971 because the government was panicking at a 4.5% per annum rate of inflation. In 1982, we would

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[2] John Maynard Keynes, The Economic Consequences of the Peace (1920) pp. 10-12.

consider returning to this rate tantamount to reaching the state of Nirvana. The prime interest rate in July 1971 was 6%. Each year we get accustomed to more and more inflation, so that now any inflation rate below 10% ("double digit") is considered a virtual end to inflation. Should Congress not adopt the recommendations outlined above, we can expect core inflation rates to rise over the next decade, and at an accelerated rate -- so that in ten years from now we can expect cheering in the media when the inflation rate falls below 50%. As inflation deepens and accelerates, inflationary expectations will intensify, and prices will begin to spurt ahead faster than the money supply.

It will be at that point that a fateful decision will be made -- the same that was made by Rudolf Havenstein and the German Reichsbank in the early 1920's: whether to stop or greatly slow down the inflation, or to yield to public outcries of a "shortage of money" or a "liquidity crunch" (as business called it in the mini-recession of 1966).

In the latter case, the central bank will promise business or the public that it will issue enough money to enable the money supply to "catch up" with prices.[3] When that fateful event occurs, as it did in Germany in the early 1920's, prices and money could spiral upward to infinity and it could cost $10 billion to buy a loaf of bread. America could experience the veritable holocaust of runaway inflation, a cataclysm which would make the Depression of the 1930's -- let alone an ordinary recession -- seem like a tea party.

That this horror can happen here can be seen in the reaction to the first peacetime double-digit inflation, of 1973-1974, by former Chairman of the Council of Economic Advisers, Walter Heller. Writing in the Federal Reserve Bank of Philadelphia Review in 1974, Heller pointed out that in the past year, prices had risen faster than the money supply, and that therefore [sic] an increase in the money supply could not be a cause of the inflation. On the contrary, opined Dr. Heller, it was the duty of the Federal Reserve to increase the money

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[3] See Fritz K. Ringer, ed. German Inflation of 1923 (New York: Offshore University Press, 1969), p. 96.

supply fast enough so that the real money stock (M corrected for price changes) would return to pre-1973 highs. In short, while using modern jargon, Heller said exactly the same thing as Rudolf Havenstein had said a half-century earlier: that the authorities must increase the money supply fast enough to catch up with inflation. That way lies disaster, and who of us is to say that the United States, at some point in the next ten years without gold, will not take the very same course?

Heller's claim that the money supply growth did not cause the price inflation is an example of many current economists' befuddlement over money. In a similar way we saw the coining of a new word in the 1974-75 recession: "stagflation," to describe the event of rising prices in a business slump. This appeared mysterious to the conventional economists yet was predicted by the hard money, free market economists. Depreciating a currency through monetary inflation always brings escalating prices with recessions in the latter stages of a currency destruction. In the early stages of a currency destruction, recession may well slow the increase in prices, but that is only because not too many people have caught on to the monetary policies of the government. As the inflation progresses more and more people catch on.

There now is consternation among orthodox economists over persistently high interest rates in the midst of a severe recession -- a very bad monetary and financial signal. Conventional economists remain baffled over the modest price inflation currently associated with record high "real" interest rates, exclaiming they are "higher than they should be." This confusion comes from ignoring the fact that computer calculations of the money supply cannot project interest rates accurately. It fails to address the subject of trust in and the quality of money. Interest rates are set in the market taking into consideration money's quality, anticipated future government monetary policy, and trust in the officials, in addition to immediate short term changes in the supply and demand for money and credit.

Precise price correlation (to money supply increases), stagflation, and high interest rates are all understood and anticipated by the advocates of sound money who emphasize the importance of the quality of money as well as its quantity.

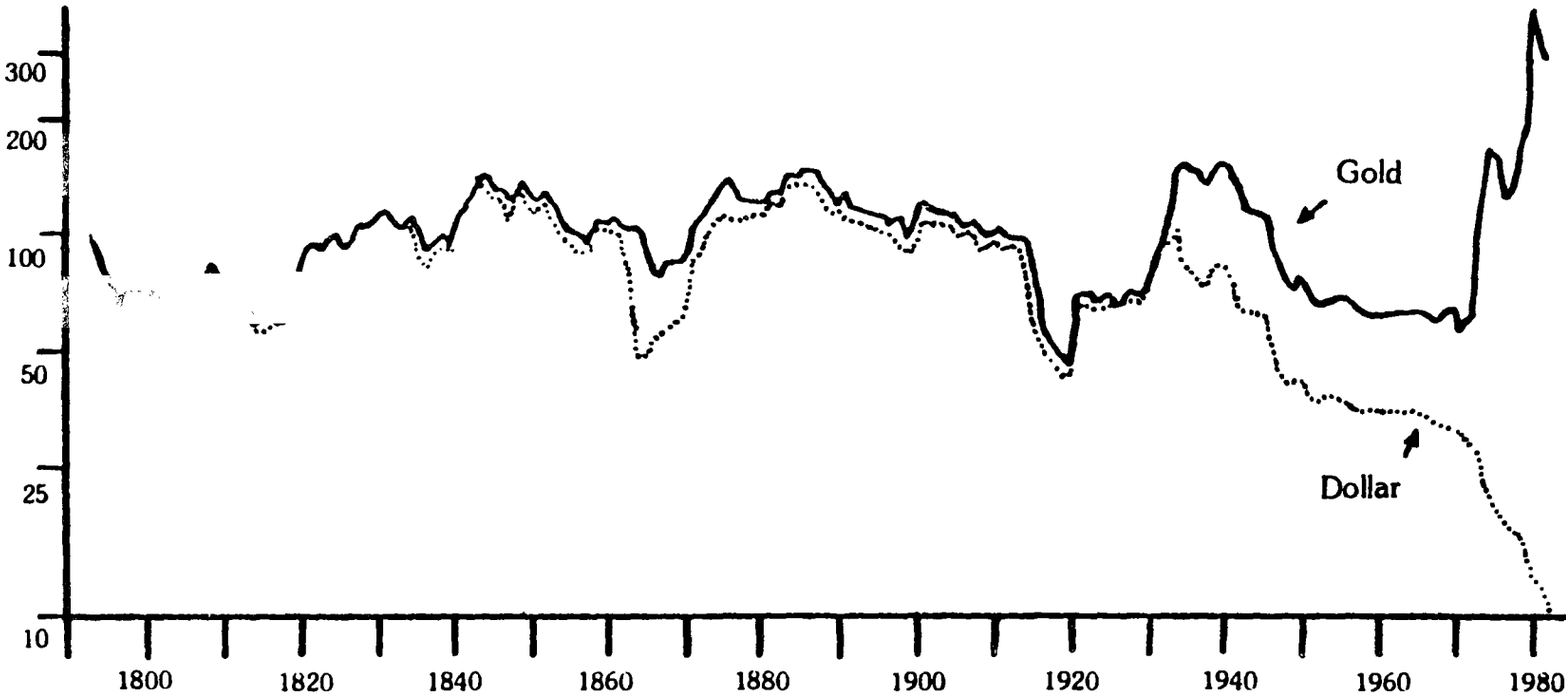
In short, if we continue to stay on the course of fiat money, facing America at the end of the road is the stark horror -- the holocaust -- of runaway inflation. Such an inflation would wipe out savings, pensions, thrift instruments of all kinds; it would eliminate economic calculation; and it would destroy the middle and poorer classes. In America, hyperinflation will not be the relatively "moderate" steady 100% per year or so that Israel or that many countries in Latin America have experienced. For in these small countries, particularly in Latin America, the currency becomes only hand-to-hand cash; all investments move to the U.S. and the dollar. The United States would not be so fortunate.

America, in sum, must choose, and the choice is a vital one. In three years, perhaps sooner if necessary, another Gold Commission should be established to make more recommendations to the Congress. At that time, the choice will be perfectly clear to all, even to those now opposed to gold. Either we must move to the gold standard and monetary freedom, with long-run stability of prices and business, rapid economic growth and prosperity, and the maintenance of a sound currency for every American; or we will continue with irredeemable paper, with accelerating core rates of inflation and unemployment, the punishment of thrift, and eventually the horror of runaway inflation and the total destruction of the dollar. The failure of irredeemable money nostrums is becoming increasingly evident to everyone -- even to the economists and politicians. Congress must have the courage to more forward to a modern gold standard.

APPENDIX

CHART

The Purchasing Power of Gold and the Dollar, 1792 - 1981



Source: American Institute for Economic Research

CHART 1

PRODUCER PRICES

QUARTERLY

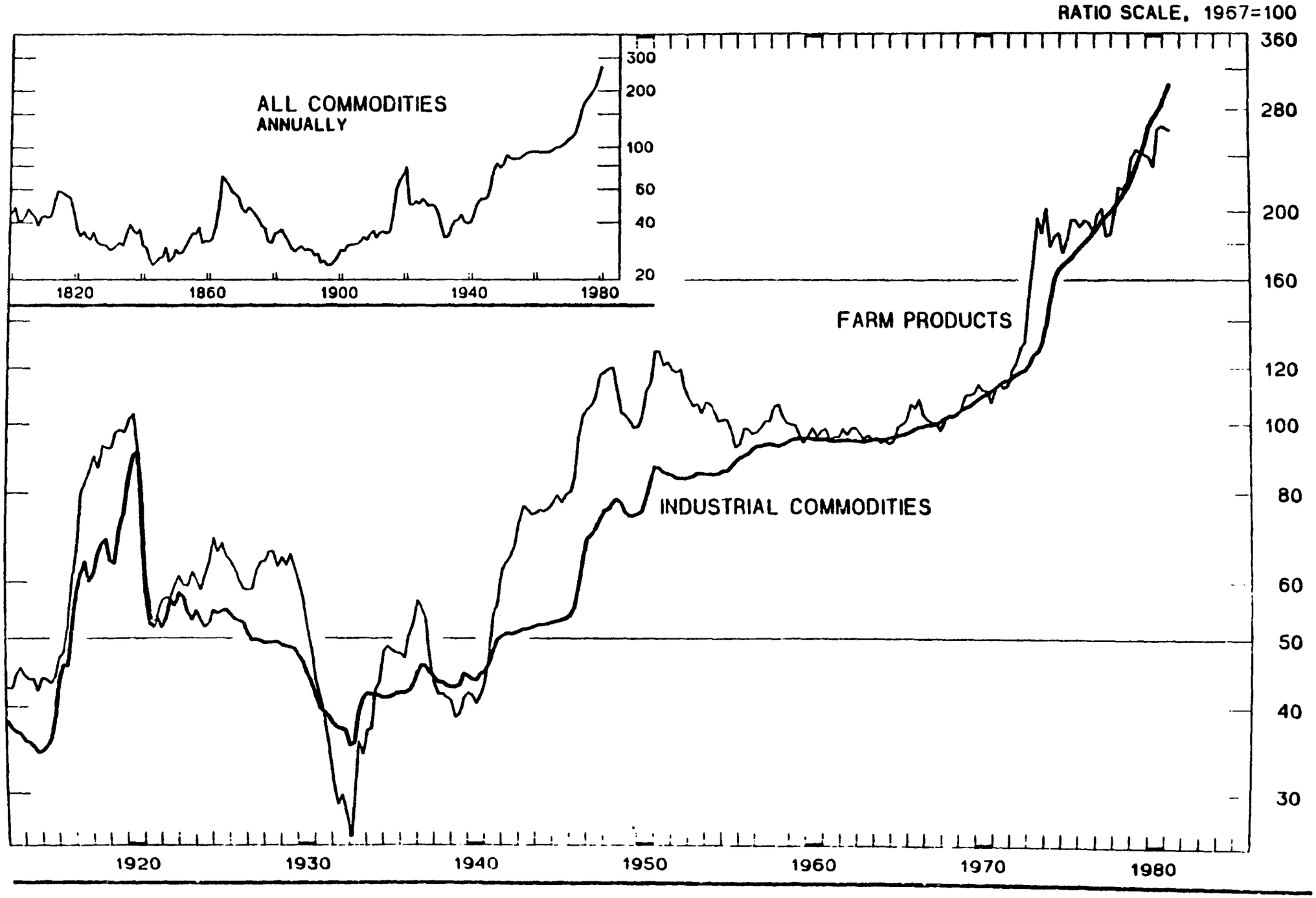


CHART 2

CONSUMER PRICES
ALL ITEMS AND FOOD
QUARTERLY AVERAGES, 1913-

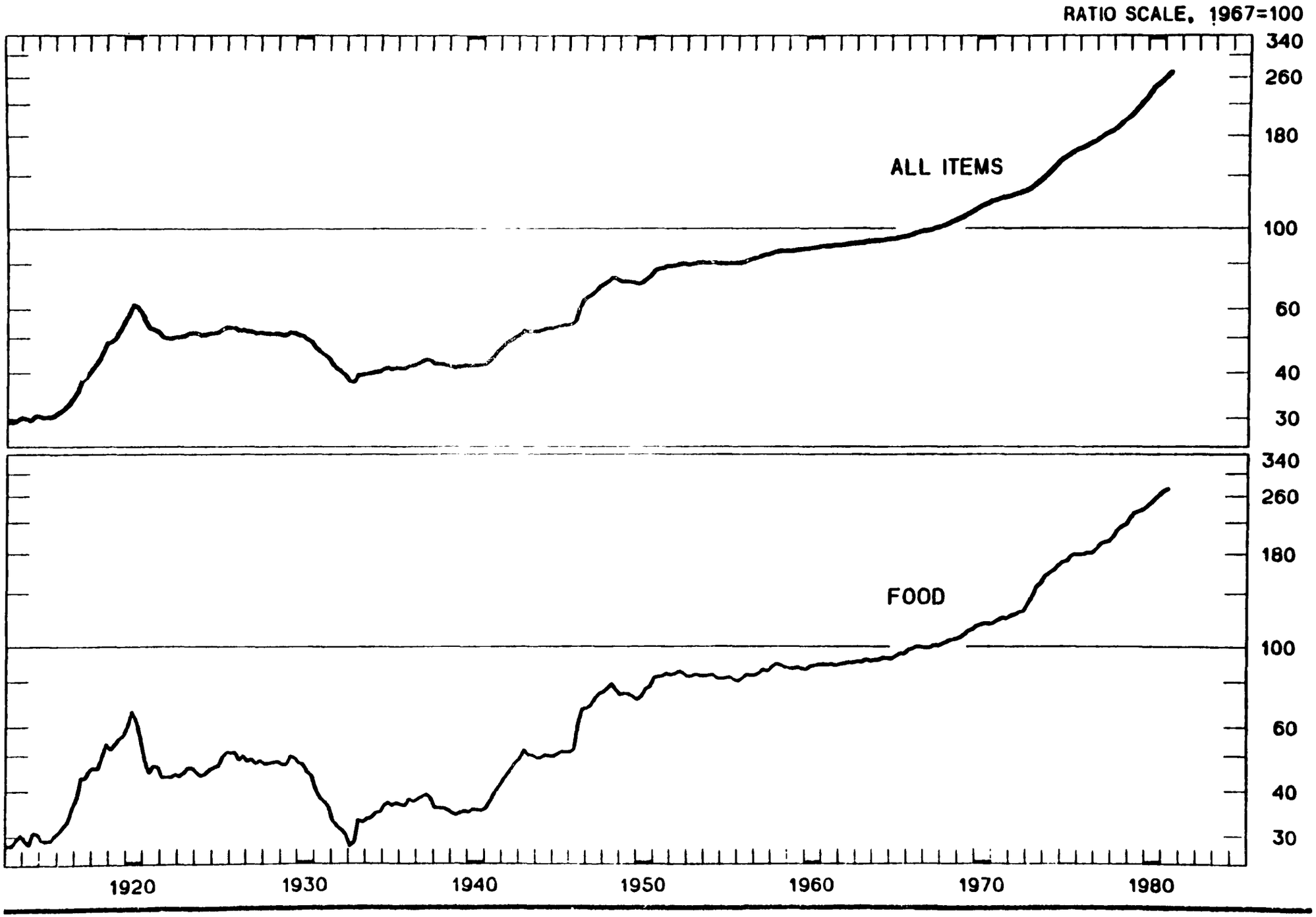


CHART 3

SHORT-TERM INTEREST RATES

BUSINESS BORROWING

PRIME RATE, EFFECTIVE DATE OF CHANGE; PRIME PAPER, QUARTERLY AVERAGES

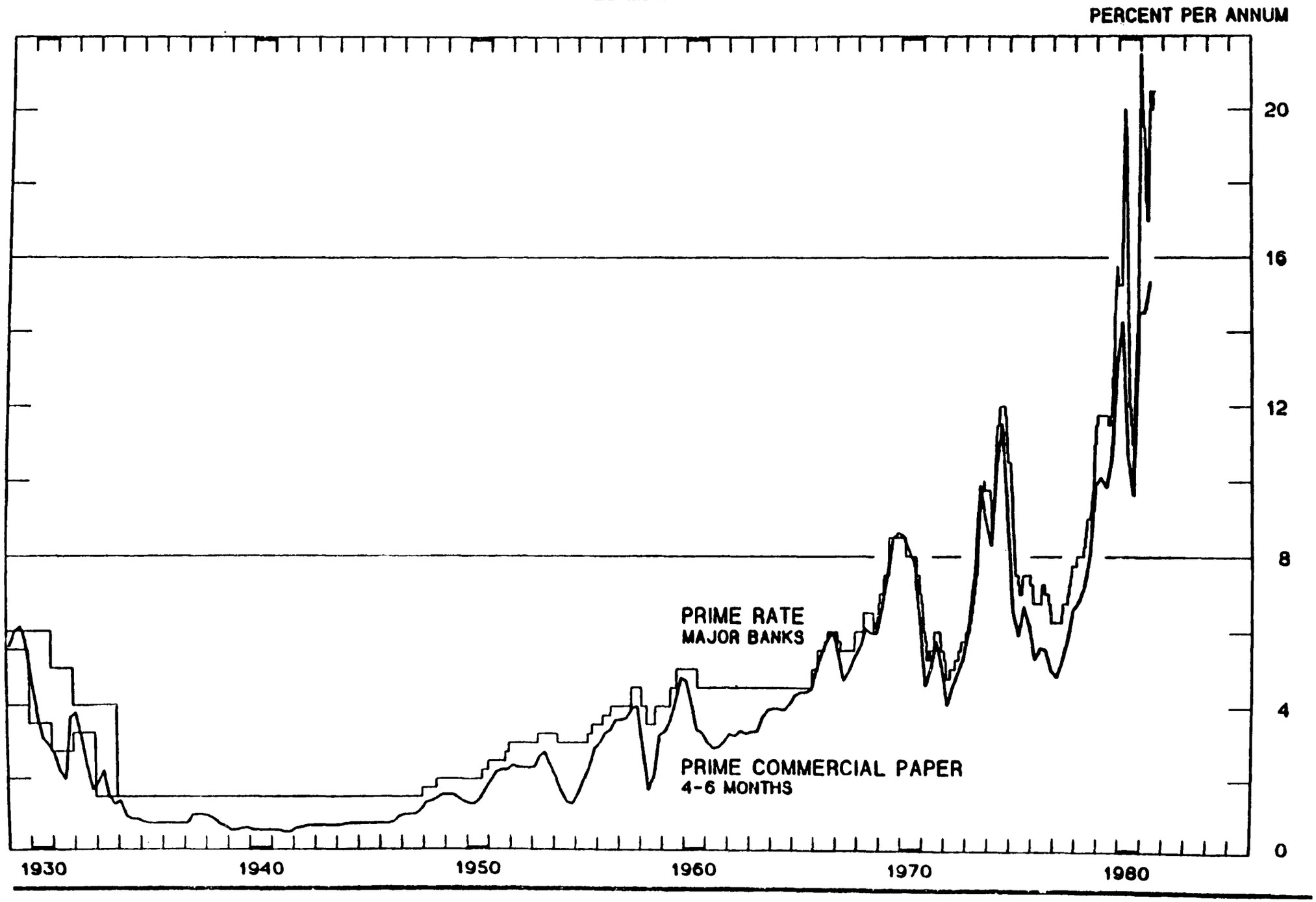


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CHART 4

SHORT-TERM INTEREST RATES

MONEY MARKET

DISCOUNT RATE, EFFECTIVE DATE OF CHANGE; ALL OTHERS, QUARTERLY AVERAGES

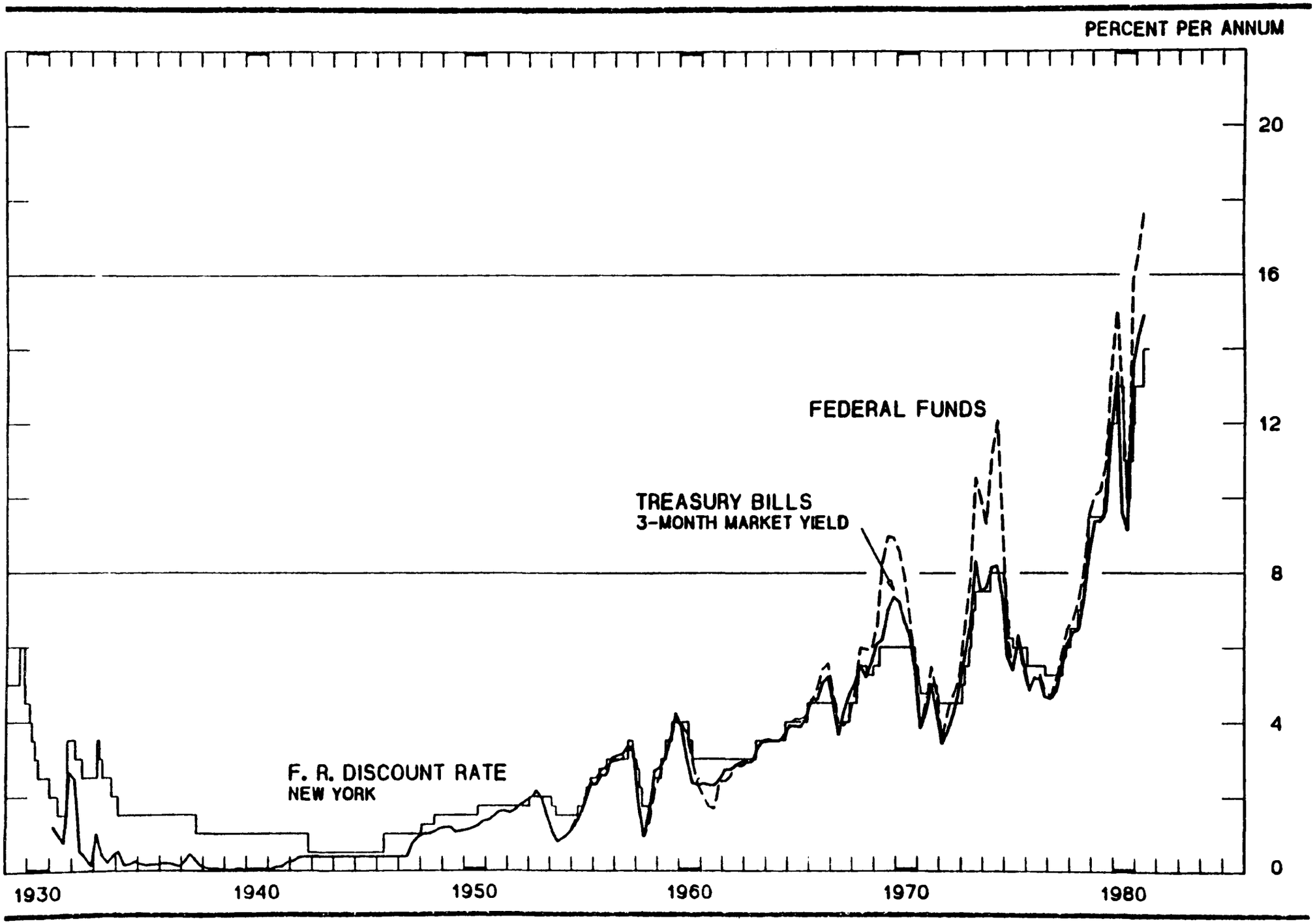


CHART 5

LONG- AND SHORT-TERM INTEREST RATES

ANNUALLY

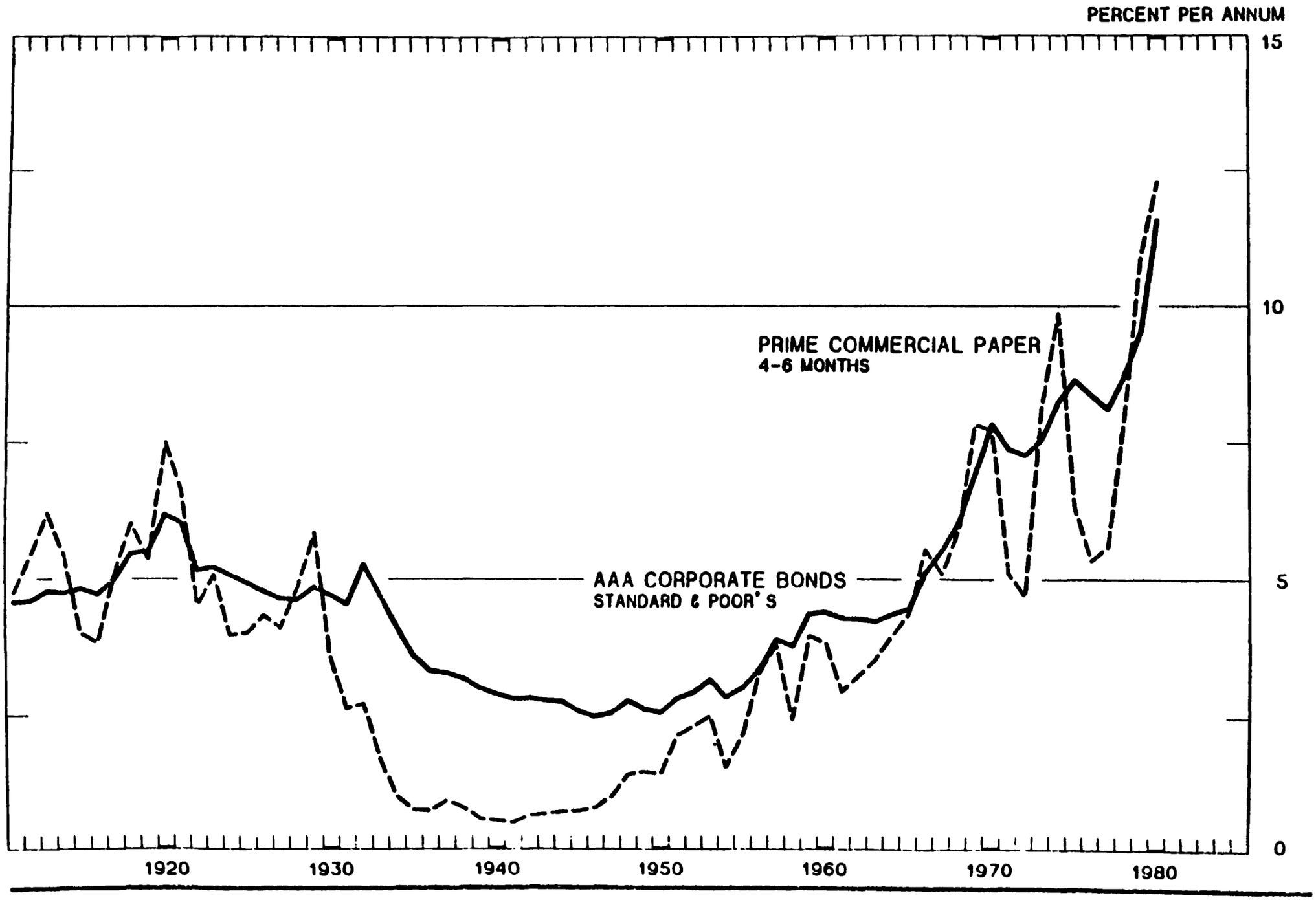
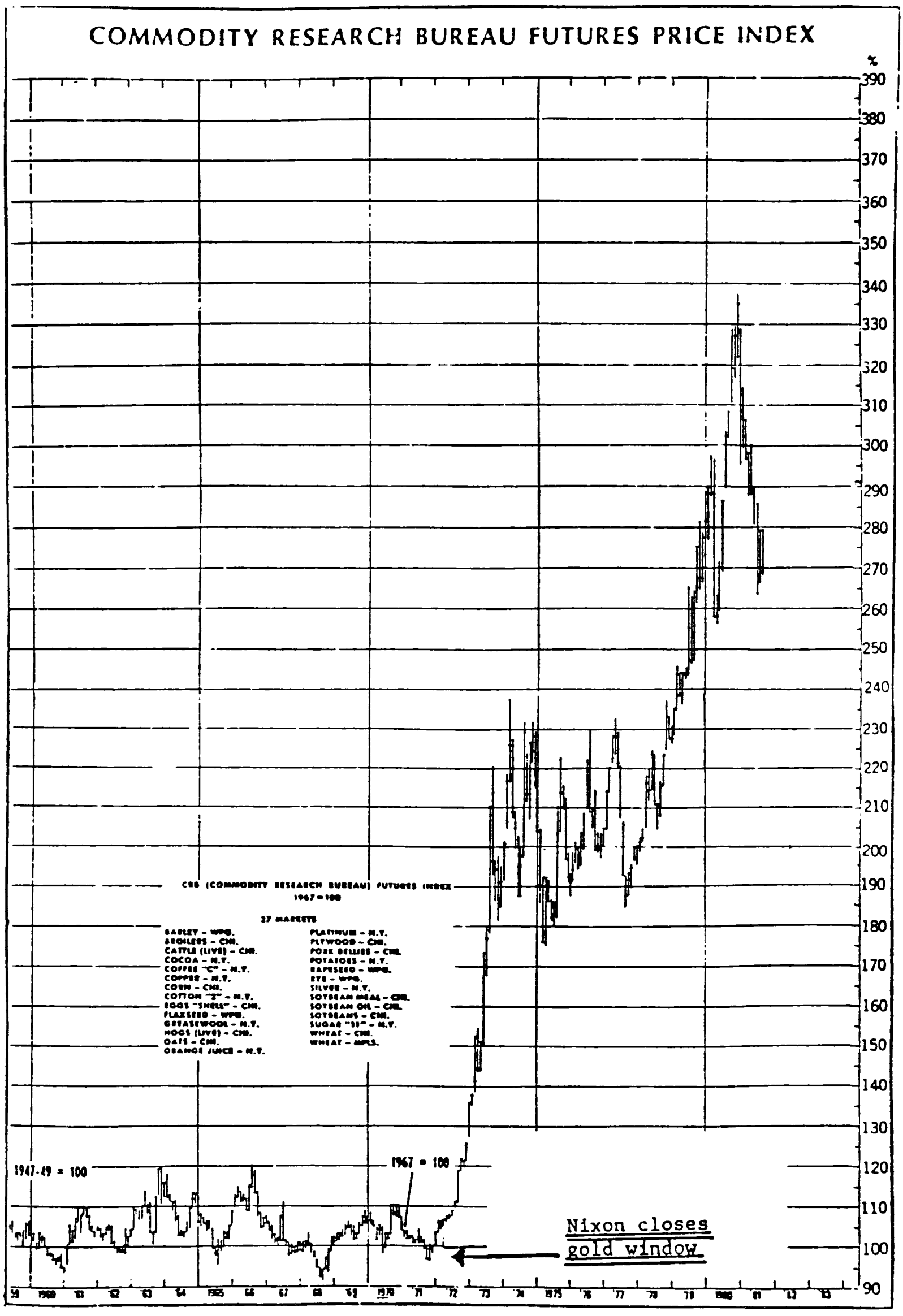


CHART 6

CHART 7


COMMODITY RESEARCH BUREAU FUTURES PRICE INDEX
%
390
380
370
360
350
340
330
320
310
300
290
280
270
260
250
240
230
220
210
200
190
180
170
160
150
140
130
120
110
100
90
CRB (COMMODITY RESEARCH BUREAU) FUTURES INDEX
1967 = 100
27 MARKETS
BARLEY – WPG.
BROILERS – CME.
CATTLE (LIVE) – CME.
COCOA – N.Y.
COFFEE "C" – N.Y.
COPPER – N.Y.
CORN – CME.
COTTON "2" – N.Y.
EGGS "SHELL" – CME.
FLAXSEED – WPG.
GREASEWOOL – N.Y.
HOGS (LIVE) – CME.
OATS – CME.
ORANGE JUICE – N.Y.
PLATINUM – N.Y.
PLYWOOD – CME.
PORK BELLIES – CME.
POTATOES – N.Y.
RAPESEED – WPG.
RYE – WPG.
SILVER – N.Y.
SOYBEAN MEAL – CME.
SOYBEAN OIL – CME.
SOYBEANS – CME.
SUGAR "11" – N.Y.
WHEAT – CME.
WHEAT – MPLS.
1947-49 = 100
1967 = 100
Nixon closes
gold window

Standard and Poor's Index of Stock Prices

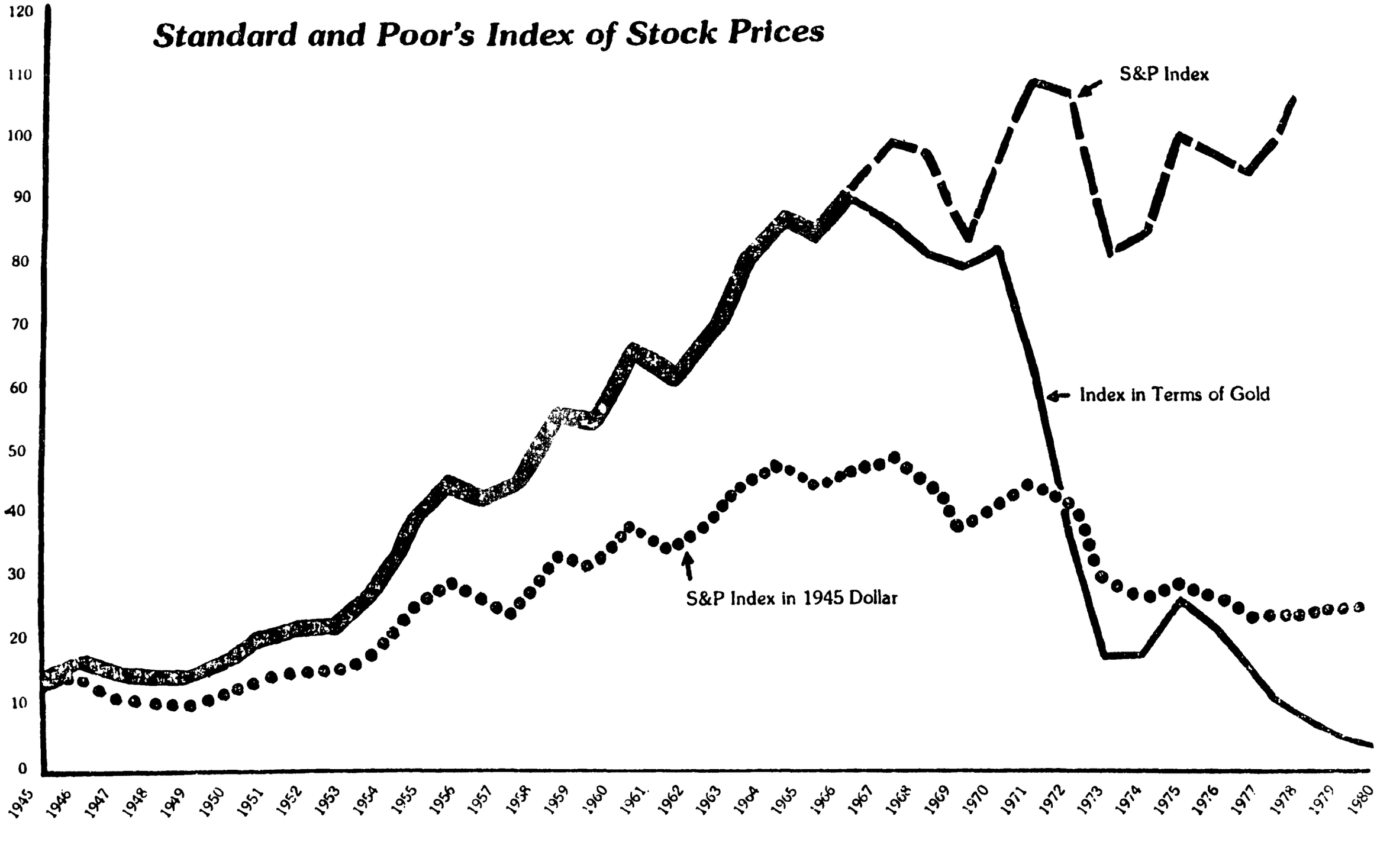


CHART 8

LONG-TERM BOND YIELDS

QUARTERLY AVERAGES

PERCENT PER ANNUM

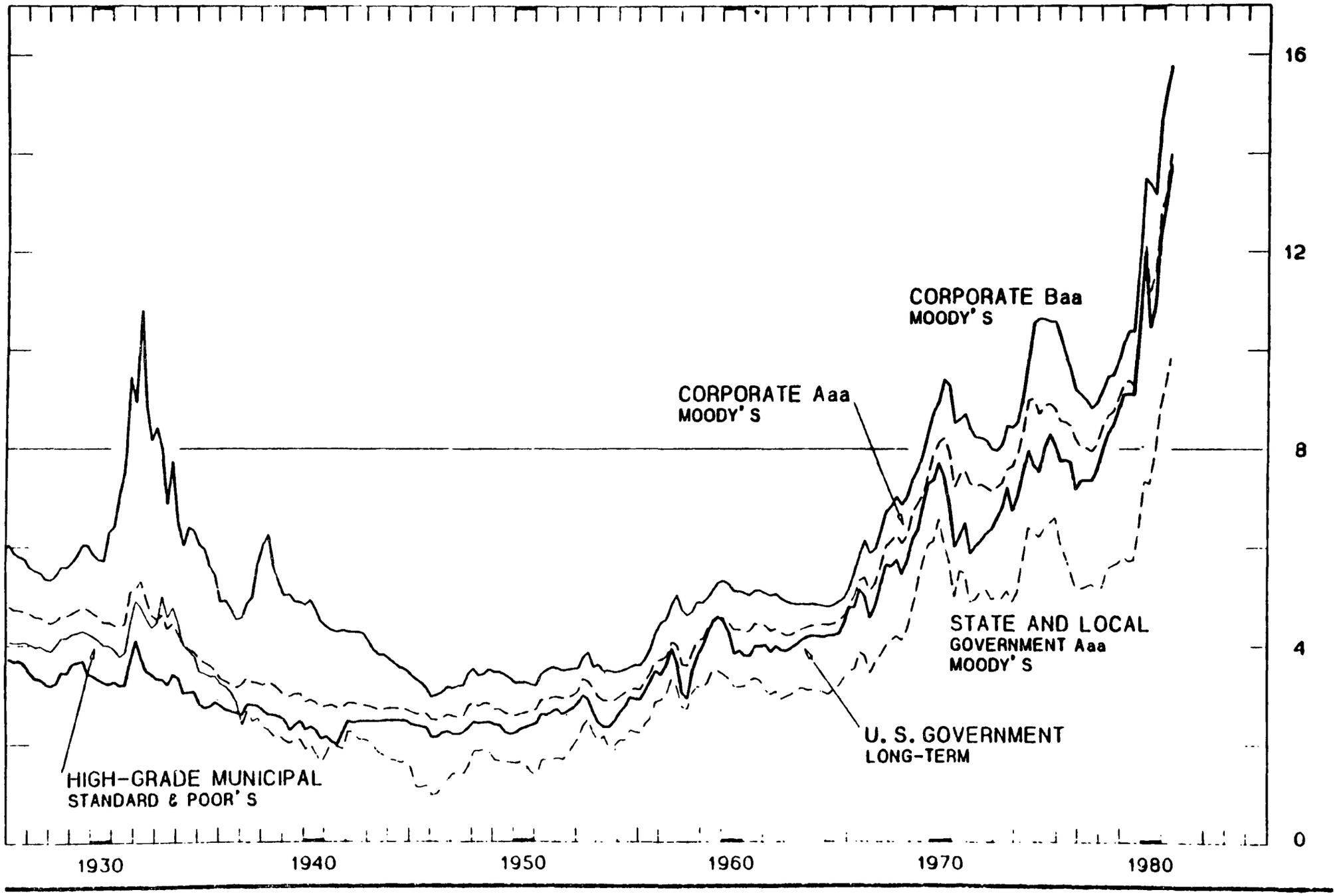


CHART 9

Standard and Poor's Index of Bond Prices

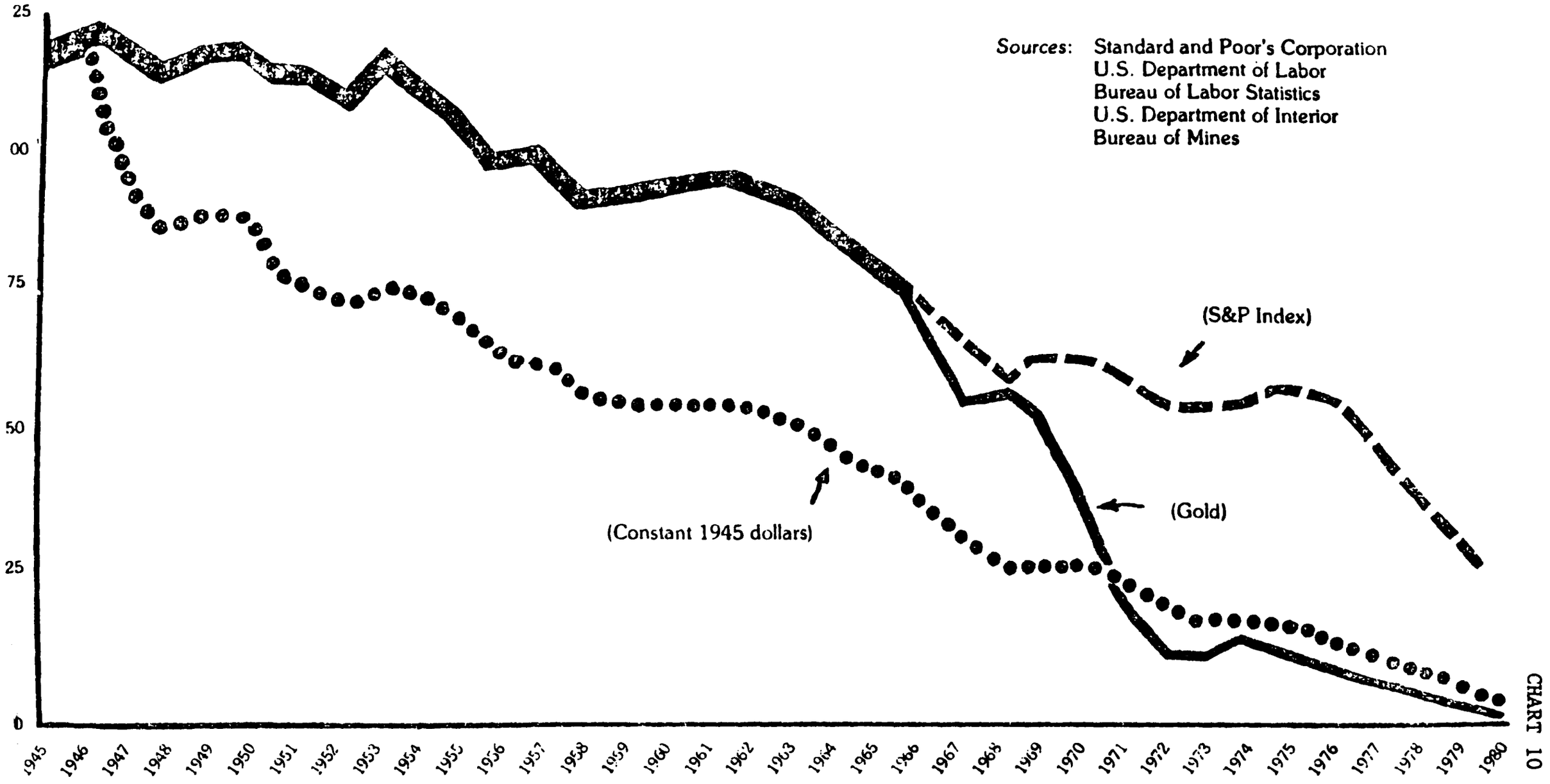


CHART 10

FEDERAL BUDGET

NIA BASIS

SEASONALLY ADJUSTED ANNUAL RATES, QUARTERLY

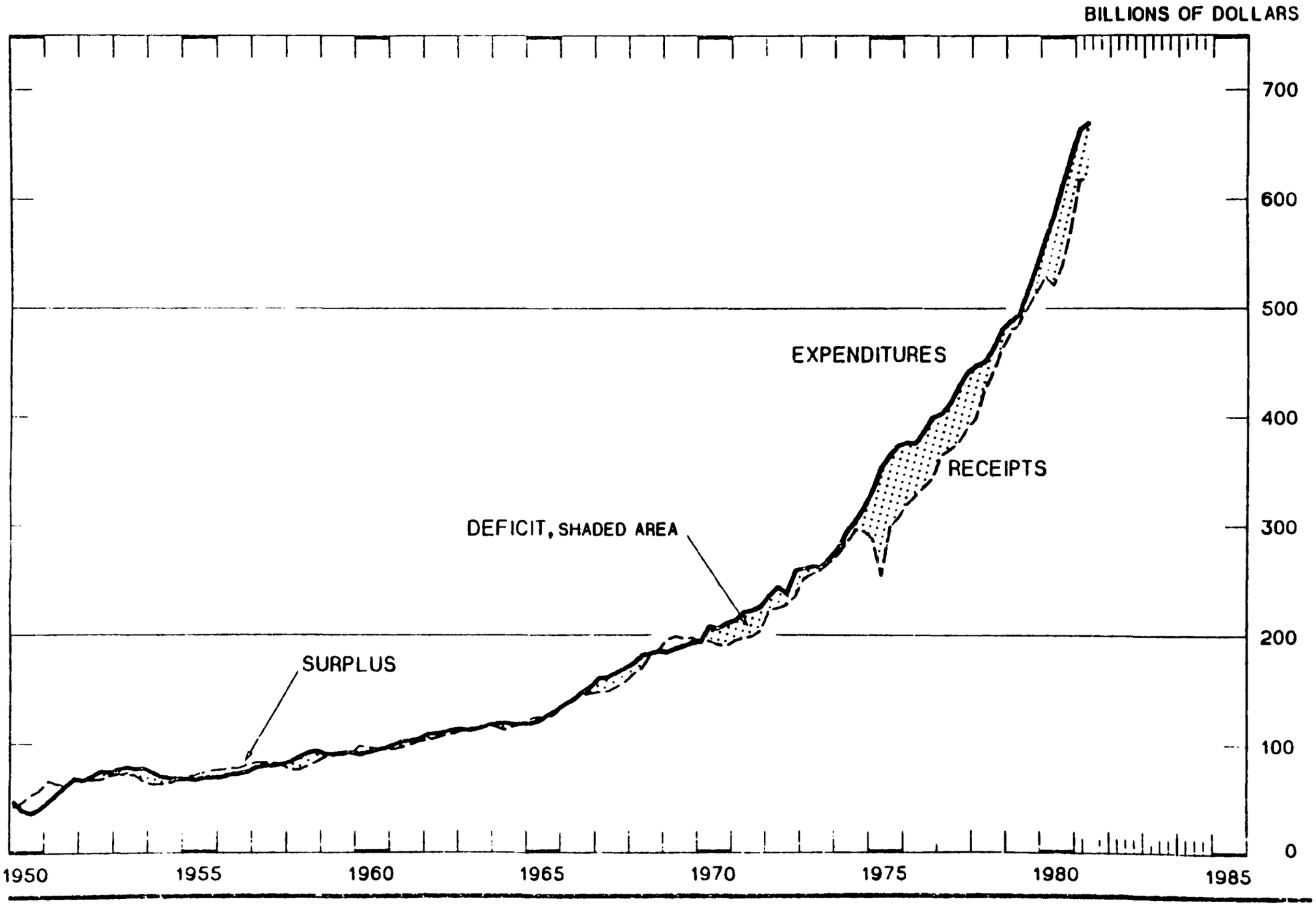


CHART 11

NET FEDERAL DEBT

AMOUNT OUTSTANDING; END OF YEAR, 1950-51; SEASONALLY ADJUSTED, END OF QUARTER, 1952-

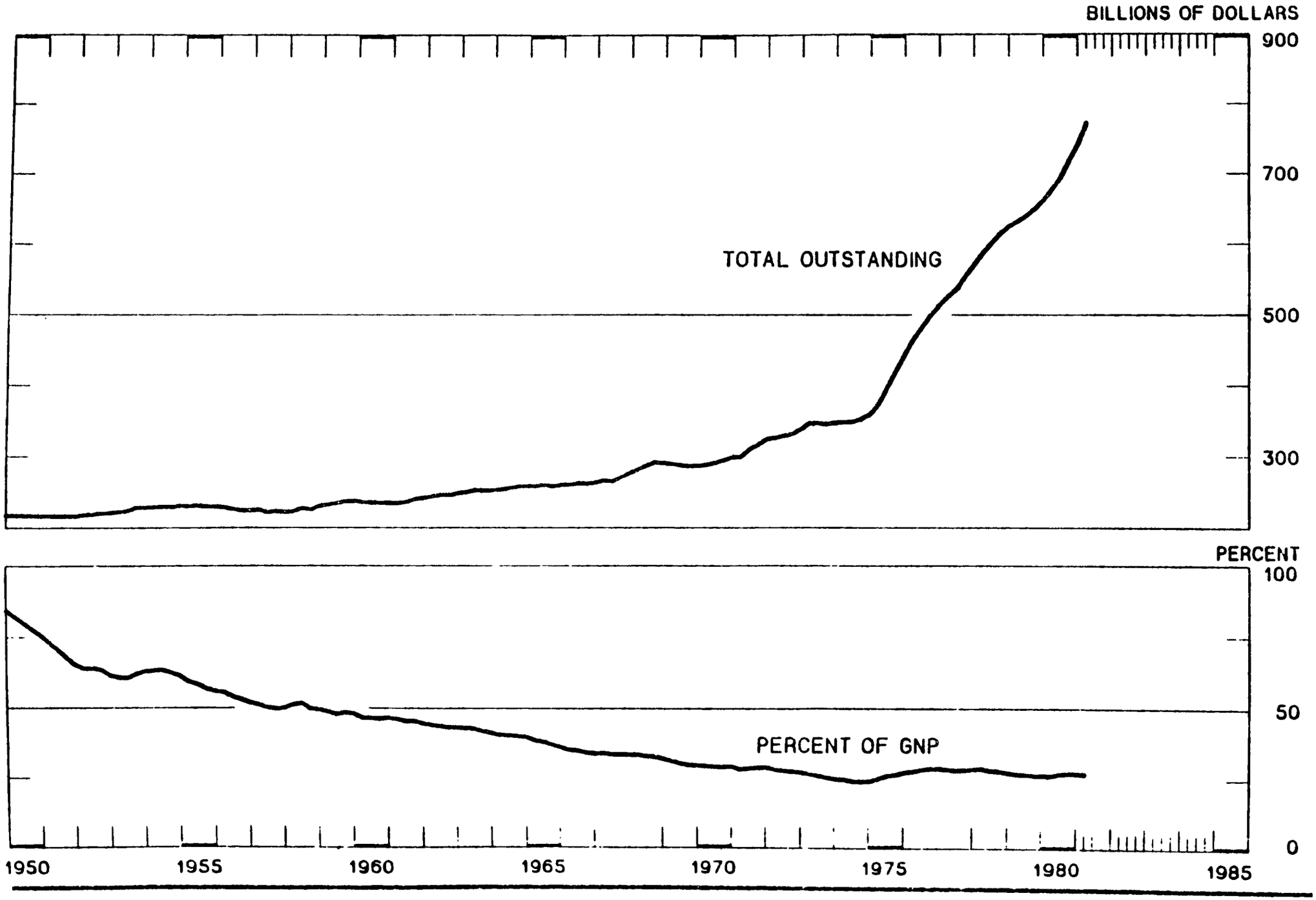


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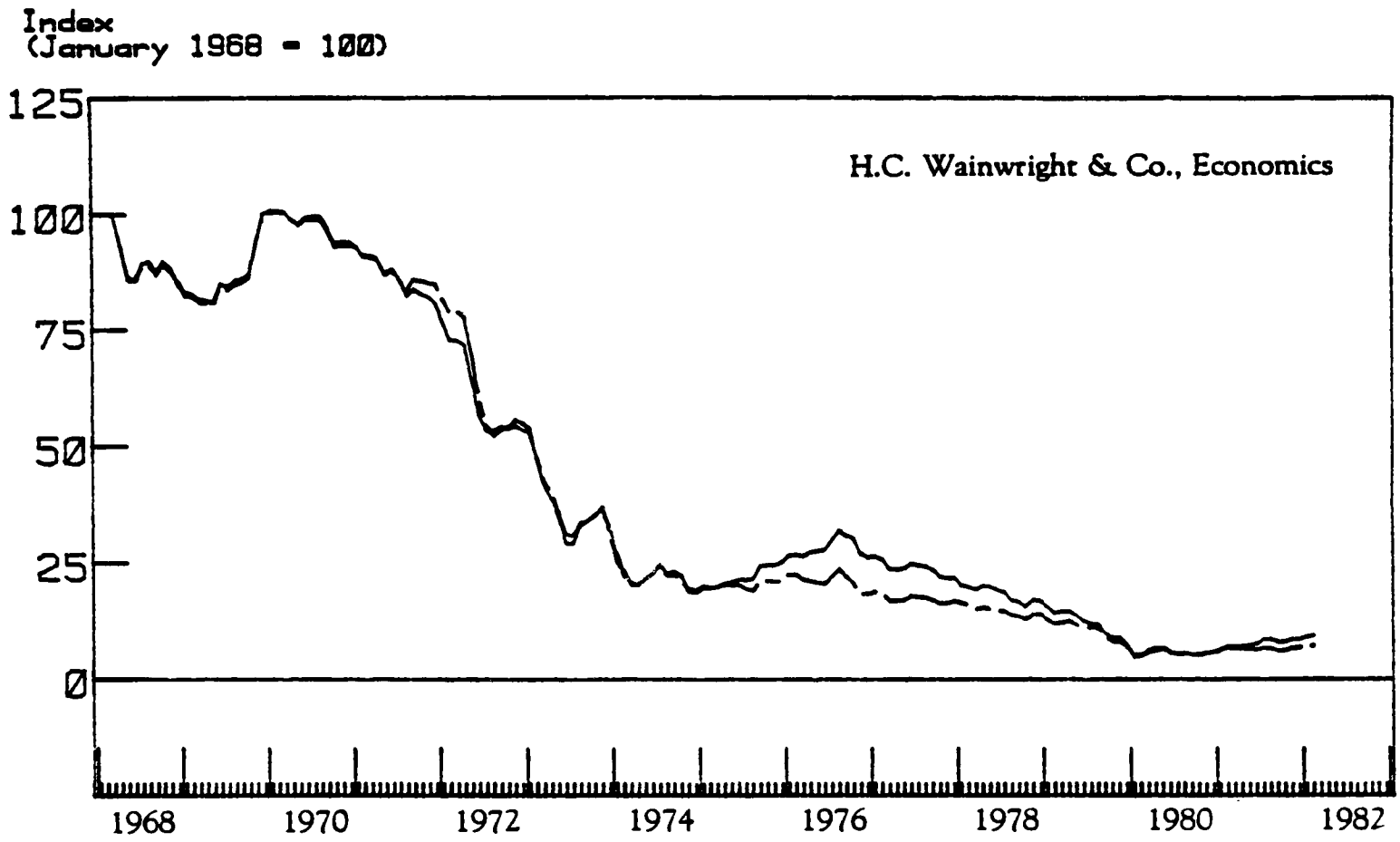
CHART 12

CHART 13

Gold Value of Major Currencies
United States and Britain
January 1968 to February 1982



Gold Value of the U.S. Dollar

Gold Value of the British Pound

CHART 14

Gold Value of Major Currencies
United States and Italy
January 1968 to February 1982

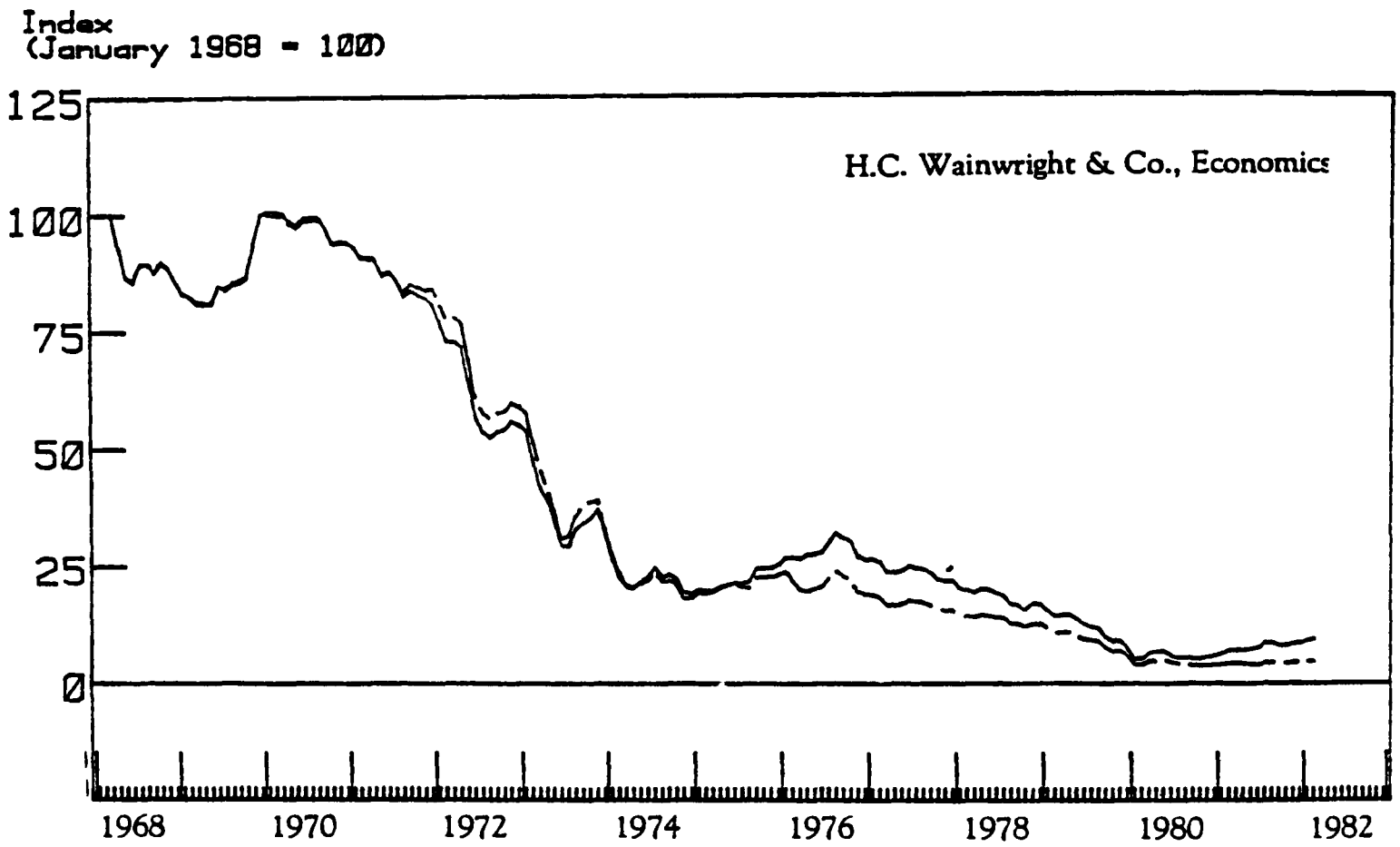
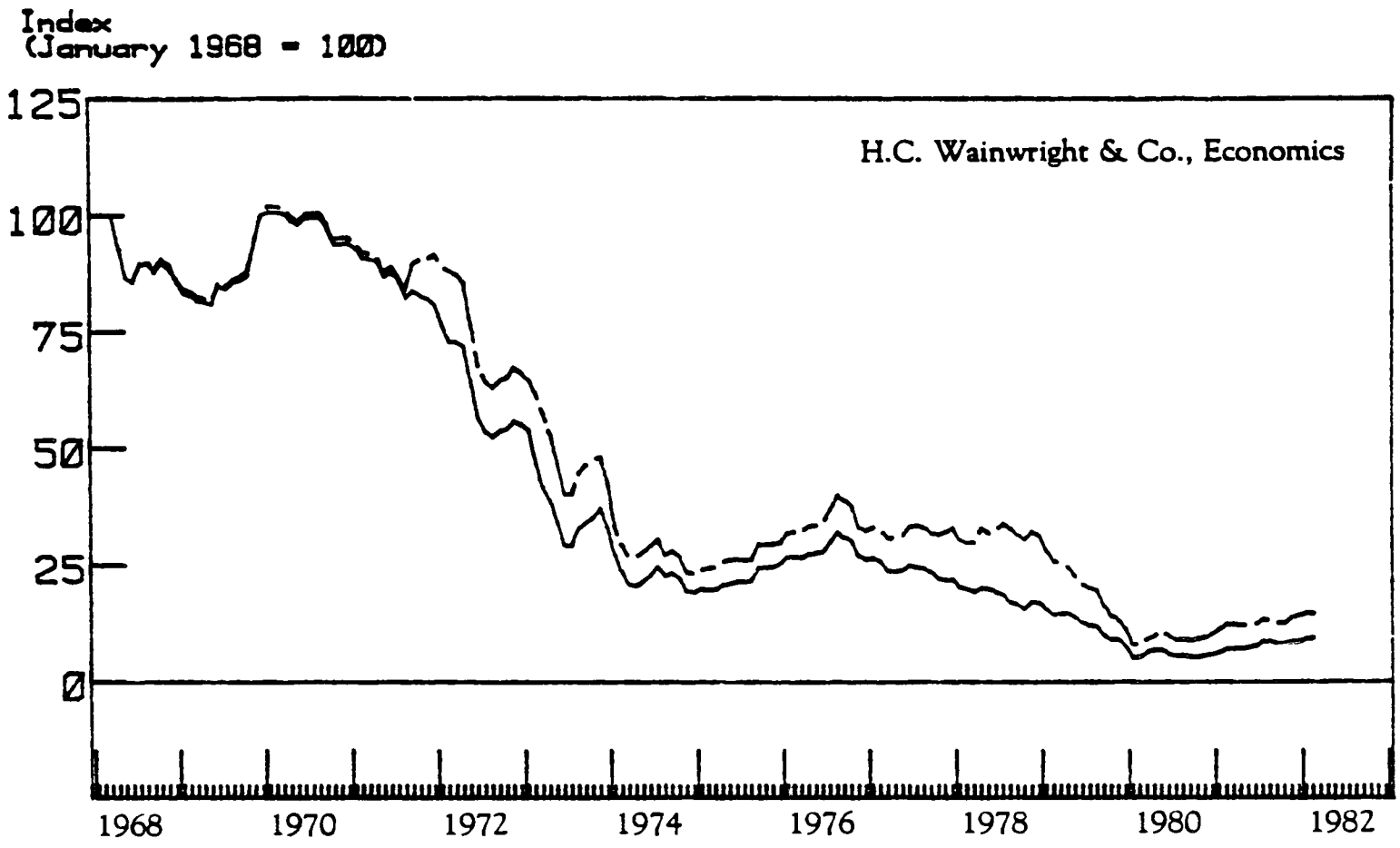


CHART 15

Gold Value of Major Currencies
United States and Japan
January 1968 to February 1982



Gold Value of the U.S. Dollar

Gold Value of the Japanese Yen

CHART 16

Gold Value of Major Currencies
United States and Switzerland
January 1968 to February 1982

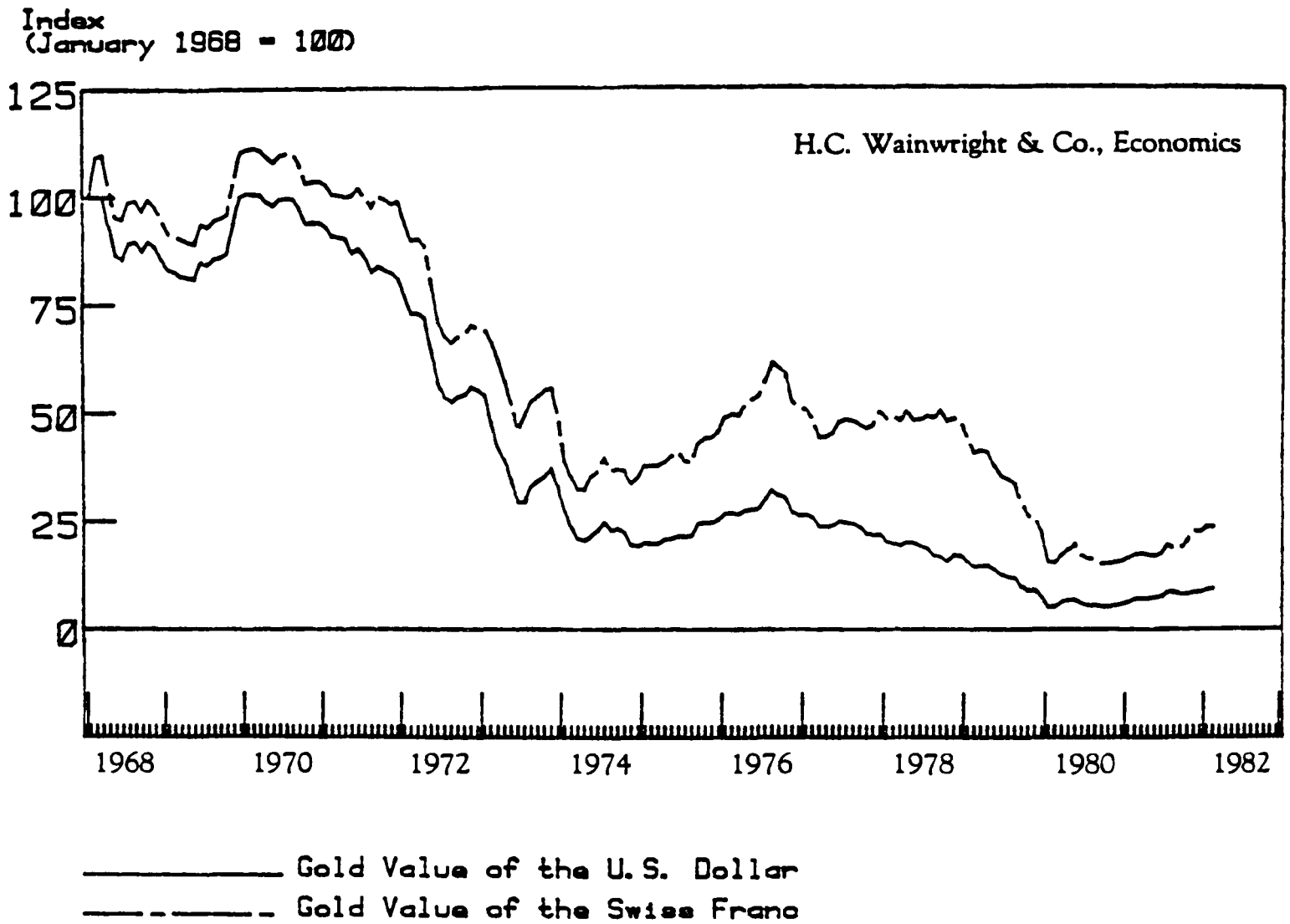
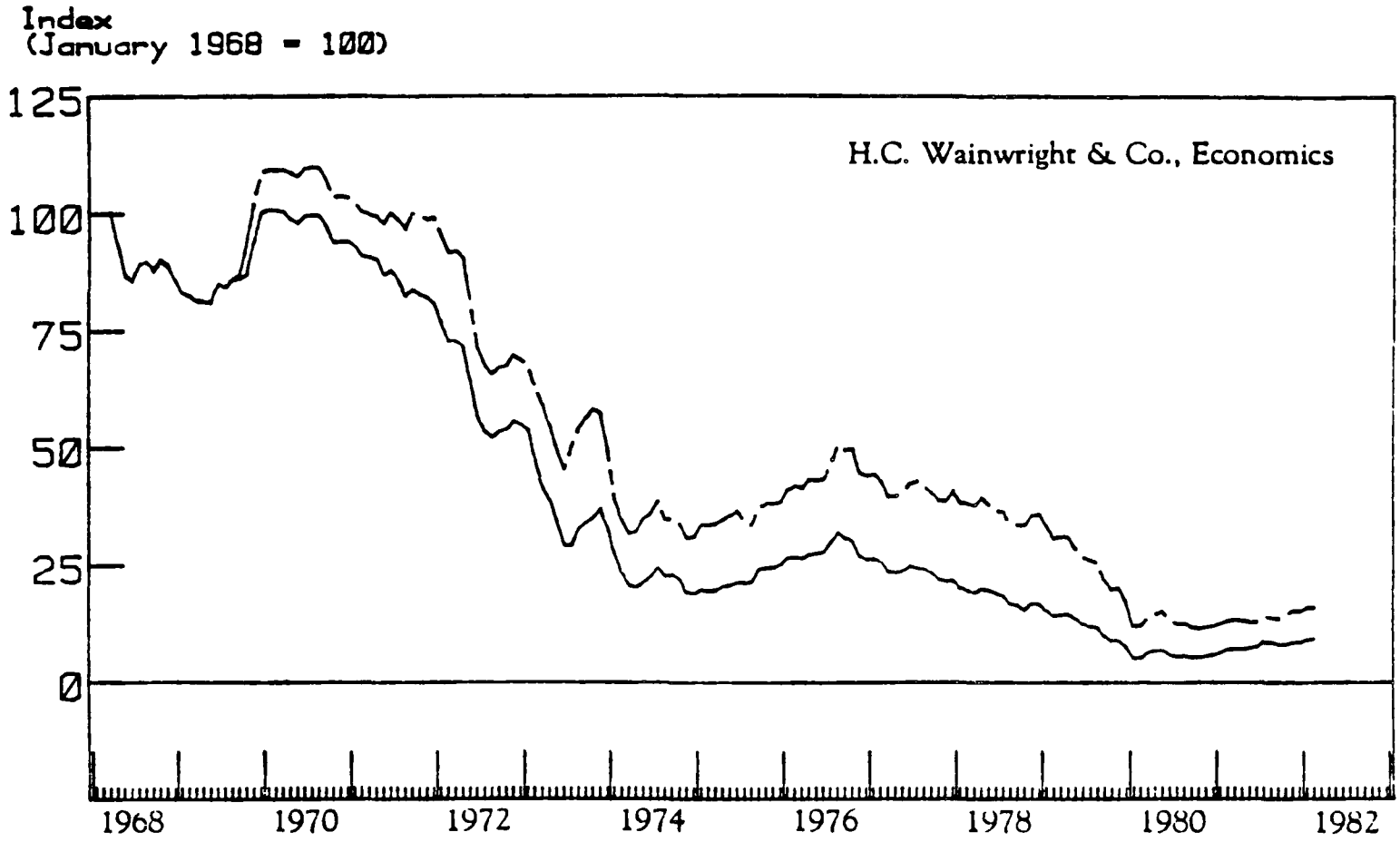


CHART 17

Gold Value of Major Currencies
United States and West Germany
January 1968 to February 1982



_____ Gold Value of the U.S. Dollar

_ _ _ _ _ _ Gold Value of the West German Deutchemark

We oppose the recommendation of the Gold Commission that Congress create a new gold coin, exempt from capital gains and sales taxation, for the following reasons:

1) It serves no productive or useful purpose or public interest to issue such a coin.

2) The coin would exacerbate existing monetary confusion, and provide an excuse for the gold bloc to further delude their public with the belief that Congress was moving to re-enthrone gold.

3) The designation of the recommended gold piece as a "coin without legal tender status" is confusing, since the term "coin" commonly implies legal tender status. Without legal tender status the "coin" is really a medallion, and we already have a program to produce those.

4) The exemption from capital gains and sales taxes would make the proposed "coin" a highly sought after speculative asset, and would drain investment funds from common stocks and other productive uses, as well as adding senselessly to the deficit.

5) The recommendation is futile, since a majority of the Members of the House Banking Committee have already announced that they will oppose it. Their statement follows:

STATEMENT BY MEMBERS OF THE HOUSE COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS ON THE GOLD COMMISSION'S PROPOSAL
FEBRUARY, 1982

We note that the Gold Commission on February 12 recommended as follows:

> We favor Treasury issue of gold bullion coins of specified weights, and without dollar denomination or legal tender status, to be manufactured from its existing stock of gold, and to be sold at a small markup over market value of the gold content, and recommend that the Congress implement this proposal. Furthermore, we recommend that the coins shall be exempt from capital gains taxes, and that the coins shall be exempt from sales taxes.

Legislation to permit this must come before our Committee. Because the Gold Commission's recommendation while pending will create further uncertainty in a nation already beset by financial and economic problems, we think it necessary to speak out now.

We oppose the Gold Commission's recommendation. No purpose is served by it other than to appease the gold lobby. Worse,

affirmative harm can be done by issuing gold coins which lack legal tender status but are exempt from taxes and have speculative possibilities vastly preferable to investment in the productive plant and equipment the nation needs. For example, a speculator who might buy the proposed gold coin at the current price of $375 an ounce, might soon find himself able to sell it at $775 an ounce, its price just a few years ago. He would pay no tax on the $400 capital gain. But one who buys and sells common stock in a productive company for a similar gain pays a 20 percent capital gains tax on the $400. Why, particularly at this time, should we do further damage to the nation's already weakened security markets?

In addition, with all the honest confusion in our economy and our own committee hearings over what is or is not money, how can we consider a recommendation that we support the issuance of coins without legal tender status, another monetary confusion?

Furthermore, at a time when our federal budgets are directing programs to the states, we can hardly justify federal actions which create privileged products that are also exempt from the sales taxes and states need for revenue to cover their enhanced obligations.

For these reasons, we strongly urge the Gold Commission to repair the damage it is causing by withdrawing its February 12 recommendation, which there is still time to do.

Signed,

Rep. John J. LaFalce (D-NY)
Rep. Walter E. Fauntroy (D-DC)
Rep. J. William Stanton (R-Ohio)
Rep. Jim Mattox (D-Tex)
Rep. Stanley N. Lundine (D-NY)
Rep. William J. Coyne (D-Pa)
Rep. Stewart B. McKinney (R-Conn)
Rep. David W. Evans (D-Ind)
Rep. Joseph G. Minish (D-NJ)
Rep. Gregory W. Carman (R-NY)
Rep. Robert Garcia (D-NY)
Rep. Henry B. Gonzalez (D-Tex)
Rep. Douglas K. Bereuter (R-Neb)
Rep. Mary Rose Oakar (D-Ohio)
Rep. Jerry M. Patterson (D-Calif)
Rep. Chalmers P. Wylie (R-Ohio)
Rep. Henry S. Reuss (D-Wis)
Rep. Frank Annunzio (D-Ill)
Rep. Ed Bethune (R-Ark)
Rep. Parren J. Mitchell (D-Md)
Rep. Mike Lowry (D-Wash)
Rep. Charles E. Schumer (D-NY)
Rep. Norman E. D'Amours (D-NH)
Rep. James J. Blanchard (D-Mich)
Rep. Steny H. Hoyer (D-Md.)
Rep. Ed Weber (R-Ohio)
Rep. Bruce F. Vento (D-Minn)
Rep. George C. Wortley (R-NY)
Rep. Fernand J. St Germain (D-RI)
Rep. Carroll Hubbard (D-Ky)

***

In addition, we strongly object to the Gold Commission's practice, in its Recommendations and in the Report, of adverting to matters outside its legal jurisdiction. The mandate of the Gold Commission was to examine the role of gold in domestic and

international monetary systems. The Recommendations and Report, however, make repeated reference to such matters as monetary growth rules and the system of floating as compared with fixed exchange rates. The Commission was not authorized to discuss these matters, was not constituted with a view to providing a balanced and professional perspective on them, did not discuss them adequately in its meetings, and should not have mentioned them in its Report.

Finally, we object vigorously to the suggestion that Congress continue the study of various schemes to promote investments in gold. Congress has quite enough to do without engaging in endless debate over hypothetical and unrealistic ideas.

Appendix to Dissenting Views of Congressman Chalmers P. Wylie

CONGRESSIONAL RESEARCH SERVICE ON:

CANADIAN GOLD COINS

Under Section 4 of the Currency and Exchange Act of Canada, the Governor in Council is authorized to issue gold coins having the "description, standards, remedy allowance and least current weight" as is set out in Part I of the schedule to the Act.1/ Additionally, the Governor in Council has the authority to amend the schedule by proclamation.2/ Consequently, gold coins can be issued by Canada pursuant to regulations drafted by the Royal Canadian Mint, approved by the cabinet, and assented to by the Governor General.

Under section 7 of the Currency and Exchange Act, gold coins issued under the authority of section 4 are expressly deemed to be "legal tender." However, under section 7(2) (a) of this law, payment of any amount is only a legal tender if the tender consists of not more than one coin having a value greater than ten dollars. This restriction applies to single transactions and not to individual payors or recipients.

Both the $100 commemorative gold coin and the $50 Maple Leaf bullion coin currently being minted in Ottawa have been issued under the authority of section 4 of the Currency and Exchange Act.3/

1/ The Currency and Exchange Act, Can. Rev. Stat., ch. C-39, Sec. 4 (1970).

2/ The Currency and Exchange Act, Can. Rev. Stat., ch. 39 (1970), as amended by 1977-78 Can Stat., ch. 35, Sec. 2.

3/ For example, see Proclamation Authorizing Issue and Prescribing Design and Dimension of One Hundred Dollar Gold Coins Effective December 18, 1980. SOR/81-181, 115 Can. Gax., Pt. II, p. 711 (Mar. 11, 1981).

Therefore, legal tenders can be made with either of these coins for their face value, subject to the restriction contained in section 7(2)(a). The remedy allowances for the Maple Leaf coin are contained in the "Proclamation Amending Part I of the Schedule to the Act With Respect to the Fifty Dollar Gold Coin Effective January, 1980."4/

Prepared by Stephen F. Clarke
Senior Legal Specialist
American-British Law Division
Law Library, Library of Congress
March 1982

4/ SOR/80-2, 114 Can. Gaz., Pt. II, p. 5 (Jan. 9, 1980).

***

GOLD COINS AS LEGAL TENDER IN SOUTH AFRICA

Under section 12 of the South African Mint and Coinage Act,1/ Republican and Transvaal gold coins are legal tender provided their weights are not less than:

Krugerrand	33.718 grams
1/2 Krugerrand	16.859 grams
1/4 Kurgerrand	8.429 grams
1/10 Krugerrand	3.372 grams
Two Rand	7.938 grams
Rand	3.961 grams2/

Prepared by Belma Bayar
Legal Specialist
Near Eastern and African Law Division
Law Library, Library of Congress
March, 1982

1/ African Mint and Coinage Act No. 78 of 1964 as amended In 4 Statutes of the Republic of South Africa classified and annotated From 1910-. 345 (Durban, Butterworth & Co.).

2/ First Schedule to the South African Mint and Coinage Act Id. at 351.

Additional Dissenting Views of Congressman Henry S. Reuss

The procedures followed by the Chair in presenting for Commission approval the compendious text of this Report provided little opportunity for discussion by Commission Members and none for competent professional review of the many facts cited and assertions made.

As a result, the text contains many controversial historical judgments, statements of opinion presented as fact, and choices of tone and emphasis with which many specialists would not agree. I have sought to point these out by providing extensive footnotes. To further provide the reader of this Report with a balanced view, I am including here as part of my own Views for printing in full at this point in the Report, several papers by a distinguished expert on gold, Dr. Edward M. Bernstein, dated October 16, 1980, March 25, 1981, June 17, 1981, and November 19, 1981.

E M B (LTD.)
RESEARCH ECONOMISTS
REPORT NO. 80/19

IS A RETURN TO THE GOLD STANDARD FEASIBLE?

October 16, 1980

Summary and conclusions

The persistent inflation has revived interest in the gold standard and two bills have been introduced in the Congress to restore a gold standard. This reflects an idealization of the 100 years of the classical gold standard as an era of great monetary stability and economic progress. In fact, prices rose and fell alternately by 50 per cent or more over periods of 25 or 30 years, depending on gold production. The gold standard was marked by recurring crises which sometimes degenerated into panics. In the United States there were 12 such panics and crises between 1815 and 1914, apart from numerous milder recessions. The great depressions that occurred twice in the nineteenth century and even more destructively in the 1930s resulted from the interaction of wartime inflation and the gold standard.

These problems were caused by the rigidities imposed by the classical gold standard. The monetary unit was defined as a fixed weight of gold and this gold value of the currency was immutable. Money was maintained equivalent to gold by the free coinage of gold and the redemption of money in gold. Most important, the money supply was limited by the gold reserve and monetary policy had to respond to the inflow or outflow of gold. In the great depression of 1929-33, the Federal Reserve eased monetary policy, but intermittently raised the discount rate when there was an outflow of gold. From 1928 to 1933, the money supply fell by 25 per cent. The tie between the money supply and gold reserves became inoperative after World War II. When the gold reserve became inadequate to support the expanding money supply, the gold reserve requirements were reduced and finally eliminated.

The Bretton Woods system was designed to provide exchange stability and convertibility of currencies without the rigidity of the gold standard. Two problems related to gold emerged in the 1950s and 1960s. First, the amount of gold added to the monetary stock was inadequate and the growth of reserves was met by a moderate increase in official holdings of dollars. Second, the growing preference for gold over dollars resulted in a sharp reduction of U.S. gold reserves from 1957 to 1969. Nevertheless, the Bretton Woods system worked reasonably well until the inflation compelled the United States to terminate gold convertibility and abandon the par value of the dollar. After 1973, the free market price of gold rose rapidly and reached $275 an ounce in mid-1979. Because of the political uncertainty resulting from the events in Iran and Afghanistan the price rose to a peak of $850 an ounce in January 1980 but has dropped since then to $670 an ounce.

The restoration of a gold standard would compel the monetary authorities to maintain the equal value of gold and the dollar at a fixed price and to limit the money supply through gold reserve requirements. The sharp fluctuations in the price of gold during the past two years show that it would be difficult to maintain gold convertibility at a fixed price under present conditions. Nor would it be possible to have an adequate growth of gold reserves to allow for the trend increase of the money supply. It is impractical to restore a gold standard at this time. It would first be necessary to end the inflation and to maintain stability of the foreign exchange value of the dollar relative to the other major currencies. If this could be achieved, there would be no need for a return to a gold standard.

Is a Return to the Gold Standard Feasible?

Prices and crises under the gold standard

The persistent inflation and the inability of the United States to restore monetary stability has led to proposals to return to the gold standard. Bills have been introduced in the Congress to establish a gold coin standard and a flexible gold standard based on an adjustable price for gold. More important, Public Law 96-389, authorizing the increase of the U.S. quota in the International Monetary Fund, provides for the establishment of a Commission of 15 members under the chairmanship of the Secretary of the Treasury with the following duty:

> "The Commission shall conduct a study to assess and make recommendations with regard to the policy of the U.S. Government concerning the role of gold in the domestic and international monetary systems and shall transmit to Congress a report containing its findings and recommendations not later than one year after the date of enactment of this Act."

The interest in returning to a gold standard reflects the view that if the creation of money were limited, the inflation would stop for lack of the monetary fuel that powers it. Much of the support for a return to the gold standard, however, is based on an idealized view of the 100 years of the classical gold standard as an age of unparalleled monetary stability and economic progress. The fact is that under the gold standard prices rose and fell for 20 to 30 years at a time so that the history of prices in that period was one of alternate inflation and deflation. Palgrave's Dictionary of Political Economy discussed the behavior of prices under the gold standard in these terms (Vol. II, p. 222, col. 2 and p. 223, col. 1):

> "Under these complicated influences [affecting the supply of and demand for gold] it would be surprising if the value of gold remained stable over long periods of time. For short periods this value has great stability owing to the high proportion that the total stock of gold bears to any possible changes in the amount demanded or supplied. An exception may perhaps be made in cases where inflated credit is suddenly shaken. . . But over long periods great changes have taken place in the value of gold. These changes have been on the whole in the direction of depreciation [inflation], but there have been long periods of progressive appreciation [deflation]."

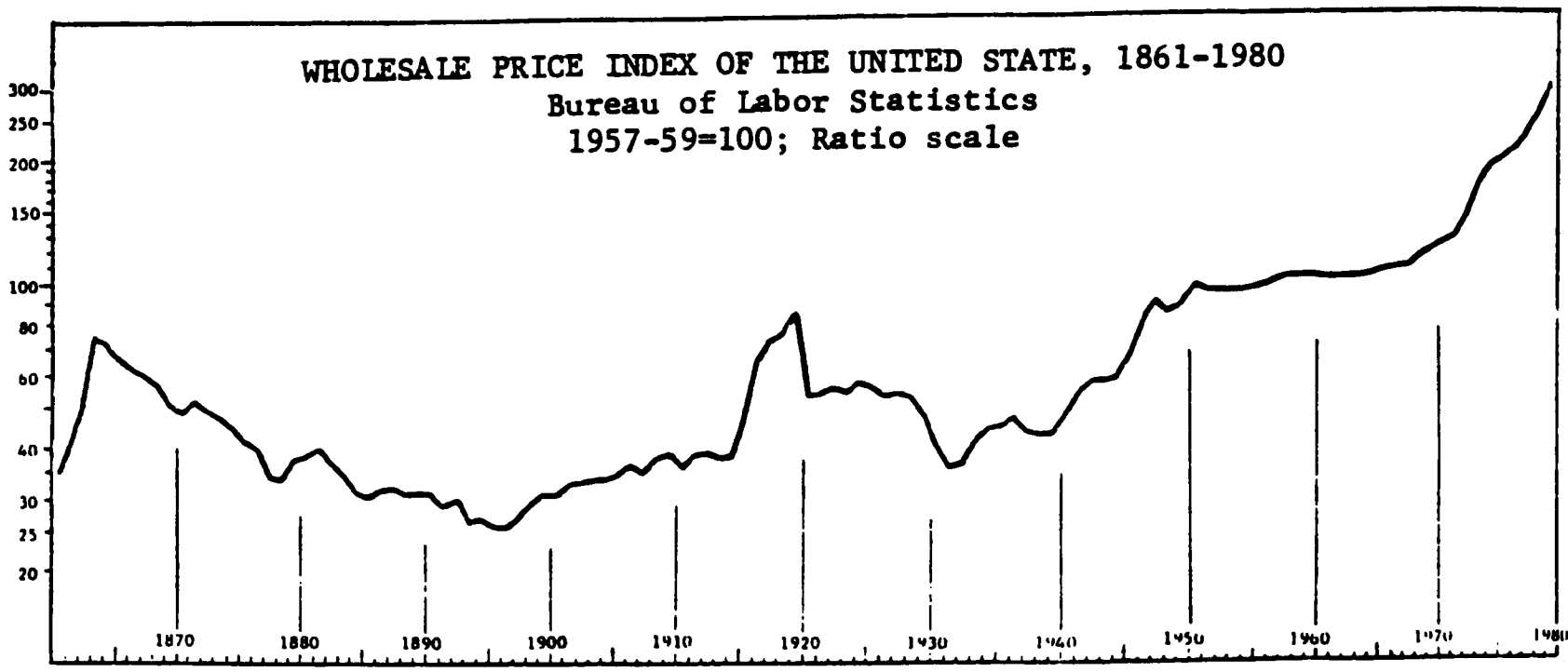
The first of these inflation peaks was in 1814 after prices had risen sharply in Europe because of the Napoleonic Wars and in the United States because of the War of 1812. From then to 1843, the U.S. wholesale price index fell by nearly 60 per cent. Incidentally, in 1834 the United States raised the price of gold from $19.39 an ounce to $20.67 an ounce in order to change the mint ratio of gold to silver from 15:1 to 16:1. After 1843, wholesale prices in the United States rose by 157 per cent

---

* This paper was prepared by Mr. Bernstein for a hearing on the feasibility of a return to the gold standard held by the Subcommittee on Mines and Mining of the Interior Affairs Committee of the House of Representatives. This subcommittee is primarily concerned with the effect that a return to the gold standard would have on the U.S. gold mining industry.

in the 21 years to 1864. Most of the rise, however, occurred during the Civil War-- that is when the term inflation was coined-- and prices fell moderately in the following ten years.* In Europe, which was on a specie standard-- silver, gold, or bimetallism-- prices rose by about 60 per cent in the 30 years to 1873.

In that year, all of the great trading countries began to follow the newly-created German Empire in abandoning the silver standard or the bimetallic standard and adopting a gold standard. This greatly increased the dependence of the world economy on gold production to provide the reserves necessary for the growth of the money supply. It was also the beginning of a new period of deflation. From 1873 to 1896, wholesale prices fell by 49 per cent in the United States, but slightly less in Europe. After the deflation ended, the U.S. wholesale price index rose by 233 per cent between 1896 and 1920, mostly during World War I. Even from 1896 to 1913, however, U.S. wholesale prices rose by 50 per cent. It is interesting to note that the high cost of living, popularly known as HCL, was a Democratic campaign issue in the election of 1912. From 1920 to 1932, the U.S. wholesale price index fell by 58 per cent, although most of the fall occurred in 1921. After this early postwar plunge in farm prices, the U.S. wholesale price index fell by one-third in 1922-32.



The gold standard was marked by recurring monetary crises sometimes degenerating into financial panics. In his Business Annals, Willard Thorp identifies 12 such crises or panics in the United States and seven in England in the hundred years from 1815 to 1914. The crises were periods at the peak of the business cycle when

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* Earl Hicks, in an article in the Southern Economic Journal (January 1940), said that the term inflation was first used by Alexander del Mar in a pamphlet, "The Great Paper Bubble, or the Coming Financial Explosion," issued by the Democratic Party in the campaign of 1864. Hicks wrote: "The frontispiece of the pamphlet shows Secretary [of the Treasury] Chase nonchalantly blowing bubbles in the economic system. One huge bubble sits upon his pipe, and Del Mar undertakes to prove that this bubble is about to break-- not only because of its great size, but because its 'inflation' has been accompanied by an unequal expansion of its various parts." Kurt Singer in his article on "Inflation," Handwoerterbuch des Staatswissenshaften, Vol. V, p. 466, asks, "Erste Verwendung des Wortes?"

when it was not possible to meet the increased demand for currency and credit so that prices plunged and interest rates soared. The panics were extreme crises usually accompanied by numerous bankruptcies. In England, the crises were due to the rigidity of the Bank Charter Act of 1844 and the modest size of the free gold reserves that the Bank of England customarily held. This made it impossible to meet currency needs in an emergency except by suspending the gold reserve provision of the Act which was done on a number of occasions. In the United States, the national banking system provided no flexibility at all in the issue of currency and that, as Professor O. M. W. Sprague wrote in his study for the National Monetary Commission (1908-12), was the cause of the recurrent crises.

1. CRISES AND PANICS IN THE UNITED STATES AND UNITED KINGDOM, 1815-1914

United States			United Kingdom		
Year	Crisis or panic*	Comment	Year	Crisis or panic*	Comment
1815	Crisis		1815	Crisis	
1825	Panic		1825	Panic	
1833	Panic		1836	Panic	
1837	Panic		1847	Panic	
1839	Panic		1857	Panic	
1847	Panic		1866	Crisis	Severe
1857	Panic		1890	Crisis	
1873	Panic	Violent			
1882	Panic				
1890	Crisis				
1893	Panic	Severe			
1907	Crisis	Severe			

* This does not include 14 recessions in the United States and nine in the United Kingdom which are not classified as crises or panics, although some were accompanied by financial stringency. The table is adapted from Willard Thorp, Business Annals, page 42 for the United States and page 44 for the United Kingdom.

The great depressions that occurred twice in the nineteenth century and reached a new level of severity in 1929-33 were the result of the interaction of great wars and the gold standard. In brief, the war inflation exhausted the money-creating power of a gold standard system. As a consequence, it was not possible to continue the growth of the money supply at a rate that would have sustained the price level reached during or immediately after the war. Furthermore, the inflation engendered by the war was very unequal among the belligerents, so that the maintenance of the gold standard or the return to the historical gold parity of the currency required the more inflated countries to deflate their prices and costs. This created centers of deflation in the world economy which spread from country to country. The result was a great depression in which countries competed in deflating the money supply in order to protect their gold reserves.

What the gold standard requires

There have been many forms of the gold standard, but they all had a few elements in common. First, the value of the currency was defined as a fixed weight of gold and this gold parity was regarded as immutable. If the gold standard had to

be abandoned in time of war, it was a moral imperative to restore it promptly after the war at the historical parity. Second, all forms of money were maintained equivalent in value to gold. This required the free coinage of gold to prevent the value of money from rising above that for gold and the gold convertibility of the currency to prevent the value of money from falling below that for gold. Third, the money supply was limited by the gold reserve. The usual link was to require a proportionate gold reserve against the currency and deposit liabilities of the central bank. Besides, the monetary authorities were expected to change their policy in response to the inflow or outflow of gold.

By these tests, the gold standard came to an end in the great depression of the 1930s. Although by Executive Order under the Gold Reserve Act of 1934, the United States defined the dollar as 1/35 of an ounce of gold, there was no requirement of convertibility. The Secretary of the Treasury, however, undertook to convert dollars into gold for foreign monetary authorities, but not for private holders, either domestic or foreign. This necessitated a major change in the operation of the international monetary system. Until 1933, exchange rates were kept within a narrow range (the gold points) by exchange and bullion dealers. When a currency reached the lower limit of the range, they converted the currency into gold, shipped it to the country whose currency was at the upper limit of the range, converted the gold into that currency, and sold it in the exchange market. Central banks bought and sold gold for their own currencies; they did not ordinarily intervene in the exchange market. The Gold Reserve Act compelled foreign monetary authorities to intervene in the exchange market if they wanted to stabilize the dollar exchange rates for their currencies.

The most important change in the gold standard was not stated in the Gold Reserve Act, but emerged in U.S. monetary policies in the next three decades. An essential element of the classical gold standard was that the money supply must be limited by the gold reserves and a change in the gold reserves should be followed by a change in monetary policy-- an increase in the discount rate when there was a gold outflow and a decrease in the discount rate when there was a gold inflow. This aspect of the gold standard had already become tenuous in the 1920s as noted by Keynes in the Tract on Monetary Reform, p. 198.

> "The theory on which the Federal Reserve Board is supposed to govern its discount policy, by reference to the influx and efflux of gold and the proportion of gold to liabilities, is as dead as mutton. It perished, and perished justly, as soon as the Federal Reserve Board began to ignore its ratio and to accept gold without allowing it to exercise its full influence, merely because an expansion of credit and prices seemed at that moment undesirable. . . For the past two years the United States has pretended to maintain a gold standard. In fact, it has established a dollar standard; and instead of ensuring that the value of the dollar shall conform to that of gold, it makes provision, at great expense, that the value of gold shall conform to that of the dollar."

Of much greater importance was the concern of the monetary authorities to protect the gold reserve during the great depression. At the end of 1928, the gold reserves of the United States were $3.75 billion, and they increased gradually to $4.63 billion at the end of August 1931. The abandonment of the gold standard by Britain in September 1931 resulted in a large outflow of gold from the United States and at the end of October 1931 the reserves were down to $3.91 billion. The discount rate at the Federal Reserve Bank of New York had been reduced from 6 per cent in October 1929 to 1-1/2 per cent in May 1931 because of the severe depression. After

the outflow of gold, the rate was raised to 2-1/2 per cent on October 9th and to 3-1/2 per cent on October 16, 1931. This halted the outflow of gold and the reserves remained stable at about $4.00 billion until April 1932. A renewed outflow began then and the reserves fell to $3.47 billion at the end of June 1932, partly in response to the reduction of the discount rate to 3 per cent and 2-1/2 per cent as the depression deepened. Nevertheless, the reserves recovered to $3.81 billion in February 1933. On March 3, 1933, however, the last day of the old Administration, the discount rate was raised to 3-1/2 per cent because of a run on the dollar, mainly internal.

In the greatest depression in U.S. history, the money supply as measured by currency outside banks plus demand deposits adjusted fell from $26.7 billion at the end of 1928 to $19.8 billion at the end of 1933-- a decrease of 26 per cent. A broader money supply, including time deposits at commercial banks, mutual savings banks, and the postal savings system, fell from $55.4 billion at the end of 1928 to $41.5 billion at the end of 1933-- a decrease of 25 per cent. While monetary policy was directed toward protecting the gold reserve, which was slightly higher at the end of the recession than at the beginning, that was not the main reason for the deflation of the money supply. The depression reduced the demand for credit; and the fall in prices, profits and incomes placed pressure on the solvency of banks and their ability to supply credit. The Federal Reserve was not bold enough in countering these deflationary forces until the depression had become very severe.

2. ASSETS OF FEDERAL RESERVE BANKS, 1928-33

	Million dollars; end of year					
	1928	1929	1930	1931	1932	1933
Gold reserves	2,506	2,784	2,906	2,933	3,110	3,524
Other reserves	203	227	176	225	221	269
Bills discounted	1,056	632	251	638	235	98
Bills bought	489	392	363	339	33	133
U.S. Government securities	228	511	729	817	1,855	2,437
(Bonds)	(54)	(77)	(164)	(360)	(422)	(433)
(Notes)	(106)	(216)	(226)	(33)	(300)	(1,053)
(Certificates)	(68)	(162)	(315)	(271)	(719)	(516)
(Bills)	(..)	(56)	(24)	(152)	(415)	(425)
Other assets	870	912	776	720	661	580
TOTAL ASSETS	5,352	5,458	5,201	5,672	6,115	7,041
Addendum:						
Total gold reserves, including Treasury	3,746	3,900	4,225	4,052	4,045	4,012
Currency outside banks	3,593	3,557	3,605	4,470	4,669	4,782
Demand deposits adjusted, all banks	23,081	22,809	20,967	17,412	15,728	15,035
Time deposits at commercial banks	19,761	19,192	19,012	15,366	13,631	11,019
Other time deposits	8,925	8,997	9,664	10,613	10,826	10,696
TOTAL MONETARY ASSETS	55,360	54,555	53,248	47,861	44,854	41,532

The total assets of the Federal Reserve Banks, which are the source of currency and bank reserves, declined in 1930, rose considerably in 1931 and 1932, and rose sharply in 1933. This was accompanied by a great change in the composition of the assets of the Federal Reserve Banks, apart from their gold and other reserves

which accounted for much of the increase in total assets from 1928 to 1933. At the end of 1928, discounts were $1.06 billion and bills bought and holdings of Government securities were $717 million. By the end of 1933, discounts were down to $98 million, but bills bought and U.S. Government securities had increased to $2.57 billion. Excluding gold and other reserves, the total of all other assets of the Federal Reserve Banks fell by 20 per cent from the end of 1928 to the end of 1930, but rose by 53 per cent in the following three years to the end of 1933.

The increase in the monetary price of gold from $20.67 an ounce to $35 an ounce created the conditions necessary for recovery. It strengthened the competitive position of the United States in world trade and provided the additional gold reserves to support a more expansionist monetary policy if that was regarded as necessary. In a basic way, however, the gold standard was changed after 1934. The dollar was still convertible into gold for foreign monetary authorities and the gold reserve requirements were unchanged, but the Treasury and the Federal Reserve no longer allowed the gold reserves to govern the money supply. This became apparent very soon when the flood of gold into the United States after the devaluation increased the gold reserves from $4.0 billion (at $20.67 an ounce) at the end of 1933 to $22.8 billion (at $35 an ounce) at the end of 1941. In an attempt to avoid the enormous expansion of the money supply that the inflow of gold would have necessitated, the Treasury sold bills to finance its purchases of gold which it then placed in an inactive account. The mounting interest cost as the gold piled up finally led the Treasury to terminate the inactive account and to monetize the gold it had previously bought.

A quite different problem, however, emerged during World War II when the gold reserves were reduced by $2.7 billion while the wartime expansion of the money supply continued unabated. From the end of 1941 to the end of 1945, currency outside banks increased from $9.6 billion to $26.5 billion, demand deposits increased from $39.0 billion to $75.9 billion, and time deposits increased from $27.7 billion to $48.5 billion. As it was evident that with the continued expansion of the money supply the somewhat smaller gold reserves would not be adequate to meet the requirements on Federal Reserve notes and on the deposit liabilities of the Federal Reserve Banks, legislation was enacted in 1945 reducing the gold reserve requirements. The gold reserves became inadequate for the money supply again in the late 1950s and 1960s and the reserve requirements were reduced twice more until they were finally eliminated. Without the limitation imposed by the gold reserves on the money supply, the United States could not be said to have been on a true gold standard.

Bretton Woods and the gold standard

The Bretton Woods system was intended to provide exchange stability and convertibility of currencies without the rigidities of the gold standard. The par values of currencies were expressed in gold as a common denominator and members were obligated to keep the exchange rates for their currencies within 1 per cent of the par value. Members were expected to follow policies conducive to exchange stability, but not to reduce output and employment or to inflate their prices and costs in order to maintain the par value. Instead, a country could change the par value of its currency as a means of adjusting a large and prolonged imbalance in its payments. Members also had to establish convertibility of their currencies for monetary authorities, but not necessarily in gold. The United States elected to buy and sell gold freely for international settlements, an obligation it undertook voluntarily as an alternative to the responsibility for intervening in the exchange market or controlling exchange rates to keep them within the prescribed range.

Although the Bretton Woods system was not a gold standard, the Fund Agreement took cognizance of the important monetary role of gold, particularly as a reserve asset. Members were required to pay part of their quota subscriptions in gold, and the IMF sold foreign exchange to members for gold as well as for their own currencies. Countries whose currencies were held by the IMF in excess of 75 per cent of their quotas had to repurchase their currencies when their reserves improved and to make the repurchases in gold and convertible currencies in proportion to the increase in their holdings of such reserves. Members were also required to pay charges-- transactions fees and interest on drawings-- in gold unless their holdings were too small. Thus, the IMF accumulated 153 million ounces of gold before the sale of some of its holdings in 1976-80.

The Bretton Woods Agreement authorized the IMF to set margins above and below the par value for the gold transactions of its members. This provision was intended to prevent the emergence of de facto exchange rates which departed too much from the par value. Thus, if a country sold gold at much more than $35 an ounce, it would have created an implicit exchange rate for its currency below the par value. Under this provision, the IMF for a time forbade members from dealing in gold in the premium markets. The premium disappeared in 1953. When the free market price threatened to rise considerably above $35 an ounce again in 1960, the United States and several other countries established a gold pool which bought and sold gold in the London market. It succeeded in keeping the price close to $35 an ounce until speculation in gold increased enormously following the devaluation of sterling in September 1967. After selling nearly 100 million ounces in the fourth quarter of 1967 and the first quarter of 1968, the members of the gold pool announced that they would no longer buy or sell gold in the free market.

Two other problems related to gold emerged under the Bretton Woods system. First, it became apparent in the 1950s that the amount of newly-mined gold added to the monetary stock was inadequate to provide for the trend growth of reserves. From the end of 1950 to the end of 1957, the aggregate gold reserves of all countries and international institutions increased at an average annual rate of $550 million. In addition, foreign official assets in the United States increased at an average annual rate of $470 million. The dependence on U.S. balance of payments deficits for such a large part of the increase of reserves was ominous for the dollar and for the international monetary system. The alternatives to continued and accelerated growth of official dollar holdings were a uniform increase in the price of gold in all currencies or the creation of a new reserve asset by the IMF. The decision was made to create Special Drawing Rights and to allocate them to members in proportion to their quotas. Three issues were made in 1970-72 and issues were made again in 1979 and 1980 with another scheduled for the beginning of 1981.

The second problem which emerged after 1957 was the growing preference of foreign monetary authorities for gold over dollars. U.S. gold reserves were about the same at the end of 1957 as at the end of 1950. Thus, nearly all of the deficit on an official reserve basis was financed through the increase in official dollar holdings. From the end of 1957 to the end of 1969, however, U.S. gold reserves decreased by $11.0 billion while foreign official assets in the United States, including nonmarketable U.S. Government securities denominated in foreign currencies, increased by $5.9 billion. The accumulation of official assets in the United States continued at a rate of about $500 million a year, but the rest of the growing deficit was met by a reduction of nearly $1.0 billion a year in U.S. gold reserves. The greater conversion of dollars into gold was also partly due to the very small amount of newly-mined gold added to the monetary stock-- $2.4 billion in 1957-69 of which

$1.0 billion was acquired by the IMF. The enormous U.S. deficit in 1970 and the first three quarters of 1971 was financed by an increase of $28.9 billion in foreign official assets in the United States and by a reduction of only $1.65 billion U.S. gold reserves, but that was because foreign countries were asked not to convert dollars into gold even before convertibility was terminated in August 1971.

The growing official preference for gold had little effect on the free market price until 1973. Although the price in London rose by about 20 per cent above the monetary price after the termination of sales by the gold pool in 1968, it was back to $35.25 an ounce by the end of 1969. The two devaluations of the dollar resulted in a moderately large increase in the price, but it was still below $100 an ounce until the floating of the dollar in March 1973. Since then, the price of gold has increased enormously, although most of the increase was in the past 18 months. At the end of 1978, the price of gold in London was $226.00 an ounce. By the end of October 1979, the price had risen to $375.00 an ounce. In the following three months the price rose to a peak of $850 an ounce on January 21, 1980. It fell thereafter to $485.75 an ounce on April 3rd and has recovered since then to about $670 an ounce at present. Until 1978, the increase in the dollar price of gold was mainly a response to the inflation and the depreciation of the dollar in terms of the strongest currency, usually the Swiss franc. The enormous rise in late 1979 and early 1980 was due to the political uncertainties arising from the seizure of the American hostages by Iran and the invasion of Afghanistan by the Soviet Union.

3. DOLLAR PRICE OF GOLD IN LONDON, 1953-80

Dollars per troy ounce; end of year or month

Year	Price	Year	Price	Month	Price
1953	34.71	1966	35.19	1979- Mar.	240.10
1954	35.04	1967	35.20	June	277.50
1955	34.97	1968	41.90	Sept.	397.25
		1969	35.20	Dec.	512.00
1956	34.91	1970	37.37		
1957	35.00			1980- Jan.	653.00
1958	35.08	1971	43.63	Feb.	637.00
1959	35.07	1972	64.90	Mar.	494.50
1960	35.60	1973	112.25	Apr.	518.00
		1974	186.50	May	535.50
1961	35.15	1975	140.25	June	653.50
1962	35.07			July	614.25
1963	35.08	1976	134.75	Aug.	631.25
1964	35.12	1977	164.95	Sept.	666.75
1965	35.12	1978	226.00	Oct. 14	668.50

Source: International Financial Statistics, Yearbook 1980, p. 42, and Oct. 1980, p. 38.

The Bretton Woods system functioned very well until about 1965. Not only were exchange rates for the major currencies very stable after the devaluations of 1949, but prices changed less than they had in corresponding periods after previous great wars. The U.S. wholesale price index rose by 52 per cent from 1945 to 1948, but that was a result of the termination of price controls which had suppressed the wartime inflation and kept the index fairly stable from 1942 to 1945. The wholesale

price index rose again by 11 per cent in 1951 because of the Korean war. In the following 13 years to 1964, however, this index rose by less than 4 per cent, and from 1958 to 1964 the index was virtually unchanged. There has never been a period of greater price stability in U.S. history than in these seven years. Moreover, after World War II the world economy avoided a great depression, cyclical fluctuations were more moderate, and the growth of output and employment was greater than at any time in the past.

The Bretton Woods system broke down because of the prolonged inflation in the United States. The inflation originated in the Vietnam war and investment boom of 1965-68. It was aggravated by adverse changes in the terms of trade, particularly the huge increases in the price of oil, by the lag in the improvement of productivity, and most important by the excessive increase of wages because of their formal or informal link to the consumer price index. Because of these developments, it was inevitable that the par value of the dollar and its convertibility into gold would have to be abandoned. The United States not only decided to let the dollar float, but it led the movement to diminish the role of gold in the international monetary system. At the 30th Annual Meeting of the Board of Governors of the IMF, a resolution was adopted endorsing the sale of 50 million ounces of its gold-- 25 million ounces to be sold at auction with the profits placed in a trust fund for the benefit of low-income members and 25 million ounces to be sold to members in proportion to their quotas at that time at the book value of SDR 35 an ounce (restitution). The Board of Governors also expressed its approval of including in a forthcoming amendment the abolition of an official price for gold and the elimination of the requirements for gold payments by members to the IMF. These provisions are now embodied in the Second Amendment to the Fund Agreement.

Can the gold standard be restored?

It is always possible to establish a gold standard if a country is willing to accept the restraints that this entails and the economic consequences that may ensue. The minimum tests of a gold standard are (1) the maintenance of the equal value of the currency and gold by the monetary authorities through the purchase and sale of gold freely at a fixed price; and (2) limitation of the money supply through gold reserve requirements, including the obligation to reduce the money supply when there is a diminution of the gold reserves. As a practical matter, a gold standard can function properly only as part of an international monetary system. Otherwise, sudden changes in the supply of or demand for gold would fall entirely on one country, as it did on the United States after 1934. Purchases and sales of gold by the monetaru authorities at a variable free market price do not constitute a gold standard. Such transactions are merely another form of intervention in the exchange market and another type of open market operation.

Those who advocate a return to the gold standard assume that it would be possible to select some price of gold that would enable the monetary authorities to maintain the equivalence of gold and currency without being drained of their gold reserves or being swamped by a backflow of gold from hoarders, investors, and speculators. The change in the price of gold since 1973, and particularly its volatility, should make one skeptical of this possibility. It was possible to maintain the equivalence of the value of money and gold for generations under the classical gold standard because the allocation of private monetary assets to gold and money had been adapted to the traditional monetary price in the course of centuries. Changes in the preference for gold relative to money were small and took place gradually, but

the monetary authorities could keep gold and money equally attractive in the long run by allowing commodity prices to rise or fall with changes in the cost of producing gold and in the short run by changing interest rates which raised or lowered the opportunity cost of holding gold instead of money.

As the price of gold has ranged between $226 an ounce and $850 an ounce in the past two years, it is not possible to say now at what price the monetary authorities could expect to maintain the equivalence of gold and money under stable monetary conditions. If gold were an ordinary commodity, with production and consumption usually about equal, apart from relatively small changes in stocks, it would be possible to estimate what the price would be if supply and demand were at trend levels. In the long run, the price would have to reflect the cost of production and demand would be adjusted to the relative price of gold and other commodities. The supply of and demand for gold does not fit this pattern. Production accounted for about 59 per cent of the supply in 1976-79 and consumption in the arts and industry accounted for 70 per cent of the private absorption of gold. The price has fluctuated sharply in this period without any apparent relation to changes in production or in the absorption of gold in the arts and industry.

The present price of gold and the fluctuations in the past two years were brought about by the demand of hoarders, investors, and speculators. Their demand is for holding gold as an asset, but the value of gold cannot be determined in the same way as the value of other assets. It is possible to estimate the value of such typical assets as stocks and bonds because they are income-earning assets. Their value is determined by discounting the future flow of earnings, and for bonds also the return of principal, at current interest rates. One may err in projecting the flow of earnings and the security of the principal of a bond, or the appropriate interest rate at which the flows should be discounted, but the method of valuation is clear. Even the value of undeveloped land can be estimated by discounting the projected flow of earnings, although there is greater uncertainty about the earnings. As gold is not an income earning asset, it cannot be valued in that way. Its sole return to the owner is through a rise in price. What makes the price of gold $670 an ounce today is that buyers expect the price to be about $760 an ounce a year from now.

The view that the price of gold will increase at a rate in excess of the interest rate assumes that the present price is justified by economic conditions and that the inflation will accelerate. The inflation of itself does not justify the enormous increase in the price of gold to its present level. At $670 an ounce, the purchasing power of gold as measured by the U.S. wholesale price index (290.8 in September 1980 on a 1957-59 base) is nearly three times as high as at the two previous peaks-- in 1896 when the index was 25.4 and the price of gold was $20.67 an ounce, and in 1934 when the index was 41.0 and the price of gold was $35 an ounce. The recent rise in the price of gold was not in response to the acceleration of inflation but to the political situation in Iran and Afghanistan. Without saying that world peace was an essential element of the classical gold standard, it is a fact that the political disorder in the world adds to the difficulty of maintaining the equivalence of gold and currency at a fixed price.

If the monetary authorities were to establish a gold standard now with the price at close to the present free market price a deterioration of the political situation could cause an enormous outflow of gold and a sharp contraction of the money supply, even if the economic situation should become more stable. On the other hand, if reasonable price stability were restored and the political situation improved, the monetary authorities could be confronted with an enormous backflow of

gold which would necessitate an expansion in the money supply. From the floating of the dollar in 1973 to 1979, investors and speculators increased their holdings in the form of bullion by about 66 million ounces and hoarders increased their holdings in the form of coins, facsimile coins, medals and medallions by about 55 million ounces. A large part of these holdings, particularly those of investors and speculators, could be sold to the monetary authorities if the gold standard were restored and price stability achieved. It is worth noting that they reduced their holdings by about 16 million ounces in 1969-72 after their huge purchases in 1967-68.

4. SUPPLY OF GOLD AND ITS ABSORPTION IN PRIVATE USES, 1968-79

(Million ounces)

	Supply				Private absorption		
	Production	Communist sales	Official sales*	Total supply = absorption	Industry#	Coins and metals	Investors, speculators@
1968	40.03	-0.93	19.93	59.03	35.75	3.47	19.81
1969	40.25	-0.48	-2.89	36.88	36.33	2.25	-1.70
1970	40.96	-0.10	-7.59	33.28	41.02	3.22	-10.96
1971	39.74	1.74	3.09	44.56	41.22	3.41	-0.06
1972	38.07	6.85	-4.85	40.06	39.87	3.34	-3.15
1973	36.04	8.84	0.19	45.07	25.24	2.41	17.43
1974	32.38	7.07	0.64	40.09	14.18	9.45	16.46
1975	30.67	4.79	0.29	35.75	22.85	8.74	4.15
1976	31.15	13.25	1.86	46.26	37.04	7.46	1.77
1977	31.25	12.89	8.65	52.79	39.45	6.20	7.14
1978	31.51	13.18	11.64	56.33	40.44	10.87	5.02
1979	30.93	7.36	18.45	56.74	31.90	10.38	14.47

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* Sales by monetary authorities, including IMF, net of purchases.
\# Jewelry, dentistry, electronics, and other industrial and decorative uses.
@ Net purchases (or sales) in the form of bullion derived as a residual.

It would also be very difficult to maintain the gold standard if it were restored. Under a gold standard, the increase of the money supply is limited by the increase in the gold reserves. Assuming that confidence in currencies were restored so relatively little of the supply would be absorbed by hoarders, investors and speculators, the growth of the monetary stock of gold would depend on newly-mined production, net sales of the Communist countries, and the consumption of the arts and industry. The production of gold outside the Communist countries reached a peak of 41 million ounces in 1970, fell to 31 million ounces in 1975, and has remained at that level since then. The decline was almost all in South African production, although output of other areas was also down slightly. The smaller output of South Africa may be partly due to real factors, but it is mainly due to the policy of mining and milling lower grades of ore as the price of gold increases. In the first eight months of 1980, South African production was 3.6 per cent less than in 1979 and some of the output was added to reserves instead of being sold in the free market.

Sales by the Communist countries, nearly all by the Soviet Union, were very large in 1972-79. These sales are for the purpose of acquiring foreign exchange to finance imports from the West. Sales are highly volatile, fluctuating directly with the Soviet balance of payments deficit and inversely with the price of gold. An

article in the Financial Times, September 15, 1980, states that the Soviet Union has sold no gold in the Zurich market since January 1980 when it delivered about 160,000 ounces, although it may have sold some gold directly to oil-producing countries. The Soviet balance of payments seems to have been somewhat better this year as indicated by its claims and liabilities in the Eurocurrency market. In any case, the gold sales of the Soviet Union are highly variable and cannot be regarded as a reliable source for additions to the monetary stock of gold.

Even if hoarding, investing and speculation were to fall to the moderate levels of the early 1960s, the supply of gold that could be added to the monetary stock would be very small. The absorption of gold in the arts and industry has exceeded newly-mined gold by 20 per cent in 1976-79, although some of the gold purchased by fabricators may have gone into inventories. This occurred in spite of a large reduction in such use of gold in 1979 because of the high price and the slowdown in some industrial countries. Perhaps, if a gold standard with a fixed price of gold were restored, the gold producing countries might increase their output. But unless there were an adequate, steady, and assured growth of the monetary stock of gold, it would not be possible for a gold standard system to function effectively.

The existing stock of monetary gold, apart from the holdings of the Communist countries, is over 1.13 billion ounces, including holdings of the international monetary institutions. Most countries carry these reserves at an average market value over a preceding period, although the United States still values its holdings at the old monetary price of $42.22 an ounce. No large country has monetized its gold reserves at the present price. These gold holdings constitute a huge reservoir of assets that would free the international monetary system from dependence on additions to the monetary stock for the growth of the monetary base. Countries could monetize their gold holdings at a regular rate to assure the monetary growth that they regard as necessary. Sales of gold could also be made out of these gold holdings without the necessity of deflating the money supply, and purchases of gold could be added to these gold holdings if they were financed by sales of Treasury bills without inflating the money supply. However, if the monetary authorities followed such policies, making the money supply independent of the increase or decrease in the gold reserves, it could not be said that the country was on the gold standard.

The bills introduced in the Senate (S. 3181) and the House of Representatives (H.R. 7874) would establish gold convertibility of the dollar or a gold coinage immediately or within a few months. This attitude of urgency in establishing a kind of gold standard is reminiscent of the debate on the resumption of specie payments after the Civil War. Some people thought it would be prudent to accumulate a larger gold reserve and to reduce the amount of greenbacks in circulation before undertaking specie payments. Others, among them Chief Justice Chase, who had been Secretary of the Treasury during the wartime inflation, believed that no delay was necessary, that "the way to resume is to resume." Inherent in this approach is the assumption that if inter-convertibility of gold and dollars were established at some price previously determined in the New York market, purchases of gold from or sales of gold to the Federal Reserve Banks would by themselves adjust the money supply to an amount appropriate to the monetary price of gold. That could entail a large contraction of the money supply through Federal Reserve sales of gold or an excessive expansion of the money supply through Federal Reserve purchases of gold. It would be ironic if the restoration of the gold standard were itself to have a seriously destabilizing effect on the money supply. Actually, it is questionable whether the monetary systems contemplated in the bills referred to above could be regarded as a gold standard in the usual meaning of this term.

The gold standard is not an end in itself but a means of achieving certain objectives. The first is to restore and maintain a reasonably high degree of stability of prices and costs. This cannot be achieved automatically by establishing gold convertibility of the dollar. It requires greater budgetary discipline, a more cautious monetary policy, and the limitation of the increase of incomes to the increase of productivity. The second objective is to achieve greater stability of exchange rates. Initially, the target could be to maintain the average foreign exchange value of the dollar within a moderately broad range relative to the other currencies in a unit of Special Drawing Rights-- the D-mark, sterling, the French franc, and the yen. Ultimately the dollar would have to be stable in terms of each of these currencies. That would necessitate keeping down the inflation to the same rate as in the most stable industrial country and giving greater consideration to the behavior of the exchange rate in formulating monetary policy. These are the conditions that would have to be established before the United States could safely return to a gold standard. If the United States could achieve such a degree of price and exchange stability, there would be no need for a gold standard.

Finally, it should be noted that the Second Amendment to the Fund Agreement contains important provisions relating to gold. Article IV, Section 2 (b) states that the permissible exchange arrangements "may include the maintenance by a member of a value for its currency in terms of the Special Drawing Right or another denominator, other than gold, selected by the member." Article IV, Section 4 states that the IMF may determine by an 85 per cent majority that international economic conditions permit the introduction of a widespread system of exchange arrangements based on stable but adjustable par values. If the IMF makes such a determination, then Schedule C, paragraph 1 provides that it "shall notify members that par values may be established in terms of the Special Drawing Right, or in terms of such other common denominator as is prescribed by the Fund. The common denominator shall not be gold or a currency." These provisions do not prohibit the United States from giving gold a role in the domestic monetary system. If the Commission established by Public Law 96-389 should recommend the restoration of a par value for the dollar, however, it would have to be in terms that conform to the Second Amendment of the IMF Agreement.

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IS THERE AN ALTERNATIVE TO THE GOLD STANDARD?

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Summary and conclusions

Some members of the Congress and some economists whose views carry weight in the Administration believe that it is necessary to restore the gold standard in order to end the inflation. In fact, prices were not stable under the gold standard and the alternate inflation and deflation caused great hardship. The gold standard survived until World War I because the maintenance of the gold value of the currency was the sole objective of economic policy. After being restored with great difficulty in 1925-30, the gold standard collapsed again in the great depression of the 1930s. The Bretton Woods system of fixed parities, established after World War II, functioned reasonably well for about 20 years, but it came under stress in the 1960s and was abandoned in 1973. The main reasons were the inability of the United States to keep the dollar equally attractive with gold, partly because of the inadequate growth in the monetary stock of gold, but mainly because of the inflation that has persisted for 15 years.

It would not be possible to restore the gold standard even if the United States and other countries were to succeed in ending the inflation. Because of the huge rise in the price of gold and its great volatility in the past two years, there is a danger that any monetary price would prove to be too high or too low and become the source of renewed instability. The decline in gold production and the increase in the industrial use of gold would make it difficult to maintain an adequate growth in the monetary stock of gold, a problem that became acute in 1950-65. The large amount of gold absorbed by speculators in recent years reflects not only fear of inflation, but the tense international political situation. Finally, it would be impossible to maintain gold convertibility of the dollar while the oil-exporting countries have enormous current account surpluses and most of the oil-importing countries have large deficits. If inflation were ended and fluctuations in exchange rates were moderated, however, it would be possible to establish a new system of fixed par values based on Special Drawing Rights, with the dollar and other currencies convertible in SDRs.

The best way to restore fixed par values and convertibility in SDRs would be to establish a Reserve Settlement Account in which members of the IMF would deposit their foreign exchange reserves and SDRs in return for a credit balance in SDRs. Balance of payments settlements would be made through transfers of SDRs between monetary authorities. If the United States had a balanced payments position, it could not be subjected to massive conversions of dollars into SDRs because most of the official holdings would be deposited with the Reserve Settlement Account and the United States would receive reserve assets in settlement of its surplus. Confidence in currencies would be strengthened if a role for gold were found in the international monetary system. That cannot be done now, but after the inflation has ended, the pattern of international payments is better balanced, and gold speculation has subsided, the IMF could set a monetary price for gold in SDRs. Members would be invited to deposit part of their gold in the Reserve Settlement Account in return for SDRs and the IMF could buy gold offered to it which would be placed in the Reserve Settlement Account.

Is There an Alternative to the Gold Standard?*

Humpty Dumpty sat on a wall,
Humpty Dumpty had a great fall;
All the King's horses and all the King's men
Cannot put Humpty Dumpty together again.
Mother Goose

Rise and fall of the gold standard

The prolonged inflation has inevitably given rise to the question whether it is due to an inherent defect in the monetary system. Some critics say that it will not be possible to end the inflation until the monetary authorities are compelled to limit the creation of money by restoring some kind of gold standard. There seems to be interest in the Congress in establishing some kind of monetary link to gold. This reflects widespread dissatisfaction with the present monetary system. It is useful, therefore to consider how the gold standard worked during the period of its preeminence, why tempts to restore some form of the gold standard have hitherto failed, and what other means there may be for imposing monetary discipline.

The classical gold standard in Great Britain lasted from 1816, when the sovereign was made the standard coin by Act of Parliament, until 1914 when the convertibility of Bank of England notes into gold sovereigns was terminated de facto. Through most of these hundred years, the United Kingdom was the only country on the gold standard, with other countries on a silver or bimetallic standard. As the sole basis for the international monetary system, the classical gold standard reigned for a much shorter period-- from 1873 to 1914. In these forty years, gold came to be universally accepted as the ideal monetary standard, little short of being divinely created for that purpose. A departure from the gold standard could be justified only by the exigencies of a great war. And when this occurred, the first objective in economic reconstruction had to be the restoration of gold convertibility of the currency at its historical parity.

This quasi-mystical attitude toward the gold standard had very little to do with what we would now regard as the central role of money in the economic system--regulating production, distribution and utilization of the national income. Nor was the gold standard regarded by 19th century economists as successful in maintaining price stability. On the contrary, as W. S. Jevons pointed out in his Money and the Mechanism of Exchange, price fluctuations were enormous and disruptive.

> " . . . [There] is abundance of evidence to prove that the value of gold has undergone extensive changes. Between 1789 and 1809, it fell in the ratio of 100 to 54, or by 46 per cent. . . From 1809 to 1849, it rose again in the extraordinary ratio of 100 to 245, or by 145 per cent, rendering government annuities and all fixed payments, extending over this period, almost two and a half times as valuable as they were in 1809. Since 1849 [to 1863] the value of gold has again fallen to the extent of at least 20 per cent and a careful study . . . shows that fluctuations of from 10 to 25 per cent, occur in every credit cycle." (pp. 325-26).

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* This paper was prepared by Edward M. Bernstein for a symposium on the international monetary system sponsored by the Lehrman Institute.

Most American businessmen regarded these price fluctuations as an unavoidable part of the gold standard. Other economic groups, however, were more critical of the gold standard and the measures taken to restore and maintain it, particularly from 1873 to 1896. Farmers found the falling prices a heavy burden for them as producers and debtors. Long before Bryan became the champion of bimetallism, the Greenback Party opposed the retiring of greenbacks as a means of restoring specie payments. In spite of the great importance of agriculture in the U.S. economy of the 19th century, farmers had only a limited influence on monetary policy. They did succeed, however, in freezing the outstanding greenbacks in May 1878 and in getting intermittent purchases of silver by the Treasury until it was ended in November 1893.

Labor in this country and in Europe also suffered from the deflation. According to the National Bureau of Economic Research, more than half of the period from January 1873 to December 1897 was marked by recession or depression. The worst time was from December 1873 to May 1885 when the economy was in recession or depression in three-fourths of these 11-1/2 years. This was not an environment in which labor could expect much in the way of wage increases, although real wages did rise. According to the article on the gold standard in Palgrave's Dictionary of Political Economy, "the general level of wages [in the United Kingdom] was probably as low in 1905 as in 1870; though the fact of the fall, and especially its amount, is not so certain as the fall in [prices of] commodities" (Vol. II, p. 223, column 2). Complaints about the gold standard disappeared when prices rose after 1896.

The classical gold standard was destroyed by the inflation of World War I. In the United States, prices doubled between 1914 and 1920 and in some other countries they rose threefold or more. Under the circumstances, all of the belligerents except the United States terminated the convertibility of their currencies into gold. After the war, it was generally agreed that the gold standard should be restored as promptly as possible. At the same time, it was recognized that some means would have to be devised to secure greater stability in the purchasing power of gold--that is, in the level of commodity prices.

One difficulty in restoring the gold standard was the greatly increased need for gold reserves because of the very large monetary expansion during World War I. It was hoped to limit the need for gold by withdrawing gold coin from circulation and by wider use of the gold exchange standard. When the United Kingdom resumed gold convertibility in 1925, it was in bullion rather than in coin; and as other countries restored the gold standard, it was to a large extent based on dollar and sterling reserves. In fact, by 1930 more than one-fourth of total international monetary reserves consisted of foreign exchange. Nevertheless, Professor Gustav Cassel warned of a possible shortage of gold reserves and the League of Nations appointed a committee of experts to study the gold problem.

The newly restored gold standard soon collapsed in the worldwide deflation of the 1930s. The huge monetary expansion during World War I greatly reduced the money-creating power of gold standard countries by absorbing most of their free gold; and gold production after the war was not enough to support the much higher level of prices. Moreover, in the United Kingdom the restoration of the historical dollar-sterling parity greatly overvalued sterling, while in some countries the new parities greatly undervalued their currencies. The resulting imbalance in international payments was aggravated by the sharp increase in U.S. tariffs in 1930. These adverse developments created the severe worldwide depression that compelled the abandonment of gold parities, first by the United Kingdom in 1931, then by the United States in 1933, and finally by the gold bloc in 1935-36.

The international monetary system established at Bretton Woods in 1944 was intended to prevent a postwar depression and to secure the benefits of exchange stability without the rigidity of the gold standard. Members of the International Monetary Fund were required to establish a par value for their currencies in terms of gold or the U.S. dollar of the gold content of 1944, and to maintain exchange rates within one per cent of the par value. A member could change the par value of its currency after consultation with the IMF and in most instances only with its approval, if that was necessary to adjust its balance of payments. The IMF had large resources to extend credit to its members to be used in conjunction with their own reserves in financing balance of payments deficits. Members were required to convert balances of their currencies held by the monetary authorities of other countries, but the conversions could be in currencies rather than gold. Only the United States undertook to buy and sell gold freely for international settlements.

The Bretton Woods system worked reasonably well until about 1967. Strains in the system first began to emerge in 1958, mainly because the European countries were unable to satisfy their preferred holdings of gold relative to dollars from the addition of newly-mined gold to their reserves. The situation became worse after 1967 when the inflation caused a large increase in the U.S. payments deficit and an unwanted m[illegible]etary expansion in the surplus countries. As the deficit became massive in 1970 and the first half of 1971, the Treasury felt compelled to terminate the convertibility of the dollar. A new pattern of par values was established by the Smithsonian Agreement in December 1971 which provided for a devaluation of the dollar and a revaluation of the currencies of the surplus countries. The United States did not, however, undertake to resume convertibility of the dollar in reserve assets. Instead, the other members of the Group of Ten agreed to support the dollar. The devaluation did not improve the payments position and in February 1973 the dollar was devalued again. As other Governments were unwilling to accumulate inconvertible dollars, the par value was abandoned in March 1973 and the Bretton Woods system came to an end.

Social and political aspects of the gold standard

The classical gold standard was a symbol of political as well as financial morality. The maintenance of the gold value of the currency was not merely the primary objective of monetary policy-- it was the sole objective. And monetary policy was supported by a Draconian fiscal policy. In the United Kingdom, the Chancellor of the Exchequer was figuratively busy saving cheese parings and candle ends, and a budget deficit was a political as well as an economic sin. Gladstone carried budgetary caution to lengths that his own cabinet regarded as extreme. Here is what his biographer said of the budget fight of 1890: "[Heavy] recent increases in expenditure upon armaments by foreign powers had aroused widespread alarm in Great Britain. . . Whole new classes of warships, incorporating the latest developments in the art of naval warfare, were certain to be required . . . to maintain British naval supremacy. . . Lord Spencer [First Lord of the Admiralty] was only asking for an additional £3 million." But Gladstone was adamant in opposing the extra expenditure and resigned as prime minister rather than accept the measure supported by his cabinet. (Philip Magnus, Gladstone, pp. 414-19).

Until the 1930s, central banks were unwilling to accept the stabilization of prices as an appropriate objective of monetary policy. In 1927 a bill was introduced in the House of Representatives to amend the Federal Reserve Act by adding this statement: "All of the powers of the Federal Reserve System shall be used for promoting stability in the price level." In the hearings, Professor Irving Fisher

supported the bill, although he emphasized that it would be difficult to maintain stability through open market operations and the discount rate if gold reserves were not sufficient for the growth of the money supply. The Federal Reserve System opposed the bill and it failed to pass. It did not want such an obligation because it feared that it would not be able to carry it out. "There is a strong temptation," Governor Miller said, "to exaggerate the influence that can be exercised upon the movement of business and the course of prices through the operations of the Federal Reserve System, through either its discount rates or open market operations."

As events showed, there are times when maintaining the gold value of the currency is not compatible with price stability. In 1929, the Federal Reserve Bank of New York raised the discount rate to 6 per cent to restrain the exuberant economy. The rate was reduced in November and December because of the recession and it was reduced again in 1930 and 1931 to 1-1/2 per cent as the depression became worse. After Britain abandoned gold, the rate was raised twice in October 1931 in steps of one percentage point to 3-1/2 per cent because of the large outflow of gold. Although the discount rate was reduced in 1932, it was raised again to 3-1/2 per cent in March 1933 as the gold reserve ratio dropped to the lowest it had been since January 1921. In the meantime, the wholesale price index fell by 30 per cent between 1929 and 1933 while the unemployment rate soared from 3.2 per cent to 24.9 per cent. In a world in which all countries were engaged in a competitive race to deflate their economies in order to protect their gold reserves, it was not possible for the Federal Reserve to give much consideration to prices and employment if it wanted to maintain the gold convertibility of the dollar.

The gold standard was never again a major objective of U.S. monetary policy. Although the United States established a new gold value of the dollar in February 1934, it did not allow the growth of the money supply to be governed by changes in the gold reserve. The Employment Act of 1946, which created the Council of Economic Advisers, made the maintenance of a high level of output and employment the major objective of economic policy. The Act did not mention price stability. Actually, there is little indication that either monetary or fiscal policy was actively directed toward expanding the economy prior to 1961. Monetary policy was usually accommodating in the expansion and contracyclical in the recession. It is worth noting that in the 14 years from 1947 to 1960 the cumulative budget deficit was $1.0 billion.

The very active policy of attempting to maintain full employment began 20 years ago. Instead of relying on the built-in stabilizers to moderate recessions, the Government took measures to offset any developments that had a contractive effect. As this required increased spending, a justification had to be found for larger budget deficits. The rationalization was that it did not matter what the actual budget deficit was provided the "full employment budget" was in surplus. That is to say, if estimated receipts with full employment would exceed estimated outlays, then the budget deficit did not matter. In fact, it might even be necessary to have a deficit in the full-employment budget under certain circumstances. Perhaps that is why the budget was in deficit in every year but one from 1961 to 1980 and the cumulative deficit over this 20-year period was more than $556 billion.

The policy of using the budget to fine-tune the economy was given legislative status in the Full Employment and Balanced Growth Act of 1978 (the Humphrey-Hawkins Act). The Economic Report of the President for 1979 (p. 167) commented on this as follows: "The Act reaffirms and enlarges upon the commitment of the Employment Act of 1946 by declaring that it is a national objective to provide full opportunities for useful employment to all Americans willing and able to work. The Humphrey-Hawkins

Act also legislates for the first time a national commitment to reduce the rate of inflation." Unfortunately, the measures taken to implement this Act helped to increase rather than decrease the rate of inflation.

There is no great mystery why the classical gold standard could survive for 100 years while the more flexible gold standard after World War I broke down in six years and the Bretton Woods system lasted only 25 years. The reasons are partly economic and partly political. It is probably true that it would not have been possible for the highly industrialized economies of today to function effectively under the monetary restraints of the classical gold standard, particularly with the tense international situation of the postwar period. Nevertheless, if U.S. and other Governments had given as much emphasis to monetary stability as they gave to full employment, the inflation could not have been so great or lasted so long.

Problems in restoring a new gold standard

An inflation of the magnitude that the United States has had in the past 15 years would have been impossible under a gold standard. From 1965 to 1980, the consumer price index of all items rose by 161 per cent and the wholesale price index of all commodities rose by 178 per cent. Since 1933, when the United States could be said to have given up the restraint on the money supply imposed by a gold standard, the consumer price index has risen by 536 per cent and the wholesale price index has risen by 689 per cent. Such an inflation did not occur under the gold or silver standard except in the price revolution of the 16th and 17th centuries when Europe was inundated with gold and silver from the New World. While the classical gold standard did not prevent inflation, it set a limit to the inflation because the rise of prices could not continue without an increase in the stock of monetary gold at an equal or nearly equal rate. It is this restraint on the growth of the money supply that the advocates of a gold standard want to restore.

There are a number of technical problems that would have to be met in restoring a gold standard. The first problem is to determine an appropriate monetary price for gold. In the past, when countries temporarily abandoned the gold standard they usually returned to gold at the historical value of the currency. Even if the depreciation had been so large that it was impossible to restore the previous gold value, the exchange rate on a gold standard currency provided a guide for a new gold parity. No such guide is available for setting a new monetary price of gold. Since 1972, the free market price of gold has ranged between $42.72 an ounce in January 1972 and $850 an ounce in January 1980. The price subsequently fell to $457 an ounce in March 1981 and is now over $500 an ounce.

As there is no gold standard currency whose exchange rate could be a guide to a new dollar price of gold, an appropriate monetary price would have to be determined by some other criterion. In 1896 the purchasing power of gold at $20.67 an ounce, measured by the U.S. wholesale price index, was about the highest in the 19th century. In 1934, after the deflation of commodity prices and the increase in the monetary price of gold to $35 an ounce, its purchasing power was 5 per cent higher than in 1896. In January 1980, when the free market price of gold reached a peak of $850 an ounce, its purchasing power was 3.9 times as high as it had been in 1896. More recently, when the price was around $500 an ounce in February 1981, the purchasing power of gold was slightly more than twice as much as it had been in 1896. If the price of gold had risen gradually to its present level, it could have been said that its higher purchasing power represented a new trend value on which it

would be reasonable to base a gold standard. The large fluctuations in the past year, however, indicate that the price of gold includes a highly variable premium for a safe asset in a time of economic and political disorder.

Ideally, the monetary price of gold should be such that there is no large-scale conversion of currency into gold or gold into currency, except in balance of payments settlements. This assumes that with an appropriate price, the demand for gold for industrial purposes and for hoarding, investment and speculation would be met out of part of the current production with the rest going into monetary reserves. If the monetary price of gold is too low, the industrial and speculative demand will absorb all of the current production and some of the gold held in reserves. On the other hand, if the monetary price of gold is too high, the monetary authorities will have to absorb most of the current production and some private holdings of gold. The conversion of dollars into gold would reduce the reserves and result in a contraction of the money supply. The conversion of gold into money would add to reserves and result in an expansion of the money supply. If the conversion were on a very large scale, the monetary expansion would cause prices to rise until the monetary price of gold represented an appropriate value measured in commodities.

As is indicates, one function of the monetary price of gold is to encourage an adequate level of production and a limitation on private absorption of gold so that the monetary stock of gold can increase at a rate conducive to price stability. The experience of recent years indicates that this will be very difficult. Gold production outside the Communist countries reached a peak of 40.9 million ounces in 1970 and has declined since then to about 30.4 million ounces in 1980. Nearly all of the decline was in South African production which fell from 32.4 million ounces in 1970 to 21.7 million ounces in 1980, not all of which was sold. Relative to the monetary stock of gold, including holdings of international institutions, production fell from 3.5 per cent in 1970 to 2.7 per cent in 1980. The fall in South African production is the result of the high price of gold which encourages mines to exploit low-grade ores and keep the higher grades in reserve.

None of the newly-mined gold went into the monetary gold stock in the past ten years. According to the International Monetary Fund, the monetary gold stock declined from 1,182 million ounces in 1970 to 1,133 million ounces in 1980. The reduction in the monetary stock of gold was the result of a deliberate decision to sell some holdings in the free market. Nevertheless, it would not have been possible to increase the monetary gold stock significantly in this period of inflation without causing an even greater increase in the free market price of gold. The absorption of gold in jewelry and other industrial and decorative arts exceeded production in every year since 1970 except 1973-75 and possibly 1980. Thus, even if all of the newly-mined gold had been available for industrial and monetary use, very little would have gone into the monetary stock in this period.

What is most striking is the very large amount of gold absorbed by hoarders, investors and speculators. Their net purchases reached a peak of 25.9 million ounces in 1974 and after declining for a time rose to 24.9 million ounces in 1979, although they must have fallen again in 1980. The gold for this purpose was matched by net sales of Communist countries and by sales of the monetary authorities outside the Communist group. Communist sales were very large in 1976-78, coinciding with the need of the Soviet Union for foreign exchange. Sales by the IMF were intended to minimize the monetary role of gold. Sales by the U.S. Treasury were intended to strengthen the dollar. If monetary stability were restored, the demand for gold by speculators would probably be greatly reduced.

Although an adequate growth of the stock of monetary gold may be a long-run problem in maintaining a gold standard, there is no shortage of monetary gold at this time. With the large official holdings of gold, the revaluation of present reserves at a new monetary price would provide enough reserves for the growth of the money supply for many years ahead. There are some objections, however, to providing reserves in this way. First, the profit from the revaluation of gold would go to Governments and it might be difficult to induce them to sterilize the profit-- say, by retiring Government securities held by the central bank. Second, the large increase in the monetary value of gold reserves might make it difficult to avoid an excessive expansion of the money supply and a renewed inflation.

Perhaps the greatest difficulty in restoring a gold standard may be the unsettled international conditions. The gold standard flourished in an era of peace; and it was destroyed in World War I. The free market price of gold today reflects not only the persistent inflation but also the tense international situation. According to the Brookings Institution, since 1945 armed forces have been used for political purposes over 200 times by the United States and 190 times by the Soviet Union. Most of these incidents were minor, but some had grave international repercussions. The more serious incidents were accompanied by a flight from currencies to gc_ . Under present conditions this would result in a rise in the price of gold with little if any official reserves used to meet the increased demand. Under a gold standard, with the monetary authorities obligated to provide gold for dollars at a fixed price, the drain of reserves could be enormous. Even if other countries were on a gold standard, virtually all of the conversions of their currencies into gold would come out of U.S. reserves.

In any case, the international economic situation would make it impossible to establish gold convertibility of the dollar. Paradoxically, the gold standard can function only in a world in which there is a well-balanced pattern of international payments, so that there is little need to use gold reserves in international settlements. At present, the oil-exporting countries have a current account surplus of over $100 billion a year which is expected to decline much more gradually than after 1974. The oil-exporting countries have invested nearly all of their current account surplus in assets denominated in various currencies, including dollars. Some oil countries, however, were large purchasers of gold last year. If the United States established gold convertibility of the dollar it could be confronted with massive conversions by these countries. While some dollars would come from the U.S. deficit, most would be dollars used by other countries to pay for their oil imports.

Monetary stability without a gold standard

There is widespread agreement now that ending inflation should be the first objective of economic policy-- more important at this time than full employment. The basic requirements for monetary stability are a fixed par value for the currency that is appropriate to the relative international economic position of the country, and wage rates that reflect the real economic value of labor's contribution to output. With an appropriate par value, fluctuations in a country's balance of payments would be primarily due to cyclical factors. Thus, if output and employment expand more than in other countries, its imports of goods and services will increase relative to its exports. The increased imports will enable the country to meet the increased demand, minimize the rise of prices, and avoid an excessive increase of wages. On the other hand, if output and employment contract more than in other countries, its exports will increase relative to its imports. The increased exports will moderate

the decline in output and employment and minimize the downward pressure on prices and wages. In the meantime, of course, a country would have to follow policies that would restore its balance of payments and defend the par value of its currency.

A system of fixed par values can function only if the great trading countries follow policies that maintain stability of prices and costs. To achieve this, labor compensation must increase only as much as the trend growth of productivity in the export industries. If the increase in labor compensation exceeds this standard, unit labor cost will increase, prices will rise, and the country's competitive position in world trade will be impaired. Even with stability of unit labor cost, a country's international economic position can deteriorate if its demand for imports grows more than the world's demand for its exports or its import prices increase relative to its export prices. Under such conditions, labor compensation would have to increase less than the increase of productivity.

The present inflation originated in the 1960s in the excess demand generated by the investment boom and the increased expenditures of the Government on the Vietnam war. The failure to prevent or halt the excess demand caused the demand inflation to be converted into a cost inflation which has accelerated because labor has insisted that it is entitled to an offsetting increase in wages for every increase in prices, regardless of the cause. In fact, there is no way to offset the adverse effect on real wages of a rise of food prices due to bad crops, a rise of energy prices due to the increased cost of imported oil, or a rise of all prices due to a decrease in productivity. The attempt to raise real wages by a larger increase in money wages will accelerate the inflation; and through the cost of living adjustment the larger wage increase will become imbedded in the structure of the economy.

A new system of fixed par values cannot be established before the inflation is ended. In the meantime, the policy should be to reduce fluctuations in exchange rates as progress is made in slowing the inflation, until there is a high degree of exchange stability. When reasonable price stability has been restored and fluctuations in exchange rates are within a moderate range, it will be possible to establish a new par value system as provided in Article IV, Section 4 of the Articles of Agreement of the International Monetary Fund as amended. This provision states:

> "The Fund may determine, by an eighty-five per cent majority of the total voting power, that international economic conditions permit the introduction of a widespread system of exchange arrangements based on stable but adjustable par values. The Fund shall make the determination on the basis of the underlying stability of the world economy, and for this purpose shall take into account price movements and rates of expansion in the economies of members."

The new par value system would have to be based on a unit of Special Drawing Rights--the reserve asset created by the International Monetary Fund. Since January 1, 1981, a unit of SDRs has consisted of specified amounts of five currencies, with weights of 42 per cent for the U.S. dollar, 19 per cent for the Deutsche Mark, and 13 per cent each for the French franc, the yen, and sterling.

The problems that would arise in a system of fixed par values are in most respects the same as those with a gold standard. The difference is that it would be possible to devise better means of meeting them. The first problem is to establish some form of convertibility. Without convertibility, deficit countries have no compulsion to restore their balance of payments; and without convertibility, surplus

countries have no reason to support the exchange rates of the deficit countries. To maintain convertibility, countries need reserves and these reserves would have to grow at about the same trend rate as the growth of international trade and payments. Excluding gold, the reserves of all countries outside the Communist group at the end of January 1981 were about SDR 325 billion ($408 billion), of which 90 per cent was in foreign exchange and the rest about equally divided between Special Drawing Rights and reserve positions in the IMF. In addition, these countries had gold reserves worth about $470 billion valued at $500 an ounce. The IMF had large resources of currencies and SDRs which it could use to extend reserve credit to its members, apart from its gold holdings worth about $50 billion at $500 an ounce.

It would be difficult for the United States to restore convertibility of the dollar unless there were new arrangements for balance of payments settlements. The difficulty is not the lack of U.S. reserve assets which amounted to $17.2 billion at the end of January 1981, in addition to 264 million ounces of gold, but the enormous liabilities to foreign official institutions. According to the Federal Reserve Bulletin, such liabilities amounted to $164 billion at the end of 1980. If the United States were to restore convertibility, it could find itself drained of reserves even when its balance of payments on an official reserve basis was in surplus. That could happen be[illegible]se deficit countries would draw down their dollar reserves to meet their deficits while surplus countries would present the dollars they acquire for conversion into reserve assets. Although the net reserve position of the United States would be improved by the reduction in its liabilities to foreign official institutions, its reserve assets would be depleted. This difficulty could be avoided if the United States were not confronted with conversion of existing dollar balances and if it received reserve assets in settlement of its surpluses.

One method of achieving this would be to establish a Reserve Settlement Account in the International Monetary Fund in which members would deposit their holdings of SDRs and foreign exchange, except working balances, in return for a credit balance denominated in SDRs. The Account would transfer the foreign exchange to the members whose liabilities they are in return for interest-bearing notes denominated in SDRs. Balance of payments settlements would be made through the Reserve Settlement Account in much the same way as under a gold standard. A deficit country requiring dollars in order to support its currency would sell (transfer) SDRs from its balance in the Reserve Settlement Account to the Federal Reserve Bank of New York as agent for the Treasury. A surplus country acquiring dollars would present them to the Federal Reserve Bank of New York for conversion into SDRs to be transferred to its balance in the Reserve Settlement Account.

An international monetary system based on fixed par values requires an adequate but not excessive growth of reserves. The alternate inflation and deflation under the gold standard was primarily due to the irregular growth of the monetary stock of gold. Professor Gustav Cassel argued that if the monetary stock of gold had increased at a regular rate of 3 per cent from 1850 to 1910, the wholesale price index, which was about the same at the end as at the beginning of this period, would have been reasonably stable throughout these sixty years. Even before the U.S. inflation began, the Bretton Woods system was under pressure because the monetary stock of gold rose at an average annual rate of only 1.1 per cent from 1950 to 1965, resulting in a depletion of U.S. gold reserves to meet the preference of the surplus countries for adding gold instead of dollars to their reserves. One reason why it would be difficult to maintain a gold standard is that all of the production would be absorbed by industrial uses, apart from the gold absorbed by hoarders, investors and speculators which might have to come out of existing reserves. No such problem

would arise with Special Drawing Rights. They could be issued and allocated by the IMF to provide for the trend growth of reserves at a regular rate. Nor would it be possible to deplete aggregate SDR reserves as all transfers would be between monetary authorities on the books of the Reserve Settlement Account and privately held balances of currencies would not be convertible into SDRs.

As a practical matter there would be no need for private conversions. Any holder of dollars, for example, could acquire SDRs by the simple process of selling enough dollars for the four other currencies in the proportions they have in a unit of SDRs. If there were a demand for balances of SDRs, banks could very easily provide such deposits in exchange for any currency. They would, of course, hold assets in the form of cash, loans, and investments denominated in the five currencies in the proper proportions to cover their SDR deposit liabilities. SDR deposits would probably have little attraction for private holders, although bonds denominated in SDRs could offer some safeguard against the depreciation of a major currency in which international loans are usually denominated. Borrowing Governments might also find the issue of SDR bonds more attractive than bonds denominated in a foreign currency, not only because of the risk of the appreciation of that currency, but also because their own reserves would be held in SDRs and if necessary they could receive reserve credit from the IMF in SDRs. It should be noted that there is no way by which SDRs on deposit with banks could be transferred to the Reserve Settlement Account. Thus, the growth of aggregate reserves in the Reserve Settlement Account would be determined solely by the decision of the IMF to make new issues.

There is a danger that pressure would be put on the International Monetary Fund to increase issues of Special Drawing Rights when many of its members have payments difficulties. That has not happened in spite of the fact that most members have large deficits. Nevertheless, it would be difficult to maintain convertibility of currencies in SDRs through the Reserve Settlement Account if international payments were to remain as unbalanced as they are now, with a few oil-exporting countries having enormous current account surpluses and most of the oil-importing countries having large current account deficits. But if the surpluses of the oil-exporting countries were reduced to a manageable level and financing were available through the IMF to supplement credits through private markets, it would be possible to finance the additions to the reserves of the oil-exporting countries through the Reserve Settlement Account. Article IV, Section 4 of the Fund Agreement requires the IMF to consider the adequacy of reserves (liquidity) as one of the factors in determining whether to establish a new system of fixed par values.

A new system of fixed par values with convertibility in SDRs through a Reserve Settlement Account would work as well as the Bretton Woods system did until 1967 and perhaps better. That is because it would require greater discipline of the United States, which is essential to make a fixed par value system work. It would not be possible for the United States to have a persistent deficit mainly financed by the accumulation of dollar balances by the surplus countries. The settlement of U.S. deficits in this way placed no pressure on the United States to restore its balance of payments and had very little effect on the monetary situation. By contrast, with convertibility through the Reserve Settlement Account, a deficit would deplete U.S. reserves and if continued it would threaten the par value of the dollar. Furthermore, a deficit would automatically reduce the money supply and the reserves of the banking system in the same way as an outflow of gold under the gold standard. If the Federal Reserve were to engage in open market operations to offset the monetary effects of the deficit, it would have to be a conscious decision in full knowledge of the state of the balance of payments.

Admittedly, there would not be the same compulsion to maintain an established par value as there was under the gold standard. Nevertheless, public opinion in the United States will become educated to the importance of the exchange rate as a factor affecting monetary stability; and the monetary authorities may be more inclined to use monetary policy to support the dollar than they were in the past, at least until two years ago. Jevons may have struck the right note on the question of discipline through stable exchange rates without gold convertibility. Here is what he said in Money and the Mechanism of Exchange (pp. 229-30):

> "A theory was very much in favour among bank directors at the beginning of this [19th] century that a paper currency could be regulated merely by watching the rates of the foreign exchanges, and restricting the issue when the lowness of the rates and the export of specie showed a depreciation of the paper [money]. This was one of the methods proposed in opposition to the celebrated Bullion Report. . . Regulation [of the currency issue] by the foreign exchanges is much better than no regulation at all, but if perfectly carried out it would give exactly the same results as the deposit [gold reserve] method, and it is only a loose and indirect way of reaching the same end."

How well a new international monetary system based on fixed par values and official convertibility in Special Drawing Rights would function without the additional restraint on the money supply imposed by gold reserve requirements would depend primarily on the United States. If this country were to succeed in restoring and maintaining a reasonable degree of price stability, then other countries that regard stable exchange rates as a major economic objective would follow policies that would keep the dollar exchange rates for their currencies within an agreed range around their par values. But if the United States permits the inflation to continue, even at a more moderate rate, it would be difficult to establish an international monetary system based on fixed par values and, if attempted, impossible to maintain it very long. Even a group of closely integrated countries, like the European Economic Community, find that a floating dollar greatly increases the difficulty of maintaining stable exchange rates among themselves. That is the lesson of the Bretton Woods period and of eight years of the floating dollar.

Future monetary role of gold

The second amendment to the Articles of Agreement of the International Monetary Fund, that abandoned the par value system and gave legitimacy to floating exchange rates, placed various restrictions on the IMF and its members regarding gold. These restrictions were intended to minimize the monetary role of gold. Actually, the gold provisions of the second amendment had no practical importance as the monetary role of gold had already been severely restricted by the same events that destroyed the Bretton Woods system-- the inflation in the United States and other countries, the reduction in the monetary stock of gold by 4 per cent in the ten years to the end of 1980, and the huge increase in and great volatility of the free market price of gold. It is very unlikely that gold will again acquire its previous role as the center of the international monetary system, but it may have an ancillary monetary role that has real as well as symbolic significance.

Traditionally, the monetary functions of gold were to limit the expansion of the money supply through gold reserve requirements and to compel the restoration of the balance of payments through gold convertibility. Very few countries have gold

reserve requirements any longer. In Switzerland, a gold reserve of 40 per cent is still required on the note issue. In an interview on March 2, 1981, the head of the Swiss National Bank said that present gold reserves at the official price would be sufficient to cover the currency expansion for another year or two. Although Dr. Leutwiler said that he regards the law as somewhat old-fashioned, it is not practical to alter it. The Bank could maintain sufficient cover by revaluing its gold reserves, but Dr. Leutwiler does not like that either, as politicians and the public might view such a move as a means of financing the budget deficit. These observations indicate why it is very unlikely that gold reserve requirements would be restored in the countries where they have been abandoned.

Gold has almost ceased to be used in international settlements. The sharp rise in the free market price gave additional luster to gold as a reserve asset. As countries believed they would be unable to replace their gold reserves if they were once drawn down, gold came to be regarded as a national patrimony to be kept but not used. The United States sold gold, initially to indicate that it had downgraded the monetary role of gold, later to strengthen the dollar in the exchange market and to improve the trade balance, as gold sales are included in exports. The United States has not sold any gold in bars since November 1979 although it is now selling a limited amount of gold in the form of one-ounce and half-ounce medallions, as required by law. Many gold-producing countries sell part of their output in the form of gold coins which command a premium over bar gold in excess of the cost of minting. A few other countries have sold gold in the free market to acquire funds to support their currencies and some countries have borrowed on gold collateral. These sporadic uses of gold, although necessitated by balance of payments conditions, cannot be regarded as the use of gold in international settlements.

At the beginning of 1979, members of the European Economic Community established a modified system of stable exchange rates, the European Monetary System, based on a European Currency Unit (ECU). Participating countries were required to deposit 20 per cent of their gold and 20 per cent of their dollar reserves in a European Monetary Cooperation Fund (EMCF) in return for a credit balance denominated in ECUs. The EMCF holds about 85 million ounces of gold. If balances in ECUs were transferred from deficit to surplus countries, they would involve the use of gold and dollars in international settlements. In practice, this does not happen. Members of the EMS use dollar and other reserves to intervene in the exchange market and thus obviate the drawing down of ECU balances to settle a deficit. Moreover, countries can secure credits from the EMCF in ECUs to finance a deficit, repaying later when they have a surplus or with funds borrowed from other sources.

While this is not the traditional way in which gold reserves were used in international settlements, it does indicate the kind of role that gold could play in a new international monetary system based on fixed par values. If the United States were to succeed in restoring and maintaining a reasonable degree of stability of prices, and if a new system of fixed par values were to result in a high degree of stability in the dollar exchange rates for the four other major currencies in a unit of SDRs, the huge demand for gold for hoarding, investing, and speculation would probably subside and some of the present holdings might even be sold. It would then be possible to maintain the dollar and other major currencies equally attractive with gold through cautious monetary policies and remunerative interest rates, so that the free market price of gold would become more stable. This would require the supply of gold from newly-mined output and Communist sales to be sufficient to meet the private demand at a reasonably stable price. To facilitate this, the monetary authorities would in general refrain from buying gold in the free market.

Under such conditions, it might be possible to make gold one of the reserve assets used in international settlements. The Fund could fix an SDR price for gold as a reserve asset. Countries would be free to place part of their gold reserves in the Reserve Settlement Account along with other reserve assets. One inducement to make such deposits would be the interest paid on SDR balances in the Reserve Settlement Account. The funds for this purpose would come from the interest paid to the Reserve Settlement Account by all members on their allocations of SDRs and interest paid by some countries on the SDR notes issued to the Reserve Settlement Account in place of their currencies deposited with the Account. In order to avoid a growth of reserves outside the Reserve Settlement Account, except for working balances, the countries with large gold reserves would undertake not to add to their holdings by purchases in the free market. Countries with small gold reserves, however, could buy gold if they wished to hold such reserves. The limitation on purchases of gold would help to keep the free market price of gold at or below the monetary price. If it were later found desirable, provision could be made for official purchases of gold, perhaps through the IMF, to be added to the Reserve Settlement Account.

There would be important benefits in ultimately including gold among the assets of the Reserve Settlement Account. The use of gold in the international monetary system could contribute to monetary stability by adding to the attractiveness of SDRs as a reserve asset and by encouraging countries to act promptly to adjust their balance of payments in order to protect their reserves. Many countries would favor such a monetary role for gold because of the confidence it would create in a new international monetary system. The United States has in the past said that it is opposed to having gold in the international monetary system. Such pronouncements are never as absolute as they seem. In July 1933, President Roosevelt sent a message to the London Economic Conference stating that the United States would not agree to fix a new par value for the dollar. Less than eight months later, he sent a message to the Congress requesting it to pass the Gold Reserve Act of 1934 which fixed the value of the dollar at 1/35 of an ounce of gold.

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DEVELOPMENTS IN THE GOLD MARKET, 1980-81

June 17, 1981

Summary and conclusions

The price of gold was very volatile in the past 26 months. From April 1979 to January 1980, the price rose by 260 per cent to $850 an ounce. Since then, to mid-June 1981, the price has fallen by 46 per cent to $462 an ounce. These enormous fluctuations were due more to political than economic developments. At its high in January 1980, the value of gold as measured by the U.S. wholesale price index was nearly four times what it was in 1896, the peak value in the 19th century. After the large fall to mid-June 1981, the purchasing power of gold was almost twice as high as it had been in 1896. Even after the large fall, the dollar price of gold is still about double what it was only two years ago.

The supply of gold from all sources fell by 53 per cent in 1980 to 25.8 million ounces. Production in South Africa fell by 4.0 per cent to 21.7 million ounces, but production in other non-Communist countries increased by 3.9 per cent to 8.6 million ounces. So far in 1981, South African production has declined by 2.8 per cent, but this may be offset by an increase in other countries. Communist sales fell by 55 per cent in 1980 to 6.4 million ounces. Because of the doubling of the average price in 1980 the Soviet Union earned as much from the smaller sales as from the larger sales in 1979. The most important reason for the reduced supply was that the monetary authorities of the non-Communist countries were net buyers of gold. The U.S. Treasury sold almost no gold in 1980, the IMF sold less, and a number of gold-producing and oil-exporting countries bought gold in the free market.

The absorption of gold in the arts and industry fell by 67 per cent to 10.5 million ounces in 1980 because of the high price. Nearly all of the reduction was in the use of gold in jewelry. Such uses fell sharply in the industrial countries while in the developing countries there was a large conversion of jewelry into bullion, mainly in the Middle East and the Far East. The absorption of gold in dentistry, electronics and other arts and industry also fell sharply. The absorption of gold in coins, medals and medallions, and in bars in developing countries fell by 60 per cent to 3.6 million ounces in 1980. This was due to the fall in the price of gold from the peak reached in January 1980. On the other hand, purchases of large bars by investors and speculators in developed countries increased by 29 per cent to 9.0 million ounces in 1980. Much of this must have been after the very large fall in the second quarter of 1980.

The volatility in the price of gold has greatly increased. The demand in the arts and industry is elastic and would tend to moderate the fluctuations in price due to changes in supply. On the other hand, speculative demand has a perverse elasticity, increasing when prices are rising and decreasing when prices are falling. The influence of speculation on the price of gold has increased because of the growth of the futures markets. In the United States, transactions in the futures markets in 1980 were about 40 times the supply of that year. The abatement of the U.S. inflation, the strength of the dollar, and the high interest rates may hold down the rise in the price of gold in the near future even if it does not fall from its present level.

Developments in the Gold Market, 1980-81

Subsidence of the gold boom

In the nine months to mid-January 1980, the price of gold in London rose from $236.40 an ounce on April 20, 1979 to $850.00 on January 21, 1980. It is impossible to devise an economic rationalization for this enormous increase in the dollar price of gold in such a short period. The inflation in the United States had accelerated and the dollar had depreciated relative to the Swiss franc; but this would have justified an increase of only 10 per cent in the dollar price of gold or somewhat more if the price could be regarded as relatively low in April 1979. The actual rise of 260 per cent was almost entirely due to the tense international political situation resulting from the seizure of U.S. hostages by Iran and the Soviet invasion of Afghanistan. Even allowing for the uncertainty that these actions created, the magnitude of the increase was an aberration as indicated by the rapid fall in the following ten weeks to $485.75 an ounce on April 3, 1980, although there was no change in the international political situation. The price recovered from this initial fall to $698.75 an ounce on September 26, 1980, but has declined since then to $461.50 on June 16, 1981. The fall of 46 per cent from the peak of January 1980 is essentially a correction of the previous excessive rise, although the decline was helped by favorable economic developments in the United States.

There was little abatement of the U.S. inflation in these 18 months, but the dollar appreciated sharply in the exchange market. Since early January 1980, the dollar has risen by about 30 per cent against the Swiss franc. This affected the gold prices in much the same way as it affected prices of basic commodities, intensifying the downward pressure on the dollar price of gold in this period. Furthermore, U.S. money market rates have risen considerably since January 1980. On a monthly average basis, the yield on three-month Treasury bills has risen from 12.00 per cent in January 1980 to 16.30 per cent in May 1981. Other short-term interest rates in the United States have risen about the same or somewhat more. Prices of basic commodities are sensitive to changes in interest rates, and that is particularly true of gold held for investment and speculation.

The only return to investors and speculators in gold is the prospective rise in its price. Such investment and speculation, however, involves large costs, primarily the interest on the funds used to buy the gold. This is reflected in the prices quoted in the futures markets. On the New York Commodity Exchange, June 15th, the price of gold for delivery in June 1982 was 14.7 per cent higher ($530.00 an ounce) than gold for delivery this June ($462.20 an ounce). An increase in money market rates widens the percentage spread between the spot and future prices of gold to the same extent. In theory, the widening of the spread could be achieved by a rise in the price for future delivery, with little or no change in the spot price. In practice, however, the effect of a rise in money market rates is to drive down both the spot and future prices, although obviously the reduction must be more in the spot price than in the future price. That is not only because the higher interest rates increase the cost of investing and speculating in gold, but also because they may dampen expectations on inflation, one of the main reasons for holding gold.

The purchasing power of gold, as measured by the U.S. wholesale price index of all commodities, varied considerably under the gold standard as the monetary price remained fixed while the prices of commodities rose and fell. The highest commodity value of gold in the 19th century was in 1896 when the monetary price of gold was

1. DOLLAR PRICE OF GOLD AND EXCHANGE RATE FOR SWISS FRANC, 1979-81

1979	Gold*	Swiss franc#	1980	Gold*	Swiss franc#	1980	Gold*	Swiss franc#
Apr. 6	239.75	58.346	Jan. 4	588.00	63.500	Oct. 3	660.50	60.790
13**	233.95	57.850	11	623.00	63.190	10	685.25	61.143
20	236.40	58.021	18	835.00	62.794	17	670.50	60.332
27	243.70	58.292	25	668.00	61.900	24	633.00	59.701
						31	629.00	58.326
May 4	248.45	58.190	Feb. 1	676.50	61.237			
11	251.50	58.113	8	692.00	61.793	Nov. 7	596.00	57.356
18	256.40	57.504	15	667.00	61.414	14	612.50	58.360
25	270.60	57.607	22	630.00	60.187	21	634.75	57.894
			29	637.00	58.754	28	619.75	57.554
June 1	275.10	57.670						
8	280.00	57.827	Mar. 7	609.00	58.326	Dec. 5	617.00	56.497
15	280.00	58.827	14	523.00	57.035	12	562.75	55.081
22	283.45	50.478	21	523.00	56.227	19	575.00	55.571
29	277.50	60.514	28	490.00	54.591	29	593.75	56.417
						1981		
July 6	290.25	60.140	Apr. 4**	485.75	53.505			
13	287.45	60.449	11	530.50	57.257			
20	298.75	60.927	18	515.60	57.521	Jan. 2**	597.50	55.944
27	305.80	60.872	25	551.50	59.102	9	577.75	55.679
						16	560.75	54.915
Aug. 3	286.50	60.255	May 2	512.50	59.032	23	533.00	54.363
10	303.75	60.746	9	508.25	59.506	30	506.50	51.813
17	300.55	60.277	16	516.50	59.880			
24	314.75	60.427	23	511.25	60.632	Feb. 6	500.50	51.520
31	315.10	60.390	30	535.50	60.205	13	491.50	49.579
						20	511.50	53.121
Sep. 7	320.15	61.433	June 6	597.00	61.200	27	489.00	51.020
14	345.80	61.233	13	608.40	61.996			
21	369.00	63.662	20	602.90	61.293	Mar. 6	467.00	51.104
28	385.00	64.371	27	637.50	61.463	13	492.00	51.913
						20	516.75	53.022
Oct. 5	385.00	63.319	July 3	663.50	62.023	27	538.75	51.746
12	395.00	61.690	11	667.00	62.723			
19	393.00	60.827	18	606.00	62.104	Apr. 3	523.00	51.546
26	375.00	59.923	25	651.75	62.566	10	493.50	51.020
						17	482.50	50.075
Nov. 2	372.80	60.976	Aug. 1	622.00	60.150	24	494.50	50.441
9	389.50	60.514	8	630.00	60.606			
16	390.35	60.716	15	624.50	60.846	May 1	487.50	49.575
23	392.00	60.551	22	639.20	59.755	8	485.75	48.709
30	415.65	62.617	29	631.25	60.680	15	485.00	48.356
						22	472.75	48.274
Dec. 7	430.40	61.881	Sep. 5	651.00	61.181	29	479.25	48.186
14	456.80	62.131	12	685.50	61.350			
21	473.10	62.274	19	674.00	60.827	June 5	460.00	46.871
28	512.00	62.775	26	698.75	60.790	12	472.00	47.733

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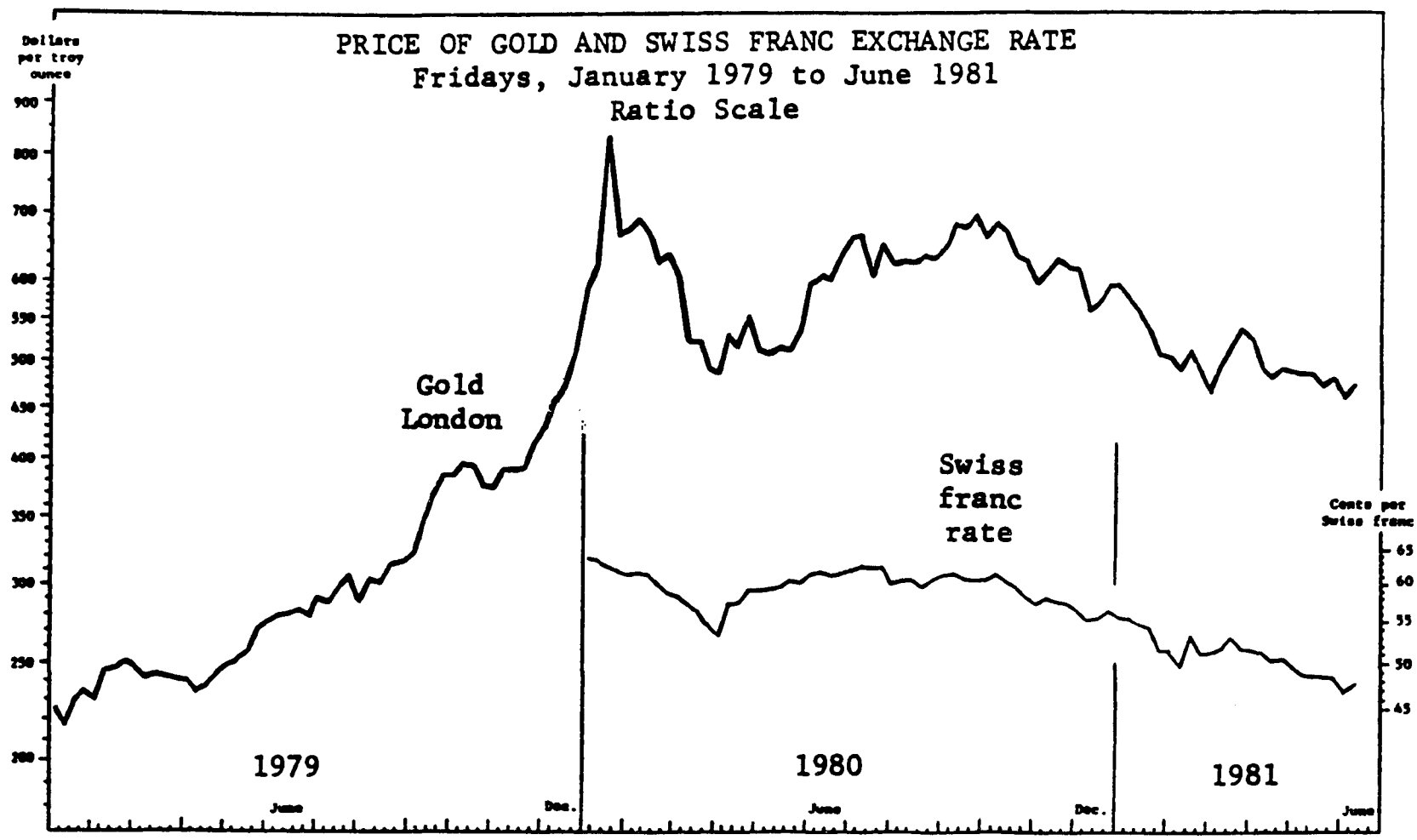
* The price of gold is in dollars per fine troy ounce at the Friday afternoon fixing in London or at the afternoon fixing on other days as noted below.

Noontime rates in New York on Fridays, U.S. cents per Swiss franc.

**Gold price on April 12, 1979, April 3, 1980, and January 5, 1981.



$20.67 an ounce and the U.S. wholesale price index was 25.4 on a 1957-59 base. In the following 24 years to 1920, the purchasing power of gold fell by 70 per cent as the monetary price was unchanged and commodity prices rose sharply, mainly because of the inflation in World War I and in the immediate postwar years. From 1920 to 1933, commodity prices fell sharply, but the purchasing power of gold was still 30 per cent less than it had been in 1896, in spite of the severe depression in the United States and other gold standard countries.

The fall in the real value of gold was reversed by the change in the monetary price to $35.00 an ounce in February 1934. Although commodity prices began to recover, the purchasing power of gold was 5 per cent higher in 1934 than it had been in 1896. This very favorable relationship was terminated by the inflation during and immediately after World War II and the renewed inflation that began in 1965. Before the United States abandoned the gold standard in August 1971, the purchasing power of gold at the monetary price of $35 an ounce had fallen by 65 per cent from what it had been in 1934. The subsequent changes in the monetary price of gold to $38 an ounce in 1971 and $42.22 an ounce in 1973 had very little effect on the purchasing power of gold as commodity prices rose even more. In the free market, however, the rise in the price of gold to $127.00 an ounce in May 1973 restored the purchasing power of gold to about what it had been in 1896 and 1934.

From mid-1973 to early 1979, the purchasing power of gold as measured by the U.S. wholesale price index rose gradually but was still less than 25 per cent above the 1896 level. As a result of the enormous rise in the price of gold between April 1979 and January 1980, however, the purchasing power of gold increased to 3.9 times what it had been in 1896. Since then, the dollar price of gold has fallen by about 44 per cent and the U.S. index of wholesale prices of all commodities has risen by 15 per cent, so that in mid-June 1981 the purchasing power of gold was somewhat less than twice the

1896 level. The fall in the price of gold in 1980-81 occurred in spite of a huge reduction in the supply. The consumption of gold in the arts and industry fell even more proportionately, and the absorption of gold in hoarding, investment and speculation fell considerably. Even so, the dollar price of gold in June 1981 was still nearly twice as high as it had been in April 1979.

2. PURCHASING POWER OF GOLD MEASURED BY U.S. WHOLESALE PRICES, 1896-1981

Year or month	Dollars per troy ounce of gold	U.S. wholesale price index 1957-59=100@	Index, 1896=100		
			Price of gold	Wholesale price index	Purchasing power of gold
1896	20.67*	25.4	100.0	100.0	100.0
1914	20.67*	37.3	100.0	146.8	68.1
1920	20.67*	84.5	100.0	332.7	30.1
1933	20.67*	36.1	100.0	142.1	70.4
1934	35.00*	41.0	169.3	161.4	104.9
1945	35.00*	57.9	169.3	228.0	74.3
1970	35.00*	117.1	169.3	461.0	36.7
1972	38.00*	126.4	183.8	497.6	36.9
1973 (Feb.)	42.22*	134.6	204.3	529.9	38.6
1973 (Feb.	89.00#	134.6	430.6	529.9	81.3
1973 (May)	114.75#	141.3	555.2	556.3	99.8
1979 (Apr.)	245.30#	244.0	1186.7	960.6	123.5
1980 (Jan.)	850.00#	270.4	4112.2	1064.6	386.3
1981 (May)	501.00#	311.6	2423.8	1226.8	197.6

* Official monetary price in the United States.
\# Highest free market price in London during the month.
@ Bureau of Labor Statistics, wholesale price index of all commodities. Data from 1860 to 1965, Department of Commerce, Long-Term Economic Growth, p. 207. Current data are published by the Bureau of Labor Statistics on 1967 and 1957-59 bases.

Supply of gold to the private sector

The supply of gold to the private sector from all sources fell by 29.0 million ounces (53 per cent) to 25.8 million ounces in 1980 from 54.8 million ounces in the previous year. About 85 per cent of the reduction was the result of the shift from net sales to net purchases by the monetary authorities excluding the Communist countries. The other large reduction was in net sales by Communist countries. Although newly-mined production declined, it was a minor factor in the sharp reduction of supply. The supply of gold to the private sector from all sources in 1980 was the smallest in 21 years.

Production. The production of gold outside the Communist countries fell by 600,000 ounces (1.9 per cent) to 30.3 million ounces in 1980. Output in South Africa fell by 900,000 ounces (4.0 per cent) to 21.7 million ounces. This was the result of a continuation of the policy of reducing the grade of ore to extend the life of the mines when the price of gold increases more than mining costs. Over the past ten years, the average grade of ore has been reduced from 13.28 grams per metric ton

milled (13.28 parts in a million) in 1970 to 7.28 grams per metric ton in 1980. In spite of an increase of 21 per cent in the tonnage milled, South Africa's gold production fell by 32.5 per cent over these ten years. That is how the South African mining industry has responded to the increase in the price of gold from a monetary price of $35 an ounce in 1970 to an average free market price of $612 an ounce in 1980. The decline in South African production will continue if the price of gold remains at about its present level relative to mining costs. In the first four months of 1981, South African production was 6.99 million ounces, down 200,000 ounces (2.8 per cent) from the same period last year.

3. SUPPLY OF GOLD FROM PRODUCTION AND OTHER SOURCES, 1977-80

	Million troy ounces				Metric tons*			
	1977	1978	1979	1980	1977	1978	1979	1980
Production, ex Communist areas	31.25	31.47	30.91	30.32	972	979	961	943
South Africa	22.50	22.71	22.61	21.70	700	706	703	675
Other Africa	1.33	1.10	0.91	0.95	41	34	28	30
Canada	1.74	1.74	1.64	1.58	54	54	51	49
United States	1.03	0.97	0.97	0.89	32	30	30	28
Brazil	0.51	0.71	0.80	1.13	16	22	25	35
Other Latin America	1.29	1.31	1.34	1.62	40	41	42	51
Asia	0.97	0.99	0.93	1.01	30	31	29	31
Oceania	1.46	1.55	1.38	1.13	46	48	43	35
Europe	0.42	0.40	0.32	0.30	13	13	10	9
Other sources	21.54	24.82	23.89	-4.50	670	772	743	-140
Communist areas, net sales	12.89	13.18	6.40	2.89	401	410	199	90
Official transactions, net sales	8.65	11.64	17.49	-7.39	269	362	544	-230
TOTAL SUPPLY	52.79	56.29	54.80	25.82	1,642	1k751	1,704	803

* The original data are in metric tons and for production, but not for other sources, are rounded to one-tenth of a ton. There are 32,150 troy ounces in a metric ton.
Source: Consolidated Gold Fields Limited, Gold 1980, London, May 1980, pp. 19 and 16.

In other non-Communist countries, output increased by 320,000 ounces (3.9 per cent) to 8.62 million ounces in 1980. The largest increases were in Brazil (330,000 ounces) and other Latin America (280,000 ounces), mainly in Colombia. On the other hand, output fell slightly in Canada and the United States and fell sharply in Papua/New Guinea (down by 180,000 ounces). The decline in Canada and the United States was mainly due to the mining of a lower grade or ore, but also because of a copper strike which reduced the output of by-product gold. In Papua/New Guinea the fall in output was the result of the large fall in copper production which is the main source of gold in that country. The decline in gold production in some other countries was also attributable in part to the reduction in copper mining. The high price of gold did stimulate production in a number of countries and that will have an even greater effect if there is a recovery in copper prices. New mines are being opened in a number of countries in response to the high price of gold, but they may not contribute significantly to production for some time. In the next year or two, the increase in gold production in other countries may barely offset the continued reduction of output in South Africa.

Sales of Communist countries. The net sales of gold by Communist countries fell by 3.51 million ounces (54.8 per cent) to 2.89 million ounces in 1980. This is the smallest amount supplied by these countries since 1971. These sales are predominantly by the Soviet Union and are closely related to its need for foreign exchange. In the past two years, the trade balance of the Soviet Union with the non-Communist countries has greatly improved. Its trade deficit declined from about $3.9 billion in 1978 to $1.9 billion in 1979 and $1.6 billion in 1980. This has greatly diminished the need of the Soviet Union to sell gold to finance its payments deficit. Moreover, because the average price doubled from $307 an ounce in 1979 to $612 an ounce in 1980, the Soviet Union received almost as much from the reduced sales in 1980 as it did from the much larger sales in 1979. This has enabled the Soviet Union to continue to rebuild its gold reserves which were drawn down in 1976-78 and partly restored in 1979 out of its estimated production of 9.5 million ounces a year.

Official sales and purchases. In 1979, the very large sales of the U.S. Treasury, the considerable sales of the International Monetary Fund, and the small net sales of other monetary authorities provided 17.5 million ounces-- about 32 per cent of the total supply to the private market in that year. In 1980, however, official purchases exceeded official sales by 7.4 million ounces. This was by far the largest factor in the sharp fall of the supply of gold in the private market last year. A large part of the reduction in the supply from official sources was due to the change in the policy of the U.S. Government. In 1979, the Treasury sold 11.75 million ounces of gold at auction in order to support the dollar in the exchange market. In 1980, the Treasury sold no gold at auction, as the dollar became stronger relative to the other major currencies. Under newly-enacted legislation, however, the Treasury is required to offer for sale to the public up to one million ounces of gold a year in the form of one-ounce and half-ounce medallions. Actual sales in 1980 (373,000 ounces) fell far short of the authorized amount.

In May 1980, the IMF completed its four-year program of selling about 25 million ounces of gold at auction, with the excess over book value (35 SDRs an ounce) placed in the Trust Fund for the benefit of its low-income members. In the five monthly auctions in 1980, the IMF sold 2.2 million ounces. The IMF also sold 3.4 million ounces of gold to its members in 1980 at 35 SDRs an ounce, but these transactions are not included in net official sales as the gold was acquired by other monetary authorities. The authority previously given the IMF to sell gold at auction and to its members has terminated. Any further sales out of its present holdings of 103 million ounces would require approval of 85 per cent of the total voting power of its members. It would be almost impossible to secure such approval under present circumstances, and it may be assumed that the IMF will not add to the supply of gold in the next few years.

According to the data in International Financial Statistics, the gold holdings of all non-Communist countries increased by 7.6 million ounces in 1980 to 937.6 million ounces at the end of the year. In part this increase was the result of sales of the IMF to members and is not an increase in aggregate holdings of the monetary authorities. Several countries reduced their holdings. The United States, as already noted, used gold for the production of medallions. Canada used some of its newly-mined gold and reduced its gold reserves by 1.2 million ounces for its Maple Leaf coins. On the other hand, there were large increases in the gold holdings of several countries. With the great improvement in its payments position, South Africa increased its gold reserves by 2.1 million ounces of which 800,000 ounces came from a reversal of the swaps made several years ago with Swiss banks, and 1.3 million ounces came from its own production. Western Hemisphere countries increased their

gold holdings by 1.4 million ounces, mainly Brazil, Colombia, Chile, Peru and Uruguay, out of their own production. The oil-exporting countries increased their gold holdings by 3.4 million ounces as a result of purchases in the market by Indonesia (2.1 million ounces), Libya (620,000 ounces) and a few other members of OPEC. The tendency of some gold-producing countries and some oil-exporting countries to add to their gold reserves may continue.

Absorption of gold by the private sector

The absorption of gold by the private sector is equal to the supply, and it fell by 29.0 million ounces in 1980. Nearly three-fourths of the decline was in the arts and industry where the net use of gold fell by 21.4 million ounces (67 per cent) to 10.5 million ounces. This is probably the smallest amount of gold absorbed in this sector since the 1960s. The absorption of gold by hoarders, investors and speculators fell by 7.6 million ounces (33 per cent) to 15.3 million ounces in 1980. While this was a large reduction, it was from a very high level in the previous year. All of the reduction was in net sales of official coins, medals and medallions, and bars in developing countries. Net sales of large bars in developed countries increased considerably in 1980.

Jewelry. Most of the reduction in the absorption of gold in the arts and industry was in the form of jewelry. The net amount of gold used for fabricating jewelry is estimated to have fallen by 19.9 million ounces (84 per cent) to 3.8 million ounces in 1980. In the industrial areas, the absorption of gold by jewelry manufacturers fell by 9.2 million ounces (51 per cent) to 8.7 million ounces. Most of the fall was in Italy where the jewelry industry reduced its net use of gold by 4.5 million ounces (62 per cent) to 2.8 million ounces. Italy is by far the largest fabricator of jewelry and nearly all of its production is exported. The reduction in its use of gold in manufacturing jewelry is a reflection of the sharp fall in demand in importing countries. In other industrial areas, the absorption of gold in jewelry fell by 2.9 million ounces (50 per cent) to 2.9 million ounces in Europe outside Italy, by 1.0 million ounces (33 per cent) to 2.0 million ounces in the United States and Canada, and by 875,000 ounces (51 per cent) to 850,000 ounces in Japan. There were small changes in the use of gold for jewelry in Australia and South Africa. The large reduction in the absorption of gold in manufacturing jewelry in these industrial areas in 1980 was due in part to the slowing of economic activity, but mainly to the high price of gold which held down consumer purchases and encouraged them to sell some of their old jewelry for bullion.

In many developing countries, jewelry is bought as a form of saving and investment. In 1979, the addition to holdings of jewelry in the developing countries amounted to 5.7 million ounces. In 1980, however, the holdings of jewelry in these countries were reduced by 4.9 million ounces. The greatest reduction was in the Middle East, where 2.9 million ounces of jewelry were melted down and used as bullion. Nearly all of this was in Iran, although there were large reductions in holdings of jewelry in Turkey and in a few other Middle East countries. In India, Pakistan and Bangladesh 420,000 ounces of jewelry were converted into bullion. And in the Far East outside Japan, 1.9 million ounces of jewelry were converted into bullion, mainly in Indonesia. In Latin America, the absorption of gold in fabricating jewelry fell by 1.3 million ounces (84 per cent) to 250,000 ounces. Most of the reduction was in Brazil, by far the largest manufacturer of jewelry in Latin America, while in some other countries in this region jewelry was melted down and resold to fabricators. In Africa, outside South Africa, the use of gold in manufacturing jewelry fell by

650,000 ounces (91 per cent) to 60,000 ounces. As these data indicate, the high price of gold not only held down jewelry purchases in developing countries, but resulted in a net reduction in gold holdings in this form.

4. ABSORPTION OF GOLD IN INDUSTRY AND IN HOARDING AND INVESTMENT, 1977-80

	Million troy ounces*				Metric tons*			
	1977	1978	1979	1980	1977	1978	1979	1980
Arts and industry	39.44	40.47	31.92	10.50	1,227	1,259	993	327
Jewelry	32.23	32.38	23.69	3.84	1,003	1,007	737	120
Dentistry	2.65	2.87	2.77	1.98	82	89	86	62
Electronics	2.46	2.76	3.03	2.59	77	86	94	81
Other arts and industry	2.10	2.46	2.43	2.08	65	77	76	65
Hoarding, investment, etc.	13.36	15.81	22.88	15.31	416	492	712	476
Official coins	4.56	9.24	9.31	5.75	142	287	290	179
Medals, medallions, etc.	1.63	1.59	1.05	0.49	51	50	33	15
Bars in developing countries	2.40	3.63	5.55	0.08	75	113	173	3
Bars in developed countries*	4.77	1.35	6.96	8.99	149	42	217	280
TOTAL ABSORPTION	52.79	56.29	54.80	25.82	1,642	1,751	1,704	803

* The original data are in metric tons and rounded to one-tenth of a ton, except for bars in developed countries, which are a residual, and are presumed to be absorbed by investors and speculators. There are 32,150 troy ounces in a metric ton.
Source: Consolidated Gold Fields Limited, Gold 1981, pp. 24-44.

Other arts and industry. The doubling of the price of gold in 1980 had a considerable effect on other uses of gold, although much less than in manufacturing jewelry. In dentistry, the absorption of gold fell by 785,000 ounces (28 per cent) to 2.0 million ounces. Most of the decrease was in the United States, where use of gold in dentistry fell by 240,000 ounces (35 per cent) to 445,000 ounces, and in Japan where it fell by 195,000 ounces (51 per cent) to 190,000 ounces. In Germany, which is the largest user of gold in dentistry because it is covered by social insurance, net absorption fell by 90,000 ounces (10 per cent) to 810,000 ounces. In all other countries, the use of gold in dentistry fell by 260,000 ounces (32 per cent) to 540,000 ounces. The reduction in the dental use of gold in 1980 resulted from the substitution of other materials for gold in fillings and dentures because of the high price.

The absorption of gold in the manufacture of electronic components fell by 430,000 ounces (14 per cent) to 2.6 million ounces in 1980. The decline was mainly in the United States (130,000 ounces), Japan (93,000 ounces), and in Germany, the United Kingdom, France, Switzerland and Italy (154,000 ounces together). In spite of the enormous expansion of electronics, the absorption of gold in these industries was less in 1980 than in seven of the ten preceding years, as the high price has led to more economical use of gold and its replacement by substitutes. The absorption of gold in all other arts and industry fell by 350,000 ounces (14 per cent) to 2.1 million ounces in 1980. This includes gold used in manufacturing costume jewelry, pens, brazing alloys and other products. About two-thirds of the reduction was in the United States where such uses of gold fell by 230,000 ounces (20 per cent) to

860,000 ounces. This decline was due to the doubling of the price of gold in 1980. In electronics and in other industrial uses, the absorption of gold in some industrial countries was held down by adverse economic conditions.

Official coins. The wide interest in owning gold has induced a number of countries to issue coins to meet this demand. The coins are generally sold at a premium above their bullion value that ranges between 4 per cent for the one-ounce Canadian Maple Leaf to 6 per cent for the one-ounce South African krugerrand and about the same for the Mexican 50-peso coin of 1.2 ounces. The traditional coins-- the sovereign, the napoleon, and the U.S. eagle-- sell at a somewhat higher premium over their bullion value. Virtually all of the gold used for official coinage in 1980 was by the mints of South Africa, the United Kingdom, Canada, and Mexico although some of the coins were struck on behalf of other countries. The actual sale of coins by the monetary authorities of all countries fell by 4.6 million ounces (38 per cent) to 5.8 million ounces. While this was much less than in 1978-79, it was somewhat more than the average in 1976-77. The sharp decline in the price of gold in the course of 1980 had a moderating effect on the demand for gold coins.

Medals, medallions, and facsimile coins. Net purchases by the public of gold medals, medallions and facsimile coins fell by 560,000 ounces (53 per cent) to 490,000 ounces in 1980. The premium over the bullion value is less than for official coins-- generally about 2 to 4 per cent. Three-fourths of the total sales in 1980 were of the new one-ounce and half-ounce medallions that the U.S. Treasury was required by law to issue and sell to the public. Net sales of all other medals, medallions, and facsimile coins produced privately in the Middle East and some European countries fell by 90 per cent to 110,000 ounces in 1980. In some countries, particularly Iran, there was a net reduction in the holding of gold in this form. The demand for medals, medallions and facsimile coins has fallen sharply not only because of the high price of gold but also because of the ready availability at a small premium of official coins in convenient size.

The demand for the medallions issued by the U.S. Treasury was for their keepsake character as well as a means of holding gold. Sales of these medallions were far less than expected. The Treasury was legally required to sell each year for five years up to 500,000 one-ounce medallions and 1 million half-ounce medallions-- a maximum of 1 million ounces a year. It offered the medallions for sale to the public at a premium of 2 per cent over the bullion value. Actual sales from mid-July to the end of December 1980 amounted to 373,000 ounces. Sales may have been held back not only by the fall in the price of gold but by the complexity and delay in purchasing the medallions through the postal system. For accounting purposes, sales in January and February 1981 (61,000 ounces) are considered part of the 1980 series. A new series will be struck in July 1981 and offered to the public. Unless the method of selling is simplified, sales may be far less than the maximum of 1 million ounces set by law.

Bars in developing countries. The absorption of gold bullion for hoarding, speculation and investment in the developing countries is usually in the form of small bars weighing a fraction of an ounce to a few ounces. Larger bars may be acquired by wealthy people or business firms or held by dealers and banks for trading purposes or as cover for sales for future delivery. In 1980, the estimated absorption of gold in bullion form in Latin America, Asia and Africa was about 80,000 ounces, down sharply from 5.5 million ounces in 1979. The data are uncertain and the estimate includes an adjustment for the reclassification of Vietnam and Laos as Communist countries which involves a deduction of nearly

500,000 ounces in 1980. Quite apart from this, it is clear that in many developing countries there was dishoarding of gold held in bar form because of the fall in the price last year.

Bars in developed countries. The absorption of gold in bars in the developed countries-- essentially by Europe and North America-- is estimated as a residual. That is to say, the identified absorption of gold in the arts and industry, in coins, medals and medallions, and in bars in developing countries is subtracted from the estimated supply of gold to the private market and the remainder is attributed to the increase in holdings of gold bars in the developed countries. In 1980, the absorption of gold in this form in developed countries increased by 2.0 million ounces (29 per cent) to 9.0 million ounces. Gold bars are held by individuals, business firms, banks and bullion dealers in their own possession, in deposits, as trading stock, and as cover for contracts for future delivery. The ultimate owners are investors and speculators who hold gold in order to avoid a loss from the depreciation in the real value of currencies or to realize a profit from a rise in the price of gold in dollars and other currencies. The absorption of gold in this form indicates that large speculators and investors, as distinguished from small hoarders, added significantly to their holdings in spite of the fall in the price of gold during most of 1980.

Markets for gold

There are markets for gold in all parts of the world, differentiated by the type of transaction of buyers and sellers. The spot markets for gold, the most important of which are in London and Zurich, are unique in a number of respects. First, Governments and monetary authorities have an important role in adding to or subtracting from the supply available to the private market. In 1977-79, net sales of Communist countries and of the monetary authorities of other countries and international institutions averaged 23.4 million ounces a year and accounted for 43 per cent of the total supply to the private market. In 1980, however, Governments were net buyers of gold from the private market so that the total supply was less than production. Because of the role of Governments, the total supply to the private market may vary considerably from year to year, even though newly-mined production in the non-Communist countries changes relatively little.

A second feature of the spot markets for gold is the large proportion of the supply absorbed by hoarders, investors and speculators. In 1977-78, they absorbed an average of 14.6 million ounces a year, constituting nearly 27 per cent of the total supply to the private market. In 1979, their net purchases increased to 22.9 million ounces or 42 per cent of the supply. In 1980, their net purchases fell to 15.3 million ounces, but that was 59 per cent of the much smaller supply of last year. Hoarders, investors and speculators also play a role in the silver market, although to a much lesser extent except in unusual cases as in 1979. In the spot markets for other basic commodities, speculators absorb an insignificant part of the supply and do not accumulate massive holdings as is true of gold and to some extent silver.

The demand for gold in the arts and industry is responsive to much the same forces as act on other commodities. The demand will vary directly with the increase or decrease in economic activity and inversely with the relative price of gold. The real income elasticity of the demand for gold in the arts and industry may be close to unity-- that is, the demand at a constant price of gold relative to all other prices would tend to vary proportionately with changes in economic activity. The real price elasticity of the demand for gold in the arts and industry, however, is

much higher than for other commodities and may be in excess of unity. That is because the gold content of jewelry, the most important industrial use of gold, is a very high proportion of the total cost. If the real price rises enough, there could even be a negative demand-- that is, a sale of gold jewelry by consumers to producers and traders. Under ordinary circumstances, the high price elasticity of demand for gold in the arts and industry would of itself tend to minimize the effect of variations in the supply on the price of gold.

The volatility in the price of gold is due to the large and important role of speculators in the gold markets. Disturbing economic or political developments will lead to an increase in their demand for gold and cause the price to rise. The rise in price will lead to expectations of a further increase and add to the demand for gold. On the other hand, favorable economic or political developments will lead to a decrease in the speculative demand for gold and cause the price to fall. The expectation of a continued fall will cause speculators to decrease their demand still more. Of course, after a large and extended rise in the price of gold, some speculators will recognize that the price is too high to be maintained and sellers will predominate in the market. This will precipitate a fall in price which will accelerate as speculators liquidate their position, until the price has fallen so low that it calls forth new buyers in the expectation that the fall in price will be reversed. A similar pattern will ultimately limit the fall in the price of gold that may be initiated by adverse economic or political developments.

The opening of futures markets in the United States after ownership of gold by Americans was legalized in 1974 has probably increased the volatility in the price of gold. The size of the futures markets in the United States has grown enormously. In 1980, the Commodity Exchange (New York) had transactions (contracts to buy) of 800 million ounces and the International Money Market (Chicago) had transactions of 254 million ounces, with smaller volumes in other futures markets in the United States. This was about 40 times the supply to the private market last year. That is not to imply that transactions on the spot markets are limited to the annual supply from newly-mined gold and net gold sales of the Communist countries and the monetary authorities of other countries. Obviously, spot gold bought at one time will be sold at another and the annual turnover will be far greater than the annual supply. Nevertheless, the futures markets are far larger than the spot markets, and for this reason have a greater effect on the price of gold.

The spot markets and the futures markets are related and prices in one affect prices in the other, although that will be more often from the futures markets to the spot markets. If demand in the futures markets for contracts to buy gold for a future delivery date exceeds the supply of such contracts, the price of gold for delivery on that future date will rise relative to the spot price. When the differential between the spot and futures prices exceeds the interest cost for the period, banks and dealers will sell gold for future delivery and buy gold in the spot market to cover their position. This will tend to raise the spot price and to hold down the rise in the futures price. And if the supply of contracts to sell gold for delivery at some future date exceeds demand, the price for future delivery will fall relative to the spot price. When the differential becomes less than the interest cost, fabricators will be induced to buy gold for future delivery and cover their position by selling some spot gold from their inventory. This will tend to lower the spot price and moderate the fall in the futures prices. Quite apart from such arbitrage between the spot markets and the futures markets, speculators will seek the most favorable market in which to buy or sell gold, and that will have the effect of unifying the spot and futures markets.

The operations of the futures markets have greatly increased the role of speculators in the determination of the price of gold. Their transactions dwarf the sales and purchases of producers and fabricators and even those of hoarders, investors and speculators in the spot markets. Moreover, the importance of futures markets is likely to grow as new markets are opened in Europe and Asia. On the other hand, the necessity of dealing in physical gold, even if only through transfers on the books of bankers and dealers, must limit the growth of the spot market. The fact that speculators will have a greater role in the determination of the price of gold does not mean that the markets will act haphazardly. On the contrary, they are likely to respond more promptly to economic and political developments, and the response is likely to be much greater than in the past. Because speculation in futures markets can be undertaken with less capital and at less transactions cost, the speculative response to changes in economic and political conditions may be greater than in the spot markets, and gold prices will be more volatile. Speculators may also exaggerate the importance of political developments relative to economic developments.

As a practical matter, the large fluctuations in the price of gold that took place in 1979-81 could not be justified by changes in economic conditions. An acceleration of the inflation by 5 per cent a year could justify a rise of that much more in the dollar price of gold from a trend rate based on inflation. A depreciation of the dollar by 10 or 15 per cent relative to the strongest currencies of the industrial countries could add that to the trend rise in the dollar price of gold. That is very different from having a three- or four-fold increase in the price of gold in less than a year. Recent economic developments may keep the price of gold from rising much in the near future, even if it does not fall from its present level. The inflation in the United States has slowed, although it is still at a high rate. The dollar has been strong in the exchange market, although it may have risen too much relative to the currencies of other industrial countries. What may be of greatest importance in holding down the price of gold is that interest rates are much higher in all industrial countries than they were one or two years ago. Speculators in the futures markets are very sensitive to high interest rates because they show very clearly what the price of gold will have to be three months, six months, and a year from now to make speculative buying profitable.

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WHAT ROLE FOR GOLD IN THE MONETARY SYSTEM?

By Edward M. Bernstein

Summary and conclusions

The hundred years of the classical gold standard were marked by large secular changes in prices. The most difficult period was the last quarter of the 19th century, when there was a large fall of prices. The reason for this was the irregular growth of the world stock of monetary gold. According to Professor Cassel, if this had been at a steady rate of 3 per cent a year, prices would have remained relatively stable. Instead, the gold stock increased irregularly, depending on gold production. After World War I, the gold stock was not sufficient to sustain the high postwar level of prices and gold production was less than half as much relative to world reserves as before the war. The gold standard, which was restored in 1925-30, collapsed in the great depression of the 1930s. In the United States gold redemption of currency was terminated in March 1933 and the gold clause was abrogated in June. In accordance with the Gold Reserve Act of 1934, the President fixed a new price of $35 an ounce for gold. The private holding of gold was forbidden, but the Treasury sold gold to foreign monetary authorities until this was ended in August 1971. Gold did not act as a limitation on the money supply, however, because whenever the reserves were near the legal minimum, the requirements were reduced until they were finally eliminated in 1968.

The persistent inflation has revived interest in restoring the gold standard. The problems this would create seem insuperable at present. Gold production has been falling since 1966 and the absorption of gold in the arts and industry has exceeded production in recent years. Even before the inflation, the growth of the monetary stock of gold was minimal. The world pattern of payments is seriously unbalanced, and if members of OPEC could convert their current account surplus into gold at a fixed price they would probably do so on a large scale. Other countries could also decide to diversify their reserves by converting dollars into gold. Finally, private holders of dollars could present enormous amounts for redemption in gold if they thought the price was too low, and private holders of gold could sell enormous amounts to the Treasury for dollars if they thought the price was to high. Although it is not feasible to restore the gold standard, some of its features could be gradually adopted. It might be possible to require reserves against Federal

Reserve notes and deposits, although not as rigidly as in the past. It would be desirable to moderate the fluctuations in dollar exchange rates for the major currencies and ultimately to return to fixed par values with considerable flexibility. It would also be possible to restore convertibility of the dollar in reserve assets, but not in gold. These are steps that could be taken gradually instead of undertaking far-reaching commitments on gold.

Gold standard before 1914

The function of the monetary system is to regulate the production, distribution and utilization of the national income. To perform this function, the monetary system should facilitate a fairly steady growth of output at a reasonably stable level of prices. It is by this test that the classical gold standard should be judged; and it is this test that the Gold Commission should apply to the proposals it will consider on the appropriate role of gold in the monetary system.

Nearly all economists of the nineteenth century regarded the gold standard as the best practical monetary system. They did not, however, believe that the gold standard worked very well. They frequently referred to the great instability of prices and the cyclical fluctuations in trade. Actually, the periods of rising prices did no harm. In the thirty years from 1843 to 1873, the U.S. wholesale price index rose by 77 per cent-- an average annual increase of less than 2 per cent. That omits the intervening sharp rise and fall of prices during the Civil War when greenbacks were not redeemable in gold. In the 18 years from 1896 to 1914, the U.S. wholesale price index rose by 50 per cent-- an average annual increase of 2.3 per cent.*

The periods of deflation presented much more serious problems. Omitting the wartime peaks in 1814 and 1864, the U.S. wholesale price index fell by 29 per cent from 1822 to 1843 and by 38 per cent from 1876 to 1896. The earlier fall was at an average annual rate of 1.7 per cent and the later fall was at an average rate of 2.4 per cent. By ignoring the intervening rise and fall of prices one could conclude that there was remarkable long-run stability of prices under the gold standard because the wholesale price index was about the same in 1914 as in 1880 and, more astonishing, about the same in 1933 as in 1883.*

It was no comfort to the generation that lived through the protracted recessions that accompanied the fall in prices to know that the preceding generation had had an equal rise in prices. The importance of the deflation problem is indicated by the fact that the British Government appointed a Royal Commission on the Depression of Trade and Industry in 1886 and another Royal Commission on the Values of Gold and Silver in 1887. It is worth noting that the theory relating interest rates to changes in prices was expounded by Professor Irving Fisher in the 1880s in Appreciation and Interest to explain why interest rates were low in a deflation, not why they were high in an inflation. Table 1 on the duration of U.S. business cycles shows clearly the long recessions and short expansions in the deflation of the last quarter of the nineteenth century.

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* The index numbers prior to 1860 are taken from G. F. Warren and F. A. Pearson, Wholesale Prices in the United States, Memoir 142, Cornell University Agricultural Experiment Station. The index numbers after 1860 are taken from the series of the Bureau of Labor Statistics, published in Long-Term Economic Growth, 1860-1965, p. 202, U.S. Department of Commerce.

1. BUSINESS CYCLE EXPANSIONS AND CONTRACTIONS IN THE UNITED STATES

Reference dates		Duration in months			
		Contraction	Expansion	Complete cycle	
Trough	Peak	Trough from previous peak	Trough to following peak	Trough from previous trough	Peak from previous peak
December 1854	June 1857	....	30	....	....
December 1858	October 1860	18	22	48	40
June 1861	April 1865	8	46*	30	54*
December 1867	June 1869	32*	18	78*	50
December 1870	October 1878	18	34	36	52
March 1879	March 1882	65	36	99	101
May 1885	March 1887	38	22	74	60
April 1888	July 1890	13	27	35	40
May 1891	January 1893	10	20	37	30
June 1894	December 1895	17	18	37	35
June 1897	June 1899	18	24	36	42
December 1900	September 1902	18	21	42	39
August 1904	May 1907	23	33	44	56
June 1908	January 1910	13	19	46	32
January 1912	January 1913	24	12	43	36
December 1914	August 1918	23	44*	35	67*
March 1919	January 1920	7*	10	51*	17
July 1921	May 1923	18	22	28	40
July 1924	October 1926	14	27	36	41
November 1927	August 1929	13	21	40	34
March 1933	May 1937	43	50	64	93
June 1938	February 1945	13	80*	63	93*
October 1945	November 1948	8*	37	88*	45
October 1949	July 1953	11	45*	48	56*
May 1954	August 1957	10*	39	55*	49
April 1958	April 1960	8	24	47	32
February 1961	December 1969	10	106*	34	116*
November 1970	November 1973	11*	36	117*	47
March 1975	January 1980	16	58	52	74
July 1980		6	....	64	....
Average, all cycles:					
1854-1914		22.4	25.5	48.0	47.6
1914-1933		19.0	24.8	43.8	39.8
1933-1945		10.5	65.0	75.5	93.0
1945-1980		10.3	49.3	59.6	59.9

* Figures are the wartime expansions (Civil War, World Wars I and II, Korean war, and Vietnam war), the postwar contractions, and the full cycles that include the wartime expansions.

Source: National Bureau of Economic Research. This table adapted from Business Conditions Digest, July 1981.

Nevertheless, most economists believed that there was no alternative to the gold standard. Jevons, noting the extreme changes in the values of gold and silver, and writing in a period of rising prices, thought it would be possible to avoid the effect of inflation on rents fixed in long-term leases by requiring them to be adjusted to offset changes in the purchasing power of money as shown by an index number of prices-- the tabular standard. Alfred Marshall saw a much broader role for the tabular standard and stressed its importance in a period of falling prices.

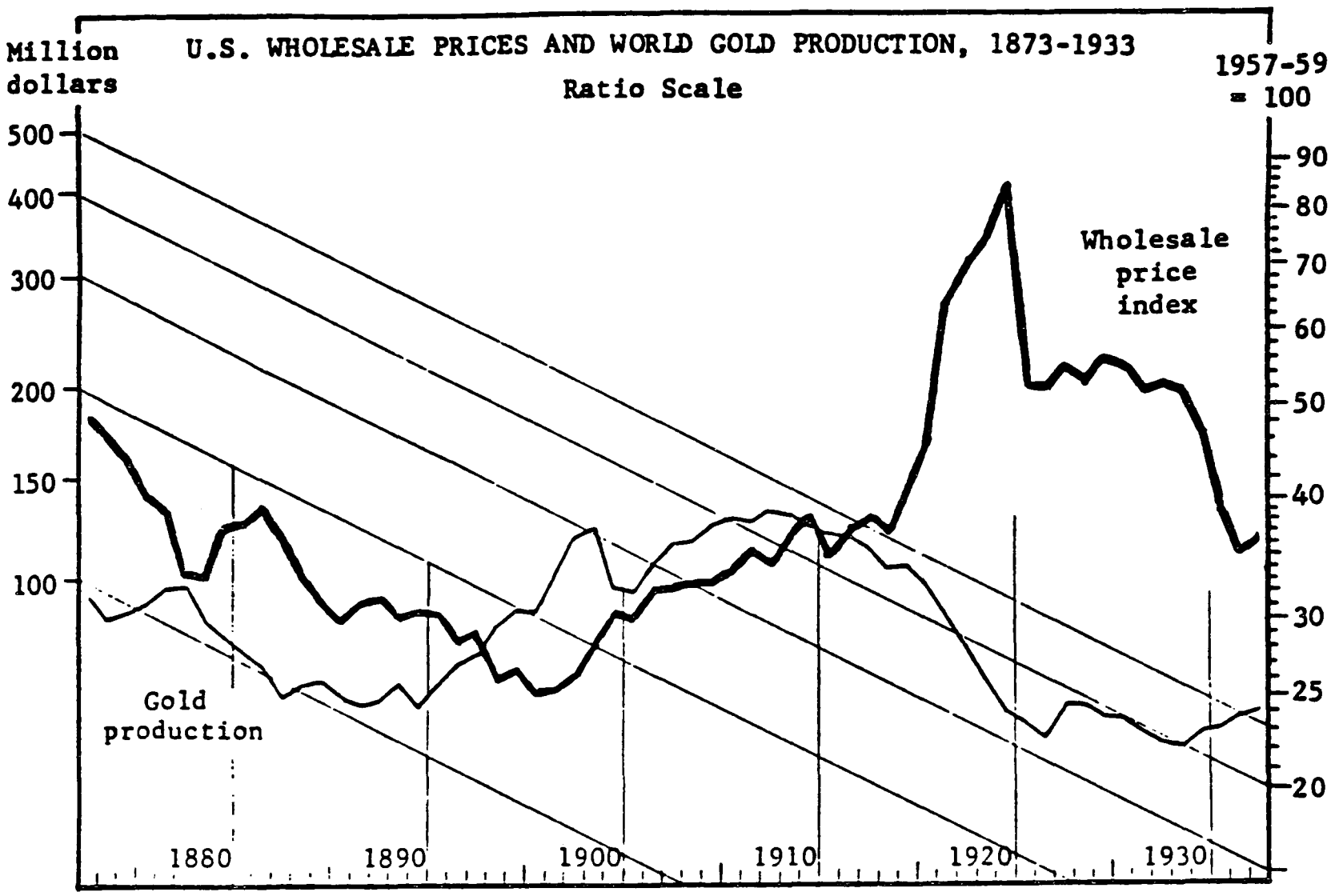
> "A great cause of the discontinuity of industry," he wrote, "is the want of certain knowledge as to what a pound is going to be worth a short time hence. With every expansion and contraction of credit prices rise and fall. This change of prices . . . increases in many ways the intensity of commercial fluctuations. When traders are rejoicing in high prices debenture and mortgage holders and other creditors are depressed; and when the pendulum swings the other way traders, already depressed, are kept under water by having to pay an exceptionally heavy toll to their creditors. This serious evil can be much diminished by a plan which economists have long advocated. . .
>
> "[The Government] should publish tables showing as closely as may be changes in the purchasing power of gold, and should facilitate contracts for payments to be made in terms of units of fixed purchasing power. . . In Mr. Palgrave's memorandum a most interesting example is shown of the kind of index number that is wanted. . . The unit of constant general purchasing power would be applicable, at the free choice of both parties concerned, for nearly all contracts for the payment of interest, and for the repayment of loans; and for many contracts for rent, and for wages and salaries." Alfred Marshall, Official Papers, pp. 9-12, London 1926.

Restoring the gold standard in the 1920s

Economists were aware that the prolonged rise or fall in prices over periods of 20 or 30 years was caused by the increase in the production of gold at a higher or lower rate than the increase in the output of goods and services. Professor Gustav Cassel noted that the index number of wholesale prices in the United Kingdom, Sauerbeck's index, was about the same in 1850 and in 1910 and that the four-year averages for 1848-51 and 1908-11 were precisely the same. This showed, he said, that the world stock of monetary gold was sufficient in 1850 and again in 1910 to maintain the same level of prices in those years. If the stock of monetary gold had increased at a regular rate throughout this period, approximately 3 per cent a year, any variation in the price level, according to Cassel, would have been due to the irregular rate of economic growth. As there was no great change in the rate of growth of output, he concluded that "the main cause of the secular variations of the general price level lies in the changes in the relative gold supply," A Theory of Social Economy, p. 447.

For the monetary stock of gold to grow at a regular 3 per cent annual rate, gold production would have to increase at about this rate, assuming that the nonmonetary absorption of gold was a fairly steady proportion of the gold output. The chart on page 5 shows world production of gold from 1873 to 1933, as estimated by the U.S. Bureau of the Mint, plotted on a logarithmic scale against isorropic lines that eliminate a 3 per cent trend, and the Bureau of Labor Statistics index of U.S.

wholesale prices plotted on a non-trend logarithmic scale. It is evident that until 1914, the wholesale price index followed a pattern similar to changes in world production of gold adjusted for a 3 per cent trend, although with a lag of several years. The inflation during and immediately after World War I disrupted the relationship of prices to the stock of monetary gold and compelled the bandonment of gold redemption in all of the belligerent countries except the United States.



There was widespread agreement that the restoration of the gold standard was an important part of postwar reconstruction. There were a number of difficulties, however, that prevented the immediate adoption of an international gold standard. The inflation continued for several years after the war, longer in continental Europe than in the United States and the United Kingdom. The monetary stock of gold was not sufficient to maintain the money supply required for the postwar level of prices with the prewar type of gold standard. This difficulty was intended to be met in two ways. First, the relation of gold to the money supply was diluted by eliminating or reducing the use of gold coins in domestic transactions, which had already been done during the war. When the gold standard was restored in the United Kingdom in 1925, the fixed fiduciary issue was greatly enlarged and convertibility of sterling was in bars of 400 ounces-- the gold bullion standard. Second, the need for gold as reserves was reduced by wider use of the gold exchange standard. The Genoa conference in April 1922 recommended the central banks enter into an agreement that "should embody some means of economizing the use of gold by maintaining reserves in the form

of foreign balances, such, for example, as the gold exchange standard or an international clearing system." When the League of Nations arranged stabilization loans for a number of European countries, the proceeds were held as reserves in the form of dollars and sterling.

Nevertheless, there was a widespread fear of a gold shortage, a view most firmly held by Professor Cassel. The reason was not only that the ratio of the monetary gold stock to the money supply in the large trading countries was so much less than it had been before the war, but that the production of gold had fallen sharply during and after the war. Gold production averaged $380 million a year in 1921-30. This represented an average annual increase of 1.4 per cent over the 40 years from the previous relative low of $215 million a year in 1881-90. The decrease in gold production was even greater compared to official reserves and the money supply. World gold production was 4.0 per cent of reserves of all central banks and treasuries in 1928, down from 9.6 per cent in 1913. Compared to the U.S. money supply, currency outside banks plus total deposits adjusted in all banks, gold production fell from 2.4 per cent in 1913 to 0.7 per cent in 1928. The decline would have been proportionately about the same if gold production were compared with the money supply, measured in dollars, in other large trading countries. The League of Nations appointed a Gold Commission to study the problem, but by the time of their report the new gold standard was already moribund.

It is useful to note another proposal made in the 1920s for stabilizing the value of money in a gold standard system. Instead of a tabular standard under which the amount of money paid under loan and other contracts would be adjusted to offset a change in prices, Professor Irving Fisher proposed that the gold content of the dollar be adjusted to maintain a constant purchasing power of money. Thus, if an index number showed that prices had risen, the monetary authorities would increase the gold content of the dollar to bring the price level down to what it had been at the base date. On the other hand, if an index number showed that prices had fallen, the gold content of the dollar would be decreased to bring the price level up to what it had been at the base date. Professor Fisher called this a compensated dollar. It was the most important of several proposals for varying the monetary price of gold when prices were rising or falling on the assumption that this would of itself stabilize prices.

Gold in the U.S. monetary system, 1934-71

The new gold standard, gradually put together from 1925 to 1930, promptly fell apart from 1931 to 1936. The United States went through a painful deflation from 1929 to 1933 in order to maintain the historic gold value of the dollar-- the mint price of $20.67 an ounce that had been established in 1837. The severity of the depression, with an unemployment rate of 24.9 per cent in 1933, compelled President Roosevelt to terminate the gold redemption of the dollar. A Joint Resolution of Congress in June 1933 abrogated the gold clause provision in contracts and made all coin and currency legal tender in payment of all debts, public and private.

By January 1934, the Administration was ready to organize the monetary system on a new basis. The Gold Reserve Act of 1934 required the Federal Reserve Banks to turn over their gold to the Treasury in exchange for gold certificates which were to be held as reserves against their note and deposit liabilities. The coinage of gold was terminated and the private holding of gold coin and bullion, with some exceptions,

was forbidden, although Treasury regulations permitted the sale of gold to foreign monetary authorities for the settlement of international balances. The President was authorized to fix the new gold content of the dollar at not less than 50 per cent nor more than 60 per cent of the previous content. On January 31, 1934 the President set the gold content at 59.06 per cent of the previous content, equivalent to $35 an ounce.

Was this a gold standard? There was no redemption of U.S. currency in gold coin for private persons in the United States and abroad. Gold convertibility for official institutions was established in order to maintain stable exchange rates, but this function was shifted from gold and foreign exchange arbitrageurs to central banks. From an economic point of view, the most important aspect of the gold standard was the limit it placed on the money supply through the requirement of gold reserves. This was supposed to act on the monetary situation directly through the effect of gold flows on reserves. In the United States, before the establishment of the Federal Reserve System, an inflow or outflow of gold resulted in an immediate change in the monetary situation. After the Federal Reserve System was established, however, the effect of gold flows was muted because of the large free reserves, except temporarily in 1920, and because the Federal Reserve Banks through open market operations and member banks through discounts were able to offset the effect on the money supply.

The Gold Reserve Act did not change the reserve requirements, although the required reserves were held by the Federal Reserve Banks in gold certificates instead of gold. The reserve requirements were not an actual limitation on monetary expansion until near the end of World War II. By early 1945 the large increase in the money supply and the small decrease in gold reserves placed the reserve ratio close to the legal minimum while the war was still on. The Treasury asked the Congress to reduce the gold reserve requirement on both notes and deposits to 25 per cent and the Federal Reserve Act was amended in this way. By 1956 the continued expansion of the money supply, although at a slow rate, had again reduced the gold reserve close to the legal minimum and the law was changed to eliminate the requirement of reserves against deposits with the Federal Reserve Banks. And by 1968, the large decrease in the gold reserve and the continued expansion of the money supply had again brought the gold reserve to the legal minimum and this time the Congress eliminated it entirely.

Thus, three years before President Nixon terminated the gold convertibility of the dollar, the gold reserve requirement for the money supply had already been eliminated. And 20 years before that, the decision was first made to change the gold reserve requirement rather than to restrict the expansion of money. This was a complete departure from the most important monetary aspect of the gold standard. The first change could be explained as a war necessity, although the reserve requirement could have been suspended temporarily and resumed after the end of the war when U.S. gold reserves were greatly increased. The second change could be explained as reasonable because there had been no reduction in U.S. gold reserves between the end of 1951 and the end of 1957, and the monetary expansion had been moderate. The third change could be explained as due to Europe's preference for holding gold instead of dollars, although the inflation was already under way and the capital outflow had increased enormously. The changes in reserve requirements were proposed by Democratic and Republican Presidents and in all instances by Secretaries of the Treasury with conservative views. They had concluded that the United States could not allow the money supply to be determined solely on the basis of the gold reserve.

The reduction of $8.79 billion in U.S. gold reserves in 1958-65 presented in a clear-cut manner the question whether the money supply should be limited by the gold reserves. This huge outflow of gold in eight years, 38.5 per cent of the reserves at the end of 1957, occurred in a period when the U.S. balance on current account averaged $3.28 billion a year compared with $815 million in the previous eight years. Net capital outflow, however, had increased sharply after 1955. In 1951-57, the deficit on an official reserve basis was met entirely by an increase in foreign official assets in the United States ($4.70 billion), with virtually no change in U.S. gold reserves. In 1958-65, the deficit on an official reserve basis was met by almost the same increase in foreign official assets in the United States ($4.72 billion), but mainly by the large reduction in gold reserves and a decline of $590 million in other U.S. reserve assets. The capital outflow might have indicated that U.S. interest rates were too low, and this was the rationalization for the interest equalization tax and the voluntary limitation on bank loans to foreigners. Foreign direct investment, however, continued on a large scale even after it had to be financed by corporate borrowing in the Eurobond market.

2. U.S. BALANCE OF PAYMENTS, GOLD OUTFLOW, AND PRICES, 1958-65

	Billion dollars			Per cent change from previous year				
	Trade balance	Balance on current account	Change in U.S. gold reserves	Consumer price index	GNP price deflator	Nonfarm price deflator	Manufacturing Price deflator	Manufacturing Labor cost
1958	3.46	0.78	-2.28	2.8	1.7	1.3	3.1	4:9
1959	1.15	-1.28	-1.07	0.8	2.4	2.0	2.2	-0.9
1960	4.89	2.82	-1.71	1.6	1.6	1.4	1.5	3.5
1961	5.57	3.82	-0.85	1.0	0.9	0.6	0.3	0.1
1962	4.52	3.39	-0.89	1.1	1.8	1.5	0.7	-0.4
1963	5.22	4.41	-0.46	1.2	1.5	1.1	-2.1	-3.9
1964	6.80	6.82	-0.13	1.3	1.5	1.0	0.1	-0.7
1965	4.95	5.43	-1.40	1.7	2.2	1.9	0.9	-1.1

Source: Economic Report of the President, January 1981, p. 344. International Financial Statistics, Yearbook 1981, pp. 438-39.

The domestic price and cost situation was remarkably stable in 1958-65, particularly when measured by producer prices of commodities. Over the whole period, the consumer price index rose at an average annual rate of 1.5 per cent. The GNP price deflator rose at an average rate of 1.7 per cent and the deflator of the nonfarm business product rose at an average rate of 1.4 per cent. These two deflators and the consumer price index are heavily weighted by services which have an upward trend relative to prices of commodities. The index of prices of nonfarm commodities, which is a better measure of price stability under a system of fixed parities, rose very little in 1958-65. The producer price index of industrial commodities rose at an average annual rate of 0.4 per cent. The producer price index of finished consumer goods, excluding food, rose at an average rate of one-fourth of one per cent, and did not increase at all from 1960 to 1965. The implicit price deflator of manufactured goods rose at an average rate of 0.8 per cent and declined slightly from 1960 to 1965. Unit labor

cost in manufacturing rose by slightly more than 0.1 per cent a year from 1957 to 1965 and fell at an average rate of 2.0 per cent from 1961 to 1965.

This would not seem to be a situation which called for a contraction of the money supply as would have had to occur if it were determined by the gold reserve. The monetary expansion was on the generous side, but not markedly excessive. The average annual increase in M-1B was 3.0 per cent from the end of 1959 to the end of 1965, although it stepped up to 4.6 per cent in 1964 and 1965. The average annual increase in the new M-2 was 7.5 per cent, but rose to over 8 per cent beginning in 1962. Greater restraint in the expansion of the money supply was called for, but not on the scale indicated by the gold outflow. A more cautious monetary policy could have reduced the gold outflow but would not have stopped it. As gold production was not enough to enable the Europeans to add to their reserves on the scale they preferred, they did it by cannibalizing the reserves of the United States. This is a problem that could recur if the United States restores a gold standard.

Problems in restoring the gold standard

The most remarkable aspect of the gold standard is not that it provided price stability or steady economic growth, but that it could survive so long under great strain and stress. The gold standard began with a deep depression in the 1820s that disrupted the political stability of Europe and it ended in a great depression in the 1930s that threatened the political stability of the United States. In the intervening period, recessions were usually longer and deeper than they have been since 1933, and they were frequently accompanied by financial crises from which the economy was free after 1933. It is important to know why the gold standard was able to survive for a century under such conditions.

The reasons are partly social, partly economic, and partly political. Gold was regarded as natural money and the maintenance of the gold value of the currency was the sole objective of economic and monetary policy. The money illusion cast a veil over price movements which the public regarded as due to changes in supply.* Recessions were considered acts of God in the same category as crop failures. No one expected Governments to do anything about unemployment, or believed that they could if they tried. Besides, intervention by the Government would have required expenditures that would have unbalanced the budget, a moral sin except in time of war. Finally, the hundred years from 1815 to 1914 were free of a prolonged war that engaged the Great Powers-- the longest was our own Civil War. Economic policy can no longer subordinate social security and national security to the maintenance of the gold value of the dollar, as is evident in the budget. In 1913, Federal

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* Even Thomas Tooke, who on budget deficits was a complete monetarist, was taken in by the money illusion. In explaining the decline of prices from 1814 to 1837, he listed the following causes: (1) a series of good harvests following a series of bad harvests; (2) elimination of obstacles to imports; (3) the reduction in transport costs and war risk insurance on imports, and cheaper internal communications; (4) the rise in the foreign exchange value of sterling after resumption of gold convertibility; (5) technical improvements in production and introduction of new lower-cost products; and (6) a reduction of the general rate of interest and wider use of savings in productive investment.

expenditures of $680 million were 1.7 per cent of the GNP. In 1980, budget outlays of $580 billion were 22.4 per cent of the GNP, with 70 per cent for transfer payments and national defense.

There are a number of problems that make it difficult if not impossible to restore a gold standard. The secular fluctuations in prices under the classical gold standard were a consequence of changes in gold production adjusted for a 3 per cent trend. It is doubtful whether gold production can be adequate for price stability under a gold standard. The production of gold outside the Communist countries reached a peak in 1966 and has declined by 26 per cent since then. In South Africa, production reached a peak in 1970 and has fallen by 34 per cent. Net sales of gold by the Communist countries fluctuate considerably from year to year, depending mainly on the need for foreign exchange by the Soviet Union to pay for grain imports. And while production has fallen, more of it has been absorbed in nonmonetary uses rather than added to gold reserves. From 1951 to 1960, the monetary stock of gold, excluding the reserves of the Communist countries, increased by an average of $580 million a year (1.5 per cent). From 1961 to 1970, it increased by an average of $100 million a year (0.2 per cent). From January 1971 to July 1981, the monetary stock of gold fell by 2.9 per cent because of gold sales by the International Monetary Fund, the United States and a few other countries.

In the long run, the gold standard cannot function effectively unless there is an adequate but not excessive growth in the monetary stock of gold at a fairly regular rate. In spite of the recent decline in output, the restoration of a fixed monetary price of gold at about the present value, assuming the inflation were ended, would encourage more production as the increase in output could not affect its price. Gold producers would also offer all of their production for sale, instead of using it for collateral on loans as South Africa has done at times to avoid putting pressure on a weak market. Nevertheless, it is unlikely that gold production would be sufficient to enable gold reserves to grow at an adequate rate. That is because the growth of production depends on the discovery of new gold fields and such discoveries are becoming less frequent. At the same time, the absorption of gold by the arts and industry has increased considerably and from 1976 to 1979 exceeded gold production outside the Communist countries, although such use of gold fell sharply in 1980 because of the high price.

The growth of the monetary gold stock would not be an immediate problem as gold reserves at present market prices are adequate to support a moderate growth of the monetary base for some time. In the United States, the gold reserves valued at $400 an ounce were equal to 67.3 per cent of the note and deposit liabilities of the Federal Reserve Banks at the end of September 1981. The ratio is very much higher in Germany, France, the United Kingdom and Italy, but considerably lower in Japan. The immediate problem for the United States would be to maintain convertibility of the dollar. This is essentially a question of maintaining the equal attractiveness of gold and the dollar. Under the classical gold standard, when the world pattern of payments was always reasonably well-balanced, and deficits were mainly of a cyclical or fortuitous character, a financial center like London could always minimize a gold outflow or induce a gold inflow when the exchange rate fell to the gold export point by raising bank rate by 1 per cent or under crisis conditions by 3 or 4 per cent. Actually, it was not until 1860 that the Bank of England began the systematic use of bank rate to attract an

inflow of gold when sterling fell, although bank rate was previously raised when there was a domestic drain or a foreign drain of gold.*

The situation is completely different now. A small group of countries, members of OPEC, had a current account surplus of over $100 billion in 1980 and will have a surplus of close to $80 billion this year. In a world of inconvertible currencies, the members of OPEC must of necessity have a capital outflow of equal magnitude. This capital is invested in a variety of assets in different countries and in different currencies. In determining the distribution of their assets, the members of OPEC are concerned with the stability of the value and the return on these assets, minimizing risks by diversification. Although some members of OPEC bought gold last year, they can put only a limited amount into such purchases because large-scale buying would raise the price enormously. This also applies to some other assets, such as common stocks, of which the supply, although large, is limited because new issues are relatively small. For this reason, the main assets acquired by members of OPEC have been deposits, money market paper, and other debt obligations.

The asset preference of members of OPEC would change considerably if the gold standard were adopted. Even if they were to use only a small part of their current account surplus to acquire gold, it would result in a rapid depletion of U.S. reserves. Moreover, members of OPEC could decide to use some of the present official assets in the United States for this purpose. In fact, there would be nothing to stop other countries that have dollar reserves from diversifying their holdings by converting some of the dollars into gold. With the huge current account surplus of members of OPEC and the large official holdings of assets in this country-- $162.2 billion at the end of August 1981-- it would not be feasible for the United States to resume the conversion of dollars into gold for foreign official agencies.

Finally, the changing preference of the public for holding gold, now met through price changes, would be a potential source of instability if the United States adopted a gold standard. The amount of gold that has gone into hoarding, investment and speculation has increased enormously since 1967. Such holdings are very sensitive to the price of gold and the prospect of a change in price. If the gold standard were restored at a monetary price that hoarders, investors and speculators thought too low, they could absorb all the gold that was available in the market and drain tens of millions of ounces from reserves, as they did in 1967-68. On the other hand, if they thought that the price was too high, the reserves would be inflated by the dishoarding of hundreds of millions of ounces of gold. In the former case, the money supply would have to be sharply contracted; in the latter case, the money supply would have to be enormously expanded. It is paradoxical that the restoration of the gold standard could become the greatest threat to monetary stability if the inflation were ended.

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* "Whatever persons-- one bank or many banks-- in any country hold the banking reserve of that country [the reserves above the legal minimum on the currency in circulation], ought at the very beginning of an unfavourable foreign exchange at once to raise the rate of interest, so as to prevent their reserve from being diminished farther, and so as to replenish it by imports of bullion. This duty, up to about the year 1860, the Bank of England did not perform at all . . ." Walter Bagehot, Lombard Street, p. 46 (New Yor'., 1873).

A role for gold in the monetary system

Although it is not feasible to restore the gold standard, some of its traditional features could be incorporated in the national and international monetary system and would contribute to the maintenance of monetary stability. The most important feature of the gold standard is the limitation it placed on the growth of the money supply. The traditional method of limiting the money supply by requiring gold reserves and having the money supply expand and contract automatically with the inflow and outflow of gold was too restrictive. Under present conditions, the growth of the money supply would depend on the erratic changes in gold production and gold sales of the Soviet Union; and with the unbalanced pattern of international payments and the speculation in gold, it would be impossible to let the money supply expand and contract in response to an outflow and inflow of gold.

It would be desirable, however, to devise a method by which the note and deposit liabilities of the Federal Reserve Banks would again be subject to reserve requirements. The reserves would have to be of a kind that would grow at a fairly regular rate and that could not be injected haphazardly into the world stock of monetary reserves or withdrawn suddenly from aggregate reserves. Mr. Robert E. Weintraub of the staff of the Joint Economic Committee has suggested a method by which the book value of U.S. gold reserves would be increased at a regular rate to allow an adequate expansion of the money supply. Similar methods could be used to assure a steady growth in the value of the world stock of monetary gold. If a system of fixed par values is to be restored ultimately, it would be desirable to have the requirements stated in terms of reserves used in international settlements. If U.S. reserves are to increase and decrease with changes in the balance of payments, the Federal Reserve would have to have flexibility in adjusting the money supply to changes in reserves while recognizing the need to respond to a decline in reserves.

Fixed par values can contribute to monetary and economic stability, provided the par values of the currencies of the large trading countries are appropriate for their international economic position. The Bretton Woods system broke down because of the inflation in the United States and the failure to adjust the par values of the currencies of deficit and surplus countries. Ultimately, it would be desirable to return to fixed par values, although with greater flexibility than under the original Bretton Woods rules. That is obviously not possible under present conditions. Much can be done, however, to improve the system of floating rates. Fluctuations in the dollar exchange rates for the major currencies have been excessive and disruptive. The rise and fall of such rates by 15 to 20 per cent in a few months and by as much as 40 per cent in a year cannot possibly reflect changes in underlying economic conditions. With such large fluctuations, the dollar must be overvalued at the top rate or undervalued at the bottom rate, and most likely overvalued and undervalued alternately.

The International Monetary Fund has a mandate to maintain surveillance of the exchange rate policies of its members. It can meet this responsibility by having its members cooperate in avoiding very large fluctuations in exchange rates, specifically the dollar rates for the currencies in the European Monetary System. Exchange rates fluctuate so much because traders know from previous experience that once a currency begins to rise it will continue to rise until the rate is so high that maintaining a long position has become too risky. It is a serious mistake for the monetary authorities to ignore the behavior of the exchange rate as it is an integral part of monetary policy. An undervalued currency is like a too-easy

monetary policy-- it stimulates output and accelerates the rise of prices. And an undervalued currency is like a too-tight monetary policy-- it holds down output and slows the rise of prices. There is no merit in the argument that the monetary authorities should refrain from intervention because no one knows what the right exchange rate is. The purpose of intervention is not to establish a right rate, but to avoid the extremes which are obviously not the right rates.

In a system of fixed parities, it is essential that countries accept responsibility for maintaining the foreign exchange value of their currencies. Until 1971, the United States did that by buying and selling gold for international settlements. At present, the dollar is not convertible in reserve assets, although it is convertible into other currencies through the exchange market and countries that want gold can buy it with dollars in the free market. Unless the system of holding and using reserves were changed, the United States could not undertake to convert the dollar in reserve assets if fixed parities were ever restored, as it could be stripped of much of its reserves even when it had a balance of payments surplus on an official reserve basis. That is because deficit countries would settle their deficits with the United States by drawing down their dollar balances, while surplus countries could present the dollars they acquire for conversion in reserve assets. If the United States is to settle its deficits in reserve assets, it must receive the same reserve assets in settlements when it has a surplus.

This could be done through establishment of a Reserve Settlement Account in the International Monetary Fund. Member countries would deposit their foreign exchange and SDRs in this Account in return for a balance denominated in SDRs. The IMF would establish a new monetary price for gold in SDRs and this would result in a fixed price for gold in terms of every currency. To avoid a sudden massive increase in reserves through the revaluation of gold, members would deposit in the Account only an agreed proportion of their gold reserves each year valued at the new monetary price. Settlement of balance of payments surpluses and deficits would be made only through the Account in much the same way that they were made under the classical gold standard. A deficit country needing dollars could acquire them from the Federal Reserve Bank of New York, as agent for the Treasury, in return for a transfer from its balance in the Account. And a surplus country acquiring dollars would have them converted through a transfer to its balance in the Account. The U.S. balance in the Account would be included in the reserves that could be held against the note and deposit liabilities of the Federal Reserve Banks.

Gold would be the main reserve asset in this system and the annual addition of gold to the Account at the new monetary price would provide a steady increase in aggregate reserves for many years. The IMF would also place its gold holdings in the Account at the new monetary price, thus increasing the resources at its disposal for granting reserve credit. Members of the IMF would not buy gold in the free market to add to their reserves, but the IMF would stand ready to buy gold offered to it. Whether it should also sell gold to the market is a question that requires further consideration. If the annual increase of reserves through the revaluation of gold and the purchase of newly-mined gold is not adequate, the IMF would be authorized to issue enough SDRs, after approval by an 85 per cent majority, to bring the increase in aggregate reserves to the target rate-- say, 3 per cent a year. The IMF would continue to grant reserve credit through its General Account to enable countries to meet temporary balance of payments deficits, along with the use of their own reserves.

The inclusion of gold as the major component of aggregate reserves and the denomination of par values in gold would impart a gold aspect to the international monetary system that would add to confidence in currencies. The requirement that balance of payments deficits be settled in reserves through the Account would impose discipline on members of the IMF. The establishment of such an international monetary system would have to be preceded, of course, by the elimination of inflation in the large trading countries and the de facto stabilization of the exchange rates for their currencies. That is the long, hard task to which the monetary authorities should devote themselves before undertaking far-reaching commitments on gold.

* * * * *

Finally, in order to better inform the public of the legal obstacles to a return to gold than is done in this Report, I am including as part of my Views, for printing in full at this point in the Report, a study prepared by Raymond Natter of the Congressional Research Service, entitled "Legal Considerations Relating to a Return to a 'Gold Standard' Without New Legislation."

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LEGAL CONSIDERATIONS RELATING TO A RETURN TO A "GOLD STANDARD" WITHOUT NEW LEGISLATION

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EXECUTIVE SUMMARY

A return to a linkage between U.S. currency and gold may involve convertibility between paper currency and gold, backing of paper currency with gold, or some form of indexing so that the value of Government securities is related to the price of a fixed amount of gold bullion.

Convertibility between paper currency and gold would appear to be inhibited by several statutes, including 31 U.S.C. § 315b which prohibits the minting of United States gold coins for domestic circulation, and 31 U.S.C. §§ 773a-773d, which withdraws the consent of the United States to be sued to enforce so-called "gold clause" provisions or to redeem currency for more than its face value. In addition, these statutory provisions prohibit the expenditure of any funds in payment upon U.S. currency except on an "equal and uniform dollar for dollar basis." Since gold is not considered legal tender, and since there is no longer a gold value for the dollar, this provision may prevent the redemption of paper currency for gold, and certainly for a fixed amount of gold. Finally, the Articles of Agreement of the International Monetary Fund as well as the Bretton Woods Agreement Act appear to prevent the establishment of a par value for the dollar without Congressional action.

With regard to gold backing for the dollar, the Treasury has considerable authority to deal in gold, and could issue gold backed certificates under 31 U.S.C. § 405b. However, this provision requires that gold be valued at approximately $42.22 per ounce for this purpose, thus imposing a practical difficulty upon such issuance to the general public. Gold backing for other forms of currency, such as Federal reserve notes, Treasury notes and U.S. notes may also be prohibited by Public Law 90-269, which removed the requirement for such backing which previously existed. It may be possible for the Board of Governors of the Federal Reserve System to informally target the growth of money supply to U.S. gold holdings, although such actions may be open to the charge of being contrary to congressional intent as expressed in Public Law 90-269.

Indexing of U.S. securities and the price of a fixed amount of gold would appear to be prevented by 31 U.S.C. §§ 773a-773d, which withdrew the consent of the United States to be sued on gold clause provisions, and precluded payment on such obligations at other than their dollar face value. "Gold clause" provisions have been defined to include terms indexing the value of a security to the price of gold.

Although at present various statutes appear to prevent or restrict a return to one of the forms of a gold standard discussed, the repeal or appropriate modification of these restrictions would allow the Executive to return to a gold standard. In addition, since the term "gold standard" is not legally defined, the Executive may be able to achieve some linkage between gold and U.S. currency through a mechanism not prohibited by the above provisions of law.

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I. Introduction

During the past few years considerable attention has been focused on the question of whether or not the United States should return to some form of "gold standard" with regard to our domestic monetary system. This paper will discuss the feasibility of such action under present laws in order to determine whether additional legislation would be needed to achieve this end.

It should be noted at the onset that, from a legal point of view, the term "gold standard" is not given a precise meaning, but rather is a descriptive phrase indicating a relationship that may take various forms.[1/] For example, under the "gold coin standard," the Government establishes and maintains a fixed price for gold, and allows unlimited convertibility between paper currency and gold coins. Gold coins are freely minted without restriction and circulate along with paper currency. Thus an individual can freely exchange paper currency for gold coins or gold coins for paper currency at any time.

The "gold bullion standard" is a gold standard in which gold coins do not circulate, but instead are melted down into bullion. Under one version of this standard individuals may convert paper currency into gold through the purchase of minimum amounts of bullion. However, as it existed in the United States after 1933, paper currency could not be ex-

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1/ However, technical economic usage of the term usually requires at least that the domestic monetary unit be defined in terms of gold, be freely convertible into gold at a fixed price, and that the free export and import and melting of gold be permitted.

changed domestically for gold bullion. Until August 15, 1971, the United States did stand ready to convert U.S. dollars with gold for foreign official holders, for international monetary purposes. Gold, under this type of standard provided backing for the paper currency issued by the Government, either fully or partially.

Another alternative under this standard would be to retain the gold bullion as a required backing for paper currency, but not allow redeemption in gold either internationally or domestically. Under this version the gold bullion would simply act as a limitation upon the total amount of paper currency which could be legally authorized.

Finally, some economists have recently proposed that a return to a "gold standard" could be accomplished through the issuance of Government securities and notes indexed to the price of gold. Under this concept, the value of the securities so issued would vary in direct proportion to the value of gold, and if allowed to circulate freely, could become, in essence, a form of paper currency as valuable as the equivalent fixed amount of gold purchasable at the date of issuance.

Thus, the following characteristics would appear to be relevant in determining whether or not the United States could return to a "gold standard" without additional legislation: (1) convertibility of currency and gold; (2) backing of currency by gold, either partially or fully; and (3) indexing Government securities or notes with the price of gold, even if convertibility is not permitted.

II. Provisions Which Restrict the Ability of the Government to Return to a Gold Standard

The following provisions appear to restrict or prohibit the Federal Reserve System, the U.S. Treasury Department, or any other Executive Branch agency, from taking actions to reinstitute one or more elements of the gold standards described above.

A. Gold Reserve Act of 1934, 48 Stat. 337.

Among other things, the Gold Reserve Act of 1934 amended Section 16 of the Federal Reserve Act, 12 U.S.C. § 411. Prior to the amendment the Federal Reserve Act specified that Federal reserve notes "shall be redeemed in gold on demand at the Treasury... or in gold or lawful money at any Federal reserve bank." The Gold Reserve Act removed the word "gold" from this provision and reworded the section so that it now provides that Federal reserve notes "shall be redeemed in lawful money on demand at the Treasury... or at any Federal reserve bank." Thus, it appears that by implication this amendment had the effect of prohibiting the redemption of Federal reserve notes in gold, since the amendment distinguished "lawful money" and gold.

B. 31 U.S.C. § 315b.

Section 5 of the Gold Reserve Act of 1934, 31 U.S.C. § 315b, provides that "no gold shall hereafter be coined, and no gold coin shall hereafter be paid out or delivered by the United States...All gold coins of the United States shall be withdrawn from circulation, and, together with all other gold owned by the United States, shall be formed into bars of such weights and degrees of fineness as the Secretary of the Treasury may direct." This provision would appear to prevent the return to a gold coin standard in the United States by Executive action alone. This provision did not restrict gold coin mintage for foreign countries.

C. 31 U.S.C. §§ 773a-7773d.

The Joint Resolution of August 27, 1935, codified at 31 U.S.C. §§ 773a-773d, was enacted in response to the Supreme Court's decision in Perry v. United States, 294 U.S. 330 (1935). See, H.R. Rep. No. 74-1519, 74th Cong. 1st Sess. 5 (1935). In Perry the Court held that the provisions of the Joint Resolution of 1933, the so-called Gold Clause Resolution, were unconstitutional to the extent they attempted to override existing obligations of the United States Government. The Gold Clause Resolution provided that any clause in an obligation, public or private, which called for payment in gold, or in an amount of money measured thereby, was void as against public policy. The Court upheld the validity of the Resolution as it applied to future contracts of the Government, and as it applied to all contracts made by State governments or private parties, but held that it could not be used to invalidate existing contractual obligations of the United States Government. 2/

In response to this decision, Congress passed the Joint Resolution of August 27, 1935. This Resolution provided: (1) that lawful holders of coins or currencies of the United States shall be entitled to exchange them, dollar for dollar, for other coins or currencies which may be lawfully acquired and are legal tender; (2) that the United States would no longer consent to be sued with regard to any gold-clause security, coin or currency in which a claim is made for payment or credit in excess of the face or nominal value in dollars of the securities, coins or currencies in question; and (3) that no sums shall be appropriated or expended in payment upon

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2/ The provisions of the Gold Clause Resolution of 1933 were repealed as to obligations entered into on or after October 28, 1977. See, Public Law 95-147.

securities, coins or currencies except on "an equal and uniform dollar for dollar basis." The term "gold clause security" was defined by the Resolution to mean a provision in a contract which purports to give the obligee a right to require payment in gold, or in a particular kind of coin or currency of the United States, or in an amount in money of the United States measured thereby.

The Joint Resolution of 1935 would appear to have the direct effect of preventing the United States Government from issuing debt securities or notes which are indexed to the price of gold, since such an indexing provision would be a "gold clause" as that term is defined in the Resolution. Cf. Southern Capital Corp. v. Southern Pacific Co., 568 F. 2d 590 (8th Cir. 1978). As such, a party could not obtain enforcement of this provision in the courts, since the United States effectively withdrew its permission to be sued on such clauses. Similarly, suits involving convertibility between currency and gold may be barred by this provision to the extent that a claim is made for payment in excess of the nominal or face value of the currency. And under the Resolution, a private party is not entitled to demand gold in exchange for currency since gold is not considered legal tender (See 31 U.S.C. §§ 451 et seq.). In addition, the Resolution prohibits Federal expenditures for payment on securities or currencies except on an "equal and uniform dollar for dollar basis." Since gold coins have been statutorily withdrawn from circulation (31 U.S.C. § 315b), and gold bullion and other forms of gold are not legal tender, and since there is no official gold value for the dollar (See G below), this Resolution may limit the ability of the Treasury to redeem currency in gold, and certainly for a pre-determined, fixed amount of gold.

D. Public Law 90-269 (1968).

Public Law 90-269 amended the Federal Reserve Act so as to eliminate the requirement that the Federal reserve banks maintain reserves in gold certificates of not less than 25 percent against Federal reserve notes in actual circulation. In addition, this Act eliminated the gold reserve requirement for U.S. notes and Treasury notes of 1890, thus ending all gold backing for U.S. currency. See, H.R. Rep. No. 90-1095, 90th Cong. 2d Sess. (1968). Reserves now consist primarily of deposits backed by Government securities and vault cash.

E. 31 U.S.C. § 821 (b)(2).

The so-called Thomas Amendment to the Agricultural Adjustment Act of 1933, Public Law 73-10, codified at 31 U.S.C. § 821(b)(2), granted to the President the discretionary authority to fix the weight of the gold dollar at such amounts as he finds necessary to stabilize domestic prices or to protect foreign commerce. This authority specifically expired on June 30, 1943 pursuant to the provisions of the Gold Reserve Act Amendments of 1941, 55 Stat. 395 (1941). Thus, it appears that Congress specifically revoked any unilateral Presidential authority to adjust the weight of the gold dollar.

F. Second Amendment To The Articles of Agreement of the International Monetary Fund, 29 U.S. Treaties 2204.

The Second Amendment to the Articles of Agreement of the International Monetary Fund greatly reduced the role of gold in international finance, and substituted in its place Special Drawing Rights or SDRs, consisting of a "basket" of currencies. Article IV, Section 2 of the Amendment provides that member nations may enter into exchange arrangements which may include:

> (i) the maintenance by a member of a value for its currency it terms of special drawing right or another denominator, other than gold, selected by the member,

> or (ii) cooperative arrangements by which members maintain the value of their currencies in relation to the value of the currency or currencies of other members, or (iii) other exchange arrangements of a member's choice. (emphasis added)

Article VIII, Section 4 of the Amendment provides that each member country shall buy balances of its currency held by another member, and specifies that the buying countries shall have the option to pay either in special drawing rights or in the currency of the member making the request. Section 7 of that same Article provides that each member country shall undertake to collaborate with the Fund and with other member countries in order to assure that the policies of members with respect to reserve assets shall be consistent with the objectives of making the special drawing right the principal reserve asset in the international monetary system. Finally, Schedule C of the Articles of Agreement provides that par values may be established in terms of special drawing rights or in terms of other common denominators prescribed by the Fund, but that the common denominator shall not be gold or a currency.

G. Bretton-Woods Agreement Act, Public Law 94-564

Section 5 of the Bretton-Woods Agreement Act, 22 U.S.C. § 286c, provides that unless authorized by Congress by law, neither the President nor any other person or agency may propose or approve any change in the par value of the dollar under the Articles of Agreement of the International Monetary Fund. However, under section 6 of this Act, the official par value for the dollar was abolished. Therefore, these provisions prevent the establishment of a par value for the dollar in gold or any other asset, without Congressional authorization.

Taken together, the Articles of Agreement and this provision appear to prevent the United States from establishing and maintaining an official value of the dollar in terms of gold for settling international balances. Of course,

these treaty provisions do not prevent future changes in this situation through amendments to the Agreement, with the consent of three-fifths of the members having eighty-five percent of the total voting power, or through Acts of Congress.

III. Provisions Which Would Allow A Return To A Gold Standard Through Executive Action

A. Gold Reserve Act of 1934, 48 Stat. 340.

As noted in the previous section, the Gold Reserve Act withdrew gold coins from circulation and provided that Federal reserve notes would no longer be redeemed in gold. Section 6 of the Act, 31 U.S.C. § 408a, also provided:

> Except to the extent permitted in regulations which may be issued hereunder by the Secretary of the Treasury with the approval of the President, no currency of the United States shall be redeemed in gold....
>
> No redemptions in gold shall be made except in gold bullion bearing the stamp of the United States mint or assay office in an amount equivalent at the time of redemption to the currency surrendered for such purpose. (emphasis added)

Thus, under this provision the Secretary of the Treasury could, with the consent of the President, choose to redeem United States currency in gold. However, since Federal reserve notes arguably cannot be redeemed in gold bullion but instead only in "lawful money," 31 U.S.C. § 408a may be limited in effect only to the redemption of other forms of currency, such as U.S. notes, or Treasury notes. In any case, the fact that a gold value for the dollar can only be established by statute, coupled with the terms of the Joint Resolution of 1935, probably prevents the Secretary from taking such action now.

B. Public Law 93-110, As Amended by Public Law 93-373.

These laws repealed the prohibition against United States citizens purchasing, holding, selling or otherwise dealing in gold in the United States, effective either as of December 31, 1974 or at a prior time if the President finds that the elimination of the restrictions on owning gold will not adversely

affect the United States' international monetary position. President Ford issued Executive Order No. 11825 (40 Fed. Reg. 1003) (Dec. 31, 1974) repealing prior Executive Orders prohibiting the acquisition of gold bullion or gold certificates by private parties in the United States.

C. 31 U.S.C. § 405b.

This section authorizes the Secretary of the Treasury to issue gold certificates in such form and such denominations as he may determine, against any gold held by the United States Treasury. Under a 1976 amendment to this section (Public Law 94-564 § 8), the amount of gold certificates issued and outstanding may at no time exceed the value of the gold so held against such gold certificates, as measured by the par value existing on October 19, 1976. At that time the par value was set at the equivalent of approximately $42.22 per fine troy ounce of gold. Thus, under this provision, the Secretary of the Treasury could issue gold certificates backed by gold, but only to the extent that gold holdings, valued at $42.22 per fine ounce, equal the total amount of certificates issued and outstanding. In addition, under the terms of the Joint Resolution of 1935, holders of these certificates would not be entitled to redeem the certificates in gold, but only in other forms of currency.

D. 31 U.S.C. § 428.

This provision enacted in 1863, authorized the Secretary of the Treasury to receive deposits of gold coin and bullion and to issue certificates of deposit therefor corresponding with the denominations of United States notes. However, the Joint Resolution of 1935 apparently prevents these certificates from being redeemed in gold, or in any other manner than on a dollar for dollar basis. And in light of 31 U.S.C. §405b and section 6 of the Gold Reserve Act of

1934, this provision may be considered obsolete. See, Staff of the House Committee on the Judiciary, 97th Cong. 1st Sess. Report on H.R. 4774, Revision of Title 31 United States Code 328 (Comm. Print Oct. 19, 1981).

E. 31 U.S.C. § 429.

This provision, as amended in 1916, authorized the Secretary of the Treasury to receive deposits of gold coin and to issue gold certificates therefore, and to receive deposits of foreign gold coin and gold bullion, and to issue gold certificates therefor, provided the latter certificates do not exceed two-thirds of the total amount of certificates outstanding. Since 31 U.S.C. § 315b withdrew gold coins from circulation and required that they be melted into bullion, the Secretary's ability to issue new gold certificates based upon the purchase of gold bullion or foreign gold coins may have been effectively eliminated. In any case, 31 U.S.C. § 405b may require that any gold so purchased be valued at $42.22 per ounce, which would appear to preclude any purchases. And even if the Secretary could issue gold certificates under Section 429, the Joint Resolution of 1935 would still act to prevent the redemption of gold for such certificates. Thus, this section may also be considered obsolete. See, Staff of the House Committee on the Judiciary, 97th Cong., 1st Sess. Report on H.R. 4774, Revision of Title 31 United States Code 328 (Comm. Print Oct. 19, 1981).

F. 31 U.S.C. § 822a.

Section 10 of the Gold Reserve Act of 1934, as amended in 1976 by Public Law 94-564, and codified at 31 U.S.C. § 822a, provides that the Secretary of the Treasury, with the approval of the President, is authorized to deal in gold and foreign exchange for the account of the stabilization fund established by this provision. This section also provides that such dealings

must be consistent with the obligations of the United States in the International Monetary Fund. The fund was originally established in order to stablize the exchange value of the dollar, however of the $2 billion appropriated to the fund, $1.8 billion was used, pursuant to a 1945 Act of Congress (59 Stat. 514) to pay part of the United States' subscription to the IMF, leaving only $200 million for the fund's capital.

G. 31 U.S.C §§ 733, 734

Sections 8 and 9 of the Gold Reserve Act, codified at 31 U.S.C. §§ 733 and 734, authorize the Secretary of the Treasury to sell gold, and with the approval of the President, to purchase gold, at home or abroad, in such amounts and manner and at such rates as he deems to be in the public interest. Gold purchases may be made with any direct obligation, coin, or currency of the U.S. authorized by law, or with any funds of the Treasury not otherwise appropriated, without regard to the laws relating to the maintenance of parity.

IV. Discussion and Conclusion

In determining whether or not the Executive can return to a "gold standard" without additional legislation, the following characteristics of most "gold standard" plans may be considered: (1) the ability to freely convert with the U.S. Government currency for gold at a fixed price; (2) the ability to back currency with gold even if convertibility is not permitted; and (3) the ability to index securities or notes with the price of gold, regardless of convertibility privileges.

With regard to convertibility, we note that Section 5 of the Gold Reserve Act, 31 U.S.C. § 315b prohibits the Government from minting gold coins

for domestic purposes, and directs the Government to melt existing coins into gold bullion, thus preventing the return to a "gold coin standard" without new authorizing legislation. However, despite this restriction, it may still be argued that currency could still be exchanged for gold bullion, held by the Treasury, thus for practical purposes establishing convertibility at a fixed price. Support for this position may be found in Section 6 of the Gold Reserve Act, 31 U.S.C. § 408a, which authorizes the Secretary of the Treasury, with the approval of the President to redeem currency in gold bullion, and Public Law 93-373 allowing private parties to hold gold. Nevertheless, the Joint Resolution of 1935, 31 U.S.C. §§ 773a-777d, withdraws the consent of the Government to be sued with regard to any coin or currency in which a claim is made for payment in excess of the face amount of the coin or currency, and prohibits any expenditures on any coin or currency except on an "equal and uniform dollar for dollar basis." In addition the authority of the President to fix the weight of the gold dollar was restricted by law so that any establishment of a gold or par value for the dollar requires Congressional action. And the Articles of Agreement of the International Monetary Fund prohibit the use of gold as a common denominator for international monetary purposes. Taken together, these provisions would appear to prevent the free convertibility by the Government between United States currency and gold at a fixed price both domestically and at the international level, despite the provisions of Section 6 of the Gold Reserve Act which would appear to otherwise authorize such actions.

With regard to gold convertibility and gold backing for U.S. currency, the Secretary of the Treasury has considerable authority under 31 U.S.C. § 822a and 31 U.S.C. § 734 to deal in gold with the approval of the President.

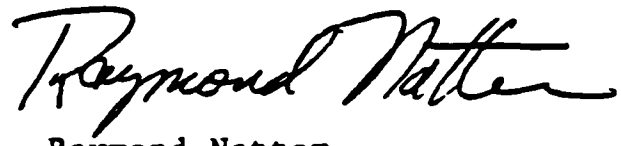
And with the expiration of the ban against private parties holding gold certificates, the Secretary would appear to be able to issue such certificates backed by gold so purchased or already in the possession of the Treasury. However, under the Joint Resolution of 1935, 31 U.S.C. § 773a-773d, one could not sue the Government for payment in gold on these certificates, and the Government may not be able to expend funds in redeeming the certificates in gold. Further, under 31 U.S.C. § 405b, the gold certificates would have to be backed by gold valued at $42.22 per ounce, which could create great practical difficulties.

On the other hand, it may be possible to link gold reserves held by the Treasury with other forms of U.S. currency, such as Federal Reserve notes. However, such a correlation would apparently have to be done on an informal basis, since the official gold reserve requirement for Federal reserve notes, as well as Treasury notes and United States notes was terminated through an Act of Congress in 1968. (Public Law 90-269). Any such informal linkage would also be open to the charge that it was contrary to the intent of Congress as expressed in 1968, and with regard to Federal reserve notes, would require the cooperation of the Board of Governors of the Federal Reserve System. And since no authority exists at present for the issuance of Treasury notes, and the circulation of U.S. notes must be maintained, by statute, at the fixed amount of $300 million dollars (31 U.S.C. § 403), the possibility of direct backing other forms of U.S. currency and gold without additional legislation must be considered problematic.

Finally, with regard to indexing U.S. securities and the price of gold, such action would appear to be prohibited by the terms of the Joint Resolution of 1935, withdrawing the consent of the United States to be sued on so-called

"gold clauses." These clauses have been defined to include clauses authorizing the payment in currency which is indexed to the price of gold. See, e.g. Southern Capital Corporation v. Southern Pacific Co., 568 F. 2d 590 (8th Cir. 1978). Since such clauses could not be enforced in the courts, it would be unlikely that a market would exist for such securities while the Joint Resolution is still in effect.

In summary, existing laws appear to effectively prevent the Executive Branch from returning to any of the several forms of "gold standard" described in this paper. If these laws were appropriately modified by Congress, authority could be provided for the Executive to reinstitute a gold standard in the country. However, it should also be noted that the term "gold standard" is not necessarily a term of art, and it is possible that the Executive may be able to initiate some formal type of relationship between the value of gold and U.S. currency without contravening the provisions discussed in this paper.



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ANNEX B

Summaries of Statements Submitted to the Commission*

*Individuals that testified and submitted statements in response to the Commission's invitation were asked to prepare brief summaries of their statements for inclusion in this report. All summaries received are reproduced, as submitted, in this annex.

Summaries of Statements Submitted to the Commission

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U.S. Policy Toward Gold

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March 4, 1982

The United States needs a new policy toward gold. For the previous several decades, U.S. gold policy was obsessed by the costs of altering the $35 parity rather than by a reasoned analysis of how U.S. gold holdings could be managed to enhance U.S. economic and foreign policy interests. The U.S. Government owns 264 million ounces of gold which, at recent market prices, has a value in excess of $100 billion. This gold is too valuable to sell and too costly to hold as a sterile asset.

The observation that there was price level stability in the long run in the nineteenth century provides the rationale for the proposals that the United States now return to the gold standard. However, long-term stability in the price level was not attained without cost; cyclical variations in income and employment were pervasive under the gold standard. Moreover, financial crises occurred on the average of once a decade and were the source of pressures to establish a central bank as a lender of last resort, both to cope with financial distress and to provide an "elastic currency."

The rationale for establishing a monetary standard is to help achieve financial and economic stability. A monetary standard is successful only if it is consistent with the financial and budgetary practices. Many countries have sought to establish foreign exchange parities for their currencies, only to be obliged to abandon them because they were inconsistent with their financial and budgetary practices. The United States has had a ceiling on the Federal debt for at least fifty years; however, whenever the growth of expenditures relative to revenue has caused the Federal debt to press against the ceiling, the ceiling is quickly raised. Bolivia, which has had more than 100 revolutions and coup d'etats in the last century, would not suddenly realize political stability by adopting a U.S.-type constitution.

The task of attaining U.S. price level stability is not the institutional one of deciding on a parity for gold, and then stipulating that the changes in gold holdings of the monetary authorities will be the only significant source of changes in the monetary base. Rather, the task is to establish the credibility of the U.S. government's commitments to a stable price level, and that significant costs will be incurred to achieve this objective.

If the U.S. authorities decide to go "back on gold," they must choose a new parity for the dollar. Consider that Rip van Winkle went to sleep in 1961, when the dollar price of gold was $35.00. Upon awakening in 1981, he is asked, "What should be the new dollar price of gold?" On the basis of traditional arguments about a proportional relationship between the world price level and the dollar price of gold--the type of argument that provides the justification for the gold standard--he might decide on $105 = $\frac{300}{100}$, since the U.S. price level now is about three times higher than the 1961 price level. But this price is much, much lower than recent market prices. If the gold parity were set at or near recent market prices, then it almost certainly would prove to be much too high if the United States succeeds in achieving reasonable price level stability.

From the point of view of the U.S. national interest, gold has a much more important role in the settlement of payments imbalances internationally than in determining the rate of growth of the money supply. As long as the market price of gold is highly variable, the most appropriate approach is to develop trading arrangements for transactions in gold among central banks. The U.S. international balance sheet--the relation between U.S.-owned reserved assets and liquid dollar assets held by foreign official institutions--appears significantly different if the gold owned by the U.S. authorities is valued on current or recent market prices. The U.S. authorities should take the initiative in attempting to standardize the approaches taken by national monetary authorities to the valuation of monetary gold. A formula might be devised to value U.S. gold in the basis of the average of prices over the last three or four years. For example, the formula might use the closing price in 36 of the last 48 months, the six months with the highest prices and the six months with lowest prices would be excluded from the determination of the value.

At some future date if the market price of gold is at or near the levels consistent with its long run equilibrium values, the U.S. authorities might take the initiative toward establishing a parity for the dollar in terms of gold. The necessary condition for a move to such a parity is the attainment of relative price stability. The sufficient condition is the move back toward a system of pegged exchange rates,

COMMENT BY THE INTERNATIONAL INSTITUTE FOR RESOURCE ECONOMICS

Submitted by

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December 29, 1981

My recent speech to the Men's Republican Club of Montgomery County Maryland expressed the views of the International Institute for Resource Economics on the gold issue. It is still relevant. Here it is:

"Since 1971 the dollar has been convertible only into an unspecified quantity of an unknown commodity. Since that date, only fools have chosen to hold dollars instead of goods. This must continue, until the dollar is again convertible into a specific quantity of a known commodity.

Which commodity? This decision can be left to the technicians. High unit value and ease of identification are considerations.

The decision to close the gold window, rather than to change the price in accordance with the increased cost of production was dictated by idiots. They were concerned with minor advantages that might accrue to the Soviet Union and South Africa. They predicted a price of $6 as the free market price of gold. Most important of all, they ignored the fact that the convertibility of the dollar into gold, as agreed to at Bretton Woods, ahd become the cornerstone of civilization on this planet.

When the International Monetary Fund met to vote on "Paper Gold"; I was there. What was I doing? I was giving away rubber yardsticks. On each yardstick, in ten languages, was the warning: "Never Trust a Politician!"

INFLATION HAS A SIMPLE SOLUTION! ALL THAT IS NEEDED IS A FIRM DETERMINATION TO RESTORE CONVERTIBILITY!"

The Institute deplores the efforts of the enemies of convertibility to complicate this issue. It is brutally simple. There are two kinds of money; HONEST and DISHONEST. History teaches us that honest money has a batting average of 1000; dishonest money a batting average of zero.

CONSTITUTIONAL GOLD

Submitted by

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November 12, 1981

The most important "commission" on the gold standard in American history was the Constitutional Convention. What is now Article I, Section 8, Clause 2 of the Constitution originally gave Congress the power "To borrow money and emit bills on the credit of the United States". The language "and emit bills", understood to authorize inconvertible paper money, was opposed almost unanimously, the delegates voting by an overwhelming majority to strike it from the text of the Constitution. As George Bancroft, the great nineteenth century American historian, concluded, "The adoption of the Constitution is to be the end of paper money ... if the Constitution shall be rightly interpreted and honestly obeyed."

In the Convention debate, absolute prohibition of paper money was urged by Oliver Ellsworth, later second Chief Justice of the United States Supreme Court, and Senator who decisively shaped the federal judiciary. The record states: "Mr. Elseworth thought this a favorable moment to shut and bar the door against paper money. The mischiefs of the various experiments which had been made, were now fresh in the public mind and had excited the disgust of all the respectable part of America. By withholding the power from the new Government more friends of influence would be gained to it than by almost any thing else. Paper money can in no case be necessary. Give the government credit, and other resources will offer. The power may do harm, never good."

Reservation of an emergency paper money power was urged by James Madison, chief architect of the Constitution, author of the Bill of Rights, fourth American President. The journal of the proceedings, which is Madison's own, records: "This vote (to bar the power) in the affirmative by Virginia was occasioned by the acquiescence of Mr. Madison who became satisfied that striking out the words would not disable the Government from the use of public notes as far as they could be safe and proper; and would only cut off the pretext for a paper currency, and particularly for making the bills a tender either for public or private debts." (Emphasis original.) Contrast Madison's intent to the legend on our Federal Reserve Notes, "legal tender for all debts public and private".

Among other implacable foes of paper money was Alexander Hamilton, our first Secretary of the Treasury, who historians conclude "in economic terms, literally built the United States". Paper money, he said, is "so certain of being abused--that the wisdom of the Government will be shown in never trusting itself with the use of so seducing and dangerous an expedient."

Chief Justice Marshall also condemned paper money, observing, "Its value is continually changing; and these changes, often great and sudden, expose individuals to immense loss, are the sources of ruinous speculations, and destroy all confidence between man and man."

Only the Civil War and Reconstruction, our greatest constitutional crises, could undermine the integrity of the monetary system carefully established by the Revolutionary generation. Our recent inflation confirms again the folly of ignoring the political vision of the Founding Fathers. Yet our problems are compounded by economists more intent on testing their theories than in fulfilling their responsibility to repair us to the classical gold standard that is part of our most fundamental political legacy.

Unless one is ready to hold the First Amendment, or representative democracy, out of date, the ideas of Madison and his peers cannot be dismissed as inapplicable to today's conditions. Since the other political institutions these men built for us continue to serve so well, we should not so casually dismiss the gold standard as the product of another age. Madison's ideas are very modern. In one of his lesser known works, entitled "Money", he examines the defects of monetarism. In the eighteenth century, "monetarist" claims were asserted by Hume and Montesquieu. Madison refuted them with the sounder classical doctrine. Inflation, wrote Madison in 1780, "has not been the effect of the quantity, considered of itself, but considered as an omen of public bankruptcy." He presents telling arguments to prove the case.

The recorded thoughts of our greatest statesmen and thinkers--both economic and political--establish beyond doubt the intellectual legitimacy of the gold standard. We all would benefit by an end to the recent, discredited, experiment with inconvertible paper money, and the restoration of the classical quality of free convertibility of notes into gold that America's founders originally secured in the Constitution.

This Gold Commission should especially heed the words of Thomas Paine, America's most influential Revolutionary thinker, who decisively shaped the ideological direction of the American Revolution. Shortly before the Constitutional Convention he wrote: "As to the assumed authority of any assembly in making paper money, or paper of any kind, a legal tender, or in other language a compulsive payment, it is a most presumptuous attempt at arbitrary power. There can be no such power in a republican government: the people have no freedom, and property no security where this practice can be acted: and the committee who shall bring in a report for this purpose, or the member who moves for it, and he who seconds it merits impeachment, and sooner or later may expect it."

-- Ralph J. Benko

WHAT ROLE FOR GOLD IN THE MONETARY SYSTEM?

Submitted by

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NOVEMBER 12, 1981

The hundred years of the classical gold standard were marked by large secular fluctuations in prices. The most difficult period was the last quarter of the 19th century when prices fell sharply and the world economy was in a protracted recession. The reason for the secular price fluctuations was the irregular growth of the world stock of monetary gold. According to Professor Cassel, if gold reserves had increased at a steady rate of 3 per cent a year prices would have remained reasonably stable. Instead, the gold stock increased at much higher or lower rates for periods of 20 to 25 years, depending on gold production. Until 1914, the index of wholesale prices in the United States fluctuated with world production of gold adjusted for a 3 per cent trend, although with a lag of five years. The inflation in World War I disrupted the relationship of gold to prices and all of the belligerents except the United States abandoned the gold standard.

The restoration of the gold standard after World War I presented a number of problems. The stock of monetary gold was not sufficient to sustain the high postwar level of prices and gold production was less than half as much relative to world reserves as before the war. The gold exchange standard economized on the need for gold reserves, but not enough to compensate for the decrease in gold production. The gold standard, which was restored in 1925-30, collapsed in the great depression of the 1930s, and all countries abandoned the gold parities of their currencies. In the United States, gold redemption of the dollar was terminated in March 1933 and the gold clause in contracts was abrogated by the Congress in June. In accordance with the Gold Reserve Act of 1934, the President fixed a new price of $35 an ounce for gold. The private holding of gold was forbidden, but the Treasury sold gold to foreign monetary authorities until this was ended in August 1971. Gold did not act as a limitation on the money supply after 1934 because whenever the reserves were near the legal minimum the requirements were reduced until they were finally eliminated in 1968.

The persistent inflation has revived interest in restoring the gold standard. The problems this would create seem insuperable at present. Gold production has been falling since 1966 and the absorption of gold in the arts and industry has exceeded production in recent years. Even before the inflation, the growth of the stock of monetary gold was minimal. The world pattern of payments is seriously unbalanced, and if members of OPEC could convert their net dollar earnings into gold at a fixed price they would probably do so on a large scale. Other countries with large holdings of dollars could also decide to diversify their reserves by converting them into gold. Finally, private holders of dollars in this country and abroad could present enormous amounts for conversion into gold if they thought the price was too low; and private holders of gold could sell enormous amounts to the Treasury for dollars if they thought the price was too high.

Although it is not feasible to restore the gold standard, some of its features could be gradually adopted as domestic and international monetary conditions improve. It might be possible to find a way of resuming reserve requirements against Federal Reserve notes and deposits, although not as rigidly as in the past. It would be desirable to moderate the fluctuations in dollar exchange rates for the major currencies and ultimately to return to fixed par values with considerable flexibility. It might also be possible to restore convertibility of the dollar into reserve assets for settling balance of payments deficits if the United States were to receive reserve assets in settlement of its surpluses. These are steps that should be considered when our inflation has been halted and the world pattern of payments becomes better balanced, instead of undertaking far-reaching commitments on gold which the United States would be unable to meet.

THE NECESSARY CHARACTERISTICS OF A MONETARY STANDARD

Submitted by

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JANUARY 7, 1982

There are already in use in the United States a large number of standards of weight and measure including standards of weight, liquid measure, length, area, volume, temperature, barometric pressure, time, speed, and numerous engineering standards for pipes, bolts, threads, and others. These standards have proven themselves in actual practice to be effective and efficient means, without government intervention, for people in our economy to cooperate in the production and distribution of goods and services. Identification of the characteristics that these standards share in common will, therefore, provide an empirically sound basis for identifying the characteristics that are necessary in order for a monetary standard to achieve comparable results.

All successful standards of weight and measure possess four characteristics;

1. THEY ARE REAL. They all have an actual, observable, measurable, substantive existence outside the minds of their users. None is subjective. Length can be seen, weight can be measured on a scale, speed is observable. However, while all standards are real, the application of all standards involves important subjective aspects. While a yardstick is objective, users of it decide subjectively how large to make their houses, how much land to allow for various uses, etc.

2. THEY ARE STABLE. All standards remain the same from place to place and from one time to another. Stability is necessary in order that economic activities that are dispersed in space and time be coordinated accurately and predictably.

3. THEY ARE SYSTEM-WIDE. All successful standards are available and known by all people in the system that use the measure — thus facilitating cooperation.

4. THEY ARE APPROPRIATE. All standards possess the quality that is being measured. A standard of length is a length, a standard of weight has weight, a standard of volume has volume. Nowhere is a length used as a standard of weight, or a speed used as a standard of temperature.

These four characteristics make all existing standards of weight and measure effective and efficient means for coordinating the production and distribution of goods and services throughout the economy. The only role of government in this process is to *define* the standard and to insure that scales and other measuring devices are accurately calibrated. Decisions as to actual dimensions of goods in the economy are left to the subjective discretion of the people involved.

When gold is evaluated in terms of these four characteristics, we find that it fails to meet all but the first condition, that of being real.

1. GOLD IS REAL. Gold has an observable, tangible existence. It is the reality of gold that leads proponents to believe that the use of gold as a monetary standard would rationalize the money supply.

2. GOLD IS *NOT* STABLE. The total supply of gold changes as new gold is added through mining operations and existing gold is used for industrial and cosmetic purposes. Gold is stable only in a relative sense being relatively more stable than iron or wheat. The *value* of gold is highly unstable, varying from person to person and from time to time.

3. GOLD IS *NOT* SYSTEM-WIDE. While almost everyone has heard of gold, very few people can accurately identify gold, and only experts know how to measure "karats". While anyone could weigh a piece of gold, only an expert could certify the metal as gold and attest to its purity.

4. GOLD IS *NOT* APPROPRIATE. Gold is measured by weight. The function of a monetary standard is to measure economic price. If weight were an appropriate measure of price, the heaviest goods would have the highest prices and all services, having no weight at all, would be free. Clearly, gold fails to meet the test of appropriateness.

Therefore, gold fails three of the four tests that a monetary standard must meet. Its popularity as a possible monetary standard can probably be accounted for by the fact that, historically, gold worked *better* than other commodities like grain and iron. Going on the gold standard today, however, would be like the Wright brothers, failing to make their airplane fly, advocating return to the horse and buggy. The wiser course would seem to be to search for something that successfully meets the four tests for a monetary standard.

Such a search leads to TIME as the proper monetary standard.

1. TIME IS REAL. Time is based on the rotation of the earth (hours and days) and the orbit of the earth around the sun (days and years). Time is as real as the rising and setting of the sun and the changing seasons. Its reality is measured by clocks and calendars.

2. TIME IS STABLE. Time is as stable as the rotation and orbit of the earth — extremely stable — the benchmark against which all other changes are measured.

3. TIME IS WORLDWIDE. All peoples of the earth keep time records. Clocks and calendars are found all around the earth.

4. TIME IS APPROPRIATE. A great deal of evidence supports the proposition that time is an appropriate monetary standard. One body of evidence consists of all the ways that time is presently used to organize and coordinate economic activities. Work is regulated in hours, days, and weeks; entry into the labor force is governed by age as is exit from it; rent and interest are charged by the month; taxes come due annually; depreciation is defined by time; economic planning is done in man-hours; and, ironically, inflation is measured by price changes over time. Another body of evidence is the universal association of time with money. People spend time, invest time, and save time just as they spend, invest, and save money. Finally, the time required to produce a good or render a service is a reasonable basis for setting price, as evidenced by actual practice in most fields, including auto repair, psychotherapy, and consulting.

A reasonable basis for adopting time as the monetary standard in the United States would be to convert dollars to hours by the following equation;

$$\frac{\text{Gross National Product}}{\text{Total Hours Worked}} = \text{Dollars per hour.}$$

For 1980, the equation is $\frac{\$2{,}626\text{b}}{194.66\text{b}} = \$13.49$ per hour.

ASSESSING THE ROLE OF A RESTORATION OF A GOLD STANDARD

STATEMENT OF

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PRESIDENT

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NOVEMBER 12, 1981

Mr. Chairman and members of the Gold Commission, I am David B. Bostian, Jr., and I am appearing today as President of Bostian Research Associates; Inc. It is a privilege to accept your invitation to state my view on the possible role of gold in the domestic and international monetary systems.

I do not advocate an immediate return to a domestic or international gold standard because of major economic and structural problems which exist today. I do advocate a gradual and experimental shift toward a possible full gold standard through the issuance of new gold-backed bonds or notes. The interest rate that such a new gold-backed issue would bear and the yield spreads relative to the existing, unconvertible government securities of similar maturity would offer important free market benchmarks by which to gauge the plausibility of an eventual return to a complete gold standard. Clearly, considering our $1 trillion national debt and the approximately $100 billion in interest that must be paid on it each year, a possible lowering of the interest expense would be a worthwhile goal. Nevertheless, when the basic question of instituting a gold standard as a fiscal and monetary discipline arises, those who favor it in any form must realize that it may fall short of optimistic expectations because the sources of real long term economic growth are not solely monetary in nature. Restraint in both the creation of money and federal deficits, while a constructive policy, does not, of itself, insure a greater supply of goods and services by which real economic wealth is measured!

There are many advantages to be derived, however, from any effort which reduces inflationary expectations and a gradual shift toward a gold standard through a possible experimental issue of gold-backed government securities is one way to maximize the advantages without incurring undue risks. If world political and economic conditions were more stable, this Commission might be advised to move more rapidly on instituting a gold standard, but we cannot rapidly return to the stable conditions that would allow the institution of a full gold standard. Indeed, one might ask if such a standard would be needed under an assumption that

conditions were actually stable? The risks of a hasty return to a gold standard are much more clearly defined. Consider the following:

- It would be difficult to determine the proper price at which gold should be fixed under such a standard. A price that was too high would be inflationary and a price that was too low could result in deflation.

- World gold production over the years has been very volatile with major discoveries and events disruptive of continuous mining hard to predict.

- The Soviet Union and South Africa accounted for approximately 77% of world gold production in 1980. (Soviet Union production was 8,300,000 troy oz., South African production was 21,669,468 troy oz. and world production was 38,882,381 troy oz.)

- Assuming adequate production and availability of gold, there is still the question of whether it would provide an adequate base to support real economic growth.

- Given the tremendous worldwide debt burden today and the inflation that has been a precondition to the servicing of that debt, a sudden disinflationary trend, such as might follow the rapid movement to a full gold standard, would possibly cause the disorderly liquidation of said debt with dire economic consequences.

- For maximum worldwide effectiveness, should an eventual return to a full gold standard be deemed worthy of serious consideration, a meeting of the IMF would be necessary to consider establishing an international gold standard. Given the need for three-fifths of the membership (and 85% of the votes) to agree on such a course of action, an exploratory meeting should be convened.

CONCLUSION

We must move with caution in reestablishing a gold standard because of the political and financial instability that characterizes the modern world economy. There is no easy solution to the economic malaise in which we find ourselves today and any sudden movement to an assumed panacea could be costly. If there is to be a relatively painless way out of the debt-ridden morass in which we find ourselves, it will only be through significant increases in productivity, i.e., through a national effort to increase the output of goods and services, the benchmarks of real wealth. In the last analysis, only if the nation has the will to be disciplined and productive will it ever adhere to any standard, gold or otherwise, nor will it ever achieve its maximum long term economic growth potential.

WHY GOLD?

By George L. Browning
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January 19, 1982

THE QUESTION: Is a money system based on gold essential to the social and economic health of the United States? THE ANSWER: Clearly and definitely, "YES". America's economic and money history provides the proof.

From 1776 to 1933, a period of 157 years, this commonwealth was elevated from thirteen impoverished colonies to the position of the wealthiest and most powerful nation in the World. This feat was not accomplished through the use of large quantities of money. It was accomplished by the wise and efficient use of manpower and material resources. In 1933 the total quantity of money in America was only $42.0 billion.

Today, in 1982, 49 years later, the money supply of the United States is over $2,500.0 billion -- sixty times as much money as it had in 1933. The nations's population has almost doubled and the physical quantity of material wealth available for purchase is nearly twice that of 1933. With sixty times as much money and twice as many people capable of rendering services, the economic management of the United States does not have the competency to provide for the needs of her people.

Horrendous unemployment, underproduction and maldistribution of wealth, and lack of housing and health requirements -- these are producing social unrest, rebellion against authority, violence, crime and insecurity for our families and properties.

America's sufferings are due to false money and economic concepts. Believing that increased money quantities would provide needed management for the nation's manpower and material resources, this nation cut the cords which tied the dollar to the hitching post of gold reserves. Only the whims of the politicians and money managers in power were left to control the quantity of dollars to be manufactured out of credit paper.

With sixty times as many dollars, America is unable to provide for the needs of only two times as many citizens. A better understanding of the nature and of the correct uses of good money is needed.

Money, per se, is not wealth. Money, per se, cannot create wealth. That which is used as money may have, or it may not have, a commodity value. Gold and silver coins have a commodity value. Paper currency and bank checks have no commodity value. Money is merely a mental thing based on faith - faith that the next fellow will accept that which is proffered as money in exchange for his goods or services. In the absence of that faith, not even gold would serve as good money.

Money's power, whether for good or evil, resides in its circulation - not in its mere existence. Centuries ago Aristotle said: "MONEY HOARDED AND NOT CIRCULATED IS STERILE AND NONPRODUCTIVE". Today, one trillion billion dollars locked up in vaults or in time and savings deposits, without circulation, could not produce employment, wealth or the distribution of wealth. When money is circulated in the home economy, not exported to a foreign economy, no money is consumed, used up or wasted. This is true whether the purpose of the spending is productive or destructive. Bad spending may waste precious manpower and material resources; it may impoverish the nation in material wealth, but it does not waste money.

For money to retain its value, its purchasing power, the money quantity must not be excessively increased over the quantity of wealth available for purchase. The total quantity of money in a nation, multiplied by its circulating velocity and divided by the total things sold determines the purchasing power of each unit of money - or the price level.

Gold's value in preserving the integrity of money is found in its disciplinary power to prevent over expansion. For thousands of years gold has been admired and desired for its beauty, its durability and its many uses, however, its scarcity has given it its greatest monetary value. The growth in gold quantity has never seriously exceeded the growth in material wealth quantity. Since early civilization, nothing has been found which will equal gold as a measuring stick for value, as a medium of exchange or as a temporary storage house for earnings or accumulated wealth. No credit money, throughout history, which has been securely and adequately tied to gold reserves, has ever defaulted or lost its purchasing power.

The United States can easily provide its people with a sound money system based on gold, without economic cost but with enormous social and economic gains. All the financial machinery needed is here. While, in recent years, America has lost to other nations over half of the monetary gold it held, the nation still holds enough gold to back the new money system.

It is utterly illogical to even consider returning the present dollar money system to a gold basis. The disparity between dollar quantity and gold quantity is so great that such an attempt would bring to the nation and to dollar holders insufferable punishment. The dollar should be given an extended life of about twenty-five years, but with its quantity reduced at least four per cent each year. This can be accomplished by requiring banks to reduce their dollar loans at least four per cent per year. Since money does not affect prices until it circulates, and since only twenty per cent of American dollars are now fully circulating in the forms of currency and demand deposits, and are responsible for price inflation, it is evident that if all dollar holders were allotted their share of available material wealth or gold, each dollar would have no more purchasing power than that now possessed by two dimes.

It is proposed that the United States create an entirely new money system. The new unit of money should be called "GOLDER". One hundred golders shall have a value equal to one ounce of gold. The Federal Reserve System and all banks of the nation shall be required to carry accounts in both golders and dollars. Gold reserve requirements for golders shall be approximately the same as those required for dollars in the 1930's. To avoid future money quantity inflation, it will be necessary to bring all financial institutions carrying checking accounts under the control of the Federal Reserve. The dollar's value in relation to the golder's value must be determined in the international money market. If it takes four hundred dollars to buy one ounce of gold, it will take four dollars to buy one golder. If it takes eight hundred dollars to buy one ounce of gold, it will take eight dollars to buy one golder. An attempt on the part of the government to give dollars a definite value in golders would create such economic chaos as to endanger our form of government.

THE REAL ISSUE IS FREEDOM OF CHOICE IN CURRENCY

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November 12, 1981

The madate of the U.S. Gold Commission, to examine the appropriate role for gold in the U.S. monetary system, has been interpreted by most commentators as "whether or not to fix the price of gold in terms of dollars." We submit, for your consideration, an alternative proposal: Let the American people have freedom of choice in currency; demonopolize the monetary system of the United States and let gold (or silver, or Swiss francs, or anything else chosen by individuals) circulate or be used as a lawful tender.

The most important function that a monetary unit serves is as a noun for quoting relative prices. The context of this inquiry into the role of gold, therefore, must address the meaning of the very words we use to write contracts.

In the novel "1984" by George Orwell, there was a government agency called the Ministry of Truth that deliberately changed the definitions of words in the English language, so that victims of Big Brother's tyranny could not communicate with each other and organize a political revolution. The evolution of the U.S. monetary system over the past 190 years has followed the same path.

In 1792, Congress passed the first Coinage Act (1 Stat. 250) which created our decimal coinage system. The U.S. dollar was defined as 416 grains of silver .89243 fine. Because the new nation, for political reasons -- Article I, Section 8, of the Constitution -- was supposed to have a common currency, the Congress established a monopoly for the central government's coins. Under Article I, Section 10, however, it is clear that the intent of the Founding Fathers was for the U.S. monetary system to be based on silver and gold, not paper money. None of the Founding Fathers suspected that just 70 years later, Congress would pass the legal tender law and make the paper dollar our basic unit of money (12 Stat. 345).

Because there was a government monopoly for "dollars," the Supreme Court refused to distinguish between paper dollars and silver dollars (79 US 457). The principle had been established that the word "dollar" is a governmentally defined word, and whenever Congress wants to do so, it can change its definition. In 1913 and 1933, moreover, Congress created the Federal Reserve System and subsequently prohibited Americans from using anything other than its monopoly money (Federal Reserve Accounting Unit Dollars). Congress simply stripped any and all meaning from the word "dollar" in its original sense.

Because businessmen and investors, and those who accumulate savings, rely upon the name of the monetary unit to calculate and plan and to

write contracts for future payment, philosopher John Locke developed a principle for honest money. He wrote, the "unit was and should be a definite weight of bullion, which must not be altered." (1695)

Bullion -- pure "noble" metal. Definite weight -- the monetary system should emerge from the common system of weights and measures; it should not be "invented" by government as an artificial denomination of weight. It was an unfortunate historical accident that the common coin in the Thirteen Colonies was not precisely an ounce of silver, which might have gone by the name "One Ounce" without the government's trademark ("silver dollar"), but for that matter there was not a standard definition of the ounce in those days either. It was the monetary use of metal that led to the establishment of the U.S. standards of weight in 1827 (cf. NBS special publication 447).

The principle of freedom of choice in currency, therefore, is founded on the use of gold and silver, by units of weight, in all kinds of transactions where honest men and women come together to make contracts. It is impossible today to make an honest long-term contract in terms of "dollars" because the word has no meaning.

There is no difference between using the word "dollar" today in a contract and using the word "shrug" (e.g., I promise to pay you 100 shrugs in five years, at 10,000 percent interest); how many Big Mac hamburgers do you think you will be able to buy with the "dollars" you get back? Yet, in the U.S. courts and in payment of taxes, the undefined word "dollar" is the unit of measurement.

Since the issue we believe the U.S. Gold Commission should address is really the essence of a market economy, and the capital markets in particular, that is the definition of the noun that Americans may use to quote relative prices, we urge you to recommend the repeal of all monopoly elements in the U.S. monetary system. Two bills in Congress would achieve this: The Free Market Gold Coinage Act, sponsored in the Senate by Mr. Symms (S.1704) and in the House by Mr. Crane (HR.3789) and the Free Market Silver Dollar Act (HR.4965). These legislative proposals would create a parallel currency system for the United States and permit individuals to exercise freedom of choice in currency -- a right they have not had since 1792 because of a monopoly in courts for something called the "dollar."

In a free market economy, freedom of choice always makes the system work better. There are many reasons to believe that the new frontier in freedom of choice -- currency competition -- will be the only way to save the United States from a devastating inflation that has already caused the highest interest rates in history, because nobody with any money to invest is willing to secure those investments with pieces of paper promising to pay "one shrug" in the future in exchange for real goods and services today.

If the principles of John Locke were good enough for Thomas Jefferson and Congress when the Declaration of Independence was signed in 1776, the principle of "bullion weight" and "freedom of choice" must be the guiding principle for re-establishing the monetary system, and strengthening the capital markets, of the United States today.

GOLD IS THE ONLY PERMANENT STABLE MONEY

Submitted by

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6 January 1982

The U.S. Gold Commission has a golden opportunity to recommend a return to the gold standard for the following reasons:

1. The present system of having unbacked and unlimited creation of paper money has led, both in the U.S.A. and foreign nations, to unending inflation without avoiding such traditional economic ills as unemployment, recessions and high interest rates.
2. A fully convertible gold standard will avoid the dangers of both inflation and an inflexible monetory base.
3. No practical substitute for gold exists which will be universally acceptable as a constant medium of payment between nations and persons.

In view of the above, the following policies are recommended:

1. The U.S. by law provide that U.S. currency and coin be fully convertible into gold coin, at the parity of $500 per troy ounce of fine gold. This parity would provide approximately 100% gold backing for U.S. currency and coin in circulation, and therefore allow an ample amount of gold for making interim internal and foreign adjustments before a statutory 40% gold backing level would be reached.
2. The U.S. mint only one type of gold coin, namely a $500 coin which would have the same weight, composition and dimensions as the South African Krugerrand, and which appropriately should have the head of Alexander Hamilton and the motto "In God We Trust, All Others Pay Cash" stamped on one side, and with the Great Seal of the U.S. on the obverse. The Krugerrand could also be made U.S. legal tender for $500.
3. The President, by and with the advice and consent of the Secretaries of State, the Treasury and Commerce, have power by law to declare a foreign currency, which is not fully convertible into gold coin, to be a Paper Currency and to determine its value in U.S. currency for the purpose of calculating import duties and official penalties.
4. The U.S. by law recognize that:
   a. The period from the present time to about the year 2000 will be one of real deflation, even if disguised by monetary inflation, based upon both expectations and the Kondratieff Cycle.
   b. In order to maximize the employment of labor, wage rates should be determined by the Law of Supply and Demand, and the U.S. reduces employment by attempting to set artificially high wage rates for any group of persons.
   c. No U.S. industry should have any right to request governmental assistance if its workers are employed at wage rates above those prevailing in a free labor market.
   d. The U.S. should by law deprive the states of the power to regulate wage rates, prices and rents.

5. The U.S. take prompt action to reduce high interest rates, which are crippling the housing and other industries, by balancing the federal budget through the raising of excise taxes on alcohol, tobacco, etc to approximately one-half of the general West European levels, thereby also leaving some tax resources to the states.

This submission is based upon traditional principles of free market economics which always work when given the opportunity to function in a civilized society. Failure to return to a fully convertible gold standard and its necessary attendant economic disciplines and freedoms will only damage the U.S. economy and further undermine the prosperity of the people.

THE IRRECOVERABILITY OF THE GOLD STANDARD

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January 1982

The idealized gold standard as it appears in text books conveys a sense of automaticity and stability - a self-correcting mechanism with minimum human intervention which assures rough stability in prices and balance in international payments. The actual gold standard could hardly have been further from this representation. Major countries of the world were on the gold standard proper only from 1870s to 1914, and briefly during the late 1920s and early 1930s. The first period went down in history as the Great Depression - until the second period came along to exceed it in depth and severity.

In the United States the last third of the nineteenth century was a period of unprecedented controversy over the monetary standard, first over the resumption of gold convertibility for the greenbacks issued during the Civil War, then over the monetary role of silver. Legislation was constantly before Congress to change monetary relationships. The year 1896 saw the only U.S. presidential campaign devoted to the issue of monetary standard. The question of the monetary standard was thus a source of continual turmoil and uncertainty, not serene stability.

The public debate reflected the fact that, contrary to current claims for it, price stability was not assured either during the gold standard period proper or over a longer period during which gold held dominant influence. Short-run variations in prices, in fact, were considerably higher during the period of the U.S. gold standard, 1879-1913, than in the more recent period, 1960-1979.

Long-run price movements were also substantial. Prices declined about 50% in Britain, France, Germany and the United States from 1816 to 1849, then rose about 50% until the general establishment of the gold standard in the early 1870s, then fell nearly 50% again until the gold discoveries of the 1890s, then rose sharply in the two decades before World War I. This is hardly a pattern of stability, although it is true that prices sometimes declined over long periods of time. However, contemporaries had no confidence that price levels would return to earlier levels. This lack of confidence is reflected in the movements of interest rates. Real interest rates on long-term bonds - interest rates corrected for the movements in prices - followed roughly the same pattern as prices themselves: high in the 1870s, gradually declining to the turn of the century, and then rising again. This pattern implies that the bond-purchasing public did not anticipate correctly future price movements. They apparently adjusted their expectations slowly, in response to past price movements. It is thus not true, as is sometimes claimed, that the metallic standard provided for stability in the real value of long-term financial contracts. A close look at history pro-

vides little comfort to the proponents of a revived gold standard.

If we turn from history to the contemporary setting, there are two broad proposals for gold in the U.S. monetary system, each with numerous variations in detail. The first involves reintroduction of some form of gold backing for U.S. monetary liabilities. The second involves some form of convertibility of U.S. monetary liabilities into gold at a known price. Some of the proposals for backing involve basically a monetary rule in thin disguise: gold plays no essential role in these proposals. Some variants would however require periodic purchases of gold by the United States, giving rise to technically difficult but not insuperable problems concerning the discrepancy between the market price for gold and the official price for gold.

The second class of proposals involves convertibility of one form or another of dollars into gold at a known price. The difficulty with these proposals is determining the price. Foreign monetary authorities hold around $250 billion and an additional $700 billion is in private dollar deposits outside the United States. This is over and above dollars held by Americans and others in the United States. Too low a price for gold would invite large-scale conversion of these dollars into gold. The system would quickly collapse through the exhaustion of U.S. official gold holdings. This contingency could of course be avoided by pricing U.S. gold at a much higher than current market price. But then the U.S. would almost certainly have to <u>buy</u> gold out of new production and private hordes. This would undermine the discipline which gold convertibility was supposed to establish in the first place.

There is another disadvantage with reinstituting gold in a monetary role that is in any way linked to the market for gold. The major producers of gold in the world, together accounting for 80% of world production, are South Africa and the Soviet Union. Both countries exercise considerable discretion in the amount of gold they sell into the market. Both are at political odds with other nations. To restore an important monetary role for gold would give these two countries a windfall of considerable magnitude, because of the higher price involved. An ill-conceived attempt to avoid this price increase and to rely on new supplies would place the monetary system of the United States hostage to political decisions in one or both of these countries.

The choice of a price for gold plays a central role in the viability of any restoration of gold to monetary role. Yet the choice of a price, while crucial, is unavoidably arbitrary. So long as this is so, a rule based on a supposedly fixed price of gold can not be a credible rule. If gold were to become unduly constraining, its price could be changed, and that possibility would be widely known. In this respect, the situation is fundamentally different from that in the nineteenth century. Then the dollar price of gold was <u>historically given</u> and not open to question. The price was not conceived as a policy variable. Yet gold ceases to provide monetary discipline if its price can be varied. So long as the price of gold is a policy variable, the gold standard provides no escape from the need for human management, however frail that may seem to be.

FACILITATING THE OPTIONS OF USING GOLD AS AN AUXILIARY CURRENCY

Submitted by

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November 13, 1981

The Gold Institute/l'Institut de l'Or is the developmental, technical and industrial arm of leading producers of gold and gold products in 15 countries, outside of South Africa and the Soviet Union which have their own entirely separate gold activities. We provide precise and timely statistics on the production and flow of gold, and extend the beneficial uses of gold by technical assistance to the many industries which use it, and to central banks, ministries of finance and mints in their issuance of gold coinage. Last year 57 governments issued some gold coins as detailed in our annual publication MODERN GOLD COINAGE.

Some nations, such as Switzerland and the United States, have had considerable time periods of economic and governmental activities which have resulted in steady levels of purchasing power of their currencies; whereas others have had economic and governmental activities resulting in continually depreciating currencies. An example of this latter is Brazil, the largest country in Latin America. For half a century the purchasing power of its units of currency has been continually decreasing by 20% to more than 50% each year, so that the value of today's Brazilian cruzeiro expressed in Swiss francs or dollars or gold is less than one-thousandth of what it was thirty years ago. The Brazilians have survived for many decades with a traditionally depreciating national currency, just as the United States survived with a temporarily depreciating "greenback" currency from the Civil War years until the restoration in 1879 of dollars having a relatively steady purchasing power.

The United States is now in a period in which its units of currency are depreciating in value and the nation is indicating its desire to undertake the economic and governmental activities which will result in its currency having a steady rather than a declining purchasing power. However, these measures are, of necessity, fundamental ones, requiring careful and enormous efforts, not only by the Federal Reserve System, but by the whole Executive Branch of the government, the whole Congress, and the support of the majority of the entire electorate. They require time to accomplish.

Meanwhile, just as was necessary in the United States in the years after the Civil War until 1879, and has continually been necessary in Brazil, some auxiliary, or parallel, currency is useful. In Brazil, the auxiliary currency for two generations was the United States dollar, equivalent to one thirtyfifth ounce of gold. In the United States "greenback" dollar period after the Civil War, the auxiliary currency was gold, or sometimes the British pound, equivalent to a quarter of an ounce of gold. In the United States today, needs for an auxiliary currency are beginning to be met by the use of metallic gold in the form of gold bullion bars, bullion coins of other

countries, and other gold pieces of precisely marked purity and weight. Residents of the United States, recently estimated at 8 million in number, have large amounts of gold bullion, coins, medallions, and precisely marked pieces, in what might be called their "private reserves," and these are available for various transactions in which the payer and the receiver wish to use gold as an auxiliary currency.

An example of usefulness of an auxiliary currency earlier, was in 1865 when a Pennsylvania company was able to make a favorable multi-year contract with a Danish company to import the mineral cryolite from Greenland. The payments were specified not in United States "greenback" dollars nor in Danish kroner, but in British pounds (quarter ounces of gold), the then auxiliary currency for both the United States and Denmark. Likewise, in Brazil, where the cruzeiro interest rates are high, many productive operations have been made possible by dollar financing, with corresponding repayments in dollars.

Examples of the present use of gold as an auxiliary currency include the payment of dividends in the form of gold, and a 3-1/4% industrial bond issue with both principal and annual interest payable in gold. The trustee of this is Continental Illinois National Bank & Trust Company of Chicago. The securities firms involved include Drexel Burnham Lambert, Inc. of New York and Ross and Partners of London, and they are equipped to arrange similar low interest bond issues payable in gold for others.

The U.S. government has already done much to restore freedom of gold movement. In this present period it would seem desirable to further facilitate the options for U.S. private citizens and corporations to use gold as an auxiliary currency. Encouragement should be given to the private financing of construction and other productive projects by the use of gold with its attendant low interest rates, without which the projects and their resulting contribution to employment and the strength of the economy, would not occur. There are many examples of the beneficial use of an auxiliary gold or gold-based currency to accomplish this in other countries.

To protect the U.S. economy, the gold which constitutes most of the U.S. government's crucial foreign reserves needs to be gradually increased and not depleted. However, U.S. refiners are producing around three million ounces of refined gold bullion per year and it is recommended that the U.S. government convert some of this into weight-denominated gold bullion coins and issue the coins, without tax impediment, through bullion dealers and banks equipped to distribute them and maintain markets for them, just as U.S. Treasury bills and bonds are now marketed through dealers and banks especially equipped for the purpose.

GOLD : ARCHAIC THROW BACK OR MODERN TOOL?

Submitted by:

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Jan.15,1982

Returning the United States to a gold standard could be either the most effective way to fight inflation or the introduction of monetary rigidity that would set the stage for crisis in the financial markets.

The key determinent of the puzzel is the price at which gold and the dollar are proposed to be connected. If the price is set too low, giving the dollar and inflated value, there would be claims against the U.S. gold stock as dollars were offered for gold. An outflow of gold would result with the same destructive consequences seen in the late 1950s and early 1960s. If the price were set too high the dollar would be undervalued causing an influx of gold and the threat of renewed inflation. Only the "right" price would work.

It is impossible for any group, government or otherwise to determine the right price. The right price is a moving target. The "free" market is not a mechanism for determining price. The Russians have been trying to manipulate the gold price for over a year. They withhold supplies when they feel the price is low and sell when it is high. Through their bank in Zurich Switzerland they are constantly trading gold. Ricght now the possibility of the U.S. returning to a gold standard is depressing the gold price. Investors fear that the U.S. would choose a low price in order to give a higher value to paper dollars.

The United States should take steps to enter the gold market, obtain current experience and struggle to find a way to make a connection between the dollar and gold.

A first logical step is to join the ranks of governments such as South Africa and Russia that realize income from the sale of gold coins. Selling a U.S. coin that flutuates with the gold price makes sense.

A second logical step would be to begin buying and selling gold with the objective not of manipulating the gold price but of blunting Russian efforts at manipulation and increasing U.S. gold holdings. This would make the U.S. an important participant in the gold market and provide a sound basis for determining if a full return to the gold standard is warranted.

Gold is money and has been for centuries. Gold bugs use that historical fact as evidence to their point that returning to a gold standard offers only benefits. They should really look at gold as money to see both sides of the issue.

Look at prices in terms of gold. We are eccustomed to looking at prices only in terms of dollars. Take oil for example. All the while the price of oil was rising in dollars it was falling in terms of gold. Lately as the dollar price for a barrel of Saudi crude has been falling the gold price for that barrel has been rising.

Understanding gold as money is key to the issue. World markets would not be automatically served by returning to the gold standard.

There is a difference betwee dilution and inflation. Using gold as a monetary tool could be helpful in preventing excessive dilution of the dollar but not necessarily helpful in fighting inflation.

Consider the oil example. If rising prices for important commodities such as oil are inflationary when they occurr in dollars they must also be inflationary when they occurr in terms of world money or gold.

A falling gold price can be just as inflationary as a rising gold price. Stability is the objective. But not forced manipulated stability. Rather genuine stability is the requirement for lower inflation and reduced dilution.

A free gold market is a useful score card. If the gold price stabilizes as a consequence of U.S. monetary and fiscal policies we would know that we were doing the right things. If we lock in a gold price through a gold standard connection we wouldn't know whther or not our policies were correct. We would only know how we were doing as a manipulator of the gold market.

Staying off the gold standard could be just as useful as returning to the gold standard. The key is having respect for gold as world money. If we have genuine respect for gold as money and show that by participating in the gold market we will reap the benefits no matter how the gold standard issue is finally resolved.

GO SLOWLY. WALK BEFORE RUNNING. SELL GOLD COINS AND BECOME MORE ACTIVE IN THE GOLD MARKET. LATER LOOK AT THE GOLD STANDARD ISSUE AGAIN.

TENDER & THE U.S. CONSTITUTION

Submitted by

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February 1, 1982

You may get two ideas from this: (1) The use of any tender other than gold and silver is UnConstitutional. (2) Legal Tender statutes are UnConstitutional because they deprive individuals of property (money is property) without due process of law.

HISTORY:
- A. Pre-Constitution 1787: Colonies in chaos due to fiat money. Creditor runs from debtor. Creditors were paid without mercy.
- B. 1787 - 1900: U. S. made greatest progress in history of mankind. Mostly on gold/silver standard. U. S. still a Republic. Well, almost.
- C. 1900 - 1968: U. S. drifts to Democracy. Last underpinning of precious metal removed (silver-certificates). Federal Reserve established.
- D. 1968 - present: Democracy in full force. Fiat money = 100% ! Tending to chaos; democracy leads to mobocracy, commissions, skepticism, collectivism.

EVIDENT TRUTHS: No nation ever survived intact that debauched its currency (commercial life blood) & No nation has ever lived more than 200 years under Democracy.

According to the U. S. Constitution fiat money must be UnConstitutional. Article I Section 8.5.: "Congress shall have Power: To coin Money,..." period. It does not say "to coin it out of paper". The 1787 Committee of 11 considered "emission of bills of credit" which means fiat money. By a vote of n i n e in favor - one against and one divided, it rejected "bills of credit". The key words are CONSIDERED and REJECTED. The Legal Tender Decisions have ignored the intent of the writers of the Constitution. If the Constitution meant to coin Money out of paper, they would have stated: "and emit bills of credit".

The combination of Art I Sec 8.5. and 10.1. closed the door to fiat paper forever. Section 10.1.: "No State shall... make any Thing but gold and silver Coin a Tender in Payment of Debts;..." The word "coin" was capitalized. These 17 words were composed by Roger Sherman, an enemy of fiat money for many reasons. A m o n g them; he was cheated by it and lost a lawsuit about it.

These 17 words were accepted by the Committee unanimously (11-0). The Legal Tender Decisions have totally scorned this prohibition on the States to impose on their citizens any Thing but gold and silver. They have nicely coerced the States to violate the Constitution on a wholesale basis.

Noah Webster called Legal Tender "the devil" and those who

favor it "were counterfeiters, deserving of the gallows,...".

"The very words Legal Tender...", according to Paul Leicester Ford, Editor of the FEDERALIST (1898), "... are a lie and a fraud, through which someone is to be robbed."

Daniel Webster said Legal Tender statutes were UnConstitutional. Amendments (V) & (XIV): "No person shall... be deprived of life, liberty, or property, without due process of law;...".

Additionally; Art I Sec 10 says, along with its prohibition of fiat money: "No State shall... pass any bill... or law impairing the Obligation of Contracts,...". Contracts are sacred! Debts are not to be paid at a discount with a printing press!

CONCLUSION:

I. Gold/silver coins should be imprinted with the weight of pure metal in grams or decimals & value in dollars ("dollar" is used twice in the Law). It is a power of Congress to: "... regulate the Value thereof, and of foreign coin, and fix the Standard of Weights and Measures;..." No other power is enumerated for the physical description of real money! The dollar is our trademark for real money.

II. Since gold is necessary for a specialized nation and division of labor (which means a high standard of living), and since gold production represents a consumption of capital, it would be advantages to everyone to economize the use of gold. The banking system has provided an ingenious solution to this problem: Fiduciary media. FM consists of 'claims to money' that are not backed by gold. Therefore, I suggest reserve requirements be set at 20-25% gold backing. Experience has shown this to be a practical figure. If a note is known to be convertible 100% of the time into real money, then it becomes the absolute equivalent of 'real money'. Thus, people do not hoard to any extent when government keeps its contracts.

III. Eliminate any mention of "legal" on any notes denominated in real money. It is not necessary. See also 111 US 701.

FINALLY: When the time comes to sequester imaginary* debts, in whatever fashion, let it be known IT IS NOT THE FAULT OF OUR CONSTITUTION! Do not blame it! Let that one-of-a-kind masterpiece be preserved unblemished for it intended to do away with bogus money & bullets and install a Republic. Please join me in noticing those who have and do violate their oath to support it.

Respectfully,

C. J. Dorbstader

* Hugh Williamson, May 13, 1785, used the term "imaginary money of the several states" in his paper on the adoption of the Dollar. Serious students of proper tender under the Constitution should read THAYER v. HEDGES, 1864, 22 Indiana 282. Note that not once did the Supreme Law use the word "legal". Also see Hagar 111 US 701.

STATEMENT BEFORE THE GOLD COMMISSION

Submitted by

Rudiger Dornbusch

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November 13th, 1981

Lack of fiscal discipline, high real interest rates and persistently high inflation, all draw attention to disarry in our macroeconomic policies. The Enquiry of the Gold Commission is an important opportunitv to look for more coherent policies and for institutions that lend stability and credibility to our macroeconomic targets.

The historical record does not bear out the belief that the gold standard provided a stable economic environment. Under the gold standard of the 19th and early 20th century one crisis chased another and macroeconomic performance, except for the average rate of inflation, was poorer then compared to the last twenty years. The accompanying table makes this point for the case of the US.

A Comparison of Macroeconomic Stability*

Period	Inflation Average	Variability of:			
		Unemployment	Inflation	Money Growth	Real Interest
1879-1913	0.5	4.5	5.5	6.7	13.2
1960-1979	4.6	1.4	4.3	1.9	3.5

*Variability is measured by the standard deviation. All data are percentage rates.

The table reveals that unemployment, inflation, money growth and the real interest rate all were more variable under the gold standard than they have been in the recent past. Even the low average rate of infaltion under the gold standard is accidental. From 1870 until 1895 prices were continually falling. Later, under the impact of Australian gold discoveries prices were rapidly rising. The long term average happens to be near zero inflation, but for shorter periods there is substantial instability, especially in wholesale prices.

A gold standard is undesirable from a cost-benefit point of view because it absorbs real resources that have alternative, productive uses. If in the present US economy all highpowered money were to be backed by gold an amount equal to 0.3 per cent of GNP would have to be devoted every year to provide for growth in the real money stock. Under a fiat-money, by contrast, we can have monetary control without a real resource cost.

The adoption of a gold standard presents extraordinary difficulties in selecting the appropriate support price and the transition strategy. A price

that is too low invites a run, a price that is too high invites deflation. A transition to gold at a future point in time, at the then prevailing market price, is entirely unreasonable since it allows a speculative bubble to determine the path of prices.

If gold is not to serve a formal role in the monetary system then gold should be immediately denationalized. The existing gold stock should be sold off with the proceeds used to finance budget deficits. The current gold holdings at $300 an ounce are worth nearly $80 billion and can thus make an important contribution to deficit finance. There is no reason for the minting of gold coins at a time of public sector austerity, nor is there a reason to maintain gold for potential uses as a foreign exchange market intervention asset. Of course, gold holdings could perhaps turn out to be convenient, but on that argument we should also hold ample supplies of Deutsch Mark, Sterling and Yen, Silver and Platinum. There is no indication that the present, large gold holdings yield services, current or prospective, that are at all in line with the resource cost of holding the treasure.

A lesson of the 1970s is that fiat-money, managed with imperfect knowledge and under political pressure, can easily give way to cumulative inflation. It is important to lock in the gains from two years of prudent monetary policy by a move to formal monetary rules that establish the fact and expectation of long-term price level stability. In the transition such monetary rules should be accompanied by transitory incomes policy.

THE INADEQUACY OF ACCOUNTING AND SECURITY OF THE NATION'S ALLEGED GOLD RESERVES AND POSSIBLE REPLACEMENT OF THESE RESERVES

Submitted By

Edward Durell

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February 10, 1982

This is a brief summary of the writer's written testimony before the Gold Policy Commission. This written testimony includes the following:

(1) My certified letter to all members of the Gold Policy Commission dated 12/4/81 containing a copy of my privately printed pamphlet, "Mr. President, Where Is Our Gold?", to give the Commission a sampling of my eight years of research. The letter suggested to the Commission that it determine the quantity and quality of the nation's alleged gold, its rightful owner, and the whereabouts of 165 million ounces of gold that left Fort Knox during the eight year period of the London Gold Pool, whose destination has not been satisfactorily accounted for.

(2) My letter dated 1/6/82 to Secretary of the Treasury, Donald Regan, covering the inadequacies of accounting and the insecurity of the nation's alleged gold reserves.

(3) My transmittal letter dated 2/4/82 to all members of the Gold Policy Commission enclosing my letter of 1/28/82 to Robert Black, President of the Federal Reserve Bank of Richmond, which outlines the evidence that the Federal Reserve System and not the U. S. government has title to whatever gold is warehoused by the U. S. Treasury.

(4) My letter dated 2/9/82 to all members of the Gold Policy Commission asking that the Commission consider several suggestions for the government to borrow and/or recover the gold necessary to back U. S. currency and/or other instruments of liability or for use in gold coins (legal tender or otherwise).

All of these documents are to be made part of the printed record of the Gold Policy Commission. This written testimony covers the following points in an effort to prove to the Commission that

(1) The U. S. Treasury and its agents do not hold the gold claimed.

(2) Whatever gold is disclosed as warehoused by the U. S. Treasury and its agents by an external, independent, physical inventory and

genuine assay, belongs not to the U. S. government, but to the Federal Reserve System.

(3) The alleged audits that have been done by Treasury would not be acceptable to a qualified certified public accounting firm.

(4) Security at the U. S. bullion depositories, mints and assay offices has not been satisfactory.

(a) Deputy Secretary of the Treasury, Robert Carswell, in a letter to Senator William Proxmire, Chairman of the Senate Banking Committee, dated 12/19/78, stated that, "...I must now inform you that there have been significant irregularities in accounting and management procedures in the New York Assay Office that appear to go back a number of years" and "The full truth may never be known because of the inadequate records kept over the years."

(b) Secretary of the Treasury, Donald Regan, on 11/16/81 ordered the Director of the Mint to move "...all Treasury owned monetary gold bullion bars" from the New York Assay Office to the West Point Depository and did so without using this physical move to determine the accuracy of the count, weight and fineness of the bars.

(5) An investigation of the circumstances and terms under which a total of 235.3 million Troy ounces of gold allegedly went into the hands of "official foreign monetary institutions"(*) during the period of 1944-1971 (when the so-called "gold window" was closed) might develop the best source for recovering a portion of the needed gold.

In respect to all of the foregoing, it is suggested that the Gold Policy Commission recommend in its report to Congress that Congress take such steps as to request the General Accounting Office to make a thorough investigation of all the questions raised by my eight years of study and investigation. In addition thereto, it is suggested that the Commission recommend to the President that he create a "Blue Ribbon Presidential Commission Of Inquiry", as was done by former President Eisenhower in 1953, to order a separate audit and inventory to examine the circumstances, responsibility and authority for the U. S. Treasury and/or the Federal Reserve System losing control of 325.4 million Troy ounces of gold, or over 60% of the nation's gold hoard between 1944 and November 1981.

I stand ready to assist in any way possible, particularly by bringing to the attention of the General Accounting Office and the "Blue Ribbon Presidential Commission of Inquiry" some of the irregularities and unauthorized actions that have been discovered under the Freedom of Information Act and otherwise.

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(*) Reference tabulation "U. S. Gold Stock 1944-Nov. 1981" distributed in Treasury's News release of 12/11/81.

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Views Presented to the Gold Commission

Submitted on November 13, 1981

By William Fellner
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I. Four Conclusions.

A. When specific conditions are satisfied, the gold standard can function effeciently, with major advantages over the available alternatives.

B. In the now foreseeable future these conditions will not be satisfied, and systems belonging in the gold-standard category would therefore malfunction with very damaging consequences.

C. However, the more distant future is unpredictable in this regard and, partly for this reason, I feel opposed to a resumption of gold sales by the Treasury.

D. We should not experiment with schemes that would give the superficial appearance of restoring a system belonging in the gold-standard category but would build into the system elements alien to the basic conception underlying the gold standard. Such constructs would involve the same political arbitrariness which we must learn to overcome in our present monetary system and, by covering up the essence of the matter, they would reduce the likelihood that we shall deal with these risks successfully.

II. Sketching the Argument Behind the Conclusions.

(1) When specific conditions are satisfied, the gold standard has significant advantages because gold then serves with reasonable efficiency as a proxy for goods in general. Hence, by the simple and credible technique of stabilizing the price of gold with reliance on a stockpile, the authorities can in those circumstances come reasonably close to stabilizing at the same time the general price level. Investors and consumers can then gear their expectations to such a behavior of the price level, and the highly damaging uncertainties of inflationary periods are avoided.

(2) The essential condition of gold serving as an acceptable proxy for goods in general is that the real price of gold (defined as its relative price expressed in relation to goods in general) should remain reasonably stable, that is, that the real price reflecting market preferences should show no disturbingly steep and unpredictable trend. To what extent this condition tended to be satisfied during the heyday of the gold standard, and what could have been done in those days to avoid the occurrence of some disturbed subperiods, are questions of considerable complexity. But on the whole, in a past era the conditions required for the efficient functioning of the gold standard were in my appraisal well enough satisfied to have made it an efficient monetary system, one that was indeed superior to the available alternatives. I also believe that it would be wrong to take it for granted that in no future era will the essential conditions of the efficient functioning of the gold standard again be satisfied.

(3) However, these conditions will not be satisfied in any future near enough to serve as a basis for present policy planning. Even if by an international agreement all major gold-holding official agencies of the world decided to return to gold, and the risk of large official inflationary gold sales to us or deflationary gold purchases from us were excluded, the real price of gold--its price relative to goods in general-- would not remain unchanged. This implies that a fixed current-dollar price of gold would not be associated with a reasonably stable general price level. The reason is that in the present circumstances the gold output does not show the required responsiveness to a rising real price of gold. There is no positive output response that would prevent a rise in the real price of gold from becoming large and from cumulating, even if with significant price fluctuations. At present the real price of gold in the United States is roughly five times what it was about ten years ago, but the noncommunist world output has declined from about 40 to about 30 million ounces a year, and there occurred also a significant deline of the world output including rough allowances for the output of the communist countries. This is obviously not how a proxy for goods in general should behave. It may, of course, be objected that, even in the past, output responses often came with substantial lags, but so far there are no signs of such a response to recent price trends. In the present debate the emphasis should be placed primarily on this rather than on mere transition difficulties (the so-called reentry problem).

(4) It is sometimes argued that the size of the gold output does not matter much because, due to the practical absence of physical depreciation, the size of the stock is so large in relation to the current output that the stock is all that matters. According to this argument the present stock would be amply large enough to prevent any upward trend of the real price of gold if, by tying the dollar to gold, we made the holding of gold unattractive to private owners. This argument is erroneous.

At present approximately 1,700 million ounces of gold seem to be held by private owners, much the greater part in jewelry and art objects. Unless the official agencies purchased this gold with severely inflationary results, the size of the privately owned stock would remain what it is and the only consequence which a postulated "unattractiveness" of gold to private owners could have would be a temporary reduction of the gold price to a level at which holding on to the given stock would become "attractive". However, the amount of gold the public would want to hold at that assumed low price would thereafter be rising, along with the size of the world's population and its standard of living. If the gold output remained insufficient to accommodate this increasing demand, the real price of gold (as defined in (2) above) would be rising from its initial level, and it would be rising at a hard-to-predict and presumably irregular rate.

This would express itself in substantial and disturbing deflationary pressures on the general price level unless the nominal (current-dollar) price of gold were raised successively or central banks and other official agencies now jointly holding between 1,100 and 1,200 million ounces were gradually unloading their stock. One or both of these two things would be very likely to happen. But to base an alleged "gold standard" system on political decisions concerning increases of the current-dollar price of gold, or to base it on gold sales of the official agencies for the sake of keeping the price of gold from rising, would introduce into such a system the same kind of political leeway the misuse of which we must try to overcome in the management of inconvertible paper money.

However, I repeat that I consider the market and policy trends of the more distant future unpredictable, and I feel opposed to the resumption of gold sales by the Treasury.

CURRENCY AS SEIGNIORAGE

Submitted by:

Brian W. Firth,

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February, 1982

SCOPE

Many commentators are considering whether there is a role for gold in the banking system, i. e. whether gold can be linked to currency. It is here contended that any such proposal must be unsound both in policy and in principle. In policy, because the currency is today heavily over-valued (Professor Laffer holds that the currency is never traded for less than ten-sevenths of the liquidated value of the assets of the Federal Reserve Bank; Professor Rothbard — usually a protagonist of the market — argues that the price of gold, in currency, should be four or five times higher than today's $385): thus the debate itself might trigger a crash of the currency. In principle, for three reasons: (a) Congress has been authorized to regulate the value of (its own and foreign) coin, but of nothing else, (b) since Federal Reserve notes are — where Congress has legislation — legal tender, their value can hardly fall below that of U. S. coin, and (c) the method here recommended for the regulation of the value of coin would link not only coin but also currency to gold.

THE PROBLEM SITUATION

The problem with coin is easily articulated: if "regular" means "predictable", the Congress has failed to regulate the value of coin. First, the metal content of coins has, historically, proved variable — even the cent, which has circulated continuously since "copperheads" of 1/10th. troy oz. emanated from numerous mints during the War between the States, is not safe from executive interference. Second, coins are — by congressional policy — in short supply: gold coins trade for 140% of their value as specie (i. e. the value they would have if the mint were open), silver coins for 110% of specie value, homogeneous copper coins for almost twice specie value (the "regulated" price of copper would be $1. 45 per pound, the market price is 80¢ per pound).

Any solution, therefore, must have two qualities. First, it must convince the owners of coin that its value will be guarded by the Congress. Second, it must render coins available in unlimited quantities — without, however, disturbing the market for metals.

THE SOLUTIONS

Congress — unlike the States — has in theory an unlimited choice of species but in fact only three options which could readily command confidence.

Firstly, the Congress could transfer the status of legal tender — where it has legislation — to the cent of 1/10th. troy oz. copper, 95% fine. There would then be no possibility of the "penny" ever being worth more then 1¢, coppers would no longer be "hoarded" (in bottles rather than banks), and normal minting would tend toward equilibrium (i. e. Congress would stop minting cents when they cost ten mills). Such a devaluation of the money is allowable, since Congress is not prohibited from impairing the obligation of contracts; however, it would give rise to a surge of wholly illusory profits (where accounts had been kept in currency). It should be noted that currency would go to a premium, since not only debtors but also creditors would prefer a note to one hundred small coins, so that the devaluation would not be as large as today's market price of copper would suggest.

Secondly, the Congress could institute free coinage of 900-parts-silver fractional coins. The "price of silver" (in currency) would then express the discount rate of F. R. notes. The advantage of this option is that the States have traditionally used a silver standard, de jure from 1792 to 1871 and de facto from 1934 to 1964: thus we might expect to see several States enact legal money statutes. The disadvantage is that the value of silver is volatile, because it is mined not for its own sake but as a by-product of copper, etc.

Thirdly, the Congress could resume the minting of gold coins (resume is the proper word, so long as the American Arts medallions fail to gain acceptance as legal money in any State).

Today, a double eagle is worth, as specie, $370 currency. This is to say that the face value is 5.4% of the value of the metal; and we know that this is comparable to, but more than, the premium on foreign gold coins.

Thus Congress could mint its gold coins (which, be it remembered, were standardized before white men reached the Rand) for a seigniorage — payable in currency — equal to the face value of the coin: the market for bullion would not be disturbed, since the seigniorage would be higher than for many other coins, but nevertheless gold would flow to the mint, because U. S. coins command a high premium.

Once currency-as-seigniorage became an accepted institution, the currency would be stabilized. Suppose that currency fell until the price of gold, in currency, were $850; then the seigniorage would be 2.4%, U. S. coins would be the lowest-premium gold coins, and gold owners all over the world would want F. R. notes with which to pay for the coining of their gold.

CONCLUSION

The contemporary problem, of regulating the value of U. S. coin, is open to a legislated (i. e. lasting) solution. It is, for the Congress to mandate that the Treasury shall strike a U. S. gold coin for whomsoever proffers both the necessary fine gold and also currency equal to the face value of the coin.

This would effect two major improvements over the present situation. First, an established U. S. coin would be available in unlimited quantities, instead of U. S. coins having artificial, scarcity value. Second, the monetary system would be isolated from, and fail-safe with respect to, the banking system: a collapse of the currency would simply restore free coinage of gold.

Possession vs. Promises:
Public Policy Issues for Reconciliation

Submitted by

The Gold Bondholders Protective Council, Incorporated
P.O. Box 2283, Seattle, WA 98111

February 11, 1982

The Gold Bondholders Protective Council, Inc. is an investors association established for the purpose of protecting the rights and interests of investors who own bonds containing a gold clause which have been distributed to the public in these United States. It embraces unredeemed obligations issued and guaranteed by the United States Government and its political subdivisions, foreign governments and their instrumentalities and like corporate entities which have otherwise maintained sound credit ratings. The Council believes it appropriate for the Gold Commission to examine and address conflicting U. S. Public Policy which is clearly inconsistent with respect to the treatment currently accorded gold coin of the U. S. and contractual promises therefor. It should be pointed out that Treasury records indicate 66% of the gold coin struck by the Mint is still outstanding, whereas only ¼ of 1% of the original gold clause obligations remain outstanding in 1982.

If a taxpayer receives gold coin of the U. S. as current income, the Treasury requires the coins be valued at their higher market value for tax purposes, thereby placing the taxpayer in a higher marginal bracket. However, when the taxpayer tenders the gold coin to the Treasury to discharge his taxes, the Treasury credits him with their lower face value. When this policy is changed and made consistent to promote rational planning, the hoard of gold coin will begin to circulate and gold will flow into the Treasury. Therefore, the Council recommends that income denominated in terms of U. S. Gold coin be valued at the lower, face value for tax purposes since it is in harmony with the Administration's policy of reducing marginal rates of taxation.

Government obligations promising to pay both principal and interest "...in gold coin of the United States of the present standard of weight and fineness...upon presentation and surrender....", remain outstanding. Although most have matured, others don't fall due until after the year 2000. In the aggregate, there is less than $30 million of these gold clause obligations remaining, equally divided between Federal, State and Municipal bonds. All were issued between 1834 and 1934 when gold was valued at $20.67 per ounce. This Commission has heard a number of suggestions urging the Treasury to issue new gold bonds. It is the Council's view that this action cannot take place until the older gold bonds are honored according to the terms specified.

Approximately $1.25 billion par value of unmatured corporate obligations containing a gold clause remain outstanding today. They are primarily long term first mortgage bonds issued by the nation's railroads, with maturity schedules extending out to the year 2361. Through various congressional enactments, the railroads were offered enormous land grants. The purpose of land grants in excess of the needed right-of-way was to provide an asset base upon which the capital needed to construct the railroad could be borrowed.

Since 1933 when the Joint Resolution outlawing gold was initially passed, the holders of these gold bonds have suffered. In the corporation's case, the shareholders have benefited. Given the current rate of inflation, the bondholders will be decimated by maturity date if the gold clause is not enforced; all of the bondholders' property will then revert to the shareholders for a pittance.

It is the contention of the Council that the gold clauses contained in these public and private obligations which were widely sold to the public remain operative and should be enforced as such for the following reasons: 1) The coinage power granted by the U. S. Constitution is not so broad a grant of authority so as to empower Congress under the guise of controlling monetary policy to affirmatively and directly nullify property rights created by otherwise legal contracts. 2) The Joint Resolution which the Supreme Court found to be valid respecting private debt (Norman vs. Baltimore & Ohio, 1935) is in reality a violation of both substantive due process and the takings clause of the Fifth Amendment of the Federal Constitution because the Joint Resolution does not bear a rational relationship to any legitimate end sought to be achieved or promoted either at the time the resolution was passed or in light of current monetary policy. 3) As evidenced by the Gold Ownership Act and more recent legislation validating contractual gold clauses, the national economic emergency which arguably justified the passage of the Joint Resolution has now passed and the Joint Resolution is an anachronism which can no longer stand based on these changed facts and circumstances. 4) The Joint Resolution was repealed upon passage of the Gold Ownership Act, and, therefore gold clauses which are unredeemed remain valid and operative. 5) Since these gold bonds were not delivered to recent investors until after the effective date of legislation revalidating gold clauses, for purposes of such legislation, the bonds did not "issue" until after the effective date of the validating legislation. Accordingly, the contractual property rights which are embodied in the gold clause must be enforced for that portion which remains unredeemed in order to prevent a further diminution of the Bondholders' capital.

In conclusion, it is clear the rights of the bondholder have been grossly neglected. The issuers received gold to finance their operations and expansion programs. They spent or invested the loan at its full buying power and have enjoyed the benefit of the bondholder's money since then. In exchange, the bondholder was to receive a modest income which was secured by a government guarantee or a first mortgage agreement and indexed to an easily ascertainable gold value. The exchange was voluntary, equal and the bargain was fair. Congress interfered with the contractual obligations existing between the parties and gave the issuer a windfall which unfairly and unnecessarily deprived the bondholders of their investments. Congress acted intentionally and directly to deprive and take away the property and rights to which the bondholders are entitled under the gold clauses in their bonds. This intrusion upon the bondholders' contractual property rights must now cease for no legitimate public "good" is served thereby. Accordingly, the Gold Bondholders Protective Council requests the U. S. Gold Commission address these claims as enumerated above and urges it to construct a coherent policy which reflects justice and equality under law.

Supply-and-Demand Folly

How can economic problems be solved when the very basics of supply and demand are not understood?

To an economist, supply is the monthy Gross National Product statistic, demand is a rising standard of living, and there are no limits to either.

To a wise man, supply is resources (water, energy, arable land, forests, minerals, living space, privacy, everything) and demand is nearly 5 billion males and females (and all that that means).

Americans and Europeans, almost without exception, are brainwashed by businessmen and politicians into lapping up the economist's definition of supply and demand not the wise man's. The rest of humanity has to tag along. So, in spite of all the talk about man's ingenuity and cleverness, wisdom even at the university level seems to be just about nonexistent.

Michael Grogan
2179 Canal Road
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October 9, 1981

Dear Mr. Volcker,

Population Standard

Since money is a sort of rationing coupon, linking population to resources, money supply should be based on population figures, not gold.

Only if population and resources-in-use increase roughly equally, as has been the case throughout history, should money supply be increased to keep prices stable.

But if, as is now the case, population increases but resources do not, money supply should not be increased, so as to ration resources more effectively by pushing prices up.

Is the latter YOUR idea? Inflation may be a blessing in disguise as an effective if inequitable way to balance resources and population. Basing money supply on population would bring the growing imbalance between population and resources home to everyone.

Sincerely,

Michael Grogan

P.S. About half a century ago my uncle asked Montagu Norman, then Governor of the Bank of England, if it would make the slightest difference if all the gold in the bank's vaults were replaced by one pellet from the droppings of a donkey.

THE OBJECTS OF MONETARY REFORM

Statement Submitted By

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December 29, 1981

1. The main task facing government today is that of restoration of integrity to the monetary system that has been steadily corrupted, particularly since 1934, with closing of the mint to free coinage, the suspension of gold convertibility, the sequestration of all monetary gold, and the repudiation of all gold debt obligations, beginning with those of the government itself.

2. The monetary standard should be as fixed as that of the weight of a kilogram or the length of a meter; neither the standard nor the circulation should be subject to bureaucratic control; to adjust either by official action is as futile, and as disreputable, as to change the weight of a bushel in the interest of a stable supply or price of the corn crop. As a resolution of this Institute, taken by its trustees in 1970, states:

> RESOLVED, That the essence of the money problem is moral more than technical - that as money is the standard of economic value and measure of commerce the manipulation of money is evil, whether in the interest of creditors or debtors, industry or labor, producers or consumers, government or taxpayers; that the integrity of money should be maintained by clearly defined content and composition, and by adherence to the definition.

3. Just as the prosperity of a merchant depends upon the quality of his merchandise and the reliability of his undertakings, so the weal of a great power is equally affected by the quality of its money, and the integrity of the standard. The Byzantine empire, though shrinking politically, was for seven hundred years the dominant commercial power of Europe and the Middle East, a position contributed to by the integrity of its coinage; Great Britain became the ascendant commercial power of Europe after the opening of its mint to free coinage in 1666, and that dominance was enhanced when it became the first and leading power to establish its monetary standard on gold. The decline of U.S. economic power and international prestige is a direct result of the wastage of this precious asset.

4. The current world-wide inflation from decay of monetary integrity may be due to U.S. influence and adoption of U.S. monetary practices, beginning with the widespread imitation of the Federal Reserve System, and later with the establishment of fiat international exchange through the International Monetary Fund and the various international institutions like The World Bank that have promoted an excessive burden of debt.

5. A reformation of the monetary system demands restoration of credibility to U.S. monetary policy. This requires the following actions:

a. Abolition of the Federal Reserve System with its power to create legal tender currency based on debt.

b. Reopening of the mint to the free coinage of gold, as existed from 1792 until 1934, with the establishment of a gold coin standard of value, at a mint value of the dollar at somewhat more than the current world market price of gold.

c. Constitutional amendment declaring only gold coin, or official warehouse receipts for gold held in government depositories, as legal tender in payment of public dues or private obligations denominated in dollars.

d. Constitutional amendment declaring monetary gold to be free of government seizure except in payment of taxes duly levied by Congress.

6. Fear of insufficient circulation under a gold coin standard and free coinage is groundless. No metal or other commodity in commerce is in more abundant supply in relation to annual production, than gold. Under free coinage, gold appears in circulation, or disappears, in response to market demand, and not as determined by a government bureau.

7. A free coinage gold standard is not designed to guarantee stable prices, nor should be so used, for prices are the result of a multitude of forces and influences, among them primarily, the emphasis or mood of the market; nor will a gold standard prevent credit crises, which are also an effect of subconscious rather than overt influences and under bureaucratic management of the currency are often promoted by bureaucratic action. A gold currency will only do what it is intended to do, that is, provide a standard by which other goods and services can be measured, and a store of value for future payments.

AS GOOD AS GOLD

Submitted by

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JANUARY 13, 1982

In the current debate on a gold standard the stumbling block is the fundamentally wrong premise in the quest to fix a price for gold. It is not possible to fix a price for gold in terms of any existing currency. Far better to consider not a price but a value. Gold has a value as a medium of exchange, in other words as a currency. Consider the implications of using gold as money.

Assume all gold reserves minted into coins of standard weight and fineness. At a given date equate the number of coins so available with the figures used internationally in representing the price of goods and services in circulation. One coin will be found to equate to many hundreds of dollars.

Now start using only gold coins to pay for goods and services. Note the dramatic fall in the numbers on the price tickets (the first skirmish in the war on inflation). Continue to mint all newly-won gold into the standard coins. Charge the weight of gold going into industry or jewellery at the value of the equivalent number of coins. Paychecks would of course come down accordingly. Checks and all paper transactions could be continued but only against deposits in the equivalent number of coins. Gold money thus on deposit would pay interest whereas gold now in the bank does not.

The result would be a stable currency and stability of values. The gold-producing countries would not get any richer (you can't eat gold) whereas countries with exports of commodities or manufactures, instead of suffering from "lack of hard currencies" would find that their products are as good as gold.

This desirable state of affairs would continue as long as the supply of coins was adequate to satisfy the needs of international commerce. However the rate of increase of the net worth of the world is historically greater than the rate of increase of gold production and is likely to remain so. In this situation the remedy would be to have a periodic re-valuation of the value of the coin. Clearly this value is going to tend upwards and, as a concomitant, the numbers on the price tickets will go down - the very reverse of inflation. Gold thus produces capital gains.

The return to gold usage (rather than a gold standard) would provide a solution to currency and exchange problems and, since the money supply would be finite, a cure for inflation and a clear directive for monetary policy.

SOME NEGLECTED ASPECTS OF GOLD

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The Gold Commission has examined the historical workings of the gold standard in the United States. This survey has not related its actual workings to the underlying theory of the classical gold standard, devised by David Hume and known as the price-specie flow mechanism. Numerous studies by eminent scholars exist. Their aim has been to examine how close has been the workings of the standard with the theory. Among those scholars are J.M. Keynes for the United Kingdom, Jacob Viner for Canada, Harry D. White for France and James D. Angell. Viner and White, in particular, concluded that the price-specie flow mechanism did not work in reality as predicted in theory. Differences among countries and divergences from theory were based on alternative domestic arrangements in different countries and different responses to similar stimuli. Viner notes, for instance, that "variations in Canadian gold stocks appear too small to have been effective means of adjusting the Canadian balance of indebtedness to borrowings from abroad." White found that "the specie flow-price mechanism is doubtless one of the forces, but there seems to be no justification for assuming that it is the sole or even the dominant means of adjustment. It is my opinion that nothing in the experience of France, the U.S. or Canada verifies the claim that the specie flow-price mechanism of the neo-classical theory is the all-important means of adjustment.

It is posited that along with Viner and White's conclusions, conditions for the working of the gold standard were more prevalent in the pre-World War I era than in the contemporary world. Hence, if the evidence does not support the gold standard for the earlier period it is even less likely to be operative today. It is argued that greater price flexibility, upward and downward, existed in earlier days, in part, because of the greater dominance of the agricultural sector in the world and U.S. economies. Prices in the contemporary world, both in terms of levels and by sectors, show greater flexibility on the upside and less on the downside. Consequently, in many markets, greater adjustments occur in output and employment than in prices. This has significant effects. Adjustments in output and employment on the downside have the effect of spreading fixed overhead burdens over smaller output levels. Great resistances to price reductions develop; and in fact, price hikes may occur at the same time that output levels are falling. Price inflexibility would deter the smooth working of a gold standard, domestically and internationally. I would suggest that monetary policies become more restrictive and of longer duration than would be required if the world were characterized by more flexible prices. Adjustment processes would be more easily achieved and the greater social costs incurred because of inflexible prices would be avoided.

One expert witness has supported his position, favoring a return to gold by citing John Maynard Keynes as authority. This was done in a Wall Street Journal article, November 27, 1981, by Mr. Alan Reynolds. Over more than 25 years, Keynes wrote much about the gold standard and monetary management. It is impossible in one WSJ column or in a brief memorandum to do full justice to the insights of such an

imaginative and loquacious man whose various writings encompass up to twenty-five full sized volumes. Nevertheless, based on a rather extensive examination of his works, I believe it fair to conclude that Keynes would have preferred some alternative to gold if it held prospects of insuring domestic monetary discipline. In the Treatise on Money, he wrote as follows:

> "I think it an allusion to suppose that there are any special characteristics governing the supply of gold which make it likely to furnish automatically a stable standard of value, except the characteristic which it share with all durable goods - namely, that the increment to total supply in any year is likely to be very small. Apart from this, gold has depended, and will continue to depend, for its stability of value, not so much on the condition of its supply, as on the deliberate regulation of demand." (Volume II, p. 293)

In the same work, Keynes noted that

> "There is little evidence to support the view that authorities who cannot be trusted to run a nationally managed standard, can be trusted to run an international gold standard. For a nationally managed standard would not subject the country's internal economy to such violent strains as those to which the attempt to continue to conform to an international standard may subject it, so that the inherent difficulty and the necessary sacrifice will be less in the former case than in the latter." (Volume II, p. 299)

Keynes last view towards gold was expressed at the Bretton Woods' negotiations which led to the International Monetary Fund. He had proposed an International Clearing Unionand new monetary unit, the Bancor. (The Bancor is currently approximated by the SDR.) For Keynes, the Bancor would not be wholly divorced from gold. He contemplated holders of gold could convert it into Bancors, but holders of Bancors would be unable to convert them into gold. This asymmetry implies Keynes would have been willing to dethrone gold from a prominent position in the international monetary system. He was, it is reasonable to infer, a realist who never abandoned his view that "in truth, the gold standard is already a barbarous relic." (Monetary Reform, 1924, p. 187.) Keynes contended that even Mr. Hawtrey and other gold standard supporters would "allow gold back only as a constitutional monarch, shorn of his ancient despotic powers and compelled to accept the advice of a Parliament of Banks." (ibid., p.187)

One cannot infer in honesty what Keynes would say to the Gold Commission today. One feels he would support an SDR, based on a basket of currencies as has evolved under the IMF. He might have difficulties with a monetary rule currently advocated by some. He would not, contrary to views of one expert witness, advocate a return to gold. Finally, Keynes as a realist and pragmatist was more concerned with having things work than with theoretical esoterica or elegeant arrangements.

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Note: The author earned his Ph.D. from the University of Chicago, has served in the Department of State and taught at the London School of Economics.

GOLD-BASED CURRENCY?

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Few would dispute the fact that monetary discipline is needed to restore order and balance to the economy.There is a growing call for gold to play a part in this discipline,but we cannot ingore the fact that the gold-standard era was not one of economic stability,but of traumatic fluctuation.A former director of the Bank of England,Vincent Vickers,(a prominent industrialist) resigned in protest againstthe gold standard.He said, "We returned to the gold standard in 1925 for the benefit of the City of London,and so ruined our basic industries.A monetary system which begets such flagrant injustice cannot be regarded as an equitable system."

Though a gold basis would be less regid and restrictive than a gold-standard,the fact remains that neither bears any necessary relationship to the actual financial needs of industry and commerce.The value of the metal itself moreover is subject to violent fluctuations as a result of psychological factors quite unrelated to those needs.A fluctuating standard is no standard,a contradiction in terms.

The absurdity of monetising gold is illustrated be the fact that when the metal has been dug out of holes in the ground it is promptly buried in other holes (called vaults),whence itwould dictate the quantity of goods and services that intelligent beings may produce and consume.Presumably someone would decide what proportion of a country's gold is to be monetised,and its value,and presumably such decisions are arrived at through intelligently assessing the actual needs of the economy.It would then seem the height of absurdity to abdicate this rational process to a non-intelligent metal !

Winston Churchill,when Chancellor of the Exchequer,called it a "deadly absurdity".He said in Parliament,(see Hansard Vol.264,21.4. 1932)"When I was moved by many arguments and forces in 1925 to return to the gold standard I was assured by the highest experts ---- that we were anchoring outselves to reality and stability---.But what has happened? We have had no reality,no stability.The price of gold has risen since then by more than 70%.That is as if a 12-inch foot rule had suddenly been stretched to 19 or 20 inches,or the pound avoirdupois had suddenly become 23 or 24 ounces.Look at what this has meant to everybody who has been compelled to execute their contracts on this irrationally enhanced scale. Look at the gross unfairness of such distortion to all producers of new wealth,and to all that labour and science and enterprise can give us. Look at the enormously increased volume of commodities which have to be created in order to pay off the same mortgage loan or debt.--- I say this monetary convulsion has now reached a pitch where I am persuaded that the producers of new wealth will not tolerate indefinitely so hideous an oppression."

Mr.Churchill continued:"Are really going to accept the position that the whole future development of science,our organisation,our increasing co-operation and fruitful era of peace and goodwill among men and nations;are these developments to be arbitrarily barred by the price of gold?Is the progress of the human race in this age of almost terrifying expansion to be arbitrarily barred and regulated by the fortuitous discoveries of gold mines here and there or by the extent to which we can persuade the existing cornerers and hoarders of gold to put their hoards again into the common stock?Are we to be told that human civilisation and society would have been impossible if gold had not happened to be an element in the composition of the globe?These are absurdities,but they are becoming dangers and deadly absurdities.They have only to be left ungrappled with long enough,to endanger that capitalist and credit system upon which the liberties and enjoyments and prosperity,in my belief,of the masses depend."

Our liberty depends on the survival of the free-enterprise system and is inseparable from it.The productive potential of the system has been almost destroyed by creeping socialism and the growth of bureaucracy. But unless the supply of money is controlled it will be found necessary to control everything else.For this purpose a Statutory Authority is neededfor its scientific control.Charged with the specific duty of maintaining a stable price-level,it would use as its gauge a weighted average of all the prices which go to make up the cost of living. Exercising inexorable monetary discipline,it would not permit deficit financing by government except within the parameters it establishes in order to maintain the value of money. Taxation likewise would be governed by those parameters.

The trade cycle,based as it is,on psychological factors,would be levelled off if the public KNEW that positive action would be taken by the Statutory Authority to keep the money supply in balance with the wealth-on-sale (goods and services).There would in effect be a commodity-standard.Gold is neither a standard nor a commodity if it is monetised.Wealth is not money or gold (these may merely be tokens to facilitate exchange).True wealth should rather be gauged by the goods and services,with which the monetary tokens should always be kept in balance by the Statutory Authority.

SUMMARY OF MY VIEWS ON RESTORING THE GOLD STANDARD

Submitted by

Henry Hazlitt

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January 26, 1982

This summary consists in two parts: (1) A condensation of my previous criticisms of Dr. Anna J. Schwartz's definition of a gold standard which she submitted to the Gold Commission on October 6, 1981; (2) a short statement of my own views on restoring a gold standard.

(1) Dr. Schwartz's "definition" of a gold standard is seriously misleading in two respects: It assumes that this must necessarily be an international gold standard -- arrived at by a vote of (presumably) the majority of members of the United Nations. It would be impossible to get any dependable restoration of a gold standard by this method.

The other more fundamentally misleading defect is that Dr. Schwartz persistently confuses a weight with a price. She therefore wrongly declares that adopting a gold standard is an act of "price-fixing" of gold. When the U.S. changed the so-called "price" of gold from $20.67 to $35 an ounce, what it really did was to declare that the paper dollar, instead of being convertible into gold at approximately one-twentieth of an ounce, would be convertible at only one-thirty-fifth of an ounce. It was, in other words, defining the value of a paper dollar as being one-thirty-fifth of an ounce of gold -- a weight, not a "price."

(2) The restoration of the gold standard in the United States need not depend on our ability to get a vote by the majority (or any other portion) of the members of the United Nations to participate. The participation of other nations would help, but the United States would be well able to adopt the standard alone. It would involve an undertaking on the part of our government to convert its paper dollars on demand into gold at a fixed gold weight for the dollar.

This could not be undertaken immediately. The first step would be for the government to announce its intention of returning to a gold standard not later than such-and-such a date (at least two or three years in the future). The next step would be for the government immediately to stop inflating. It would be

impossible to return to a sound and maintainable gold standard if the value of the paper dollar kept falling. Therefore, the inflation would have to stop almost immediately after the government's intentions of restoring a gold standard were announced. If this were done, and if the general public were confident that the government would actually carry out its promise to return to gold, the currency would approach and reach parity with gold even before the date of the actual beginning of convertibility of the paper money into gold.

It will be noticed that this schedule implies the almost immediate discontinuance of any budget deficit.

This is the essence of the proposed program. A few additional reforms would be desirable along with it. One would be the abolition of the Federal Reserve System, which in its very nature is an assurance of inflation. (The government, of course, should not continue to have power to make money artificially cheap or artificially dear).

Summary of "Gold and Monetary Freedom"

Submitted by
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November 12, 1981

Dr. Allan Greenspan has written ". . . that the gold standard is an instrument of laissez-faire and that each implies and requires the other." Of course, he is correct: economic freedom--more specifically, for our purposes, monetary freedom--is an indispensable prerequisite to any meaningful financial use of gold.

However--and this is the core of the Commission's problem--today there is little economic freedom in America. And almost from our first day as a Nation, there was little monetary freedom; now, there is none.

To understand our lack of monetary freedom it is necessary to go back into history. With the birth of our Nation at the Constitutional Convention of 1787, our Founding Fathers created a new government which possessed expressly delegated powers. Congress was the recipient of legislative power, and in the monetary realm it was authorized only to borrow money, to coin money and regulate its value, and to punish counterfeiting--as to monetary affairs at least, the delegates had substantially resisted the siren song coming from the unfree and semi-free statist European political systems.

But the resolve of America's leaders soon began to ebb. Less than four years after the Convention, the scope of our government's monetary power divided our Nation's leaders at the highest level. The question was whether Congress could charter a bank. President Washington sought opinions from his Treasury Secretary, Alexander Hamilton, and his Secretary of State, Thomas Jefferson. It is popularly believed that the two disagreed. Actually, on the issue of government power, they were in complete agreement--in principle. Hamilton held that Congress's few delegated monetary powers were sufficiently broad to encompass chartering the bank, especially if those powers were "loosely" interpreted, and that Congress even possessed extra-constitutional powers beyond those which had been specifically delegated. Although Jefferson denied to Congress the bank chartering power, he would have granted it to the states--thus sharing Hamilton's statist premise about the power of government over monetary affairs. When the Bank Controversy was over, Hamilton's view prevailed. The monetary power of Congress had grown considerably.

Congressional power expanded nearly thirty years later, when Hamilton's views about its extra-constitutionality became part of the bedrock of American constitutional law. In 1819 John Marshall's opinion for the Supreme Court in M'Culloch v. Maryland expressly held that in monetary affairs, the government of the United States was, like the monarchs of Europe, "sovereign."

That sovereignty was never more apparent than throughout the Civil War's "greenback" episode. In order to fight the war, the northern government of President Lincoln created legal tender and simply forced individuals to accept greenbacks, no matter what they thought the paper was worth. As usual, the Supreme Court of the United States was a willing accomplice to Congress's usurping of nondelegated, extra-constitutional monetary power. In the first important legal tender case to reach the Court, Hepburn v. Griswold, every one of the justices (majority and dissent) agreed on the underlying principle: that Congress possessed a broad monetary power whose outer boundaries were far from clear. Less than eighteen months later, Hepburn was overruled by Knox v. Lee, and legal tender was expressly held to be constitutional.

By the time of the last legal tender case some years later, nearly three centuries had passed since the 1604 English Case of Mixed Money had approved Queen Elizabeth's sovereign power to debase her coinage. Yet despite the fact that in America we had created a different kind of political system, despite a written Constitution that narrowly circumscribed the power of our government, the foreign sovereign who had been repudiated by the colonists seemed to have been replaced by a domestic one--at least in monetary affairs. The idea that monetary power belongs to the sovereign was conceived in Europe. If, despite the United States Constitution, that idea was born in America in John Marshall's M'Culloch decision (midwifed by Hamilton's opinion to Washington in the Bank Controversy) and reached its majority in the Legal Tender Cases, then its maturity came in three twentieth century cases.

In Ling Su Fan v. United States, the Supreme Court concluded that attached to one's ownership of silver coins were "limitations which public policy may require," and that the coins themselves "bear, therefore, the impress of sovereign power."

Two months later the Court went even further, at least in dicta. Nobel State Bank v. Haskell held that a state bank could be forced to help insure its competitors' depositors against insolvency. In the course of his opinion for a unanimous Court, Justice Oliver Wendell Holmes actually went so far as to admit that government monetary power was indeed omnipotent: "We cannot say that the public interests to which we have adverted, and others, are not sufficient to warrant the State in taking the whole business of banking under its control."

Holmes' dictum very nearly became a reality in the early days of the "New Deal," when, in a statist orgy of rules, regulations, proclamations, executive orders, resolutions, decrees and manifestos, America's banks were ordered closed, her dollar was devalued, her gold standard abandoned, private ownership of gold was illegalized, and gold clauses were nullified. Although only the gold clause issue reached the Supreme Court, when nullification of the clauses was upheld, it was crystal clear that the Court had de facto approved of all the New Deal's statist exercises of raw government power--based on a chain of precedents running back inexorably to Noble State Bank, Ling Su Fan, the Legal Tender Cases, M'Culloch, the Bank Controversy, and thence to the Elizabethan Case of Mixed Money. Ironically, but not surprisingly, in little more than three hundred years, a round trip had been completed: from an English monarch's unlimited monetary power, to the reposing of identical power in the hands of a supposedly free representative democracy. When the smoke of the Gold Clause Cases had cleared--to the profound detriment of individual rights--the government of the United States unquestionably controlled every aspect of this Nation's monetary affairs: money, credit, banking, gold, the securities business, and more.

In the nearly fifty years since then, that control has both deepened and become considerably more sophisticated (as in the Bank Secrecy Act), emulating other contemporary societies which we rightly disparage for their lack of freedom.

The United States--its government and its people--can not have it both ways. Either we have monetary freedom and a gold standard, or no monetary freedom and no gold standard. There is no middle ground.

Indeed, should this Commission recommend that a gold standard be instituted, and should Congress and the President take the unlikely follow-up step of introducing one, even then, a gold standard resurrected under today's economic and monetary controls would not be worth the paper it was proclaimed on. Until the government of the United States once and for all pulls out of the economic and monetary affairs of its citizens--whether there be a gold standard or not--we cannot have economic, or monetary, freedom. Without it, what we have instead, as uncomfortable as this may be to admit, are revocable privileges--which are the antithesis of individual rights.

HISTORICAL EVIDENCE SUPPORTING A RETURN TO A GOLD DISCIPLINE

Submitted by

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February 1, 1982

My historical research has led me to see the stabilizing powers of gold within monetary systems. This research has been collated in The Golden Constant: The English and American Experience, 1560-1976.

My findings can be summarized as follows:

1. There must be a discipline over the money supply. Nearly everyone agrees with this in the abstract. Disagreement arises over the question of at what levels and how to exercise the discipline.

2. Attempts at monetary discipline when managed by men have not worked. I am not referring solely to the history of the United States. The same observation can be made for England, Germany, France, Italy and Japan. The only exceptions were draconian measures ending brief periods of crisis.

3. Therefore, I believe there must be management by law--not by men. An example of what I mean by "law" is that currency must be convertible into precious metal at a price fixed by law, with a legal reserve in place to guarantee conversion.

   One example of managerial judgment by men is when a governing board selects target interest rates or target growth rates in selected definitions of money supply and makes continuing judgments of appropriate open market operations to try to hit these targets.

4. Those monetary laws that worked best throughout history have been based upon the discipline of the precious metals. Notice that I am not saying that whenever the system was based on precious metals it was stable; I am saying that when in history we find long-run stability of prices we find precious metals standing behind it.

5. The precious metal that has had the most successful experience in stabilizing price levels is gold.

Based upon these findings I submit the following conclusions. The American public and the world at large would be well served by a monetary reform that would include:

a. Some form of a gold standard based on law;
b. Arrived at in consultation with our trading partners;
c. Accompanied by extensive fiscal reforms including budgetary policies to preclude over-spending.

Statement by Helen B. Junz, Vice President, Townsend-Greenspan & Co., Inc., New York, N. Y.

Mr. Chairman, I will focus my remarks primarily on the international aspects of some of the gold link proposals before you. Although the implications of each of these proposals differ, the objectives are consistent and clear: they spring from the growing dissatisfaction with the apparent intractability of inflationary tendencies in the world economy and the attendant volatility of interest and exchange rates. To bring about a greater degree of price stability and, thereby of predictability of the economic environment, is a policy priority shared among most nations today. However, there is considerably less agreement about the way in which this goal can be accomplished and about the role that gold can play in the process.

At this time when interest in relinking gold and the domestic money supply is being revived in the United States, other countries seem to be moving away from gold for purposes of controlling domestic monetary expansion. Even the most traditionally gold-conscious countries, such as Switzerland, appear to be headed towards a weaker rather than a stronger linkage. And both, the Swiss and the Dutch, who together with the French have generally been Europe's spokesmen in favor of a role for gold in the international financial system, do not consider a move to gold convertibility practical at this time. Although currently not supportive of moves to restore a system of gold convertibility, most industrial countries and a number of developing countries as well never really fully agreed to the concept of demonetisation of gold either. Accordingly, a number of developing countries, particularly some OPEC members, have materially increased their gold reserve holdings. And the members of the European Monetary System, have included gold in their reserve pooling arrangements. Foreign authorities clearly are more interested in the ability to activate their gold reserves for purposes of intervention in foreign exchange markets, and, if needed, as collateral for official foreign borrowing, than they are in re-establishing convertibility. These attitudes have clear implications for the success or failure of some of the gold standard arrangements this Commission is examining.

These arrangements can be grouped into three sets by ascending degrees of convertibility. The first set of proposals calls for a link between gold and the domestic money supply without convertibility of dollar assets into gold. Such arrangements are least subject to international influences. Their purpose is to impose a legal constraint or specific rule on the expansion of the money supply. The imposition of such an objective rule stems from the belief that the authorities are too exposed to political and social pressures to be able to pursue their stated goals in a steady fashion. If this is so, it is hard to understand why they would be able to remain within the gold cover constraint, when they were unable to stick to other promises. A gold cover commitment on the monetary side, a priori, is no different from a legislated debt ceiling on the fiscal side. And the experience with the latter has been that whenever the ceiling became a real constraint there was a change in the legislation rather than in policy. Thus, before a gold cover commitment could change market expectations about inflation in the United States, domestic and foreign holders of dollar assets would have to be convinced that the imposition of such a requirement somehow is more binding than past experience indicates.

The second set of proposals attempts to shield a gold based domestic monetary policy from external influences by limiting convertibility to domestic residents. This would require the imposition of exchange and capital controls. Enforcement of such controls in a world with capital markets that have become increasingly interrelated and by a country that is at the very center of this international financial network just is not realistically feasible.

The final set of proposals involves broad gold convertibility at a fixed official price. Under ideal circumstances, such a gold standard will, indeed, work to stabilize the domestic price level. For that to happen, the supply of gold needs to expand in line with the growth of real demand for money. But past experience has shown that this is not always so, particularly in the short-run. The supply of gold is governed by rather different factors than is the demand for money. Furthermore, because decisions about new supply are concentrated among a very small number of gold producers, there can be no assurance of a smooth flow of new supply. Further, the consequences of having supply decisions for a core commodity concentrated in the hands of a small number of producers are abundantly clear.

A perhaps even more serious problem in operating a gold standard system is that any addition to, or decrease of, the Treasury's gold stock triggers an offsetting change in the money supply. Whereas such an offset is fully appropriate when the change in gold holdings stems from portfolio decisions of U.S. residents, this cannot be taken as given when it originates abroad. The essence of the gold rule is that it functions objectively and does not distinguish among the causes that trigger changes in the monetary environment. This means, however, that any overseas disturbance will immediately reverberate through the U.S. economy, regardless of the state of the economy at the time. U.S. monetary conditions, thus would swing with the rise and fall in world demand for gold. For example, the Soviet Union covers its foreign currency needs largely through gold sales into the free world market. A harvest failure in the Soviet Union, thus triggers gold sales. These in turn exert downward pressure on the world price of gold, making it profitable to sell gold to the U.S. Treasury. This inflow of gold then would cause an increase in the money supply and in the domestic price level. Conversely, an increase in political tensions tends to raise the demand for gold triggering a deflationary reaction in the United States. Portfolio decisions by foreign holders of dollar assets, politically or financially motivated, would affect U.S. monetary conditions in a parallel manner, destabilizing the U.S. economy, purposely or indirectly.

Given the relative volatility both economically and politically, that appears to be characterizing the 1980s, there likely would be a significant number of occasions when outside influences could effectively destabilize domestic monetary conditions. Accordingly, pressure would build for discretionary action to shield the domestic economy from such outside influences. But once an override mechanism to the objective rule of the gold standard is established, the system is as vulnerable to the push and pull of domestic political and social pressures as is the system it is intended to replace.

These problems are quite fundamental and exist aside from the thorny question of how to determine the appropriate official price for gold at which re-entry could be effected. The gold standard, like any other simple objective rule, cannot be an unerringly appropriate guide to policy action in today's complicated world. The discipline it would exert clearly would be helpful in containing inflationary tendencies. However, the costs associated with failure could be tremendous for such failure would put in question the political determination of the authorities to achieve and maintain financial stability. What it finally comes down to, is that discipline can be successful only in achieving its goal, if the political will to do so is strong. Any woman can tell you that no corset can help fit a size 18 body into a size 8 dress for any length of time. Imposition of outside discipline can help an overeater shed a few pounds, but without a change in basic attitudes, inevitably this discipline eventually will give way to another eating binge. However, once attitudes have changed and discipline has become a part of the behavior pattern, outside constraints appear unnecessary.

TOO EARLY FOR GOLD

Submitted by
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February 1, 1982

Discussion about going back to a gold standard has suddenly become respectable. The idea that something must be done to restrain the inflationary habits of politicians has gained an acceptance that was unthinkable a few years ago. Advocates of a gold standard believe that once convertibility of the dollar into gold at a fixed price is restored, inflationary expectations would quickly fall, prices would stabilize, interest rates would decline, and real growth would return to the economy.

We do believe that a monetary system built on a hard base is the only way to prevent the government from printing money willy-nilly. As it has in the past, gold can probably play this role in the future better than anything else. Being commodity money, gold has the advantage of enabling free-market forces to maintain relatively stable prices over the long term.

The fact that the gold standard is desirable, however, does not mean that it can be reinstated any time soon. Excessive credit expansion since gold-backing behind the dollar was removed has led to rampant inflation and has brought acute illiquidity to both the private and public sectors. Until these imbalances are corrected, reinstating the gold standard can do more harm than good.

Assuming that we can return to gold now, what should the price be? The best way is to let the free market set this price. One proposal now receiving attention would have the government announce a set date several months hence when it would start to buy and sell gold at a fixed price. That official rate would be based on the market quotation prevailing just before the deadline. The problem with such a plan is that no free market for gold would really be in existence during the interim period. The huge supply held by central banks wouldn't be available for sale. Speculators could drive the price sky high by buying as much gold as possible. When the government absorbs this vast influx of gold at lofty prices, it would inject billions of dollars of new reserves into the monetary system. Banks could then effect a new wave of credit expansion, the money supply would skyrocket, and runaway inflation would surely follow.

Why can't the government simply fix a rate high enough to support the dollars now outstanding or to cover the nation's foreign liabilities? For one thing, such an arbitrary rate must be set far above recent market quotations. It would have the inflationary effects noted

earlier. Also, it would freeze the existing illiquidity into a new monetary system and would prevent the free market from correcting the mess.

A return to the gold standard is possible only if the metal is fairly priced relative to all commodities. This is the only way the purchasing power of gold - and the money it backs - can benefit from the self-stabilizing feature of a hard money system. What, then, is a fair price for gold in terms of its purchasing power? Since 1934, when gold was fixed at $35 an ounce, producer prices have increased by about 670%. A comparable increase for gold would give us a price of $270 an ounce. Looking at gold over a much longer period of time, during the 100 years when gold was fixed at $20.67 an ounce, the producer price index average 38.4 (1967=100). Currently standing just below 300, it has multiplied roughly eightfold. A similar increase for gold would bring a price of only $165 an ounce. In terms of its commodity purchasing power, then, the next official gold price should be somewhere in the range of $150-300 an ounce.

A return to a gold standard now at this price would be terribly disruptive, however. The public is still highly inflation-conscious. If the government agreed to sell the metal so far below the current market price, it would surely lead to a run on the U.S. stockpile. Tens of billions of dollars could be drained out of the banking system and the overall effect would be drastically deflationary. Politicians will never willingly deflate the economy to such a degree. Hence restoring the gold standard in the near future is out of the question.

This does not mean that some kind of gold standard can't eventually be reestablished. The gold standard was restored in the 1870's after commodity prices had fallen by more than 50% from their Civil War peaks. A similar opportunity may present itself later in the 1980's. Free-market forces are now at work to bring about a switch from inflation to deflation. Widespread price declines are now a fact for all financial assets, including gold and collectibles, and they are beginning to emerge in the real estate sector. Soon this deflation will spread to other sectors of the economy.

After this deflation has finally led to credit contraction and a worldwide depression, the price of gold may well have dropped to its fair market value later in this decade - perhaps below $200. At that time, but not before, it will be possible to reinstate the gold standard.

WHY GOLD IS NOT THE ANSWER

Submitted by

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November 12, 1981

You have received many proposals to give gold a centrol role in our monetary system. The proposals differ widely and so do the arguments advanced on their behalf.

Some believe that gold is "honest" money. Those who bring goods and services to market should be paid with money containing equivalent real resources. This doctrine appeals to concepts of value handed down for centuries and embodies view about the nature of the contract between citizen and sovereign. The honesty of money, however, is not guaranteed by backing it with gold. If the U.S. Government were required to mint gold coins from newly mined gold, the coins would embody the real resources used in producing them. But producers of other goods and services would be wrong to regard them as honest money. The value of money derives from our ability to use it, not the cost of producing it. An honest money is one whose purchasing power is stable. If there were new discoveries of gold or dramatic improvements in methods of mining, the resource cost of a gold coin would fall, and it would not be an honest money.

Two other arguments are advanced by advocates of gold. They say that a gold standard is the best way to maintain price stability in the long run. They say that the decision to adopt a gold standard will dispel uncertainty in the short run.

I have doubts about the promise of long-run stability. You went over the record at one of your meetings, when you discussed the excellent paper by Anna Schwartz, and I agree with the conclusion that one of you drew then. Some say that the gold standard gave us price stability. It may be more accurate to say, however, that we were able to stay on gold in periods that were intrinsically stable and forced to abandon gold when they ended.

I have even deeper doubts about the assertion that a quick return to gold will dispel uncertainty, assuring the success of supply-side policies. Consider the legislation introduced by Senator Helms. Six months after Congress adopts his bill, the Federal Reserve banks will start to buy and sell gold freely at a "standard" price equal to the average of market prices in the previous week. There is no way to know how this legislation would affect market prices during that critical week. There is no way to know what will happen thereafter. The public might sell large amounts of gold to the Federal Reserve banks, and the legislation would then mandate rapid expansion of the monetary base. The public might buy large amounts of gold, and the legislation would then mandate rapid contraction. In either case, the Federal Reserve System might have to declare a "gold holiday" very soon. This seems to me a recipe for heightening uncertainty, not for ending it.

A fourth argument is advanced on behalf of gold. It is the case for not

going back to pegged exchange rates. Let me make three observations: (1) Exchange rates can be pegged without using gold. A link to gold is not necessary nor sufficient to keep a pegged-rate system from breaking down. (2) Most observers have strong doubts about returning to pegged rates. Those who favor them believe that floating rates have been a major cause of international instability. Floating rates were adopted, however, to insulate national economies from external shocks, and they have been rather helpful in this regard. (3) I would remind those who favor pegged exchange rates that we cannot adopt them unilaterally. To do so de facto would require the cooperation of other countries; to do so de jure would require a formal decision by the International Monetary Fund.

At one of your sessions, someone said that he favors the "development" of a gold standard, not a "return" to a gold standard. I take this distinction seriously. If a gold standard is to have any chance of conferring long-term stability, it must prevent the monetary system from creating or accommodating inflationary pressures. It would have thus to be very much stricter than earlier gold standards. It would be necessary to back the currency completely by gold. Yet this radical reform might not go far enough. During the last decade, we have been assaulted by a dozen definitions of money. This barrage reflects uncertainty about the usefulness of any single concept. It also reflects an economic process. When the authorities clamp down on the supply of one monetary asset, the financial system produces substitutes for it. The very attempt to control a particular aggregate, even by backing it with gold, reduces the relevance of that aggregate.

In your deliberation, you have concentrated on a return to gold by the United States, acting unilaterally. You should pay close attention, however, to the international ramifications. Under present international monetary arrangements, a foreign government can peg the value of its currency to the U.S. dollar. (To this extent, the United States cannot decide unilaterally that dollar exchange rates should float.) Under present arrangements, however, a country can maintain its peg only by purchasing and selling dollars. If the United States restored convertibility to gold, other countries could still peg directly to the dollar. But they could move to a gold standard, too, and this would likewise fix the prices of their currencies in terms of the dollar. More importantly countries pegging to the dollar and those pegging to gold could buy gold from or sell gold to the United States. There is another possibility. Foreign governments and central banks hold some $167 billion in balances with U.S. banks, Treasury bills, and other dollar claims. They hold an additional $80 billion of Eurodollar deposits. These could be used to purchase gold from the United States, affecting the monetary base. Many people ask what should be done with the large U.S. gold stock if it is not given a new monetary role. I believe that the Government should hold onto its gold stock. The United States has huge stocks of tanks, aircraft, and missiles. It does not want to use them but cannot get rid of them. The United States should keep its gold for analogous reasons. The future is undertain and unsafe. One can conceive of international emergencies in which gold may be the only acceptable means of payment. One can conceive of circumstances in which we would want to redeem the dollars holed by foreign governments. Do not try to concoct a new use for gold. In the words of another economist on another occasion: Don't just do something. Stand there!

GOLD, THE ONLY HONEST UNIVERSAL MONEY

Submitted by
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February 3, 1982.

"How many reams of paper cut into bills can circulate as money? The worthless tokens are signs of value only in so far as they represent gold...While gold circulates because it has value, paper has value because it circulates." That irrefutable and cogent truism, in and of itself, is the concise epitome of the case for a prompt return to the discipline of the gold reserve standard which would automatically place a limit on the profligate printing of fiat money by vote-buyingpoliticians and their associated self-serving pressure groups. It is not a quotation from any great American; it is from the "Critique" of Karl Marx, a true believer in honest money. The nearly half century binge on dishonest nothings is the core of our inflation. The U. S. and the western world are now on the brink of a monetary catastrophe that can make the great depression appear to have been a boom unless the discipline of gold is invoked.

The enemies of gold, knowing that that discipline will end their self-serving, resort to such specious superficialities as Russia and South Africa will also benefit. Their incidental benefit does not compare with the greater vital benefit to the staggering monetary system of the western world. The blacks of South Africa had their wages held down by the blatant hypocrisy of the U. S. in its futile endeavor to keep the price of gold at $35. Since that hypocrisy has been shattered, black wages have been quintupled. Any figures on Russian gold and the important cost of its production are pure guesstimates; most likely, Russian propaganda. To the adamantly biased, the simple answer is to demand that both pay in gold for everything they buy from the west.

Paper money is pure fiat(government IOUS of nothing). By whatever nomenclature, none is as "good as gold" nor will the contrived rhetorical alchemy of the political hierarchy turn them into gold by its deceptive hogwash. Under a convertible gold standard, preferably with a 100% gold requirement, they would be given value as warehouse receipts for gold. It would give the electorate the power to pull the rug out from under the vote-buying spenders who would then find little inducement to run for office and give the people a sound reason to vote. It would be the crux of putting the kibosh on inflation and the devastating interest rates. If this last chance administration had given the return to the gold standard its first consideration, it would have facilitated its success in its needed reforms. If it does not return to it very shortly, its patchwork surgery will be but an interlude to the next spree and the ultimate monetary collapse.

In the face of the glaring success of OPEC in setting its own price for its valuable asset and keeping it from the manipulations of the so-called free market, gold advocates, without any regard

for our gold as an asset that will buy materiel and arms (even from your enemy) in time of war, without sound reasoning, either propose, a denigrating gold low price arrived at through each individual crystal ball or tossing to the wolves on what they naively term the "free" market to be gobbled up as in the past, e. g. wanton Carter, at their price.

There is only one sound basis upon which to return to the gold reserve standard; that is, by the commonsense of shedding the politically embedded complex of denigrating our gold asset and recognizing the unequivocal fact that the tobaggoning dollar is close to the bottom of the hill. That commonsense mandates, that the U. S. and it alone must commensurately equate the value of our invaluable gold asset with the reality of the billions of owe-you-nothing dollars that have been spewed around the world. This sound mathematical equation calls for an initial price of several thousand dollars an ounce as our selling price. Our purpose then should be to, over time, take a goodly part of those gold threatening dollars out of circulation; thus gradually increasing the gold value of the dollar. At this initial stage we would not oblige ourselves to buy gold at our set selling price. Sellers of gold would have the world gold markets. Over time, our price and the markets' price would meld to a consensus price. We would have an honest convertible dollar with increasing substance value and our gold asset would be protected from the machinations of the marauders.

The sufference of the glaring failure of monetarist fine tuning boggles one's reason. It is clear that it is politically perpetuated by and for that hierarchy. Ludicrously, the punishment by staggering interest rates is being meted out upon its victims by the culprit, the Federal Reserve Bank.

The stacked Gold Commission with but two of its seventeen members for the gold standard is a sad omen. It has seriously jeopardized the stature of this reform administration, giving it a resemblance to that of the voted-out Carter. If its only monetary reform is to be the issuance of more gold coins as the surgery to right the inflationary monetary mess, it will be a tragic cop-out to those who put it in office, tragic for the country, and probably tragic for it.

Unless President Reagan has it up his sleeve to insist upon the return to the gold standard at a high protective price and gets it so cemented that it can not be violated in the future, whatever little success he may hope to have in controlling inflation will be very short lived.

International trade is seriously in need of a gold value denominator. It would eliminate costly currency hedging and would foster world trade. It would also control inflation through its penalty, the loss of gold by the inflationist country.

THE DESIRABILITY OF A SPECIE MONETARY STANDARD

Submitted by

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January 10, 1982

The role of gold and silver has been fundamental in the monetary systems of all countries since the dawn of civilized society. This has been and remains true because a reliable and stable medium of exchange is a basic necessity in every economy, especially in one consisting of advanced and sophisticated production; and that gold and silver alone have ever served in this crucial capacity with any degree of continued success.

We should note (1) that no nation or monetary authority has ever had the power to issue fiat money without abusing this power and thus causing destructive inflation; and (2) that such abuse has always resulted in the most serious consequences. Sometimes, the outcome has been a dictator or the utter breakdown of the social order; in others, where wisdom and statesmanship have supervened, reforms were effected which placed the nations involved, not only on the course of recovery, but gave them periods of prosperity and tranquility.

Perhaps the most important historical instance of great statesmanship was that of our Founding Fathers, who had, from bitter experience, learned the inevitable consequences of inflation (in that case unavoidable because of the War of the Revolution). After the Continentals, as well as the various irredemable currencies issued by the colonies reached a certain point of depreciation, they ceased to circulate; and those who prepared our Constitution were determined that no such tragedy should recur in the United States. They therefore enacted two provisions in that instrument, one of which states that "Congress [alone] shall have power to coin Money, regulate the Value thereof, and of foreign coin;" and that "No State shall...make any Thing but gold and silver Coin a Tender in the Payment of Debts." This means simply that there shall be no currency except specie issued by Congress (or notes redeemable in such medium); and that every state must pay its obligations in such currency.

Perhaps the most important example of devastating inflation is that of the decline and fall of the Roman Empire; as its powers waned and tributes no longer flowed in from the conquered provinces, there was no employment for millions of slaves who had previously produced goods for export or served in the mansions of the wealthy. Once emancipated, they had to be supported and entertained; thus, bread and the circus. However, since taxes were insufficient to pay for this welfare, the government attempted to solve its problem by issuing vast amounts of debased currency;

and, though Draconian laws were enacted to compel the acceptance of this at face value, it ceased, in due course; to circulate at all; and this was one of the basic causes leading to a millennium of Dark Ages, during which life expectancy fell to four years, and the entire population of Europe was threatened with extinction.

In 1922-23, inflation occurred in Austria and Germany which finally increased the price of a loaf of bread to a trillion marks. The middle class was destroyed, a development which brought Hitler to power and resulted in WW II, with costs which are beyond comprehension.

Since it is so much easier to print fiat money than it is to extract taxes from an angry and restive population, the temptation to issue it is almost irresistible. But this is the road to national suicide!

We know there are serious monetary students who believe that, in order to avoid inflation, we need only limit the federal budget to current income, restrict the issuance of currency to actual need, and exercise a strong fiscal restraint. But, as we have noted, we know of no historical instance in which any authority with power to issue fiat currency has refrained from abusing that power. Thus it is that since WW II, inflation, taxes, and interest rates have gone into the stratosphere.

Thomas Jefferson was an uncompromising proponent of a solid and redeemable currency. He held that the national government alone should have power to issue currency and that this should forever be in the form of specie or in notes so redeemable.

The great monetatry scholar, Ludwig von Mises, declared that sound money is libertarian, because it is affirmative in approving commodity choice in a free marketplace; it is negative only in preventing the government from meddling with the economic and monetary systems. In practice, the classical gold standard is the only effective curb on the power of government to inflate currencies, and thus enslave the people by destroying their life-savings; its abolition renders all other legal and constitutional safeguards useless. History demonstrates that whenever government cannot negotiate loans and dares not impose additional taxes, it resorts, if possible, to the dishonest use of fiat currency.

After much research, I find myself in agreement with those who advocate the gold standard; and I can see no impediment to its return except the opposition of powerful political and economic interests who wish to continue the present manipulation of our money.

For these and related reasons, I urge the Gold Commission, the Department of the Treasury, and its Secretary, Donald Regan, to give serious thought to the need and expediency of returning to the gold standard -- to the constitutional mandate -- before the continuing inflation shall have brought this great nation to the very brink of economic catastrophe.

A PERMISSIVE WAY OF ACHIEVING A GOLD STANDARD WITHOUT PRIOR FIXING OF THE DOLLAR PRICE OF GOLD

Submitted by

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December 28, 1981

To object to the gold standard because it will not bring freedom from poverty, depression, unemployment and war, is surely the setting up of a strawman. The gold standard prevents debasement of the monetary unit. Like a huge fly-wheel it gives stability to the monetary system.

Although forces in government, in the Fed and its member banks will oppose giving up their banking powers and privileges, they cannot very well object to a gold standard brought about in a permissive manner in the free marketplace.

Only the following legislation is required. The Secretary of the Treasury is instructed to offer monthly, gold notes in such amounts and durations as the market can absorb. The competition of money-market, mutual, pension and other funds will produce bidding, even though payment is made in gold. The price of gold should not rise unduly because the increased demand is relatively small. The Fed should be enjoined from buying government or other securities. Its discount rate must be at or above the prime bank rate.

The Fed must not issue any more Federal Reserve notes (dollar currency) but existing dollar currency must be exchangeable at market rates for up to 90% of Treasury gold, for gold currency, the dollars received being destroyed. Gold from any source ;may be used to back up additional gold currency. Gold deposits will come into existence, side by side with dollar deposits, just as gold and greenbacks did after the Civil War. Gold reserves for gold deposits would be the same percentage as dollar reserves. Gold currency is 100% backed by gold. Gold loans will be at lower interest rates and markets will quicken. Dollar deposits will gradually disappear as old dollar loans are repaid and new loans are made in gold.

The Fed would be shorn of most of its functions. It would be hard to make a case that it has served the country well.

AN URGENT RETURN TO THE AMERICAN SYSTEM

Submitted by

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January 8, 1982

Since approximately October 1981, the economy of the United States has entered the beginning phase of a new world depression. At this moment, we are near the threshhold of several alternative kinds of chain reactions of financial collapse in both our domestic economy and the world market. Although restoration of a gold reserve system will not stop this depression by itself, the immediate establishment of such a gold reserve system is an indispensable part of any effective package of remedies.

The government of the United States must take immediate, unilateral action to (a) define the monetary gold reserves of the United States as the sole basis for circulation of our nation's currency in international markets, and (b) to invite other governments to join with us in creating a new gold reserve system. Monetary gold should be priced at approximately $500 an ounce, the estimated competitive market price for adequate supplies of monetary gold from mining. Gold reserve transfers in settlement of monetary accounts is to occur only among nations which enter into such an agreement.

The banking system of the United States must be regulated in a manner consistent with such a gold reserve policy, and no foreign financial institutions should be permitted to engage in business within the United States except on condition that they accept the conditions of regulation and transparency of regulated banking institutions of the United States.

The effect of these two cited measures will be to tend to dry out the flood of fictitiously generated "offshore, unregulated" credit into U.S. capital markets. Therefore, the government and banking system must take concerted action to generate adequate supplies of credit.

The Congress must authorize gold reserve issues of U.S. Treasury, gold reserve-denominated currency notes. These issues of currency should not be employed for government spending, but for lending through special discount windows of the Federal Reserve System. This lending should occur, at rates of not above 4%interest per annum, as participation in a percentile of

individual loan agreements contracted between borrowers and private banking institutions. Such participation should be restricted to capital-intensive improvements of production of agricultural and industrial goods, of transportation, and to capital improvements by designated units of government.

The domestic objective of such supplementary lending is to expand rapidly the tax revenue basis and to increase average levels of national productivity as measured in terms of per capita output of tangible goods. This is the only possible means for remedying in-sight Federal deficits now aimed at levels of $150 billion a year or higher, deficits which will skyrocket off the charts once the full impact of the new depression is felt.

The foreign policy objective of such measures is to create a degree of order in international monetary and economic relations, within which order reorganization of the debt overhang of developing nations can be reorganized on a gold reserve-denominated basis. The objective of such actions is to achieve a level of increased volume of hard-commodity world trade in the reasonably projected magnitude of between $200 and $400 billion annually.

The proposal to re-establish the gold reserve policies of the American System of political economy should not be confused with proposals to introduce a "gold exchange system." The latter proposals would have catastrophic consequences, including a general collapse of the capitalist economy worldwide. The function of a gold reserve system is hard, gold backing for that margin of credit which is not immediately secured by sale of commodities for dollars. By making new issues of currency as good as gold, we make our entire currency issue implicitly also "as good as gold."

We must act quickly. Farms and firms which have been driven out of existence are no longer prospective borrowers, employers or purchasers of goods. We must act before the chain reaction of collapse enters the next phase-change, while most of the structure of our goods-producing and transportation sectors still exist to be revived to healthy economic life.

THE USE OF A BASKET OF COMMODITIES TO BACK THE CURRENCY

Submitted by

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JANUARY 14, 1982

This is to suggest that the Gold Commission consider the use of a broad group of commodities to back the currency. There would be advantages in using a number of commodities as compared to the use of a single commodity, gold.

Some of the commodities that might be considered for inclusion in a broad group of commodities would include, besides gold: oil, steel, coal, coffee, wheat, copper, corn, aluminum, soybeans, silver, platinum, uranium, and wood.

If the currency were fully convertible into commodities, inflation would largely come to an end for the simple reason that the final relationship between units of money and units of goods would have been finally and definitively established. Inflation only exists because there is no fixed relationship between units of money and units of goods.

There would be various criteria that would need to be met for a particular commodity to be included in the group as a backing for a currency: the commodity should be easily stored, without spoiling; there should be a relatively abundant and stable supply; it should be readily transportable; it should have a relatively high ratio of value to size and weight, so that the storage cost is not excessive; the commodity should be sufficiently uniform so that units are of the same value (or at least it is relatively easy to determine grade or quality); and preferably there should be either a good domestic supply or a number of friendly nations with available supplies.

The advantages from use of a number of commodities, rather than gold alone, would center around avoidance of the special problems associated with gold, such as the fact that the supply of gold in the U.S. is too small to back the currency (at current values, less than 1/4th the value of the existing money supply); gold production is excessively centralized in two countries, South Africa and U.S.S.R., whose control over the supply could be inimical to the best interests of the U.S.; and the rising cost of new gold, as less accessible veins are mined, would cause a built-in inflation effect.

Other advantages of using a group of commodities would relate to the avoidance of the problems associated with use of any single commodity, whether it is gold or something else. This would include the obvious problems of tying currency to any commodity which has had the severe fluctuations in unit value that gold has had over the last year or so. Also, of course, inflation (or deflation) is not prevented by tying the currency to a single commodity, if there is the possibility that the value of that commodity will fluctuate in ratio to the value of other goods. However, with a group of commodities,

if the group is sufficiently inclusive, inflation can be largely eliminated, almost by definition.

Another advantage of a group of commodities is that the supply may be partly represented by commodities already under U.S. control, for example, metals under the stockpiling program, oil under the government reserve supply program (or Naval reserves), various foods stored under farm subsidy programs, timber on U.S. lands, and so forth. This can reduce the problem of acquiring the commodities used to back the currency.

Further, gold to an extent suffers from the same defect as a paper currency in that its value depends on mass perception of its future exchangeability, of the willingness of others to accept it in payment in the future. If everyone lost faith in the future acceptance of paper currency, it could cease to have value, as it did in Germany in the 1930's. The only reason the same thing could not happen to gold is the fact that it does have some intrinsic value-in-use; but, in the absence of a hoarding factor, this value could be much less than any fixed value as a backing for currency.

There is a basic problem associated with any precious metal as an exclusive basis for a currency. Its very preciousness results largely from scarcity, but this scarcity means that the supply is not large enough to back a currency. Further, the mystique associated with precious metals results in a hoarding that distorts the market value, as compared with what the value-in-use would otherwise be.

It is suggested that the Gold Commission give consideration to this concept of using a broad group of commodities to back the currency. It would appear to have substantial advantages over the use of any single commodity, such as gold.

COMMENTS ON THE PROPOSAL OF A GOLD STANDARD TO REVITALIZE OUR ECONOMY

Submitted by:

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Did you ever really look at a tree? Do you know what it is? Do you know how important it is to our survival? It gives us shade in the summer and in the winter warmth from a fire place. It gives us shelter in a house and it gives us communication through our newspapers and letters.

We over exploit this wonderful "gift of nature" by destroying oxygen producing forests, that help us to survive, and then turn them into thin sheets of paper, worthless paper, stamped with ink and the words "legal tender" as if to give them some value that nature didn't.

This bad paper is called "money." Originally this money was accepted as having value when it was exchangeable for so much of nature in the form of gold or silver. Then it was good paper. Good paper was a check on our plunder of nature as it represented certain resources of nature such as gold and silver in a ratio to other resources of nature such as trees and therefore we could not so readily devastate these trees.

What we have now is "legal tender" paper that can be exchanged for other "legal tender" paper -- in other words nothing. But we use this "nothing" as falsely representing a resource of nature that isn't there to plunder another resource of nature that is there -- in other words we get something for nothing. Eventually this leads to a day of reckoning. Our blind fascination with this "legal tender" bad paper carries us to our self destruction.

Young eskimos were given so much bad paper as payment for working on the Alaskan Pipe Line that they went and bought out their own whaling fleet to plunder the endangered Bowhead whale with the latest weapons of destruction and carnage. The elder eskimo whaling captains were so appalled at this paper funded war on whales that they set up their own organization to control it -- they were closer, historically, to a barter economy or value oriented economy. The eskimos claim that they need the whale to survive but bad paper led some to destroy the very basis of their survival.

Again I say, and I cannot be too emphatic in these dire times of ever diminishing and plundered resources, the rain forests of the world are being destroyed by the leverage of bad paper. The rain forests give us our oxygen -- the natives call them the lungs of the world.

In parts of South America where unbacked paper money is dropped like confetti, inflation is so rampant that tourists have their eye glasses torn right off of their faces by the natives for the gold content of the frames.

Our bankers, the megabankers, have dropped so much confetti on Poland that Poland is exporting food from the mouths of citizens to try and pay off its debt not realizing how its natural wealth was ripped off by confetti. But this Disney Land Empire of MegaBankers is awakening to the fact that followers of their "paper cross" are diminishing and that they themselves are losing faith in it.

So to boost their religion they are seeking gold relics and turning to the "gold cross" of the infidels and their barbaric worship. To help them do this they got a "bail out" insurance to give their confetti, they just can't seem to give up this "opiate of the bankers," substance, in the form of the Monetary Control Act and other pending legislation, that is to be subsdized by the taxpayers. Now they will have a direct path to Fort Knox and our pockets.

What this means is that you and I, as usual, the tax payer, particularly the middle class tax payer, is to further subsidize the further blunders of the "confetti boys" as well as our self destruction. While we choke on paper the bankers, like the South Americans, go after our eye glass frames.

To save ourselves, let's cut off the bankers' paper supply and return to a gold standard with a free circulating gold coin currency with gold and silver backed treasury bonds so that we can keep our eye glasses as well as our shirts.

SUMMARY OF STATEMENT OF NOVEMBER 3, 1981 SENT TO GOLD COMMISSION, WASHINGTON,DC

Submitted by

Philip H. Mann - 7737 N. Kendall Dr.(C201), Miami, Fl. 33156 -- Feb. 4, 1982

PART I - CONDITIONS PREVAILING PRIOR TO DEPARTURE FROM GOLD STANDARD,MAR. 1933:

During 1928-1929 general business was good, but terrific speculation in Commodity and Stock markets. By Sept. 1929 the Dow Jones Ind. reached 386; call-money 20% - all commercial banks a high Loan/Deposit Ratio of 78%. Drastic liquidation in commodity and stock markets, and bank credit began in October 1929 and continued until June/July 1932, resulting in THE DEPRESSION. By July 8, 1932 the D.J. Ind. Avgs. declined 89½% to a low of 41. Commodities suffered sharp declines. Also, by July 1932, all basic indices: production of automobiles, building, steel, lumber, electric power, paper, carloadings, retail store sales, wholesale prices, etc. were at depression lows. The Great Depression was ended in July 1932.

The recovery started in July/August 1932. By Sept. 7, 1932 the D.J. Ind. advanced 100% to 80. Commodities also advanced sharply. Basic indices also shared in this recovery. Their message was loud and clear. The Great Depression's backbone was broken. Such recoveries usually continue a long time.

The foregoing conditions prevailed when President Roosevelt was inaugurated March 4, 1933. At the end of his three hour radio inaugural speech he announced he would recommend to Congress: (a)that the U.S. go off the Gold Standard; (b) raise official price of gold from $20.67 to $35 an ounce, a 40.94% devaluation; (c) refuse to pay gold for Gold Certificates.

The late Senator Carter Glass of Virginia, former Secretary of the Treasury in Woodrow Wilson's Administration and chief architect in forming the Federal Reserve System in 1913, was shocked at President Roosevelt's sudden repudiation of his party's platform to maintain the Gold Standard. He delivered a most eloquent speech April 27, 1933 on the Senate floor, part of which I quote: "With nearly 40% of the entire gold supply of the world, why are we going off the Gold Standard? With all the earmarked gold, with all the securities of ours they hold, foreign governments could withdraw in total less than $700 Million of our gold which would leave us an ample fund of gold in the extreme case to maintain gold payments both abroad and home. To me, the suggestion to devalue the gold dollar 50% means national repudiation. To me it means dishonor. It is immoral ----". "The history of inflation is recited. Bacon, the wisest philosopher since Christ, the author of the inductive system from which we have drawn all our inventions, valued experience; Edmund Burke, the great rhetorician of all times, was logician enough to magnify experience; Patrick Henry, the great advocate of human liberty, said that his feet were lighted by the lamp of experience. Yet, here today, we are flying right in the face of human experience, rejecting it all. More than half of our laboring population will be the people to suffer under this unbridled expansion. That is what it is, because the rein is so loose that the steed will never stop until he goes over the precipice killing his rider." (See Exhibit 1A - Congressional Record, Senate, April 27, 1933, pages 2460-2462.)

Also, shortly after Roosevelt's inauguration, March 1933, he declared a National Emergency closing all the banks. There was no justification for such action, because most weak banks (nearly 7,000) had failed and were closed prior to Roosevelt's election. (See Congressional Record - Senate - April 27, 1933, page 2467 - Senator Glass' radio speech of Nov. 1, 1932) Exh. 1A.)

The data discussed in this PART I clearly indicates the depression reached its bottom in July 1932 and that a vigorous recovery started in July/ August 1932. This took place nine months before Roosevelt took office March 1933. There were no justifiable circumstances to depart from the Gold Standard. This departure started the great money printing presses then and have continued to the present time.

PART II - THE INFLATION THAT FOLLOWED DEPARTURE FROM THE GOLD STANDARD:

During the past 30 years I watched with great concern the acceleration of inflation and the constant depreciation of the U.S. dollar. Have read numerous books and articles on INFLATION. It is interesting to note some important remarks made during the great debate during September 1790 by the French statesman, Mirabeau, on irredeemable currency: "a nursery of tyranny, corruption and delusion; a veritable debauch of authority in delirium; that infamous word, paper money, should be banished from our language."

In 1933 the official price of gold was increased from $20.67 to $35 per ounce. In 1968 the last domestic connection between the dollar and gold was removed by Congress eliminating the requirement that the Federal Reserve hold Gold Certificates equal to 25% of the value of outstanding Federal Reserve Notes. In August 1971 the last foreign connection between the dollar and gold was removed by President Nixon when he notified foreign central banks that the U.S. would not redeem their dollars for gold. This action caused domestic and foreign commodities - gold and silver to sky-rocket. Note the steep advances from 1971 to 1980: Commodity Research Bureau Futures Index (27 markets) up 248% - Reuters Price Index up 273%; B.L.S. Wholesale Price Index up 155%; Gold up 233%; Silver up 240%.

PART III - SUGGESTIONS FOR RETURNING TO THE GOLD STANDARD

See Exhibit 2 - attached to my Nov. 3, 1981 Statement - a splendid article by Robert A. Mundell, Professor of Economics, Columbia University - I quote: "It is unfortunate that two of the 20th Century's most influential monetary economists, Keynes and Friedman, wrote their major theoretical works for a closed economy with scant attention to the problems of international inter-dependence. Both economists generally assumed a national closed economy on an inconvertable paper standard, generally ignoring that in the 1930's as today gold represented the principal external monetary reserve." "Keynes' system thus takes into account the wage rate, the money supply, the price level, and the exchange rate, and the need to anchor the system by choosing a 'standard'; he chooses wage rates. This accounts for the support of 'wage policy' by his influential disciples."

Why is gold so important? Because it has maintained a stable purchasing power which is recognized and accepted worldwide. Professor Roy Jastran, University of California, has calculated on an index with 1930 as 100, that the purchasing power of gold in England was 125 in the year 1600 and 129 in the year 1900. In 1900 the average weekly earnings of British workers were equal to ½ ounce of gold; in 1979 (after two world wars, a world slump, a world inflation) their earnings were also equal to ½ ounce of gold, same as 1900.

CONCLUSION: Since 1933, disciples of the Keynes System and the Friedman Monetarist System have managed our monetary policy. They failed to realize that many years of experience have proven that whenever any country embraced the policy of irredeemable currency the ensuing INFLATION would progress according to a law in social physics known as 'law of accelerating issue and depreciation'. They failed to realize it was easy to refrain from the first issue; it was exceedingly difficult to refrain from the second issue; to refrain from the third and following issues was impossible.

Philip A. Mann

Summary of

THE GOLD STANDARD: RETROSPECT AND PROSPECT

Submitted by

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FEBRUARY 11, 1982

A reconstituted gold standard is being proposed by "supply-siders" as the only means of giving the central bank the power over the money supply presumed by monetarists and required for a supply-side solution to inflation. Actually, the shattered monetarist/supply-side fantasy cannot be salvaged in this manner. "The gold standard" is a euphemism for a variety of arrangements involving an increasingly ambiguous relationship between gold and money. Gradual inadvertent de facto severance of the connection between gold and the money stock led to recurrent crises climaxed by international collapse of the gold standard (1931-33). Misconstruction of the International Monetary Fund (IMF) Agreement on exchange-rates and gold policy as implying a new gold (exchange) standard contributed to the inoperability and ultimate failure of the Fund (1971-73).

Conceptual deterioration explains this tragic history. The preclassical monetary standard was, simply, the material constituting standard money. The triumph of gold over other metals was merely a matter of convenience. In the classical period the issue shifted from convenience to substance, i.e., which metal is the most stable standard of value? By the time gold won the bimetallic controversy at the end of the nineteenth century, the concept of a standard of value (gold or any other tangible commodity) was precluded by the concept of marginal utility, which proved that nothing intrinsically contains a given amount of value in the manner of length or weight.

In neoclassical literature the term "monetary standard" became synonymous with "monetary system." The standard was, therefore, confused with the policies required to ensure determination of the money supply by the national gold reserve. Forgetting the purpose of the policies permitted de facto departure from the standard while maintaining the mechanics of currency convertibility into gold. Henceforth, whatever the gold standard was supposed to signify, it no longer linked the quantity or value of money with either the quantity or value of gold. The classical distinction (and relationship) between the monetary unit (dollar, franc, etc.) and the monetary standard was lost. "Money" became referred to as the "standard of value." In short, the standard of value became nothing more than the abstract unit of account.

This was precisely what the anticlassical antibullionists had meant by the abstract standard that they opposed to the gold standard defended by the classical school. Thus, the legal losers in the bullion controversy of the

early nineteenth century were ultimately the actual winners. The distinction between gold and paper standards was erased while people thought they were on a gold standard.

The gold standard, which in classical analysis was a proxy for the labor standard of value, was inadvertently replaced by a goods standard of value. The goal of stable prices triumphed over that of stable wages, and productivity gains became increasingly reflected in rising wage rates instead of falling prices. This shift was facilitated by declining price competition and organization of labor, business, and agriculture. In due time stable prices gave way to rising prices as well as wages. This was permitted by a growing elasticity of the money supply accounted for by financial innovations circumventing the gold standard limitation on the money stock. Thus, the inherently deflationary impact of the gold (labor) standard of value was minimized. The only reason the gold standard lasted as long as it did was that bank demand deposits were not recognized as money till well into the twentieth century; therefore, they were not subject to the limitation of the gold standard till other ways of getting around the restriction were discovered. Legal abrogation of the gold standard (1931-1971) represented a volitional repudiation of aggregative control of the money stock independent of the microeconomics of domestic markets.

The alleged automaticity of the gold standard, which some people suppose will solve our problems for us, is a myth. Is the (a) gold standard any more compatible with contemporary institutions today than it was in the nineteenth and early twentieth centuries when the gold standard existed in name but not in fact? Is there a role for gold in the quest for a workable compromise between the external stability desired by official "monetary authorities" and the internal stability universally preferred by the public?

THE WALL STREET JOURNAL, THURSDAY, SEPTEMBER 17, 1981

An Epistle to the Gold Commissioners

By Allan H. Meltzer

The gold standard is an idea whose time is past—long past. The classical gold standard is not a superior method of solving our current problems of inflation and unemployment, whatever its merits a century ago.

Advocates of a return to gold offer their nostrum as a means of stabilizing prices but offer few details about how to reach this desirable goal. All we are usually told is that the gold standard is a "supply-side" solution, which will reduce interest rates, stabilize prices and eliminate the summer's excess supply of zucchini. None of these claims is true.

The fact is that a gold standard stabilizes only one price—the dollar price of gold. Whether other prices, for example an average of the prices of the goods and services that people buy and sell are relatively stable or unstable then depends on what happens to the aggregate demand and supply of these goods and services.

Suppose the world price of oil falls and Arabian sheiks or Iranian mullahs sell gold to maintain their spending. The U.S. must buy the gold to prevent the gold price from falling. This expands the domestic money stock—whether that stock is entirely in gold or is a mixture of gold and paper with gold backing. The required increase in the money stock raises aggregate demand and the prices of all other goods and services in the U.S.

There is nothing special about oil. A failure of the Russian wheat crop, the growth of world productivity relative to U.S. productivity, world inflation—any sizable change affecting world demand and supply of goods and services—would cause domestic prices to change.

Most Classical Period

These are not speculations about what may happen. They describe what did happen under the gold standard in its most classical period. Prior to 1913, we did not have a central bank. Gold coins circulated and checking deposits, many bonds and other financial assets were redeemable in gold.

The U.S. price level was not stable from year to year, or decade to decade. The price level was approximately the same in 1913 as in 1882, but this gives a misleading suggestion of stability. Prices of goods and services fell 47% in 1882-96, then rose 41% from 1896 to 1913.

Real economic activity was more variable under the gold standard than in the recent past. Recessions lasted twice as long, on average, from 1879 to 1913 as in 1945-80, and expansions and recoveries were about one-third shorter. Per capita real income, a useful measure of the living standard, rose more slowly. The most reliable statistics suggest that real per capita income rose a bit faster in the disappointing decade of the 1970s than under gold prior to 1913.

All economic problems cannot be blamed on the monetary standard or cured by changing the monetary standard from gold to paper or from paper to gold. Comparisons of events in 1879 to 1913 with 1945 to 1980 cannot, by themselves, decide whether the gold standard is superior or inferior in some global sense.

They do tell us that the gold standard neither guarantees nor brings smoother growth in standards of living, higher real growth, shorter recessions, more durable expansions or year-to-year price stability. If we care about these things, we should have second thoughts about returning to a gold standard.

All economic problems cannot be blamed on the monetary standard or cured by changing the monetary standard from gold to paper or from paper to gold.

Advocates of gold complain about current variability of money growth and the uncertainty created by changes in monetary policy. A return to gold does not solve these problems. The gold standard makes the quantity of money in the U.S., and its rate of growth, depend on the decisions of Arabian sheiks, South African central bankers, the productivity of foreign workers, the budget and monetary decisions of major countries and other factors.

From 1879 to 1913, many major countries adopted or remained on the gold standard. They accepted part responsibility for fixing gold's price. Every 50 years or so, the demand for and supply of gold brought the broad index of prices of goods and services into an equilibrium that was the same as the equilibrium reached about 50 years earlier.

The belief that prices will return to the same value within a few decades probably reduced the cost of financing long-term capital, like railroads, a principal investment in the late 19th Century. But it is a mistake to regard the gold standard as a guarantor of price stability even in this long-term sense.

The supply of gold depends on discoveries and improved methods of mining and extraction. Nothing in the gold standard mechanism guarantees that relative changes in demand and supply for gold will return the price level to some fixed value every 50 years or every century. This happened in the past because gold deposits were discovered, better methods of extraction developed and banking panics occurred often enough to wipe out some of the money stock and lower the price level.

The only permanently fixed price under a gold standard is the one that the government fixes—the price of gold. The alleged discipline of the gold standard is a political decision to set the price of gold once and forevermore.

Gold standard advocates should be praised for insisting tirelessly that the only way to maintain price stability is by controlling money growth and for reaffirming that the most reliable way to control money growth is from the supply side. These are views that they share with people like Milton Friedman or the members of the Shadow Open Market Committee whom the press describes as monetarists.

Similarity in the views of monetarists and advocates of the gold standard does not extend to the means of controlling money from the supply side. Monetarists insist there is only one way to control money reliably. The central bank must control the size of its own balance sheet by restricting the dollar value of the assets it buys. About 90% of the assets are government securities purchased in past failed attempts to set interest rates or exchange rates.

If the Federal Reserve controls the amount of assets on its balance sheet, the principles of double-entry bookkeeping *guarantee* that their liabilities are controlled. These liabilities, and the corresponding assets, are known as the monetary base, so the monetarist prescription is: Control the size or growth rate of the monetary base.

Without divine intervention, neither the Fed nor anyone else can control the monetary base, interest rates and exchange rates simultaneously. We are—they are—permitted to make one choice from these three (and all the other) proposed targets.

Many attempts to watch multiple targets by using the 24 collective eyes on the Federal Reserve committee that makes monetary policy decisions convinced a majority of the committee's 12 members that one target achieved is better than a basketful of failed promises. The 24 eyes are now glued on one target—the announced growth rate of the money stock —in hopes of repairing the Fed's damaged credibility. Let's hope they stay there.

A gold standard is not a more believable or reliable way to control money or the monetary base. Such statements are the

(continued on reverse side)

very opposite of the truth because no one can choose both the price of gold and the rate of money growth. If the announced price of gold is too high compared to the demand for gold and the world supply of gold, gold flows to the U.S. People pound on the door, offering gold in exchange for dollars. The Fed, or the government's gold buyer, is required to issue more money. The stock of money increases, and prices rise. If the announced price of gold is too low, people offer dollars and buy gold. The stock of money falls and prices fall. If these changes in offers and demands for gold are difficult to forecast, and they are, we have booms and recessions whenever there is a large change up or down in the demand for gold.

No Doubt About the Effect

Again, these are not speculations about what could happen. They are a description of the past performance. After Franklin Roosevelt decided in 1934 to raise the buying and selling price of gold from $20.67 to $35 an ounce, we did a lot of buying. The stock of monetary gold rose 50% in the next three years. Prices rose, despite the Depression. To prevent the effect of gold purchases from further expanding the money stock, the government thereafter sterilized the effect of gold on money. Whatever one believes about the wisdom of these and subsequent decisions there is no doubt about the effect of the overvaluation of gold on the money stock.

Where would you set the gold price to prevent a repeat of the inflationary gold flows of the '30s, or deflationary gold flows? Don't make the mistake of thinking that someone else knows the right price to set and keep constant for the next 100 years. He doesn't. That's why advocates of the gold standard never suggest or hint at how or where the price of gold should be set to stabilize prices in an uncertain world. And don't look to the market for guidance. The market changes its collective mind every minute.

The administration knows that we cannot fix exchange rates or the price of gold and control money. Treasury Secretary Regan and Undersecretary Sprinkel should be lauded for insisting on a freely floating dollar. A free float removes one obstacle to better monetary control. It is a step on the path to lower inflation that has yielded benefits.

Other steps could be taken to make monetary control more certain, more reliable and less variable. But it is a mistake to think that a return to the gold standard is one of them.

Mr. Meltzer is professor of political economy and public policy at Carnegie-Mellon University.

The Case for a Price Rule Such as the Gold Standard

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November 13, 1981

Returning to a price rule such as the gold standard is the only way out of the prolonged period of stagflation the United States has been experiencing. No matter to which policies the Reagan Administration turns, it continues to face the same barriers to success - inflation. While legislation is to reduce tax rates by about 23% over four years, inflation continues to raise tax rates. By the time tax rate indexation begins in 1985, tax rates will probably be higher than when Ronald Reagan took office. Inflation is also hindering efforts to balance the Federal budget through both retarding the growth of income and raising the costs of debt servicing. Today, inflation is the problem.

There are two competing approaches for combatting inflation. One, labelled a "quantity rule" approach, asserts that the rapid expansion of the money supply is the source of inflation. The proposed cure: give the Federal Reserve more power and incentive to tinker with the supply of money. The second, labelled a "price rule," asserts that the value of money continues to depreciate because the government refuses to anchor the price of money. The proposed cure: have the Federal Reserve once more intervene to stabilize the relative price of money now and in the future.

The last twenty years has been a steady shift of U.S. monetary policy away from the price rule approach and towards a quantity rule approach. This period has also coincided with a steady and dramatic rise in the levels of dollar inflation and dollar interest rates. Between 1947 and 1964, under the Bretton Woods System, dollar inflation averaged only 1.4% and T-bill yields averaged only 2.1%. In 1965 the U.S. removed its commitment to redeem Federal Reserve deposits in gold at $35 per ounce. Over the 1965-67 period, interest rates jumped to an average 4.4%, and inflation 2.0%. Following the March 1968 abolition of the 25% gold reserve requirement behind Federal Reserve notes, average inflation rose to 3.3% and T-bills to 5.8% in the 1967-71 period. Inflation, in the year and a half after President Nixon's August 1971 slamming of the gold window, jumped to an average 6.5%. The Smithsonian Accord still fixed the value of the dollar in terms of other currencies. But even that was eliminated in February 1973. Between 1973 and 1977 inflation averaged 9.1% and T-bills 6.2 percent. However, there remained one last price rule. The Fed still targeted interest rates, the value of today's dollar relative to tomorrow's. Following the elimination of the last price rule in October 1979, we experienced record inflation and interest rates.

The shift to a quantity rule has not worked because it is an indirect imprecise tool for controlling inflation. The policy objective is not the supply of dollars, it is how fast the dollars are deteriorating in value. To affect value, the quantity of dollars must be controlled relative to their demand. This creates several obvious problems.

First, most economists would agree that our ability to accurately forecast the demand for money is extremely limited. Second, our ability to estimate the supply of money is not much better. There are problems with collecting accurate data and then correcting them for seasonality and trading day variations. Third, economists cannot even agree what the correct measure of the money supply is, much less that the Fed controls it. With the growing list of domestic and international substitutes for Federal Reserve liabilities, however, there is a growing consensus that those narrow definitions of money on which policy decisions are focused represent only a small fraction of what constitutes money. Dollar money markets are global, and the Federal Reserve is only one of many international participants.

So the Fed's new obsession with money growth targets is a search for a mythical formula which is bound to fail. Even worse, it flies in the face of the logic of why we have a monetary system and a central bank to begin with. The goal of an effective monetary system should be to make money useful, not restrict its use. Monetarism has turned the logic of central banking on its head.

The key to making money useful is to stabilize the value of money now and in the future. The way to do that is through a price rule. Focusing monetary policy on stabilizing the value of money is a direct way to reduce inflation and inflationary expectations. With less emphasis on the number of drops passing through the Fed's spigot, and more quality control in maintaining an even size, the attractiveness of the dollar improves, probably leading to an expansion in the supply of dollars.

There are at least three different price rules which could be adopted. One is to reestablish control over long-term interest rates. While this mechanism stabilizes today's prices relative to tomorrow's, it does not anchor either price level in terms of commodities. A second alternative is for the Fed to reestablish control over exchange rates. However, while such a move stabilizes spot prices in our country relative to those abroad, it still does not anchor spot prices acorss countries.

The third possibility is to reestablish control over commodity prices by establishing a gold or other commodity based system. The value of the dollar could be stabilized in terms of a basket or a single commodity, though a single commodity is probably less prone to political manipulation. By far this is the superior system, for it does what none of the alternatives do - stabilize spot inflation. In turn, lower expectations of inflation lower interest rates.

The precise form of the standard, however, is not as important as the intervention mechanism. Regardless of the standard chosen, the Fed must be governed by two basic rules: (1) If the dollar price of the standard starts to rise, the Fed must intervene to buy back dollars at the fixed price, and (2) If the dollar price starts to fall, the Fed must intervene to sell dollars. By following these rules about price stability, the Fed knows when and by how much it must intervene. By watching the same market price of the standard, the private market in turn knows quickly and efficiently whether the Fed is "playing by the rules."

BETTER A "CINDER BLOCK STANDARD" THAN NO STANDARD AT ALL!

*Submitted by : PAUL W. NORDT, JR.**
32 Maple Drive, North Caldwell, NJ 07006

** Age 67, Chmn., JOHN C. NORDT CO., INC., Precious Metals Manufacturer, employer of about seventy persons, a business dating from the year 1872. Mr. Nordt is a professional Mechanical Engineer, active in public affairs in New Jersey all his life, serving in elective office locally and identified with community and religious affairs continuously for more than a half-century. Married for forty-two years, three children. Two sons in top management of the Nordt company, daughter a doctoral candidate in the field of Clinical Psychology.*

Since 1966 a close student of U.S. monetary problems , with an increasing concern as monetary policy seemed increasingly in the hands of theorists and academicians who seemed blind to the anthropological evidence that mankind has at least a few quirks of behavior disqualifying him from controlling the money system with any degree of stability, devoid of specie convertibility by the people.

* * *

I have submitted not only letters, but copies of a speech (not presented) and a pamphlet "WHY WORRY? ---IT'S ONLY MONEY" during the days past when the Commission has met. I have had responses from a few on the Commission; viz., Dr. McCracken, Dr. Paul, Senator Jepsen, Gov.Wallich and Congressman Wylie, but when I realize the volume of literature showered upon you, it's not hard to see why no more have answered.

My appeal to you is, I think, somewhat unique in nature. I do not claim to be a professionally trained economist. I wonder, though, whether very many of you recognize how crucially important is the moral issue when one considers monetary policy. Surely, you must be aware of the great need for the public to trust the value of The Dollar. When that trust is destroyed, to restore it is not an easy or quick task. I am told that Aristotle made the statement:

> IN AN IDEAL STATE OF SOCIETY PERHAPS THE INTRINSIC QUALITY OF MONEY MIGHT ENTIRELY DISAPPEAR AND BE REPLACED BY THE VALUE DERIVED FROM THE CONTROL OF THE STATE. BUT FOR THAT TO OCCUR THE CONTROL OF THE STATE WOULD NEED TO BE PERFECT IN AUTHORITY AND GOD-LIKE IN INTELLIGENCE.

To be "perfect in authority" the state would have to be manned by persons wholly free of the capacity to do ill . . . . . free of avarice and greed. To be "God-like in intelligence" implies that our government would have to be staffed by people that never make a mistake. Surely it's not necessary to argue the fallibility of mankind. Even "The Fed's" governors are a few steps lower than The Almighty!

You on The Commission I am sure are sufficient students of American history to be aware that those who founded our American Government were much aware of mankind's frailties . . . . . FRAILTIES THAT MAKE ALL OF US UNQUALIFIED TO MANAGE A FIAT MONEY SYSTEM!! The people must have some form of immediate control, a way of expressing their confidence (or lack of it) in the currency

BETTER A CINDER BLOCK STANDARD THAN NO STANDARD AT ALL ! *(Continued)*
By Paul W. Nordt, Jr.

issued and the monetary policy established. As you all know, the idea of "checks and balances" underlies our entire system of government. Distrust of people in power is, obviously, the hard core reason for this. Tragically, going back decades our people have been deprived of exercising any "check" or "balance" when it came to the value of dollars. Then, in '71 the whole world lost its power to express directly any feelings about The Dollar.

After one of your meetings I approached Gov.Wallich with the question, "Do you see any connection between the skyrocketing inflation after August '71 and the fact that at that point President Nixon removed from The Dollar any meaningful definition?" If I recall his abrupt reply, it was, "There is absolutely no connection!", then he walked curtly away.

It is possible I misunderstood him at that time. Nevertheless, I urge you all to air your thoughts regarding definability of The Dollar, definability in tangible, intrinsic and specific terms. Although I have attended most of your public sessions, I recall nothing at all that dealt with definability or about mankind's capability to control money when the people are denied any way to express dissatisfaction over its value.

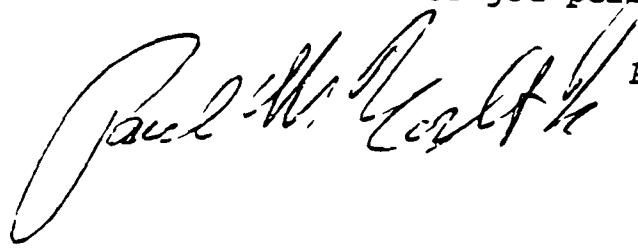
It's a pity that when Congress established the Gold Commission it did not choose a different name. More accurately, it ought to be "The Commission to study DEFINABLE MONEY vs. UNDEFINED MONEY. Possibly with more impact the name could have been a bit more succinct and called it something like THE FUNNY MONEY COMMISSION.

Gentlemen, that is not as "zaney" an idea as it may sound. When we consider how the name "gold" affects the minds of the Keynesian-type economists, they believing that golden money is a "BARBARIC RELIC", it might be more productive for The Commission to think of itself as studying the true differences between good money and bad money, "funny money" being a term of derision for today's buck, but not too inaccurate a description at that!

To avoid the acknowledged prejudices by so many against gold as money, wouldn't it be useful to think of a "CINDER BLOCK STANDARD", comparing it with what it's like having no standard at all. Seriously, gentlemen (and Mrs. Anna Schwartz), I challenge you to take up that argument. It may not be as facetious as you might think at first glance. Oh, you can change it to such standards as barrels of bourbon, or pork bellies, or rides on "THE METRO". The true issue: DOES THE WORLD HAVE A RIGHT TO KNOW JUST WHAT A DOLLAR IS?

Yes, candidly, I believe that if you truly, and in good faith, really talk this out you will all agree our dollars cannot remain simply pieces of paper , meaningless printing thereon. The Constitution declares that our Congress "regulate the value thereof" (of money). Surely you can't regulate something that has no definition!!

How I'd love to chat with each of you personally!



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THE MORAL ISSUE OF "HONEST MONEY"

Gary North

Summary of the Paper

A. What Economists Know

1. Economists cannot, as scientists, recommend any policy because of its scientifically demonstrated benefits to the public. (The problem of interpersonal comparisons of subjective utility.)

2. Economists, by training, avoid questions of economics and morality.

B. What Is Honest Money?

1. Most marketable commodity
   a. Possesses historic value
   b. Expected to possess reliable, somewhat stable future value

2. Governments possess a monopoly over the creation of money
   a. Monopolies tend to be abused
   b. Central banks tend to accommodate past price inflation
   c. Monetary inflation becomes a permanent phenomenon
   d. The implicit contract -- the promise of reliable money -- is broken

C. Civil liberties and the Gold Standard

1. Redeemable money restricts government's ability to debase currency unit
   a. Public can protest debasement by demanding gold for depreciating paper
   b. Arbitrary money manipulation ("flexible monetary policy") is hampered
   c. Implicit contract by government to produce honest money is enforced

2. Irredeemable currency reduces public's ability to pressure arbitrary state

D. Guarding the Guardians

1. Specialists can speculate against the Treasury's promises

2. The gold standard forces the Treasury to defend its promises daily

Summary of Appendix

A. Three-step Program
   1. Abolish legal tender for U. S. government money
   2. Allow private minting of "gold dollar" and "silver dollar"
      a. Fixed weight and fineness established by law
      b. 100% reserves for all specie-money substitutes (warehouse receipts)
      c. No attempt to set exchange ratios by law among various currencies
   3. Full gold-coin redeemability by Treasury at market prices

B. Freedom does not threaten the free society

FLEXIBLE GOLD CONVERTABILITY*

Submitted by
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Traders are defrauded and trade is impeded when the value of the currency varies unpredictably. As abundantly demonstrated by the many arguments presented to this Commission, neither the "Fixed Price" nor the "Free Float" systems provide adequate predictability. With the Free Float system, the lack is obvious. Predictability is also lacking with the Fixed Price system, since in practice, as history shows, there is no way to maintain the system without recurrent revaluations.

What is needed is a system which would provide free convertability between dollars and gold at definite, predetermined and predictable values. The system suggested here is designed to eliminate short term, unpredictable variations in the dollar price of gold, while automatically adjusting the price by small increments to the long term trend of the free market. This would provide a reasonable degree of predictability during the time period required for the delivery of goods and the completion of payments for most contracts in both domestic and international trade.

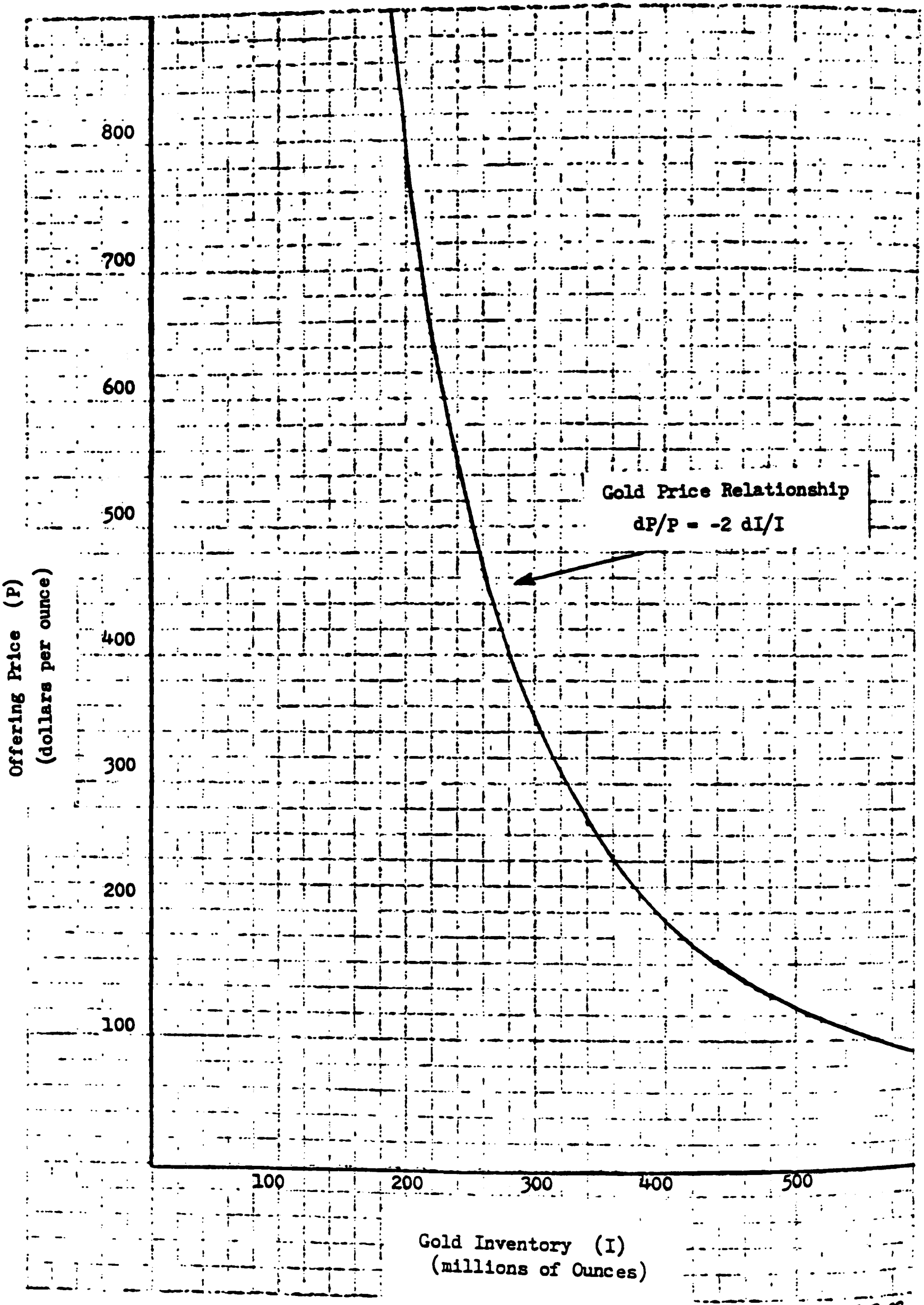
Although the system described below does provide a reasonable degree of predictability, it would not necessarily make the dollar a safe vehicle for a long term storage of value, nor would it provide any effective "discipline" on the tendency of our government to inflate the currency. It would however provide a convenient index of whatever inflation or deflation is actually occuring.

The benefits described above can be obtained by mandating a predetermined relationship between the official selling price of gold (P), and the actual inventory of gold in the Treasury (I), as shown in the attached diagram.** This suggested relationship, $dP/P = -2dI/I$, would force a 2% increase in the price for every 1% decrease in the inventory, and a 2% decrease in the price for every 1% increase in the inventory, etc. To reduce speculative activity, the official buying price would be set at 1% below the official selling price, and all prices would be determined each day by the inventory of gold in the Treasury after all orders for that day were satisfied.

Tying the dollar to gold in this predetermined relationship would stabilize the price of both dollars and gold. This system would not prevent all variations in the dollar price of gold, but it would damp out the short term variations and allow analysis and extrapolation of long term trends. The actual degree of predictability provided would of course depend on the accuracy of the analysis of such trends.

*This proposal is also described in the author's book, "Compassion and Common Sense" (1980, MCP Books, Box 273, Germantown, MD 20874)

**The attached illustrative diagram is based on an assumed initial inventory of 264 million oz. of gold, and an assumed initial price of $\$450_2$ per oz. Using these values and integrating gives: $(\$/oz)(\text{millions of oz})^2 = 31{,}363{,}200$.


800
700
600
500
400
300
200
100
Offering Price (P)
(dollars per ounce)
Gold Price Relationship
dP/P = -2 dI/I
100
200
300
400
500
Gold Inventory (I)
(millions of Ounces)

CEO
11-6-81

HOW TO MAKE FULL BODIED GOLD AND SILVER COINS. IMPROVE OUR MONETARY SYSTEM

Submitted by

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January 15, 1982

While the Gold Commission was authorized to study and make recommendations "concerning the role of gold in domestic and monetary systems," more good will come if the role of silver is included in the recommendations.

The ultimate goal of any study pertaining to the monetary system should be to recommend a monetary system as close to the ideal as can be obtained. The ideal monetary system will be obtained when all the items in the money supply are brought into circulation without incurring interest-bearing debts.

Gold and silver full bodied coins can be brought into circulation without incurring interest-bearing debts. So the more full bodied gold and silver coins we add to our money supply, the closer we will be to having an ideal monetary system.

Our money supply now consists of U.S. token coins, U.S. notes, Federal Reserve notes, and bank credit. Of these four items, the U.S. token coins and the U.S. notes are the only items issued by the U.S. government. They are the only items that came into circulation without incurring interest-bearing debts.

The U.S. government is already making and selling full bodied gold coins called, medallions, in one ounce and in one-half ounce coins. In like manner it also can make and sell full bodied silver coins in one ounce and in one-half ounce coins.

To bring these full bodied coins into circulation to serve the public as media of exchange, all the Congress has to do is to declare that these coins will be received as payments for all taxes, fees, duties, and other charges due the U.S. government. The government in turn will use these coins as the payments for its current expenses.

Just as the U.S. government now sets the value of the medallions to the current market value of their metal content (plus a small service charge) on the day it sells the medallions, the government is to set the value of the coins to the current market value of their metal content on the day it receives them as payments.

To give the public additional opportunities to obtain U.S. full bodied gold and silver coins directly from the government, Congress can authorize the mint to accept from the public gold and silver in any acceptable form (coins, bullion, nuggets, etc.), make it into the current gold and silver coins and charge the owner of the metal a fee sufficient to cover the cost of the minting process. Then give the newly minted coins back to the person who brought the metal to the mint.

In order to bring more of the full bodied coins into the money supply and in order to reduce the need for government borrowing, Congress can, in addition to selling the coins, authorize the government to issue the coins as payments for its needed expenditures. The government is to pay out the coins at the market value of their metal content at the time the coins are used as payments. All of the government's idle gold and silver can be used in this manner.

If the above procedures are adopted, we can expect the following results:

1. It will not cost the government anything to adopt them.

2. The monetary system will not yet be ideal, but it will be one step closer to the ideal. A much greater part of the money supply will be brought into circulation interest-free.

3. It will please the large number of people who want gold and silver to be used in our monetary system.

4. It will do no harm; it will incur no burden or loss for those people who do not want gold or silver in our monetary system. Any person who gets paid in gold or silver coins can immediately exchange them at a bank for other currency or for bank deposits without any loss of exchange value.

5. If the government's income and expenditures remain constant, the U.S. government's interest-bearing debts can be reduced in an amount equal to the dollar value of the gold and silver coins sold and paid into circulation.

6. People will learn that when gold and silver coins are used as media of exchange at the current market value of their metal content, the coins will always stay in circulation.

Submitted by

LOIS D. POWERS - ECONOMIC NEWS AGENCY, INC.

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From Editorial by Charles R. Stahl in
Green's Commodity Market Comments 9/23/81 and 10/21/81

The gold standard is currently the subject of a profusion of press articles, most of which are missing the point. Whatever the pros and cons of the gold standard, and even assuming that the gold standard is the solution to all our economic problems (which it is not), there is no practical way to implement a gold standard system within a reasonable time; therefore the discussions on the subject are, in our humble opinion, a waste of time. In today's world, no country can establish and maintain a gold standard alone. We have an international monetary system, which is governed by IMF statutes; those statutes can only be changed by negotiations and agreement among all members of IMF. Those who remember how many years it took to get rid of gold as the numeraire of the monetary system will appreciate that even if negotiations were to start next year, after the report of the Gold Commission has been completed--assuming that it will be in favor of restoring the gold standard--we will be well into the 1990's before the new system could be ratified. And that certainly would be too late in order to lower the interest rates, which the supplysiders believe the introduction of the gold standard would achieve.

Today's gold standard proponents must have a very poor opinion of the members of the Interim Committee of IMF, and of IMF's entire body of central bankers and finance ministers, if they believe that all the arguments which they are now advancing in favor of the gold standard were not mulled over a thousand times by those experts, and considered wanting.

The bill introduced in the U.S. Senate proposing the return to a gold standard is based on the premise that the price of gold should be fixed at whatever it will be in the world markets six months after the United States announces its intent to return to the gold standard; that bill is the "Laffer stock" of the gold cognoscenti. Professor Laffer believes that when the United States announces its intention of fixing the price of gold in terms of dollars or vice versa, the price of gold will decline to some "reasonable" level, somewhere in the $250-$300 area. With due respect to all the gold standard proponents, the very day the United States announces its intent to return to the gold standard and to peg gold at whatever the price will be six months after that announcement, gold will embark on an alpine climb, and the 1980 gold Everest of $875 will be easily left behind.

A further premise of the Senate bill is to forbid the Fed and the Treasury to intervene in the foreign exchange and gold market during the six-month period. With the Fed and the Treasury out of those markets as a stabilizing factor, can anyone really believe that the price of gold will go anywhere but higher? There is an enormous vested interest in gold; not only Swiss banks and their clients, not only German banks and their clients, not only South African mining companies, not only the Soviet Union, not only OPEC countries, not only Far East interests, but millions of people who own gold and who would be only too glad to see its price go higher rather than lower, and who would bet on it.

But let us assume that Professor Laffer is right, and that the price of gold will decline to $250-$300, or whatever level below current prices, and that the price of gold will be fixed at that level. That price would then constitute a floor, and the same thing would happen which happened in 1968, when the gold pool of the central banks operated by the Bank of England had to stop its sales because the demand for the yellow metal at the official price was much too large. Incidentally, it was in these pages in December 1967 that the two-tier gold system was first proposed. It met with a great deal of incredulity from the U.S. Treasury, but when the chips were down, in March 1968, the two-tier system became a reality. Ultimately it gave way to a free market entirely, and that is exactly as it should stay.

Whenever the gold standard was in force, the assumption was that fixed exchange rates would last forever. Since forever did not last, a restoration of the gold standard cannot be achieved; the gold standard is like virginity, once lost, it cannot be restored.

The proponents of the gold standard point out that the run-up in the price of gold has benefited the Soviet Union and South Africa most. What they overlook is that the $850 peak price on the London fix did not last longer than one hour, and that the intraday high of $875 for spot gold on Comex did not last more than one minute, so that no large quantities of gold were sold at those lofty prices, either by the Soviet Union or by South Africa. As a matter of fact, the average price of gold last year was $613, and in 1980 the Soviet Union sold only 90 tons of gold. Maintaining the free gold market, as opposed to pegging the price of gold, does not permit gold producers to sell large quantities at peak prices; whereas should the gold standard be restored, then producers would have a ready outlet at a fixed price.

The Soviet Union has the world's largest unmined gold reserves, in excess of 5 billion oz. Should the price of gold be pegged at, for example, $800 per oz., that would give the Soviet Union potential assets of four trillion dollars! With that kind of money, over the years, they would not have to bury us, as Khruschchev once said, they could buy us out. . .

Our readers certainly remember that we severely criticized another bill introduced by Senator Jesse Helms to restore the gold standard, based on the fantasies of Professor Arthur Laffer. However, the Free Market Gold Coinage Act is an improvement, even though parts of it must be changed, particularly the paragraph referring to how the Treasury should compute the price of gold when buying or selling the coins, and it could help reduce inflation by absorbing excess liquidity (if and when there is one). The Treasury would use its 263 million oz. gold hoard to mint the coins, which would be sold at the market value of gold. The bill could be amended to provide for use of the proceeds to balance the Federal budget, and theoretically the Treasury could collect over $100 billion from the sale of those coins. However, the difficulty is to determine the price at which the Treasury should be selling or buying those coins at any given time, and whether it should be entitled to a seignorage, and if so, how much. There is one more question to ponder: if the Treasury is obliged to buy any quantity offered or to sell any quantity demanded, wouldn't that be like giving the Treasury the major say in what the actual price of gold will be? On balance, the reintroduction of U.S. gold coins is an acceptable idea, provided that the Treasury will just mint them, and will not be obliged to maintain a market (i.e., will not have to buy them back).

THE BEST MONEY SYSTEM

Submitted by

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1 Dec. 198~~2~~1

The best monetary system known to history was based on gold or silver coins that were of the same size and quality for all cooperating countries. Its being based on coins of standard value makes them interchangeable among countries.

This system was used by the Greek city states, by the Byzantine and Arabic Empires between 700 A.D. and 1100 A.D., by the cities of Northern Italy during the fifteenth century and by the Latin Monetary Union and Northern or Scandinavian Union in Europe during the latter part of the nineteenth century and early years of the twentieth.

Although a system based on a coin of standard value for all countries has proved its worth, it is doubtful if the United States could stay on such a system until the budget is balanced and inflation of the currency is discontinued. If American citizens are permitted to have their gold minted, the United States will find it easier to adopt the gold standard when our inflation of the currency is stopped and other countries start trading the golden coins that they are now hoarding. There are good reasons why we should plan to use the metric system with a gram of gold being the unit of value.

LORD JOHN MAYNARD KEYNES

The writings of Lord John Maynard Keynes are being followed in making the monetary policies of the United States and of much of the world. A careful study of his works show that he promoted policies which he himself said was the best way to overthrow capitalism.

His biographer reported that Keynes was in favor of the undemocratic practice of leaving major decisions to a small group of intellectuals.

In a letter to his mother Keynes referred to himself as being a Boshevik which may account for his sabotaging democracy and capitalism.

TESTIMONY OF ANDREW G. E. RACZ

TO THE GOLD COMMISSION

NOVEMBER 12, 1981

The purpose of my presentation is:

1) To state that gold is a monetary asset;

2) To state that gold and silver are vital strategic American assets;

3) To propose a viable, constructive and aggressive American gold policy; and

4) To prove that the United States is the world's most powerful monetary power.

This Administration can combine monetary policy with foreign policy to achieve prosperity at home and to play a forceful role in constructive foreign policy.

I recommend that:

1) The Gold Commission accepts that it is the policy of the United States to increase, as opposed to decrease, our gold and silver reserves.

2) This Commission should recommend the creation of a department which would empower the Treasury to enter the futures markets in gold in Chicago, at the COMEX, in London, Hong Kong and Zurich.

Immediate Recommendation

The Treasury should prepare for the immediate sale of approximately $50 billion in gold-backed bonds with a 2% coupon convertible into gold at $550 per ounce with five years maturity. Simultaneously, the Treasury should declare that it is the policy of the United States to purchase gold on the open market, either in its physical form or hedge its position on the futures markets. No details would be disclosed.

Members of the Gold Commission are to be reminded that the Soviet Union is not in a position to do the same. Whatever gold it has is needed to finance its food bill. There is no $50 billion surplus that can be held for five years within the Soviet colonial system. This is my professional opinion.

The immediate effect of such an issue is not only pure interest savings, but it would divert borrowing requirements from the government bond market and would relieve the pressure on corporate borrowing. Most important, however, it would demonstrate the tremendous monetary power of the United States of America. We are the only country whose gold is unimportant to carry out our daily business and the only country whose integrity to redeem the $50 billion gold issue either in gold or in dollars is unquestionable.

Furthermore, the Treasury should create a non-marketable, 8% "Freedom Bond" which this Government can offer to all the American banks that are currently stocked with uncollectible debt from Eastern European countries. In exchange for the unsound paper of Poland, Rumania, East Germany and Hungary, the banks should be offered the opportunity to pass on the dead assets to a low-coupon, say 8%, 10-year debt to the Treasury with the commitment that no further loans would be issued to the above-mentioned countries.

The "Freedom Bonds," of course, are made possible because of the savings created by gold-backed bonds and potential drops in interest rates.

Let's visualize for a single minute that by cutting off Eastern European and Russian credit the President could start negotiating with the leaders in the Kremlin.

Our aim is to cut our defense appropriation immediately! A 5% cut in our 5-year, $1.5 trillion defense appropriation would represent a $75 billion saving.

Just think about it...$75 to $100 billion cut in defense spending! THE RESULT: a single digit prime rate and probably not more than a 7% or 8% inflation rate. The stock market would probably go up 500 points. I estimate that with such a scenario, every 100 points is equivalent to at least $100 billion, maybe even a $150 billion, increase in the gross national product. One hundred billion dollars in GNP represents at least an extra $30 billion in tax revenues. It is easy to see, Mr. Secretary, that in 1984 instead of a balanced budget we would have a surplus; and you would be the first Secretary of the Treasury to recommend a second tax cut in the first four years of an Administration.

GOLD: THE SOLUTION TO OUR MONETARY DILEMMA

Submitted by

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February 9, 1982

We are confronted with an apparent monetary dilemma: the choice between a 1929-style depression if we stop inflation, and, far worse, sooner or later, a 1923-German-style currency collapse if we allow inflation to go on. Our dilemma arises on the one side from the inherent accelerative tendencies of inflation--of money creation. On the other side, it arises from the fact that the inflation we have already experienced has encouraged people to become highly illiquid and badly overborrowed; the other side of the coin of the inflation-induced illiquidity is an artificially high velocity of circulation of of money. Stopping, or even substantially slowing, inflation must produce a rebuilding of liquidity, a reduction of the velocity of circulation, and thus a contraction of spending and revenues and a massive inability to repay debts, along with huge unemployment. Because these are the consequences, we cannot realistically expect the government to stop or even reduce its inflation for very long. Every such attempt is fairly soon abandoned and the incipient tendencies toward contraction overcome by a fresh acceleration in the creation of money.

Most proposals for the establishment of a gold standard provide no escape from this dilemma. If implemented, they would succeed in ending inflation, but only at the price of bringing on a depression, for they would require a reduction in the rate of increase in the money supply from its present level of seven or eight percent or more per year to a rate commensurate with the increase in the supply of gold--perhaps two or three percent a year. They offer no remedy for the attendant drop in the velocity of circulation and consequent inability to repay debts.

The kind of gold standard I advocate is designed to deal with the drop in velocity. Its aim would be to stop inflation completely without precipitating any contraction of spending calculated in dollars. In essence, the mechanism for achieving this would be to go over to a <u>100% reserve gold coin system at a very high price of gold</u>.

Under such a system, the money supply of the United States would be, in effect, a quantity of gold ounces, which I estimate in the neighborhood of 500 million, allowing for present official US gold reserves, private holdings, and anticipated

gold imports. Under this system, even if the velocity of circulation fell from its present level of roughly six to its 1946 low of about two, there need be no contraction of spending calculated in dollars, if the gold were priced high enough. For example, a gold-ounce GNP of 1,000 million would be equivalent to our present dollar GNP of roughly 2.5 to 3 trillion at a price of gold between $2,500 and $3,000 per ounce.

The transition to this system could either be abrupt or gradual. If gradual, it should consist of the following steps, perhaps best spelled out in a constitutional amendment. 1. An absolute guarantee against any future confiscation of private gold holdings, as occurred in 1933, and in 1917 in the case of banks. 2. The abolition of all taxes, federal, state, and local, on the purchase and sale of gold. 3. The recognition by the IRS and the courts of revenues and incomes calculated in gold, with no tax imposed on account of a rise in the price of gold. 4. The full enforceability of gold contracts in terms of specific performance; the absolute immunity of all such contracts from legal tender legislation in any form. 5. The granting to private minters, for a nominal fee, of the right to use the seal of the United States in the minting of new gold coins. 6. The requirement that all privately issued bank notes and checking deposits denominated in gold be <u>100% backed by gold coin or bullion in the possession of the issuer</u>. 7. The establishment of a legal tender value <u>for gold</u> in terms of debts denominated in paper dollars, which value could be raised from time to time as the market price of gold rose.

As these steps were taken, the private demand for gold and its monetary use would enormously increase, as would its real value. At some point, once gold had become reestablished as a private money of the market, the government could use its gold reserves to redeem the outstanding supply of non-gold money defined on an M1 basis. Until that time, no sales of government gold should be permitted.

Once on the 100% reserve gold coin standard, further inflation--in terms of gold--would be virtually impossible, and no basis would exist for a contraction of spending in terms of gold. The 100% reserve gold coin system would thus be the ideal monetary system, secure against the boom-bust cycle of inflation and deflation, and the way to eventually escape from our present inflation without contraction.

Summary of Gold Commission Testimony by Alan Reynolds

The tripling of long-term interest rates since 1965 reflects accelerating loss of confidence that the dollar will hold its value in the future. Long-term interest rates never exceeded 5-6% under any gold standard. If interest rates returned to the gold standard level, the federal budget would be in surplus.

Any monetary rule may be bent during crises, but this does not justify abandoning all predictable rules. No quantity rule can have long-term credibility because the definition of money is constantly changing and velocity has been unpredictable since 1971. If markets nonetheless believed that a quantity rule would end inflation, interest rates and velocity would fall, requiring violation of the rule or abrupt deflation. A gold standard can stop inflation quickly, as in France in 1926, without the quantity rule's risk of deflation.

The relevant comparison is between the classical or Bretton Woods gold standards and the period since 1968 or 1971. It is misleading to compare ancient wholesale commodity prices (mostly farm products) with today's broad price indexes. Gold itself was a broader measure of value.

Research by Zarnowitz indicates that about half of the "recessions" from 1879-1914 did not really exist. Not one recession has been plausibly blamed on the gold standard, though deflations of 1921 and 1929-30 were partly due to <u>failure</u> to adhere to the gold standard. Recent cyclical performance has not improved, despite such advantages as a large service sector, deposit insurance, unemployment insurance and a central bank. No gold standard period experienced as bad a blend of unemploy-

ment, inflation, volatility and stagnation as in 1979-81.

A true gold standard provides a legal definition of the dollar as a fixed weight of gold, with government standing ready to convert dollars for gold and vice-versa. There is no need for a fixed relationship between official gold hoards and some measure of money. Monetary policies must simply be adjusted to stem a persistent inflow or outflow of gold, maintaining the guarantee of the dollar's value in gold.

The money supply under convertibility is whatever people are willing to hold without switching to gold. There is no rigid link between gold production and money, nor between the stock of dollars and income or output. Producers of gold hoarded it in the 1970s for the same reason that producers of oil decided that oil in the ground was a better hedge against inflation than dollar assets in a world of managed money.

No foreign nation could upset the dollar price of gold without "cornering the market" on dollars or gold, which is impossible. Suppose the Soviets dumped tons of gold to get dollars, then traded those dollars for grain. If that started a general inflation, gold at a fixed price would become a bargain. U.S. farmers would trade their new dollars for gold, quickly stopping any inflation.

The most that monetary policy can do is to provide a stable unit of account for long-term contracts. Gold is clearly superior in this respect to any observed or hypothetical alternative.

FOR A 100% GOLD DOLLAR

submitted by

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The chronic and accelerating inflation of our time is the consequence of the dollar--and other world currencies--having been cut loose from its original moorings in the market commodity, gold. Instead of its former definition as a unit of weight of gold, the "dollar" is now simply the designation of the Federal Reserve on a piece of paper. Whereas on the gold standard, new money can only be acquired by the costly process of mining a scarce metal, now--under a fiat paper standard--new money is manufacturered at will, and virtually costlessly, by the Federal Reserve System. The business of manufacturing costless money has been placed, as a coercive monopoly, into the hands of the Fed, that is, of the federal government. Inflation is a process of the destruction of the value of the currency by increasing its supply, and so the sole culprit for this inflation is the federal government (and other central governments throughout the world) and its money-manufacturing arm, the Federal Reserve System.

Monetarist economists understand some of this process, but their rather naive solution is to maintain the power of the Fed to the full but to urge it to use that power wisely. This is equivalent to putting the proverbial fox in charge of the chicken coop and urging that fox not to eat (or to eat at a fixed and steady rate) any of the chickens. This solution ignores the fact that it is to advantage of any fiat money factory to use its power to create new money: to finance its own expenditures, and to subsidize favored political and economic groups.

Just as we need a Bill of Rights to chain down government and prevent it from violating the rights of freedom of speech and the press, so we need a fundamental way, a way going beyond mere exhortation, to chain down government and to prevent it from manufacturing fiat paper and debasing the value of our currency. To do so, just as the Bill of Rights separates church and State, so we must separate the State from money.

The most important step toward separating money and State is to return to--or go forward to--the definition of the dollar as a unit of weight of gold. Under cover of the depression emergency, the U.S.government confiscated the gold of every American in 1933. The depression is long gone, but the stolen gold still lies under the ground at Fort Knox and other depositories of the U.S.Treasury. Making dollars redeemable in gold coin once again will end the regime of fiat paper, restore a market commodity as the monetary standard, and restore the property rights to gold which the American had purloined from them a half-century ago.

Since the dollar has not been redeemable in gold for a long time, its official statuory definition in terms of gold (now at approximately $42 per ounce) has been a dead letter. Since any initial definition of a term is arbitrary, we are free to fix the new weight of the gold dollar at whatever level is most convenient. I submit that, if we are to return to the gold standard at all, we may as well go forward to the best possible such standard, and that means a system in which every dollar note or demand deposit is a genuine "warehouse receipt", that is, is backed 100% by gold. At the present time, this would mean a return to gold at approximately $1600 per ounce; such a rate would give the U.S.monetary system enough gold to back every dollar at 100%.

Such a high "price" (actually, low weight) of gold has been charged with being "inflationary", but that would only be true if the presently constituted fractional reserve banking system could pyramid a multiple of dollars on top of the newly expanded gold base. But the unappreciated virtue of such a $1600 price is that it would enable the speedy liquidation of the Federal Reserve System, the turning over of the gold to the nation's banks, and a subsequent free banking system operating on the basis of 100% gold. The "classical" gold standard was far from perfect, and its lack of perfection stemmed from the existence of central banking, and the inflation and boom-bust cycles triggered by the policies of the central bank. The U.S. economy was far sounder and more stable before the existence of a central bank, and it will be so after the central bank is eliminated.

The abolition of the Federal Reserve will end the regime of managed money, whether gold or fiat, and will complete the separation of money from the State.

As for the relation of such a 100% gold dollar with other countries, the solution is simple: any country that also returns to a gold standard will have its currency fixed to the dollar according to its weight; and fiat currencies will freely fluctuate in relation to the gold dollar.

PLEASE

Submitted by

Jim Russell
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January 4, 1981

The small company I own will close its doors at the end of the Ohio apple harvest after 111 years in the apple processing business. A miserably short apple crop in northeast Ohio was the cup of hemlock, but the demise has been inevitable for some years now. The management (that's me) has simply been unable to cope with the decade-long government policy of inflation and usurious interest rates.

In this huge and complex economy, the loss of Rhodes Cider Mill will draw less notice than the death of a sparrow. The apple jelly I make from fresh cider only will be missed by a few diabetics who found it was the only jelly they could eat. Those customers who thought our cider the very best will have to look elsewhere next fall. My few part-time employees will have to supplement their pre-Christmas earnings in some other way. Not even a blip, however, will appear on any economic indicator.

Liquidating my very own little business will rob me of a degree of independence in which I have reveled. I have often worked 120 hours a week motivated by a force more powerful than any whip. Now I will go to work for an employer (and perhaps my creditors), and I fear 40 hours will prove to be drudgery. I can't ignore the feeling that somehow my loss was not entirely my own fault or an accident.

The inflation and interest rates I couldn't quite handle are surrepticiously transfering a great deal of wealth out of the hands of many and into the hands of the few. My hard-learned understanding of human nature convinces me that inflation is not entirely an accident of democracy. I more than suspect that those who do benefit by it have had more than an idle interest in its continuance. I observe no group that has benefited more by inflation than the wealthy legislators of the national government.

I have been a victim of inflation, but I will no longer allow people of political influence to steal my assets and destroy my independence. I have been forced by law to transact my financial dealings in a currency that may be cheapened at the direction of a few influential people. Those people have used that power to cheat me. I demand that power be removed from those hands.

I will not have the value of my money controlled by the Federal Reserve Board, by Congress, or by any group of men. I demand money that cannot be cheapened by any man for any reason. I will no longer accept dollar bills that are subject to manipulation as the measure of the value of my labor. I want my gold that is now stored by my government circulating freely in my country. I want an honest day's pay for an honest day's labor, and I will accept nothing less.

Who are these men at the Federal Reserve that they should be granted the power over the value of an entire nation's money? Who gave them the wisdom to "manage" the money and thereby the lives hundreds of millions of American? Do they know when interest rates should go up or when they should go down to benefit this nation? The evidence is overwhelming that they do not know, and they can not know. There is dramatic evidence that they do not even know what the money is they are trying to control.

Does the Federal Reserve hold the power to manipulate the money supply for evil or selfish motives? Why would any nation entrust such devastating power to a body of men when an inanimate object (gold) has demonstrated the ability to fulfill the role of money free from the devices of humans to enhance or subtract from its value.

After the experience with inflation of the recent past, the real issue before The Gold Commission is how to protect the basic human right af any citizen to reap the fruits of his or her labors. In this complex economy of ours, we must have money that will provide a store of value as well as a medium of exchange in order to secure that right. The dollar bill, and all of its relatives, have failed miserably to act as a trustworthy store of value. Gold has always filled that role, and its acceptance in exchange for goods or services exceeds all other mediums even after a period during which the United States Treasury deliberately and avowedly attempted to reduce the monetary role of gold. (It is noteworthy too, that throughout the period during which the Treasury attempted to discredit gold that the value of gold as measured in dollars increased many times over.)

Why are promissary notes of the United States Treasury selling for less than 60¢ on the dollar? Because the Treasury redeems those notes with dollars that are certain to be worth less upon redemption. (Alexander Hamilton would be enraged to see the low esteem of his beloved agency.) Why are Americans growing poorer, their productivity declining, their capital stock deteriorating, their interest in government faltering, and their economy suffering a thousand ills? They do not trust, and with just cause, the only legal tender a perverted government allows. Be gone with it.

THE ESSENTIALS OF A SOUND CURRENCY SYSTEM
(a summary of a long article with the same title)

Submitted by

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February 1982

The essentials of a sound currency are these:

1) A commodity standard for the nation's unit of value; and, in the light of the experience of highly commercialized nations for at least a century and a half, that standard had best be a quantity of gold.

2) It is admissible, convenient, and useful to use paper notes as legal tender currency along with standard coin or even without coin, PROVIDED the nation's Treasury maintains a reserve of standard coin or bullion or of both large enough to enable it to stand ready at all times to convert (or "redeem") said legal tender notes at face value into standard coin or bullion.

3) This sort of a currency system will not work satisfactorily in any free-enterprise country unless the government thereof so manages the economy as to maintain a high degree of competition both in its domestic commerce, especially, and its foreign commerce.

During the period from January 1, 1879 (to go no farther back) to March 1968, this country was undeniably and continuously on a single gold standard and maintained the convertibility of its legal tender, non-gold currency at face value into standard coin or bullion. And during that long period, the purchasing power of a paper dollar was precisely the same as that of the gold dollar. Prices of goods and services commonly went up a little in good years and down a little in poor. Only in times of war or of big booms or busts did an inflation rate or a deflation rate exceed 1 or 2 percent.

In fact, in March 1968 and by statute in August 1971, our Government found it necessary to abandon convertibility for our paper currency and has not resumed it to this day. Since that abandonment, we have had a high inflation rate every year, good, bad, or indifferent. And continous inflation is cumulative. In the last fourteen years the general level of consumers' prices has increased by 183 percent. Our paper dollar now will buy no more than 35½ cents would buy in 1967.

This great inflation of prices, this great decline in the purchasing power of the dollar, has worked vast inequities between debtors and creditors, has created great uncertainties for businesses, labor organizations, families, and all public fiscal authorities and has given us intolerably high interest rates.

In the history of the world there have been hundreds of cases of governments having been forced or led to suspend specie payments (as the term used

to be) for their paper currencies; and in no single such case has any government ever managed to avoid rapid depreciation in the purchasing power of its unit of value — pound, franc, mark, peso, whatever. And the simple reason for this having been the case is that sensible people who earn, save, and invest rapidly lose confidence in the worth of such paper currency, even though it is issued by their own government and made legal tender for all taxes and all debts public and private within the country. The present juncture in world history affords no exception to the record.

Every nation in the free-enterprise world is now experiencing a high inflation rate and all the consequent economic ills. The great majority of such nations had been on a gold standard at least for a time — as signatories of the post-World War II Bretton Woods International Monetary Accord. All are now trying to make do with inconvertible paper currency. Bretton Woods is in shambles.

There is no way that this nation or any other nation can bring the present rampaging inflation under control without first re-establishing a standard of value and convertibility for its paper currency.

During the long hiatus, so much gold has fallen into the hands of speculators that probably no one nation, not even the United States, could alone re-establish the gold standard. But nations with large gold reserves have, fortunately and wisely, kept their reserves pretty well intact. A number of them acting in concert could certainly re-establish the gold standard in their respective countries. Each could (and would anyway) set the new price in its own currency at which it would resume buying and selling gold. No heed need be given the prices quoted in the speculative markets of Hong Kong, Zurich, or whatever.

Any new international accord that the United States adheres to should by all means prohibit any signatory to use the currency of another nation as the whole or any part of its treasury or bank reserves and should include a clear statement to the effect that each signatory remains entirely free to regulate the export of capital. It is highly debatable whether or not the actual fund of the International Monetary Fund should be continued. The advisory and statistical functions of the I M F should be continued.

TITLE: RETURN U. S. DOLLARS TO QUALITY MONEY

Submitted by: Harry R. Scharlach
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Date: December 30th., 1981

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I respectfully submit some thoughts on gold's role in our monetary system, for consideration by the U.S. Gold Commission.

We have had ten years of experience with fiat U.S. Dollars, since August 15, 1971.

The massive "new" economic approaches to achieve monetary stability have all been found lacking in credibility.

High interest rates, for example, do not stop inflation. In the long run, high interest rates increase inflation and bankruptcies.

The U.S. should now adopt the old classical monetary approach to reduce inflation and interest rates and bankruptcies and revive our sagging economy.

A return to gold standard dollars is now required.

This action would give U.S. financial and business institutions a chance to function properly in a progressive manner.

The rule of "QUALITY MONEY" backed by gold shoud now be substituted for depreciating fiat money.

The "quantity" theory for dollars has already been proven a failure.

The cost of mining gold and it's market price for gold should both be taken into consideration when adopting an official new price for gold. The price should be such that the U.S. Treasury would gain gold rather than lose gold.

A return to some form of gold backing for U.S. Dollars will not be a step backwards but the necessary step forward to return to sound monetary practices.

All holders of U.S. Dollars should again be entitled to see their dollar assets represent a store of value earning interest without further depreciation. This is the only honest way to print money.

THE UNDISCIPLINED DOLLAR

Submitted By

EDGAR J. SCHOEN

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JANUARY 29, 1982

This monograph was published and copyrighted in the Spring of 1980. It is a chronological recital of sellers' and buyers' markets in real estate from the beginning of the 19th century to date, and of the vagaries of the dollar during that period of time.

The first two chapters are by way of introduction to the subject matter. The first chapter (pages 1-4) deals with the report of a meeting in Washington of the international governmental financial leaders of the western world in 1966. It discloses a number of different viewpoints concerning fiscal policies of the western nations. It also discloses how wide from the mark the international financial leaders have been. As to the dollar, it reveals the flight of gold from the United States during the period from 1958 to 1966. It is a truism that when a nation is in trouble, gold leaves that nation. Chapter 2 (pages 4, 5) deals with the relation of quantity of money to inflation, taking the position that whatever the definition of inflation may be, a prolonged and violent inflation cannot take place without a sharp rise in the quantity of money.

Chapter 3 (pages 6-19) deals with a succession of buyers' markets (lows) in real estate beginning with the year 1820 through the year 1897. It discloses that once every 18 years there had been a buyers' market in real estate. It discloses that every generation has had a boom in real estate followed by a bust. This chapter also discloses that during the 19th century, up to 1897, the United States followed the admonition of George Washington to avoid entangling foreign alliances; and that in 1897, the United States actually was the richest country on earth.

Chapter 4 (pages 19-27) deals with the period from 1897 to the beginning of the Great Depression. It was then that the United States first became embroiled in foreign alliances.

Chapter 5 (pages 28, 29) deals with the factors that brought about the creation of the Federal Reserve Board, and the use of its notes as currency. Chapter 6 (pages 30-36) deals with the hyperinflation in Germany in 1923 and inflation in the United States since 1964. Chapter 7 (pages 37-40) describes the involvement of the United States in the international financial bank crisis of 1931. Chapter 8 (pages 41-49) covers the period from the election of Franklin Delano Roosevelt to the early days of 1980. These chapters disclose buyers' markets in real estate in 1910, in 1928, in 1946, and in 1964.

Chapter 9 (pages 50-54) deals with the creation of the present day fiat currency of the United States during the Presidency of Lyndon B. Johnson. In 1965, the then Secretary of the Treasury secured legislation removing the gold reserve requirement that had been instituted under Franklin Delano Roosevelt from federal reserves deposit liability. In 1968 the gold reserve was entirely eliminated. Up to that time, there had been a creeping inflation of approximately one to two percent a year. With the reserve gone, it was not long before the inflationary spiral brought the nation to today's galloping inflation.

Chapter 10 (pages 55-78) deals with the role of the United States Supreme Court in the creation of two of the nation's three fiat currencies; first, there were the Legal Tender Cases shortly after the Civil War, and secondly, the Gold Clause Cases during the early years of the administration of Franklin Délano Roosevelt. The majority opinions in both disclose that the Supreme Court bowed to the political whims of the moment, and thereby departed from logic and good sense.

Chapter 11 (pages 79-86) suggests that the People should have the right to vote directly upon the monetary and fiscal policies of the federal government by way of the creation of a referendum to be made part of the electoral process once every four years.

Chapter 12 (pages 87-90) suggests first that the United States today is a debtor nation, secondly, that those who insist that monetary discipline can only be brought about by a return to the gold standard are misguided, and third, that monetary discipline can only be brought about by a return to the gold reserve requirements destroyed during the Johnson administration.

Presently, it appears that in 1982 there will be another bottom of the buyers' market (a low) in real estate. What is the occasion for this? It is a long period of double digit mortgage interest rates to which there appears to be no present end. For this there are many causes. The primary cause? Government fiscal excesses due to the nation's fiat currency. During the fiscal years ending in July, 1973 through the same period in 1981, the government had a succession of fiscal deficits totaling 351 billions. Somewhat over a hundred billions of this was monetized. During the same period, the national debt increased some 600 billions, only a portion of which is attributable to budget deficits. The culprit? The off-budget entitlement programs, payments for which are made through a so-called Federal Financing Bank.

The author, born in 1893, a businessman's lawyer, now inactive, first learned about the 18 year real estate cycle when studying economics at Harvard under the guidance of Professor Leon Taussig.

GOLD AND THE REIGNING DELUSION

Submitted by

FOUNDATION OF THE AMERICAN ECONOMIC COUNCIL

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FEBRUARY 5, 1982

America has fallen victim to another of History's great paper money delusions, similar in many respects to the Mississippi Scheme. If this delusion is allowed to persist, American society will continue to become less free, less harmonious and less prosperous.

This particular paper money delusion arose as a consequence of fostering fraudulent and coercive practices in the money and banking system via the political process. These practices gave rise, in turn, to the so-called "business cycle" and the protracted destruction of the classic gold standard.

Throughout monetary history, dating back at least to 400 B.C., there have existed two rival monies which are basically different in kind. Of these, one is money which is chosen voluntarily as a preferred medium of exchange through a process of competitive selection in the marketplace. The other is money which is defined and forced to circulate by edict of the state--that is, fiat or legal tender money.

Money which is the product of free choice is essential to the establishment and maintenance of a relatively free and prosperous society. Fiat money is an essential ingredient of totalitarianism. It is the politically induced evolution from marketplace money to fiat money that is embodied in the paper money delusion of today.

Through the institutionalization of fractional reserve banking, the passage of legal tender laws, the formation of the Federal Reserve System, and the confiscation of American citizens' gold in 1933, America gradually reverted to a money and banking system that may best be characterized as a "barbarous relic." The system is thus characterized because it incorporates elements of force and fraud more appropriate to a primitive feudal society than to a modern industrial democracy.

The time has come to establish a new kind of money and banking system that is appropriate both to the spirit of the American Revolution and to the continuation of the Industrial

Revolution. To be just, viable and enduring, such a system must fulfill a very simple and straightforward criterion: It must be free of the elements of force and fraud to the greatest possible extent. In practical terms, this means that the money system must be placed in the arena of voluntary exchange of values--the free market.

There are several obvious steps that need to be taken in order to convert the American monetary system from a barbarous relic, embodying numerous elements of force and fraud, into something approaching a modern free market money system. The recommended steps which fcllow have been identified on the basis of the deficiencies in the money and banking system that were discussed throughout the body of this statement:

1. The most important step is to abolish all legal tender laws, thereby removing the threat of the use of force in maintaining the circulation of a particular money. This will permit Americans to choose among competing monies--it will end the Federal Reserve's money monopoly. It will also facilitate evolutionary changes in the money system, as inferior moneys are gradually eliminated through competition, and new moneys are introduced.

2. All restrictions on entry and membership requirements should be eliminated from the banking business. Concurrently, the Federal Reserve System should be abolished.

3. Anyone who promises to place money in safe keeping for immediate return at the request of a client, should be held liable for fraud should he subsequently appropriate that money for his own uses, or intentionally place it at risk (investing or lending without the client's permission).

4. The final essential step is to return the gold presently stored in government vaults to the American people. This should be done by restoring convertibility of Federal Reserve Notes into gold coins of traditional weight and purity. The conversion ratio should be determined by market operation over a period of one to two years following passage of the enabling legislation. Once all Federal Reserve Notes have been converted, they should be retired, thus removing government and its agents from the money production business. From that point on, government should only intervene in monetary affairs to exclude fraud in the issuance of private monies.

Date: November 4, 1981

Title: GOLD AND THE NEED FOR DISCIPLINE IN MANAGING OUR MONEY SUPPLY

Submitted By: John V. Silcox, President
Bank of Hanover & Trust Company
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Hanover, Pennsylvania 17331

In response to your office's requests concerning bankers' thoughts on gold role in the monetary system, I offer the following observations:

It appears that some form of discipline is needed in controlling the level of money supply in our economy. This also appears to be the case with other industrial nations in the world. Central banks seem to lack the fortitude to control money supply without making concessions to the political pressures and desires of the elected government. We seem to have fallen into a pattern where the central bank accommodates deficit spending by monetizing the Treasury's debt issues and, in so doing, creates new money reserves. A return to "the gold standard", as existed prior to 1933, would provide the external discipline needed to control the growth of money supply in the country, and keep inflationary pressures in check. A return to such a system of external disciplines would require a higher degree of political sophistication than seems to exist in any of the industrial countries today, with the possible exceptions of West Germany and Japan. In addition, a return to the gold standard would create an immediate problem for the United States government in devising ways to balance the budget in a very short period of time. This would require either drastic cuts in the spending level or very substantial increases in the taxing level, or a combination of both.

While I personally question the political feasibility of making such drastic changes in our government's fiscal management policies, I am convinced that the long range effect of a return to a gold standard would be extremely beneficial. If our currency were immediately convertible into gold, long range planning could be undertaken by individuals and businesses with the assurance that a price stability could be forecast into the future. The cost of a long term investment could be measured in terms of actual on-going dollar expenses, without having to consider the impact of inflation on actual dollar returns on the investment and financing costs.

We have reached the unfortunate position where lenders and investors are not willing to provide funds for long term fixed asset investment at fixed rates of interest. As a result, lenders and depositors are requiring floating rates of interest to be applied to all types of loans and deposits. Businesses cannot project fixed asset investments, in terms of estimated units or production to be derived from such an investment, with the application of historic profit margins and cost factors. As a result, I find the businesses we deal with plan only for investments that promise a very quick repayment of invested dollars. Consequently, our industrial investment in plant and machinery has slowed down to the point where productivity gains are hard to develop.

Date: November 4, 1981
Title: GOLD AND THE NEED FOR DISCIPLINE IN MANAGING OUR MONEY SUPPLY
Submitted By: John V. Silcox, President; Bank of Hanover & Trust Co.

In summary, I feel that a return to the gold standard would be difficult - if not impossible - to impose on the American public. However, a failure to build some type of external discipline into our monetary affairs will eventually lead us to an economic collapse that may be even more intolerable.

I suggest the consideration of a modified gold standard such as that which has been recommended by the Council for a Competitive Economy. As I understand this proposal, it calls for a return to the issuance of gold coin that would be allowed to circulate as currency in the country. The proceeds of the sale of these coins by the Treasury would be used to pay off existing Treasury debt, and could not be used to finance current expenses of the government. In addition, the proposal calls for allowing other currencies to circulate in the country and be used at the discretion of the individual citizen. Under this plan a contract could call for a payment in dollars, gold, or any foreign currency that the parties entering a contract might agree to. Consequently, if the Federal government insisted on continuing its uncontrolled spending habits, the citizens themselves would be motivated to bring such spending policies under control by refusing to accept the currency of the government. Since other currencies would readily circulate, along with dollars, the burden of mismanagement would fall where it rightfully belongs - on the government.

I refer you to Mr. Joseph Cobb, economist for the Council for a Competitive Economy at 410 First Street, S.E., Washington, D.C. 20003 for a scholarly analysis of the plan I refer to above. While there do not appear to be any ideal solutions to the problems of deficit spending and inflation, there are alternatives. In my opinion, the plan that Mr. Cobb proposes seems to hold some merit.

Is a Gold Standard Workable?

By James E. Sinclair, General Partner
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The recent debate on the adoption of a gold standard has been tinged at times with more theological fervor than real understanding of the marketplace. Some advocates of the gold standard argue that nothing less than a return to gold convertibility can stem excessive growth of the money supply and bring down interest rates.

The idea of gold convertibility as a panacea is appealing in its simplicity. If the government undertakes to redeem all dollars in gold on demand at a pre-determined rate, it must automatically limit the creation of dollars to coincide with the amount of gold available in official reserves. Restrained in its ability to create new money, the government would have to confine its spending to available revenues or risk losing its gold. In the simpler era of the 19th and early 20th centuries, the gold standard functioned with a good deal of success, though perhaps with less success than legend accords it. It is not a device readily adaptable to the far more complex economic world of the late 20th century.

Today, gold is less a commodity and medium of exchange than a barometer of world anxieties. Under pressure of news communicated with the speed of light, traders can instantly bid up the price of gold or sell it down. Any number of events can drastically affect the state of the world's anxieties and thus the price of gold. Imagine for a moment the impact on the price of gold of some not-too-fanciful news developments: the overthrow of Saudi Arabia's House of Saud by a radical regine; the discovery that Libya or the Palestine Liberation Organization had gained possession of nuclear weapons; the threat or the reality of a major Soviet military incursion in Northern Africa. For the U.S. Treasury to maintain convertibility under those circumstances could be the monetary equivalent of activating a fuse to a nuclear device.

Convertibility works best in a stable climate, a condition in which price and demand are so finely tuned that conversion is an unused option. Ideally, convertibility serves as a form of discipline upon the nation's money managers, not as an option likely to be exercised by holders of dollars or gold. In today's world, the risk is high that convertibility would lead frequently to conversion. In those circumstances, the Treasury might be caught between depleting its gold supply and closing the gold window. Those were just the choices that faced the Nixon Administration in August, 1971, and its decision was inescapable. It ended convertibility and with it Washington's last direct commitment to the gold standard.

Those familiar with day-to-day operation of the markets have noted a shift in the markets' reaction to events and expectations. As recently as the early 1960's, economists assumed that interest rates were a function of money supply, that a rapidly expanding money stock would be translated into readily available money and low interest rates. But in recent years, the relationship between the money supply and interest rates has become more complex and less

predicatable, more responsive to psychology and expectations, less to fundamentals. A forecast by a respected observer such as Dr. Henry Kaufman of Salomon Brothers can instantly affect markets.

By the volume theory of money, if money supply is increasing at an accelerating rate, this fact has greater impact upon interest rates than a supply growth of the same scope but on a decelerating rate of change. In a market susceptible to arcane influences, it could be dangerous to introduce yet another experimental approach, even one tested, as the gold standard was tested, over many decades. There is risk that the application of an automatic rather than judgmental brake on the money supply could produce a real shrinkage and even a truly dangerous disinflation of the type that plunged the U.S. into the Great Depression.

It is argued that gold-backed government securities could be sold at far lower interest rates than conventional Government bonds, and that this device could save the Treasury large sums in interest charges. The theory merits examination.

If a lender could be assured that his capital, guaranteed in the form of gold, would retain its purchasing power for the life of a bond, the lender could afford to accept a nominal rate of interest. However, recent issues of bonds backed by bullion--silver in the U.S., gold in Europe--have been received warily by lenders. Whether the U.S. government could market enough gold-backed low-interest bonds to meet its borrowing needs is an open question.

If the Government floated a substantial issue of bonds secured by gold and returning only a low coupon rate, what would happen? By some projections, these bonds would be readily absorbed. My view is that they would gain wide acceptance only if the buyers anticipated an ongoing rise in the price of gold, or in other words, continuing inflation.

Assuming for the moment that these new gold-backed bonds proved to be popular, how would this affect the value of other outstanding Treasury issues, those not backed by gold? Why would anyone buy a bond backed only by the faith and credit of the United States Government if gold-backed bonds were available? There is no distinction in the marketplace between old securities and new securities, old interest and new interest, so the popularity of gold-backed bonds could only have a negative effect on the great body of outstanding Treasury securities, depressing prices and inflating yields.

Fiscal and monetary policy must be corrected through adherence to disciplines, and in my opinion, along something close to the lines of present Administration policy. The gold standard is not a substitute for fiscal and monetary discipline. Perhaps after discipline has been established and goals realized, some form of gold standard might successfully be employed to hold gains already won. As a gold analyst with 21 years' seasoning in the markets, I see the gold standard not as a workable tool to achieve monetary discipline but just possibly as a device to maintain discipline and stability once those conditions were established.

Issues Before the Gold Commission

Submitted by:

Robert Solomon

The Brookings Institution

November 12, 1981

1. What would be gained from giving gold a more important official role? Some believe that a monetary rule that the Federal Reserve had to follow would limit money growth and put an end to inflation. This would eliminate all Federal Reserve discretion and eliminate counter-cyclical monetary policy. Others favor a gold-convertible dollar so as to assure that the supply of money is determined by the demand for money. This approach is flawed because it fails to distinguish "money to hold" from "money to use" and could worsen inflation. None of the gold-linked proposals address the fundamental inflation problem of the United States, which is an interaction of wages and prices.

2. What would a move toward gold do to the exchange rate system? Most proposals for a return to gold do not address this question. It is important to avoid pushing the world back to the strait-jacket of fixed exchange rates.

3. What would be done about the price of gold? An attempt to peg the market price of gold could cause monetary policy to be destabilizing. A free market price would not satsify those who are seeking the discipline of gold. This poses a dilemma for advocates of a return to gold.

4. What sort of international convertibility would be established and what are its implications? The dangers of destabilizing purchases (or sales) of gold from (or to) the United States are real, as discussed under 3 above.

5. What should the United States do with its gold? This is not a pressing problem. Our gold stock is part of the national patrimony, along with many non-monetary assets. There may be occassions to use the gold in the future but we are not forced to decide to do something with our gold assets just because they exist.

Sound Dollar Committee S.M.
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STATEMENT TO GOLD COMMISSION

TRANSITION PERIOD - Irredeemable Paper to Specie-Backed Currency.

Submitted by: Richard L. Sólyom, Chairman; February 6, 1982.

It is inevitable that sooner or later the United States will return to a specie-backed currency. The following statement concerns the transition period from our present irredeemable paper to a new specie-backed currency.

Court action (Law No. 56,182) to test Constitutionality of irredeemable paper is underway in Montgomery Co. Maryland. The appeal process for a new trial began on January 14, 1982.

The result of a favorable court decision will be, not a great upheaval, but simply that the States will have had taken away from them a priviledge they now think they have . . . the practice of extinguishing their debts with irredeemable Federal Reserve notes. Furthermore, a transition period will be provided automatically. It will set the stage for the following scenario:

AT THAT POINT IN TIME

1. Federal Reserve notes will continue to circulate but their use by the States will have been prohibited.
2. This will force the Congress to reassume its constitutional obligation & prerogative of coining money and regulating the value thereof
3. A bill will be passed creating a new specie-backed currency; interest free and fully redeemable.
4. The Congress will instruct the U.S. Treasury (not the Federal Reserve banks) to issue this new money.
5. This new currency will NOT be issued directly to the public by the U.S. Treasury.
6. The new currency will be issued by the U.S. Treasury to the 50 State Treasurers in exchange for "X" number of Federal Reserve notes, say .. one for twenty greenbacks.
7. The State Treasurers will use this new currency to extinguish their States' debts in compliance with Article I; Section 10 of U.S. Constitution which says: "No State shall ... emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; . ."
8. Then, two currencies will be circulating simultaneously, irredeemable Federal Reserve notes and the new specie-backed currency. Similar situations have existed in the past in this country. Citizens will then make their "preferred choice" and one or the other will dominate.

(Continued)

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9. This scheme will introduce a new specie-backed currency into the monetary blood-stream with least disruption to industry, banking and commerce. It will, at the same time, sop up much of the debt-ridden paper money now causing ruinous inflation.

A National storm is brewing over this issue. A return to an honest monetary system is inevitable, the sooner the better.

Respectfully submitted,

R. L. Solyom

Richard L. Solyom
Chairman

Summary of Court Case:

A MAJOR CONSTITUTIONAL CHALLENGE

The Founding Fathers, when framing the Constitution, were fully aware of the dangers of paper money. Hence, Article I; Section 10 reads: "No State shall . . emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; . ." In spite of this explicit language, our government, since 1968, has been printing paper dollars without gold or silver backing. The inevitable consequence is uncontrollable inflation.

Though the "money question" has been raised by innumerable tax resisters and others, to date the government has always been able to sidetrack the issue and avoid defending its position. Now, however, comes Richard L. Solyom of Fort Lee; N.J. with a direct challenge to the value of the paper dollar. He is demanding payment in gold and silver coin from the State of Maryland as compensation for land taken from him by the Maryland-National Capital Park & Planning Commission under eminent domain laws. The outcome of his case may well decide whether or not the Constitution is still the Supreme Law of the Land.

Solyom is prepared to accept whatever amount a jury may decide is "just compensation" but claims that if he accepts paper money offered by the Park Commission, it will place the State of Maryland in direct violation of Art.I; Sec. 10 of the U.S. Constitution. Therefore he must refuse the paper money.

His landmark case was heard in the Circuit Court for Montgomery Co. Maryland on December 1, 1981. A preclusion order, issued by the presiding judge, prevented the money issue from being presented to the jury.

The case has been appealed and ultimately may land in the U.S. Supreme Court. The language of the Constitution is explicit and it is difficult to imagine a Supreme Court decision adverse to Solyom. A favorable decision by the Supreme Court will mean that Federal Reserve notes can no longer be used by the states to extinguish their debts. Such a decision will help guide the Federal government back to a specie-backed currency.

GOLD PAPER - CURRENCY FOR FUTURE

Submitted by
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8th June,1981

Inflation has become a way of life in free world economy. The expansion of money in terms of production of commodities causes changes in value of money. Sensitive as it is to continuous changing factors, economic, political, and social; the confidence in money is subject to changes and therefore shelter against falling money value in terms of commodities is being sought after by investment in fixed assets like property, land and/or commodities. With the limitation on supply of each of these shelters, the demand causes the rising price trend in all above assets, which in turn cause many social and economic problems like rising cost of production creating labour problems and unemployment. Thus inflation generates a cycle of events. Unless inflation generates a growth rate in the economy to communsurate with the fall in value of money caused by the rate of inflation the problem of inflation shelter remains. It is also met by investment into other assets. Such other investments which are sought after are gold, silver and diamonds and even other base metals. Value of silver, diamonds and base metals is subjected to the individual problems also. While gold is a distinctive asset from others, a new class of investors seek after gold. I am suggesting the introduction of paper currency or paper bond convertible in gold or gold value at a future date as an additional asset against inflation, as shelter and as a substitute to physical gold investment. Total currency in any country completely backed with gold or convertible into gold as per orthodex gold standard is an ideal situation not likely to reach in forseeable future, nor is it free from global problems.

The estimated total gold investment is 24.5 million ozs. in the year 1979. The total world production is 39.29 million ozs. in 1979. This works out to 62%. Though in 1980 investment ratio has gone down, still, it may work out to 45%. If only 25% of this demand is diverted to the paper gold, it will contribute to less pressure on physical gold.

Besides, gold reserves with Central Banks are about 1000 million ozs. If the investment in paper gold materialises to 5 million ozs. per year it would contribute to counteract inflationary pressure in the economy, and the gold of the Central Bank Reserve will find useful utilisation. This amounts to limited and restricted return to gold standard.

As I mentioned in my speech at Sixth Annual Conference of NMR at New Orleans in November,1979 that abrogation of gold clause in 1935 brought an end to automatic relationship between currency, gold and commodities. This was the beginning of the end of unequivable faith in paper currency. The introduction of paper gold is reversal of that trend. It may be only a first step in that direction.

I am restricting myself to a suggestion to issue of gold bonds by a centralised monetary authority or by Central Banks of individual country. Convertibility of gold bond into gold at a future date say 15 to 20 years is subjected with an option of either to give gold or value of gold into the local currency at the time of maturity. These bonds are to be sold across the counter of the Central Bank against (1) either surrender of physical gold or (2) against payment in local currency. In the instance of (1) the physical gold is surrendered against paper gold bearing a fixed interest and an option of delivery of physical gold in equivalent weight at the time of maturity or the value of so much weight of gold at a price prevailing at the time of maturity in local currency of such gold. (2) In second category, the option of delivery into physical gold to equivalent of weight of gold; or the value of weight of gold in local currency at the time of maturity; against issue of gold bond at a price determined in local currency. The bond may bear a fixed interest.

NOTE 1

GENESIS OF GOLD BOND

It is an issue of bonds against currency returnable in gold or gold value in currency at a future date.

Two types of gold bonds are suggested.

1. One is the issue against subscription in local currency. The Government may issue bonds at a price against local currency for so many ounces of gold to be returned in physical gold at the date of maturity. If by chance gold is not returned, it is to be paid in local currency at the price of physical gold prevalent at that time. It may vary on demand based on the price of physical gold. It is sold in units of ounces of gold, i.e. bond for one ounce of gold to be purchased against currency.

At the end of the maturity period the physical gold of one ounce is to be given or currency i.e. dollar to be given equivalent to the price of physical gold ruling at the time, for one ounce of gold.

2. Second type is when the gold bond is issued against surrender of physical gold to be given back in physical gold at the time of maturity. If physical gold cannot be returned it is to be paid back in currency of the country in which the bond is issued, at the price of physical gold ruling at the time.

Central Banks have Reserves in gold to the tune of $500,000 million at $500 per ozs. which performs no important part in the monetary systems. Some of such gold can be ear-marked against type number one of the gold bond.

It is estimated that about $30000 million in gold is in the hands of private individuals ($500 per oz) some of this may be diverted to second type of gold bond. These bonds must have all the qualifications of physical gold to some extent, besides, such bonds may offer advantages to investors by better interest rate,benefits in taxes and bearer conversion like gold. These suggestions require thorough and deeper scrutiny by the Monetary experts.

CONSTITUTIONAL CURRENCY

by Leslie Taylor,Equitor
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January 28,1982.

The Constitutional currency with "regulated value thereof" has never been available to the citizens of the United States. Currency of regulated value is the answer to America's problem.

Until now, the meaning of the term, regulated value, has not been available to the people or their Congress. Neither the term currency, confused with money, nor the term value,have been understood, making it possible for the Congress to carry out the masterful provision for maximum production with full employment.

With the science of currency discovered, exposing the meaning of the term "regulate the value thereof" of money,there is no occasion to consider a return to the "fractional reserve" gold standard, the perfidy of which brought on the Federal Reserve Act.

Article 1, Section 8, Clause 5, is written in code. The code has been broken. Money means currency, and "regulate the value" of currency, means to establish The Unit of Value along with the units of weight,distance,volume,horsepower,speed, and temperature,etc.

The mystery about currency, and money, has been cleared up.The science of economics, as well as the science of currency,along with the science of finance and the equitable distribution of the cost of government service, which sciences eliminate usury-debt taxation, inflation-deflation, needless bankruptcy and unemployment, by leveling off the economy for equity-compensated production, are now off the drawing board, scientifically discovered and adequately defined.

The Unit of Value is now discovered and scientifically defined. Value,in the abstract,is: Production Unit Compensation Cost.The unit is The Unit of Value: The key to the solution of economic problems.

Economics has been brought to life and meaningful understanding as: Production for Compensation to Distribution for Consumption. The missing link has been Compensation,for labouring and capital. The emancipation of Labor,and,the emancipation of Capital,is found.

The purpose of the innovation of currency is for compensation. The Science of Equitable Exchange Compensation, is now discovered.

With knowledge of The Unit of Value the Congress is enabled to implement the provision of the Constitution for currency of regulated value and avail the citizens of a free enterprise wealth-economy.

It is universally known that the Federal Reserve System of debt-banking as legalized inflation-deflation,usury-debt taxation,is not only wrong,but is destroying the individual liberty of the citizens. There is no such thing as liberty without equitable compensation.

2. It is one thing to know what is wrong in our great country, but quite another thing to know what to do about it. We now know how.

We now know exactly how to replace the present currency system with the system which the now decoded Constitution provides for. Knowledge is now available for the Congress to perform a vast service for the people which they have always been entitled to.

A principle has been discovered which controls the economy and destiny of nations. The science of currency is the control. The Unit of Value is the secret of currency of regulated value which is required by the Constitution for Congress to provide. Until now, no Congress had the knowledge with which to implement the Compensation Currency provision of the U.S. Constitution. Hence the depredations of the original gold standard, which depredations were improved upon by the sly artifice and cunning of the Federal Reserve System of legalized inflation-deflation usury-debt taxation, and unbalanced budget, and national bankruptcy, shame and disgrace before the nations of the world, but with the deep delight of the leaders of Soviet Russia who may say: "Lenin told you so".

It was the gold standard that brought on the inflation-deflation of 1929-33 and enabled the Class A Stockholders of the Federal Reserve debt-banks to get gold demonitized in 1934, their arch objective. With their legalized fraud, they do not need any gold.

Let it be known: The currency of regulated value of the Constitution is specifically defined as: Price and Dollar, issued by the producing citizens, as dual documents of ownership of equity-value units of composite-posted exchange-wealth in Equity Trust Exchange Depots, as privately owned warehouses, for the purpose of delay-exchange processing to re-purchase and re-sale, as balanced compensation to holders of similiarly issued Certificates of Equity (price-dollars), effectuating equity-value units for equity-value units of exchange-wealth services.

The Comptroller of Equity and Currency operates this system for the Congress, as now mandated by the Constitution, with his Ex-Officio Managers in key positions. Through his Office, the Congress finances government service costs without a dime of debt or a penny of usury-interest, with a balanced budget, daily.

The Congress will exercise its option to repeal the Federal Reserve Act debt-banking non-value usury-interest currency system and institute the free-enterprise full-employment at full wages, full investment at maximum and uniform dividends, in a maximum-prosperity wealth-economy, free of all inflation-deflation usury-debt-taxation; the cost of government service being distributed by the Comptroller's system of Automation of Finance to the currency service, regardless of who is using the currency service at the end of each day. All present tax offices are no longed needed. The saving, and opportunity for error in these offices, is vast.

Briefly and respectfully submitted,

Leslie Taylor, Equitor

Leslie Taylor, Equitor

FREE BANKING UNDER A LABOR STANDARD -- THE PERFECT MONETARY SYSTEM

Submitted by

EARL A. THOMPSON

DEPARTMENT OF ECONOMICS
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JANUARY 8, 1982

No one to my knowledge has prescribed a financial system that would, at least within familiar economic paradigms, guarantee an automatic, simultaneous cure for all of our macroeconomic maladies (viz., inefficient fluctuations in employment, persistent and highly variable rates of inflation or deflation, and governmentally created, artificial scarcities of money). Economists seem to believe that such a system does not exist. However, there is a financial system -- one with a labor standard and free banking -- that would, at least theoretically, simultaneously prevent all macroeconomic ills regardless of the kinds of shocks that hit our economy and without any reliance whatsoever on discretionary policy intervention.

The only governmental responsibility in this financial system is to make the dollar freely convertible into an amount of gold, or noncurrency redemption asset that government finds most convenient, just enabling the redeemer to purchase a predetermined, fixed amount of labor in the free market.

So, theoretically speaking, a dollar will always buy a constant amount, say five minutes, of U.S. labor. This creates a stable and intertemporally constant wage level. To see this, suppose that the free market level of money wages were to increase, ceteris paribus. The amount of gold required to purchase a unit of labor would increase correspondingly. Since the public could then obtain more gold for a dollar from the government than they could from the free market, arbitrageurs would profit by turning dollars into the government for gold and then selling the gold in the free market. The resulting, automatic drain of dollars from the system would serve to depress money wages. The induced reduction in the free market's money price of gold would not reduce the arbitrage profit because a lower gold price immediately increases the amount of gold required to purchase a unit of labor and therefore the amount of gold one can obtain from the government for a dollar; as the financial return to the gold purchase and resale decreases, its cost decreases by the same amount. The currency drain, therefore, continues until the money wage rate is restored to its original level.

In a world with many kinds of labor, our standard would stabilize the quantity-weighted average wage rate, e.g., the 30-million worker, B.L.S. monthly wage index, thereby giving an individual, for his dollar, an amount of gold just enabling him to purchase a representative set of labor services totalling a constant number of man-minutes of U.S. labor.

Since monthly wage index data are not available until well into the following month, a practical problem arises as to how to determine the relevant

conversion prices. To solve this, the government should make its conversion payments assuming that the wage index will be at its theoretical value, but compensate all large converters ex post for subsequently observed increases in the index from its theoretical value and, of course, charge them for decreases in the subsequently observed index. Thus, the government would make its March conversion payments assuming that the average cost of five minutes of labor during March is $1.00; but if this average cost turns out to be, say $1.02, then all large converters would be due an extra 2% gold payment while if the index were, say, at $.97, the large converters would have to pay 3% more dollars to the government. Thus, if informed speculators thought, on balance, that the March wage index was going to be above $1.00, they would, on balance, convert dollars to gold, simultaneously sell the gold in the free market, and wait for their expected compensation from the government in the following month. The dollar drain created by this operation would depress the expected wage level until it reached unity. In this way we would always have an expected wage index, an expected dollar cost of five minutes of labor, of $1.00.

Another practical problem, a temporary one, is posed by the fact that existing contracts are geared toward about a 10% annual increase in money wages over the next few years. Allowing gradual decreases in the labor conversion rate for a few years, commencing at a 10% annual rate, before stabilizing it at, say, five minutes of U.S. labor for a dollar (i.e., to where the average wage level is $12 per hour) would preclude potentially very costly recontracting and at the same time substantially reduce the redistributional component of the increase in the value of existing long-term bonds. Alternatively, a new, recognizably distinct, labor-convertible dollar could be printed. This would not only allow existing contracts requiring the delivery of future dollars to be executed in the old, Fed-controlled, depreciating dollars and thereby permit an immediate move to an intertemporally constant wage level in terms of the new currency; it would also, by enabling the government to prohibit the Fed from transacting in new dollars, prevent the Fed from inadvisedly attempting to neutralize the efficient, labor-standard, currency flows between the Treasury and Public. After a while, once most old-dollar obligations have been fulfilled, and the new dollar has supplanted the old, the Fed could take over the Treasury's conversion operation, although this would presumably require an Act of Congress. Such an Act should also eliminate reserve requirements, bank interest rate regulations, rediscounting and open market operations as needless constraints on the free market's efficient, competitive provision of a currency-convertible medium of exchange. The intertemporally constant wage rate would insure the automatic absence of inefficient business-cylce unemployment and the removal of the artificial constraints on the banking system would assure a statically efficient, competitive banking system.

While inefficient fluctuations in employment would disappear under a labor-standard, they would be greatly exacerbated by returning to a simple gold standard because money wages and employment under a gold standard are altered by variations in the free market's relative price of labor in terms of gold and because the relative price of assets fixed in supply to the world has become highly unstable and should be expected to remain so over the foreseeable future. For the same reason, adopting the discipline of a commodity index standard would induce more severe employment swings than we've witnessed over the past decade. Moreover, unlike a gold standard, a labor standard would neither require international cooperation nor lay us open to foreign economic sabotage.

Finally, the resumptions of convertibility that would occur under a labor standard following wartime convertibility suspensions and inflations -- in sharp contrast to gold standard resumptions -- would create nothing like the gradually decreasing money wages and great depressions characteristic of our sordid past under the gold standard. Resumptions of convertibility under a labor standard would instead produce the immediate wage and price level adjustments characteristic of harmless currency reforms. The system would be depression-proof.

U.S. MONETARY SYSTEM 1981 VERSUS U.S. CONSTITUTION

Submitted by

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NOVEMBER 18, 1981

Thank you very much for your invitation to submit written testimony for consideration by the U. S. Gold Commission.

I have read the minutes of the second meeting of the Commission containing the comments by members of the Commission. None of them addressed the issue of CONSTITUTIONALITY regarding the laws under which the present U.S. monetary system operates. A brief look seems appropriate.

1) THE POWER TO COIN MONEY AND REGULATE ITS VALUE.

   a) Article I., Section 8 of the Constitution of the United States (ConUSA hereafter for brevity) says:

      "The Congress shall have Power...To coin Money (and to) regulate the Value thereof..."

   b) ConUSA grants NO POWER WHATSOEVER for any branch of the U.S. Government to PRINT money or to create money in any manner whatsoever (electronically, by bookkeeping entry, by creation of bank checking account balances in exchange for promisory notes, by use of plastic credit cards) other than COINING IT.

2) COMPOSITION OF COINS.

   a) Although ConUSA did not specify in Article I, Section 8 the composition of the coins which the Congress was empowered to "coin", ConUSA did indeed imply in Article I, Section 10 that such coins were to be composed exclusively of gold or silver. ("No State shall...coin Money (or) make any Thing but gold and silver Coin a Tender in Payment of Debts...")

   b) It seems (to this writer, at least) that if ConUSA had authorized the national government to create non-specie money (a view widely held among Commission members in 1981), such non-specie money could not be used in the several states as "Tender in Payment of Debts" because of the prohibition in Article I, Section 10.

3) LEGAL TENDER LAWS.

   a) Article I, Section 10 implies that states may make legal tender laws so long as such laws DO NOT "make any Thing but gold and silver Coin a Tender in Payment of Debts."

b) ConUSA makes NO grant of power to the Congress to enact any legal tender laws. The powers granted to the Congress by ConUSA are carefully enumerated in Article I, Section 8. They do NOT include any mention of legal tender. Therefore such powers are DENIED to the Congress. (Bill of Rights: Article X: "The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.")

c) I am aware of the decision of the United States Supreme Court in the "Legal Tender Case" (Juilliard v. Greenman, N.Y. 1884, 4 S. Ct. 122, 110 U. S. 446, 28 Law. Ed. 204.) The Court said: "The several states are prohibited from making anything but gold and silver coin a tender in payment of debts, but no intention can be inferred from this (underscoring by WIVB) to deny to Congress this power." The denial of this power to the Congress is to be found in Bill of Rights, Article X and by the absence of such grant of power in Article I, Section 8 and in all other sections of ConUSA. This court decision and its aftermath only prove that the Judiciary Branch has been a party to the debauchery of the U.S. monetary system.

Re: TERMINATION OF ONGOING "GOLD PRICE MANIPULATOR'S INFLATION"

Submitted by;

New York Gold and Silver Futures Exchange
American Gold and Silver Merchants Assoc.
42 W. 35th Street NYC 10001 * tel: 736 0638

to strengthen

CONSTITUTIONALLY CONSTITUTED GOVERNMENT

Its Officers Its Workers Its Citizens

proposed gold
Executive piece

Shortly after governmental restraints on gold trading were removed in 1968 the founder and members of the above Exchange and Association innovated and conducted a new, dynamic, gigantic, vitally needed futures contract market in untraded, unlisted, neglected commodities (gold, silver, plywood, rubber, steel, chemicals, minerals, etc.) exempt from futures trading regulations by the United States Code in effect when such new markets were commenced.

These new markets, founded on Common Law Trusts In Aid of Government, were singularly and exclusively created to advance the United States of America, its peoples, its societies, its commerce and its government with (1): a vast, new, dynamic field of industry capable of fully employing its commerce and society for hundreds of years (2): funds, in the form of a 1% Exempt Commodity Futures Contract Trading Exaction, sufficient to operate its governments with little or no need for taxation in any social or political climate and (3): propagation of the benefits of benign encylic discoveries improving National health, education, transportation, agriculture and housing. (See records on file with U. S. Gold Commission).

After surplus investment capital rallied "en masse" to the above innovate Exempt Commodity Futures Contract Market the worried officers of the securities industry and the regulated commodity markets caused a United States Department of Agriculture Committee Meeting on "Trading in Puts and Calls in Non-Regulated Commodities" convened on February 14th 1973 wherein they complained of the new Exempt Commodity Futures Contract Markets success and, wherein it was suggested that Clearing Houses, Exchanges, Advisorial Services and Associations appropriate to the new market be formed and established in the Law.

In March, November and December of 1973 the instruments of title to a "financial business system" of Exchanges, Clearing Houses, Advisorial Services and Associations for trading Exempt Commodity Futures Contracts were filed with the Division of Corporation for the State of New York by the founder of the above New York Gold and Silver Futures Exchange. Said system stock is 70% federally owned.

A "Code of Trading Exempt Commodity Futures Contracts" was prepared, effectuated and mailed (registered mail) to the administrative officers of all three branches of constitutionally constituted government. Such Code conferred remunerative regulatory agency over all Exempt Commodity Futures Exchanges upon the United States Department of Agriculture and the United States Department of Justice and, directed that the securities and bond industries be permanently strengthened with a proviso that all proceeds of all Exempt Commodity Futures Contract Trading be invested in stocks, bonds and securities of the United States of America while awaiting distribution to beneficiaries named on page 27 of the January 10 edition of the New York Law Journal. (Public Notice of "Trust Funding Government).

The Supreme Court of the State of New York, the United States District Court, Southern District of New York and the United States Circuit Court of Appeals for the Second Circuit have and continue to

recognize the above Exempt Commodity Futures Trading Industries standing to maintain actions at law against all avariciously demented entities entering the field to inflate world economy my manipulating gold prices to their profit. The leading culprit in the field refuses to answer an order of the New York State Supreme Court directing it to show cause why it should not be permanently restrained from selling Exempt Commodity Futures Contracts. We will seek orders against this last remaining entity from the United States Courts.

Before March 31st 1982 the above Exchange will have perfected three .999 gold medallions of differing weights commencing the practice of honoring thereon the three branches of constitutionally constituted government, and will have put them out to market through advertisements quoting their price under a $35 an ounce gold standard recall.

Directly after gold controls were removed in 1968 the above founder immediately established, in law and commerce, a managing and controlling authority (NYG&SF Exchange & Association above), over gold and silver trading and embarked upon a ten year struggle in the courts to stay the inevitable inflationary tide issuing from ill-advised removal of gold pricing controls. The decisive day for the commencement of de-flation occurred when a brave worker, David Bay: 120 E. 30 Street, NYC placed an unauthorized ad in the 1/2/80 and 1/4/80 editions of the N.Y. Times announcing the price of gold substantially below the "runaway market price". Such ad spared this Nation grievous harm and singly began a world decline in currency and commodity prices which has not abated.

The fundamental premise of a lasting, economically healthy Nation should be a prohibition (Executive, Judicial or Legislative) against private hands holding the mechanism which determines currency prices, i.e. "gold"

STEPS CLEARING AWAY INFLATIONARY DEBRIS

1. Honor our brave judiciary who uncomplainingly bore the overwhelming burdens of a now receding, near fatal, inflationary holocaust.
2. Confront State Department civil rights attorneys motives for deluding our Courts that racial discrimination exists in America.
3. Examine America's moral rights to force two traditional (Arab & Jew) adversaries to live together in unmitigated bloodshed.
4. Continue objections against annexation of Afganistan and Golan.
5. Recall "gold standard" of $35 an ounce allowing private ownership.

We endorse and recommend that Taylor Industries Inc. (NYS) and the above membership continue as the salaried minter and marketing agents for coined bullion sales with all profits directed to the U.S. Treasury.

signed 2/17/82 NYC John Van Hoore
Pres; NYG&SFE AG&SMA

GRAMDOR: A Proposal to Establish a Resilient Gold Currency

Submitted by
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18 January 1982

The volume of money, the national debt, the offshore dollar obligations of the United States prohibit the convertibility of the dollar into gold at any sensible price. As all currencies in the Free World are based on dollar reserves, they, too, are inconvertible. This is the first time in 3000 years that there exists no genuine exchange money standard in the world.

The gold held by national treasuries performs no useful function; the gold hoarded by individuals is also withheld from the economic stream. The IMF, charged with regulating exchanges, can not cope with the flood of printing press monies. No supra-national authority could that. National agencies must govern.

A flexible gold currency could be established by the USA and the leading nations of the Free World. They should form a Monetary Union. Gold coins uniform in denomination, size, weight, and fineness would provide gold money that would circulate freely throughout the Free World. The troy ounce is too unwieldy a unit. The gram is proposed instead, and the new currency might be called Gramdor (gram d'or) with mils as subsidiary units. The Gramdor, an auxiliary currency of global validity, would not replace the local currencies as legal tender in the member nations.

Gramdors could be put into circulation without reducing monetary gold stocks. One troy ounce equals 31.103481 gram. The treasuries should offer to pay ₲31 for each troy ounce of gold. The fraction of 0.103481 g would constitute seignorage.

The relationship of Gramdors to the several national currencies would be established by the countries' paying local currencies for gold (and Gramdors) and selling Gramdors for local money.. By infusing gold money into the economic mainstreams, we would give gold a functional value, greatly enhancing its value. The initial price might well be set at $700/oz. = $22.50 per ₲. At this rate, our gold is worth about $185 billion. Currency in circulation is about $137 billion. The gold would thus constitute a 135% "cover", a very ample proportion by historic standards. Our debts make this desirable.

The envisaged Gramdor Union members would own close to one billion ounces of gold at the start. This hard money core would be worth $700 billion. Tenders of hoarded gold might well swell this to gold worth a trillion dollars, free gold in treasuries.

All member nations would adhere to Gramdor Union principles, but each nation would be free to set its own initial price and ratios, as shown below.

The American announcement might say:

"The Treasury will pay $22.50 for one gram of gold in bullion form and certain gold medallions (Maple Leaf, e.g.) It will sell Gramdors at a premium of 1%, i.e. at $22.725 each. Gold pieces are available, ₲20, ₲10, and ₲5. Notes covered fully by gold held in escrow will also be issued, as will subsidiary coins, mils.

"There is no limit to the amount of gold accepted by the Treasury for exchange into Gramdors or dollars at the posted bid rate. The amount of Gramdors the public can buy in any one week is limited to 1/10th of 1% of the Treasury's free gold stock.

"The posted prices will hold good as long as our free gold stock covers between 100% and 150% of dollar bank notes in circulation. When the gold stock exceeds 150% of money in circulation the Treasury will lower its prices for gold and Gramdors by 0.1% each week until the ratio is down to 150% again.

"Should the cover fall below 100%, we will raise the rates by 0.1% a week until the 100% cover is restored. Should the cover drop below 70% of money in circulation, then the sale of Gramdors will be suspended and the buying rate will be raised by 0.2% each week until the 70% cover is restored. Thereafter, sales will be resumed and the rates will be raised by 0.1% a week until the 100% mark has again been reached."

In the U.S.A. the four stages will thus be:

Ample:	Cover over 150%.	Buying and selling prices lowered weekly by 0.1%.
Good:	Cover 100 to 150%.	Prices and sales steady.
Tight:	Cover below 100%.	Prices raised by 0.1% weekly. Sales go on.
Thin:	Cover below 70%.	Purchase price for gold raised by 0.2% each week until 70% cover has been re-established. Sale of Gramdors suspended until then.

Other member nations may set different ratios, each according to its capacities, but the principle of unlimited purchases and limited sales and that of adjusting prices as the situations become ample, good, tight, or thin must prevail. Adherence to these methods is the cornerstone of the Gramdor system.

As one nation raises its gold price, another holds it steady, and a third lowers it in terms of its respective local currency, the exchange rates will be adjusted in an orderly manner, multilaterally. Global flexibility and resiliency are thus assured.

The free gold markets should be permitted to continue to function. They would be instrumental in channeling newly-mined gold into the Gramdor System. The 25,000,000 ounces a year would add about four percent to existing gold stocks. If only half of the newly-mined gold were to flow into the Gramdor treasuries, the monetary gold stocks would keep pace with expanding economies.

The above is a brief summary of a comprehensive plan to restore gold money to the commerce in the Free World.

HPVdP

FIRST THINGS FIRST IN THE MANAGED-MONEY GOLD-MONEY DEBATE

submitted by
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Philosopher John Dewey offered this sage observation: "[T]here is a need that comes before that of solution. That is the need for getting a reasonably clear sense of what the problems are that have to be met.... For in the technological and the medical arts, we have learned that to plunge into action before we have located what is the matter is the way to make things worse than they were before." He was talking about philosophical problems, but his remarks apply with equal validity to today's monetary problems.

The variety of views about solutions to today's monetary misery attests to the poor understanding there is of the monetary problem in its full context. Instead of attempting to define the appropriate role for gold by the end of its tenure, the Gold Commission might best serve the Nation by providing a clear description of the problem in its many and complex aspects. To expect specific solutions at this time in the inquiry is most unreasonable when it is remembered the relative virtues of gold money and managed fiat money have been debated in various forms for 200 years (at least back to the Bullionist controversy in the early 1800's).

For there to be a reasonable chance that a sound monetary course will be taken in the future, the proponents of paper money and gold money must settle some critical issues. The most basic of them are:

1. What is reasonable to expect of a well-functioning money-credit system? The sorry record of money management during the past few decades has the advocates of managed fiat money on the defensive. But advocates of managed money assert that the gold standard is not the answer to the problem. They point to the record of U.S. experience with the gold standard in the late 1800's and say that it did not prevent domestic short-run price fluctuations or insulate the U.S. economy from disruptive international events. So it did not, but are those achievements to expect of a monetary system?

It is arguable that broad price fluctuations are inevitable and necessary over brief spans. Consider the massive adjustments necessitated by the marked rise in energy prices initiated by OPEC in 1973. Even if there were no monetary excesses, price indexes would have to have risen for a time, until prices of nonenergy goods had been reduced for lack of demand. By such processes, an economy's real resources are re-allocated to reflect new economic trade-offs.

As for international repercussions, one thing that has become plain during the past decade is that fluctuating exchange rates do not adequately insulate an economy from international events. To think otherwise was naive, since prices, supply, and demand affect each other simultaneously and in a world context. Floating became "dirty" because clean floats had consequences for domestic prices, output, and merchandise and capital flows - consequences that were judged politically unacceptable and therefore were moderated by foreign-exchange intervention and capital controls. In an open world economy, economic decisions and conditions in one country inevitably impact on those in other countries - regardless of the monetary system. And they must, if worldwide resources are to be re-allocated in accordance with new, ever-changing worldwide trade-off possibilities.

2. In today's world of impressive financial sophistication, can a fiat money supply be controlled at all? Many monetarists now admit that former official money managers are responsible to a large extent for the current monetary problems, but they say that the outcome could be better in the future if the new managers apply appropriate operating targets and have enough determination to resist political pressure to abandon them. We shall concede that repeated earlier failures of paper money management in this country and others at many times in the past are not incontestable proof that official managers will fail again, but the historical record justifies great skepticism. In turn, warranted skepticism affects savings, investment and price and wage decisions in ways that might make the doubt self-fulfilling.

Today there is a more crucial doubt. Even if money managers were to control the reserve aggregates as deemed necessary by paper money proponents, would such control restrain growth of actual transactions money - not merely the reported monetary aggregates? With today's fiat dollar and continually developing new payments mechanisms, the amount of transactions money supportable by any given reserve base (the "money multiplier") may be nearly limitless. Each time the monetary authority brings under its control a recently developed transaction account, the private sector ingeniously creates another outside official domain.

Managers of huge financial organizations (there now is little by which to differentiate banks and nonbanks) can extend fiat dollar credits without apparent limits, secure in the knowledge that they will be able to offset their fiat-dollar liabilities with fiat-dollar claims against other huge institutions engaging in the same practice. And if by chance one of these finds itself short of dollar credit to meet an immediate liability, they can be confident that official fiat-dollar credit will be provided to bail them out, so that the financial house of cards will not collapse.

The expansion of a fiat money system is ultimately limited, of course. It is limited by the option of the public to refuse to produce and trade their goods for the fiat currency and to refuse to save and invest in currency denominated financial claims. These conditions are called "flights from currency" or "money panics," and are accompanied by depression, since economic transactions fall drastically in a barter economy. A monetary system that would check developing excesses far before this chaotic outcome becomes a worrisome possibility would seem most desirable. Today's system of paper money provides no such check. A gold system would.

3. Are the consequences of short-term banking and credit "panics" only undesirable ones? Gold convertibility provides the users of money with a means to restrain early any developing excesses originating with the issuers of money. This induces early correction of incipient economic distortions fostered by the credit excesses. A credit-based market economy may well have a potential for cyclical excesses, regardless of the monetary unit. Anyone with a service or product to offer can extend credit in the process of selling his wares. Such nonbank credit can generate business optimism and initiate a cyclical uptrend. As a practical matter, however, nonbank credit could not support an over-exapnsion for long because of the limited acceptability of nonbank IOUs. Bank IOUs are different; they are widely accepted as a means of final payment - they are money. Bank credit growth can extend expansions into speculative "booms."

If such booms are cut short by banking "panics" initiated when money users present the banks' IOUs for redemption in gold and the banks cannot pay as they promise, should the associated recession be attributed to use of the gold standard or abuse in the form of unsound credit practices? Should the downward phases of prices and business activity be viewed as needless losses of output or as necessary

corrections of prior distortions? It seems that unless one is ready to expect perfection in economic decision making, one must concede that an economy may have expansionary excesses that must be corrected during contractionary phases. Seen in this light, perhaps abuse of sound credit practice should be blamed for the banking panics of the late 1800's, not use of the gold standard.

4. Which money-credit system has the better self-correcting mechanism? If errors are inevitable, the monetary system that provides the better self-correcting tendency would seem more desirable. A true gold standard (not a gold-exchange standard) is such a system. A managed, fiat money sustem is not. Indeed, the history pf paper-money managers - acting under the duress of government - is to "validate" developing distortions in order to prevent recessions, or to cut them short, and thereby to enhance the popularity of those in political power. Corrections of developing distortions thus are repeatedly prevented until malinvestments become so severe that the system collapses.

A gold-based money-credit system is managed decentrally be market participants. It compels money issuers (bankers) to learn quickly from their past mistakes or it forces them out of business through bankruptcy. When a bank's demand liabilities are redeemable in gold - which neither bankers nor politicians can create - total demand liabilities are limited by the stock of gold on hand (not necessarily dollar for dollar). Through the process of trial and error, bankers learned by late in the last century that some types of loans (assets) were more adequate collateral for ensuring their ability to meet their gold obligations than other types of assets. The more useful assets were loans to finance the marketing of a product, the near-term expected sale of which would provide either the funds for repayment or, if the sales did not occur at the price expected, a quick lesson to the banker that he misjudged economic conditions related to the loan and had better adjust his lending practices to reflect actual conditions. Economic coordination and money management thus occurred at the most dispersed, micro-economic level, and the risks were borne by those making the decisions. The banks' practice of limiting asset monetization to these "self-liquidating" loans was called the "commercial loan theory" of banking, or the "real bills doctrine." The real bills doctrine must be a part of a resurrected gold standard in order for that standard to be workable. Sound banking and a gold monetary unit together tend to keep bankers from creating excess money or to correct quickly any incipient excesses. Not just any tie between gold and the dollar would prove to be beneficial to the economy. Many forms of the "gold standard" almost surely would fail. Probably only one form would succeed.

To do nothing now about the possibility of restoring gold, however, would be to continue totally subjecting the economy to the risks of fiat money. Inaction in this instance could be dangerous in the event deep doubts about the dollar reappear and create the possibility of an imminent flight out of the paper dollar. One course of potential usefulness that has limited risk would be to demonopolize Government's power over the monetary unit, or in Friedrich Hayek's language, "to denationalize money." Decentralized experimentation with various types of private monetary units and banking practices in the market would not require Government to give up its control of paper money, such as it is. Yet, denationalization would offer the opportunity for more useful money to re-evolve before utter chaos develops. One way or another, market participants ultimately will decide what is used as money - not economists, bankers, or politicians. Why not put the market to work before all else fails and the money-credit system must be rebuilt from ashes?

IF POSSIBLE, AT LEAST BE HONEST ABOUT FIAT CREDIT SYSTEMS EXCLUDING GOLD VERSUS NON-FIAT SYSTEMS INCORPORATING GOLD BACKING

Submitted to Gold Commission by
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In response to your October 22, 1981 invitation for written views on matters being considered by the Gold Commission, please accept the following brief summary. Since 1970, I have strongly advised a cornerstone investment position in gold and gold related assets as a hedge against the inevitability of hyperinflation and/or deflation due to the emergence of a dollar fiat credit system versus a dollar credit system incorporating gold convertibility.

Throughout history efforts to debate gold and fiat paper have been primarily political ego trips if, a critical if, discussions failed to begin with a distinction being made between money and credit. Without this distinction, there is no science to the issue, only political emotions. Sound money has always been an unencumbered asset and credit an encumbered asset. When the basic distinction between money versus credit is overlooked, all the key issues of historical financial collapses and human suffering are overlooked. And never in all history has there been a purely credit system without gold convertibility which did not, in time, end in collapse and suffering. This is not to say gold backing is perfect. Periods of difficulty should be openly accepted for gold convertibility on the basis of there being no perfect system. But gold convertible systems have been less imperfect than fiat credit systems which are guaranteed to collapse in time not only because the record of all history proves it so but also because common sense provides simple reasons why it is so.

In sum, most of the issues so far made public by the Commission reflect individual "political" viewpoints and fail to address the unbiased fact of the absolute inevitability of disharmony and human suffering under fiat paper systems with no gold convertibility. As the U.S. dollar is now in this historically untenuous position, it is absolutely certain that dollar credit will collapse at some point unless the Commission can come up with one reason why this time there is any difference from every single case before it in history. There is at least a chance to avoid instability and suffering with gold. There is no such chance with exclusively fiat encumbered credit.

The evidence of history is thus clearcut. Fiat systems involve exclusive issuance of encumbered assets -- currency and credit. Common sense of even below average mortals involves a simple "knowing" that too great an issuance of anything which is encumbered will result in time with default. It is as certain as the law of gravity. Thus, if the Commission rejects a gold backed system, it is guaranteeing that dollar credit will eventually collapse no matter what happens. It is only a matter of time. That, it seems, should at least be acknowledged in any rejection of a gold backed system.

Weintraub Gold Certificate Plan

My plan is responsive to the Commission's charge "to make recommendations...concerning the role of gold in our domestic and international monetary system." It uses gold as the discipline to put a lid on money growth. This would prevent persistent inflation such as has affected the U.S. economy since 1968.

The limitation on M1B growth is enforced by tying the maximum allowable growth of currency in every 12-month period to the increase that period in the value of the Federal Reserve's gold certificates. The value of the Fed's gold certificate account depends strategically on the official price of gold. That price was last set in 1973 at $42.22 an ounce. Under my proposal, it would be allowed to increase percentagewise each period by enough (1) to offset a predetermined increase in the certificate requirement, which starts (1981 departure) at 9 percent, plus (2) the maximum desired growth in what will be called M1 beginning in 1982, plus (3) an adjustment for changes in the checking deposits to currency ratio.

1. The predetermined increase in the certificate requirement. A 33 percent yearly increase in the certificate requirement, as from 9 to 12 percent, 12 to 16 percent, etc., is recommended. The major purpose of this increase is to raise the official price of gold to the market price in about eight years. Capital gains accruing to the Treasury from raising the price would be used to retire Federal Reserve held Treasury debt, leaving the monetary base unchanged by the action.

2. Maximum desired M1 growth. Assuming for the moment that there is no change in the checking deposits to currency ratio, the official price of gold would be programmed to rise each year (beginning in 1982) by this amount plus the maximum desired growth in M1. In this latter regard, given the events of this year, 4 percent seems appropriate for 1982 and 3 percent for 1983 and subsequent years.

3. Adjusting for changes in the checking deposits to currency ratio. If the checking deposits to currency ratio changes, an automatic adjustment is made to permit reaching, but not exceeding maximum desired M1 growth. In essence, the price of gold is increased faster than the programmed increase in the certificate requirement plus the limit on M1 growth, if the public prefers to hold more exchange media in the form of currency, but would rise more slowly if there is an increase in the checking deposits to currency ratio. The adjustment formulas are spelled out in my written and oral submissions to theCommission.

With the adjustment, my plan is flexible enough to allow the public to hold any fraction of its total exchange media in the form of currency that it wants. My proposal will in no way prevent the Federal Reserve from meeting all demands for liquidity and from carrying out its responsibility to "furnish an elastic currency."

My plan allows for coinage of gold by Treasury as suggested by Commission members, Dr. Paul and Mr. Costamanga. Exactly how is detailed in an appendix to my oral testimony. However, my plan does not require or in any way provide for Treasury sales of gold at a fixed price. It does make it easier to consider this question at some future time by raising the official price of gold every year. In time, the official price will equal the market price.

Finally, the Commission can recommend a different timetable for increasing the official price of gold if desired without affecting money growth simply by changing the size of the programmed yearly increase in the gold certificate ratio, now 33 percent. And, of course, the Commission also can recommend that Congress authorize lower or higher maximum M1 growth than 4 percent in 1982 and 3 percent in later years. Indeed, the level of the lid should be reviewed from time to time.

MONETARY STABILITY AND GOLD

Submitted by
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11 Dupont Circle, N.W., Washington, D.C. 20036
November 13, 1981

The central issue facing the Commission is that of determining whether any of the various proposals for restoring a monetary role to gold can be expected to enhance rather than to undermine monetary stability. The classical gold standard creates a financial incentive to supplement costly commodity money with cheap credit money as long as the convertibility of the currency looks secure, but the currency at times falls under suspicion, whereupon a run into gold occurs, producing monetary contraction and banking crises. In a rather similar way, the Bretton Woods system subjected the world stock of international reserves to capricious variation as a result of shocks to the private demand for and supply of gold. The proposal to make the dollar convertible into gold at a fixed price, while maintaining a floating exchange rate between the dollar and the other major currencies, would tend to add to the variability of the dollar's exchange rate, because shifts between non-dollar currencies and gold would have much more impact than they now do on the foreign currency value of the dollar. All of these proposals present a clear threat to monetary stability.

The proposal of Robert E. Weintraub to restore the gold certificate reserve with a variable gold price designed to restrict the note issue within certain limits is, in economic substance, a proposal to pre-specify a ceiling for a particular monetary aggregate; the role of gold is purely cosmetic. The idea of minting gold coins and selling them against Federal Reserve notes at the market price of gold would not lead to any extensive use of those gold coins as a medium of exchange, and is monetarily irrelevant. Restoration of the international usability of gold reserves in transactions with foreign central banks would require an agreement among the leading central banks to accept gold at a market-related price; whether or not the gold price were stabilized by intervention, such an agreement would expose the value of international reserves to capricious variation. Examination of the various proposals before the Commission therefore suggests that re-establishment of a monetary role for gold would be at best irrelevant and at worst a dangerous threat to monetary stability.

If gold is not to have any future monetary role, it will be necessary to decide what to do with the Treasury's stock of monetarily-redundant gold. The logical complement to a recommendation against any future monetary role for gold is to sell the bulk of the stock, in a manner designed to maximize

the present value to the US taxpayer. However, other considerations are relevant in determining the disposition of the gold formerly contributed to the International Monetary Fund by the United States: in particular, the commitments made by US statesmen and officials in the 1960s suggest that there is a case in equity for using the remainder of the Fund's gold in the same way as one sixth has already been used, to finance a Trust Fund for the benefit of low-income countries.

RESTORE REDEEMABILITY

Submitted by:
John Wrisley
One Myrtle Court
Columbia, S.C.

You are doubtless inundated with instructive material from scholars on both sides of the gold question. Please also permit a few words from a common citizen who is very concerned about the rapid depreciation of our currency and sees your mission as a possible signal that the federal government might be willing to do something about it.

I was taught that money is a store of value as well as a medium of exchange. The store of value function has been lost. Consequently, preserving the proceeds from one's work against currency depreciation has now become a terrifying game - especially for those of us approaching the retirement years.

It is apparently beyond the power of man to satisfactorily create and manage a fiat currency. If we don't reunite our currency with a commodity people know and trust we may find more people than ever rushing to the safety of Krugerrands, Maple Leafs, 50 Peso coins and precious stones. This cannot be particularly beneficial to the U.S. economy.

If reuniting our currency with gold/silver is too complex perhaps there is merit in issuing a new currency backed by the precious metals, allowing it to circulate freely as an alternative to irredeemable currency. This would allow the people to decide which money they prefer. (We already have the power to make contracts in weights of gold. Why not extend

that freedom?)

In the long run the present exercise by the Commission may turn out to be unnecessary. The ultimate decision about what money is will be made by the people. This lesson has been repeated over and over again througout history and is presently being demonstrated in Poland where the dollar and other "strong" currencies are eagerly sought because of their purchasing power. The zloty has fallen from grace and few merchants and producers are willing to trade goods for it. Let's prevent that scenerio from happening in the United States by once again linking our currency to something of value.

Sincerely,

John Wrisley

WHY THE U.S. MUST NO RETURN TO GOLD

Submitted by

JOSEPH W. WYTHE

Huérfanos 669, Suite 311
Santiago, Chile

5 March 1982

While I do in fact favor the Gold Standard the point of the title above is that it would be futile to go back to the old monetary system in force before 1933. If we want to curb inflation and stabilize the U.S. monetary system and economy we as a nation must be prepared to take several steps simultaneously:

1. Reduce government spending considerably as a percentage of GNP, and then keep the federal budget in approximate balance. Government spending in and of itself promotes inflation (whether the budget is balanced or not) as it diverts resources from the private sector to less productive public uses.

2. Reduce our excessive reliance on credit and debt as a nation. Business cycles can never be eliminated entirely, but excessive use of credit promotes overheated booms and causes sharper recessions and/or depressions than would otherwise be the case. Too much credit distorts overall resource use from productive and sound projects to increasingly more risky ventures. First inflation and then the current wave of business failures in the U.S. are the result of excessive credit expansion. Thus a banking reform that would limit banks' ability to create credit as they do today is another pre-condition for the gold standard to function effectively.

3. Fix the price of gold high enough to induce a flow of gold into the Treasury. Milton Friedman read this paper and disagreed with my plan to fix the price of gold. In a letter he correctly pointed out that the real objective is "monetary stability", and not necessarily a fixed price of gold. I agree. The problem as I see it is to restore the confidence of the general populace in our monetary and banking system, and linking the dollar to gold might prove to be an essential step.

Excessive debt financing by both the public and private sectors has pushed interest rates to their present high levels. These high rates are the cause underlying the current wave of business bankruptcies which will surely worsen in the rest of 1982 and into 1983. Interest rates will only come down after a massive credit contraction and resulting deflation have run their course. All of this implies that a financial panic in 1983 or 1984 is now likely, after which the problem of restoring confidence will take on paramount importance. The gold standard coupled with the kinds of reforms and policy changes mentioned here may prove to be very attractive if not indispensable.

Nevertheless gold must not be viewed as a panacca. The recent suggestions by supply-siders that "bringing back gold may be the only way to make Reagonomics work" is misleading and misses the point. President Reagan's program is essentially sound, but there is a catch. Neither his nor any other program can restore health to the U.S. economy soon. The impending credit contraction and deflation must run their course first, then tax cuts to stimulate investment, reductions in the role of government and other supply side measures will have a chance to succeed. Unfortunately this reasoning implies a long and serious slump and many more bankruptcies before the cleansing of our economic system by the "invisible hand" is completed. Once our nation became addicted to debt financing the credit contraction now unfolding became a foregone conclusion.

Neither gold, nor Congress nor the President can hold back the course of events now in motion. If wise, however, our leaders can use this crisis to good purpose and reform our institutions in ways that will minimize such extreme cyclical swings in the future.

ANNEX C

Some Implications of Legal Tender Status of U.S. Currency

Some Implications of Legal Tender Status of U.S. Currency

Questions have been raised as to the implications of the legal tender status of currency in the United States under existing law. This memorandum examines that issue in the context of (1) debts owed by one private party to another; (2) debts owed by a private party to the Federal government; and (3) Treasury's obligations to convert U.S. currency from one form to another.

A. Background

The Constitution grants to Congress power "To coin Money, regulate the Value thereof, and of foreign Coin."[1] In addition to this specific grant of authority, the Constitution grants Congress the power "to make all Laws which shall be necessary and proper for carrying into Execution" the enumerated powers.[2] These provisions, together with the powers to lay and collect taxes, to borrow money, and to regulate commerce, give Congress comprehensive authority over the currency and the monetary system of the United States.3 Only Congress, and not the States,[4] may declare what shall be money and may regulate its value.

Pursuant to this authority, Congress may take such measures as it deems necessary and proper to provide a uniform currency[5] with an equal value in every state. Congress may define what constitutes legal tender,[6] and may make certain things legal[7] tender only for specific purposes. The exercise of these powers has been upheld on several occasions by the Supreme Court: Congress may issue paper money not redeemable in gold or silver[8]; may prohibit the mutilating, melting, or exporting of gold or silver coin[9]; may prohibit clauses requiring payment in gold or silver[10]; and may, in exercising these powers, suspend the operation of provisions of contracts between private parties[11] entered into either before or after the date of legislation. Thus, Congress has plenary powers to establish, regulate, and control the national currency; judicial review extends only to whether the measures taken have a reasonable relation to a constitutional purpose.[12]

B. Contracts Between Private Parties

Private parties may attempt to contract to receive payment for debts (1) in "dollars"; (2) in a particular form of U.S. currency; or (3) in foreign currency or some medium other than currency. This section considers whether offers of alternative payment will satisfy such obligations, and whether such obligations may be enforced.

31 USCA section 392 provides that "all coins and currencies of the United States.... shall be legal tender for all debts, public and private." If a contract does not specify the medium of payment required, the obligation may be fulfilled by tendering payment of the required sum in any "coin and currency of the United States." At least in one instance, where there was a legitimate business reason for doing so, a court has held that a creditor may restrict payment to certain forms of legal tender if prior notice is given. That court held that a railroad company could require passengers to pay fares in nickels, rather than pennies, where its fare machines accepted only nickels.[13] On the other hand, a creditor need not accept payment in a medium other than legal tender.[14] This outcome does not change if a contract specifies only that payment be made in "dollars"; a creditor may not subsequently require that payment be made in any particular coin or currency.[15]

A clause in a contract, requiring payment in a particular coin or currency, or in gold or silver, may be enforceable, but only if the underlying obligation was created on or after October 28, 1977. Congress determined in 1933 that such clauses were against public policy, and could be discharged by payment of an equivalent amount in legal tender.[16] In 1977, however, Congress made this prohibition inapplicable to obligations issued on or after the effective date of P.L. 95-147.[17]

Private parties may voluntarily contract to make or receive payment in a medium of exchange other than United States legal tender.[18] It appears that the cases which permit a creditor to demand payment in a specified form of legal tender would authorize a creditor to refuse payment in legal tender where a contract specifies some other form of payment.[19] Such contracts are not necessarily enforceable, however; courts have discretion to require specific performance of the contract obligation, or to award payment of an equivalent amount in damages. Specific performance will be awarded only in extraordinary circumstances, where dollar damages are not an adequate substitute for the promised performance.[20] Further, where damages are awarded, they must be denominated in dollars.[21]

C. Obligations of Private Parties to the U.S. Government

The U.S. Government is not required by statute to demand that all obligations owed to it be paid with legal tender. Therefore, the U.S. Government may enter into contracts which provide that payment be made in foreign currency, gold or silver, or some other medium of exchange which is not legal tender. Where a contract does not provide how payment must be made, or provides that payment be made in dollars, any form of legal tender must be accepted. This is because, as noted above, 31 USCA section 392 provides that coins and currencies of the United States "shall be legal tender for all debts, public and private, public charges, taxes, duties, and dues."

Where a contract provides that payment be made in something other than dollars, however, section 392 does not require that the U.S. Government accept only legal tender. Section 392 applies to only those debts which may be paid in legal tender; it requires only that where the U.S. Government does not specify otherwise, payment in any U.S. coin or currency will satisfy the debt. In addition, this section has been held to authorize the U.S. Government to refuse to accept payment of taxes in a medium other than legal tender.[22] Thus, for the purposes of 31 USCA section 392, the U.S. Government has the same status as a private party.

31 USCA section 371 provides that the money of account of the United States shall be expressed in dollars and decimal portions thereof, and also provides generally that "all accounts in the public offices and all proceedings in the courts shall be kept and had in conformity to this regulation." Accordingly, judgments in United States courts, for the payment of damages, must be stated in dollars.[23] In addition, it requires that the IRS maintain records and measure transactions in dollar terms.[24] However, there are no cases addressing the question whether this section limits in any way the authority of the Executive Branch to enter into obligations not denominated in dollars. In any event, the U.S. Government in many instances has been authorized by statute to enter into such contracts (e.g., the Commodity Credit Corporation may agree to barter agricultural commodities for other specified commodities; the United States Treasury may borrow foreign currencies and purchase and sell foreign exchange).[25] The U.S. Government, however, would be situated similarly to a private litigant seeking to enforce such an agreement in court.

D. Conversion of Various Forms of United States Currency by Treasury

Treasury has a very limited obligation under existing law to convert coins and currencies of the United States when requested to do so by lawful holders thereof. That obligation is set forth in 31 USCA section 773a:

> The lawful holders of the coins or currencies of the United States shall be entitled to exchange them, dollar for dollar, for other coins or currencies which may be lawfully acquired and are legal tender for public and private debts. The Secretary of the Treasury is authorized and directed to make such exchanges and payments upon presentation hereunder in the manner provided in regulations prescribed by him.

Neither this nor any other provision of law requires Treasury to redeem any particular currency or coin for any other. Further, any exchanges under section 773a must be made on a dollar for dollar basis, rather on the basis of the bullion value or the numismatic value of coins or currency received.

NOTES

[1] Article 1, Section 8, Clause 5.

[2] Article 1, Section 8, Clause 18.

[3] Norman v. Baltimore & Ohio Railway Co., 294 US 240 (1935), citing Juilliard v. Greenman, 110 US 421, 440 (1884).

[4] Article 1, Section 10.

[5] Knox v. Lee, 12 Wall. 457 (1871).

[6] Juilliard v. Greenman, supra.

[7] See, e.g., 31 USCA section 452, which originally made United States notes legal tender except for import duties and interest on the public debt.

[8] Juilliard v. Greenman, supra.

[9] Ling Su Fan, 218 US 302 (1910).

[10] Guaranty Trust v. Henwood, 307 US 247 (1939); Norman v. Baltimore, supra.

[11] Id. Such action does not constitute a taking without compensation in violation of due process, nor does it constitute an impermissible impairment of contract rights.

[12] Norman v. Baltimore, at 211.

[13] Martin v. Rhode Island Co., 78 A. 548 (R.I. 1911).

[14] Calafut v. CIR, 277 F. Supp. 266 (D.C.Pa. 1967).

[15] Juilliard v. Greenman, supra.

[16] Joint Resolution of the Congress of June 5, 1933 (31 USCA section 463).

[17] P.L. 95-147, section 4(c), October 28, 1977 (91 Stat. 1229).

[18] Consolidated Freightways v. Industrial Commission, 264 NE2d 291, 293 (Ill. 1971).

19 Bronson v. Rodes, 74 US 229 (1868).

20 First National State Bank of New Jersey v. Commonwealth Federal Savings and Loan Assn. of Norristown, Pa., 455 F. Supp 464 (D.N.J. 1978); aff'd 610 F.2d 164 (3d Cir. 1980).

21 31 U.S.C.A. section 371. See also International Silk Guild v. Rogers, 262 F.2d 219 (D.C. Cir. 1958).

22 Calafut v. CIR, supra.

23 54 Am Jur2d Money, Sec. 31. See also Deutsche Bank Filiale Nurnberg v. Humphrey, 272 U.S. 517 (1926).

24 Durovic v. CIR, 1975, 65 TC 480.

25 7 USCA section 1692; 31 U.S.C.A. sections 766 and 822a.

Department of the Treasury
Office of the General Counsel
January 4, 1982

ANNEX D

Continuing Audit of the United States Government-Owned Gold

November 1981

Continuing Audit of the United States Government-Owned Gold

Summary

A continuing audit of the United States gold stock has been underway since 1975 at the direction of the Secretary of the Treasury. When it is completed in 1984, it will have covered all the gold for which Treasury is accountable and will have involved an estimated 26 man years of work. This audit, together with a special audit of the gold stock conducted by the General Accounting Office in 1974 and audits by examiners of the Board of Governors of the Federal Reserve System, has (as of September 30, 1981) covered more than 212.7 million fine troy ounces of gold. This represents over 80 percent of the total amount of United States-owned gold of 264.1 million fine troy ounces. No discrepancies have been found in Treasury records with regard to any gold in permanent storage.

Current Audit Program

On September 23, 1974, members of Congress were invited to inspect the United States gold stock stored in the Ft. Knox bullion depository. Following Congressional inspection, which involved removal of the seals and opening selected vault compartments, a special audit was conducted in September and October 1974. The General Accounting Office (GAO), in cooperation with auditors from the Bureau of the Mint, Bureau of Government Financial Operations (BGFO), United States Customs Service, and the Treasury Department's Office of Audit conducted an audit of 21 percent of the gold bars stored at Ft. Knox. In the report of the audit, the GAO recommended that consideration be given to performing continuing audits of the gold in custody of the Mint. That recommendation is the basis for the current audit program.

On June 3, 1975, Treasury Secretary Simon issued Treasury Department Order No. 234-1 authorizing and directing the Fiscal Assistant Secretary, with the cooperation and assistance of the Director of the Mint, to conduct a continuing audit of United States Government-owned gold for which the Department of the Treasury is accountable.

The Fiscal Assistant Secretary established a Committee for Continuing Audits of United States Government-owned Gold to provide guidelines and general direction to ad hoc gold audit committees. The Committee for Continuing Audits is headed by the Director, Audit Staff of the Treasury's Bureau of Government Financial Operations (BGFO) and includes the Chief of Internal Audit of the Bureau of the Mint and the Assistant General Auditor of the Federal Reserve Bank of New York.

The objectives of the continuing audit are to verify the accuracy of the inventory of gold and the adequacy of related accounting records and internal controls in accordance with Treasury audit policies. The continuing audit is designed to ensure that about 10 percent of the United States Government-owned gold is audited annually.

Since the initial audit in September and October 1974, audits by ad hoc committees have been performed at the United States Bullion Depository, Fort Knox, Kentucky, United States Assay Offices at New York and San Francisco, and the United States Mint, Denver, Colorado. The ad hoc committees included auditors from BGFO and auditors and technicians from the Bureau of the Mint. The GAO is invited to participate in or observe all audits.

The continuing audit is being conducted on a cyclical basis because of the enormous quantity of gold to be handled and the related costs. In performing the audit, the gold bars are physically moved from one vault compartment to another. During this operations, the melt numbers and the number of bars in each melt are verified with an inventory listing, and one in fifty melts is randomly selected for weighing and test assay. The assay samples are assigned a code number and sent to one of the Bureau of the Mint laboratories for analysis. The results of the assays are returned to the audit committee for comparison with the fineness shown on the inventory listing.

Compartments audited at Mint institutions and depositories are kept under official joint seal by representatives of the audit committee. Any subsequent movement of gold in or out of audited compartments must be verified jointly, after which the compartment is resealed. These procedures are designed to keep the audited gold under control of the audit committee.

It would not be feasible to complete a 100 percent audit in a single year, under the stringent control procedures required, without seriously impairing the audit of other vital Treasury operations. This is primarily a problem of the availability of personnel with the necessary experience and qualifications, although additional costs are also relevant. It is estimated that the continuing audit, when completed, will have required 26 man years.

Status of Audit

As of September 30, 1981, United States Government-owned gold amounted to 264,126,046.192 fine troy ounces. The gold that has been audited under the continous audit program and the GAO audit of 1974 amounts to 208.9 million fine troy ounces and represents about 79 percent of the gold held at the Bureau of the Mint bullion depositories.

Gold held at the Federal Reserve Bank of New York is audited periodically by examiners of the Board of Governors of the Federal Reserve System. The audit procedures followed are essentially the same as those followed at Bureau of the Mint depositories, except that assay samples are not taken to verify the purity of the gold. At the invitation of the Board and the Bank, members of the Committee for Continuing Audits representating the Mint and the Bureau of Government Financial Operations observed the audits. As of September 30, 1981, members of the Committee had observed Board audits of 3.8 million fine troy ounces representing over 26 percent of the 14.4 million fine troy ounces under control of the Bank.

Adding these observed audits to the Treasury audit at Mint depositories, 212.7 fine troy ounces, representing 80.5 percent of United States Government-owned gold, has been audited under the current program. A report of the continuing audit, for the fiscal year ending September 30, 1980, is attached.

Attachments:

Summary Report of Continuing Audits of U.S. Government-Owned Gold as of September 30, 1980

United States Government-Owned Gold Audited as of September 30, 1981

United States Government-Owned Gold Audited During 1981

Status Report of U.S. Government-Owned Gold, September 30, 1981

Analysis of Net Changes in U.S. Gold Stock, 1945 - Sept. 1981

Treasury Department Order No. 234-1, June 3, 1975

Department of the Treasury News Release, September 20, 1974

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SUMMARY REPORT OF CONTINUING AUDITS OF UNITED STATES GOVERNMENT-OWNED GOLD AS OF SEPTEMBER 30, 1980

INTRODUCTION

The Department of the Treasury, at September 30, 1980, was accountable for 264.5 million fine troy ounces of United States Government-owned gold valued at more than $11.2 billion. The Bureau of the Mint is responsible for the custody and security of 251.7 million fine troy ounces of this gold located at five field institutions throughout the United States; the Federal Reserve Bank of New York is responsible for the custody and security of over 12.8 million fine troy ounces. The gold is valued at the official U.S. Government rate of $42.2222 per fine troy ounce.

BACKGROUND

In response to public and Congressional inquiries, the General Accounting Office (GAO), in cooperation with the Department of the Treasury, conducted an audit of about 21 percent of the gold bars stored at the United States Bullion Depository, Fort Knox, Kentucky in September and October 1974. Auditors from the Bureau of the Mint, Bureau of Government Financial Operations (BGFO), United States Customs Service, and the Department's Office of Audit participated in the audit. In

the report on this audit, the GAO recommended that consideration be given to performing cyclical audits of the gold in the custody of the Bureau of the Mint.

On June 3, 1975, the Secretary of the Treasury issued Treasury Department Order No. 234-1 authorizing and directing the Fiscal Assistant Secretary, with the cooperation and assistance of the Director of the Mint, to conduct a continuing audit of United States Government-owned gold for which the Department of the Treasury is accountable.

The Fiscal Assistant Secretary established a Committee for Continuing Audits of United States Government-owned Gold to provide guidelines and general direction to ad hoc gold audit committees. The Committee is headed by the Director, Audit Staff of BGFO and includes the Chief of Internal Audit of the Bureau of the Mint, and the Assistant General Auditor of the Federal Reserve Bank of New York.

OBJECTIVES

The objectives of the continuing audit are to verify the accuracy of the inventory of gold and the adequacy of related accounting records and internal controls in accordance with the Department of the Treasury audit policies. The continuing audit is designed to ensure that about 10 percent of the United States Government-owned gold is audited annually.

RESULTS

Since the initial audit in September and October 1974, audits by ad hoc committees have been performed at the United States Bullion Depository, Fort Knox, Kentucky, United States Assay Offices at New York and San Francisco, and the United States Mint, Denver, Colorado. The ad hoc committees included auditors from BGFO and auditors and technicians from the Bureau of the Mint.

GAO is invited to participate in or observe all audits. Representatives of the GAO did not observe any audits during Fiscal Year 1980.

As of September 30, 1980, United States Government-owned gold totaled 264,514,379.521 fine troy ounces valued at $11,168,379,035.01. Of this total, 251.7 million fine troy ounces were stored in five Bureau of the Mint institutions. More than 189.9 million fine troy ounces of this gold having a value in excess of $8 billion, or about 71.8 percent of the total, has been audited under the continuing program. (See Appendix).

SCOPE

The audits were performed in accordance with the audit program developed and approved by the Committee for Continuing Audits of United States Government-owned Gold.

Audit procedures included (1) inspecting the joint audit committee seals used to control compartments containing previously audited gold; (2) comparing the records for each compartment

inventoried to the identifying information on the gold bars; (3) weighing, from each compartment inventoried, at least one randomly selected melt in each fifty melts (a melt averages about 20 bars cast from one crucible of molten gold); (4) removing samples from a bar in each of the melts weighed and having the samples assayed; (5) verifying the mathematical accuracy of all inventory records; (6) verifying the inventoried gold to the institutions' records; (7) verifying the quantities shown by the institutions' records to the control accounts for gold maintained by the Bureau of the Mint and to the central accounts maintained by BGFO; (8) placing audited gold bars in compartments under Official Joint Seal and audit committee control; and (9) reviewing and evaluating internal controls and security procedures.

OPINION

Ad hoc audit committees operated under the guidance of, and followed the audit program developed and approved by, the Committee for Continuing Audits of United States Government-owned Gold. Based on the results of audits reported the Committee for Continuing Audits of United States Government-owned Gold concurs with the ad hoc committees that (1) gold bars audited were in agreement with the institutions' records, (2) the amounts recorded on the institutions' records were in agreement with control accounts for gold maintained by the Bureau of the Mint and with the central accounts maintained by BGFO, (3) the assay results were within the tolerance range established by the Bureau of the Mint, and (4) the related accounts and internal controls are adequate.

Committee for Continued Audits of
United States Government-owned Gold

Joseph F. Ruffley, Sr. Chairman
Bureau of Government Financial Operations

Thomas E. Diaforli
Bureau of the Mint

William M. Schultz
Federal Reserve Bank of New York

Appendix I

UNITED STATES GOVERNMENT-OWNED GOLD
AUDITED AS OF SEPTEMBER 30, 1980

	Gold Audited And Sealed	Gold Holding	Percent Audited
	(Fine Troy Ounces)		
Bureau of the Mint			
Fort Knox			
1974	31,095,438.808 (1)		
1975	15,273,290.116		
1976	13,713,923.796		
1977	17,243,968.437		
	(11,280.638)(2)		
1978	16,402,995.314		
1979	14,788,122.158		
1980	15,414,301.908		
Total	123,920,759.899	147,342,289.397	84.1
New York			
1976	10,313,909.044		
1977	7,281,145.221		
	(160,003.718)(3)		
1978	8,708,979.152		
1979	7,976,130.706		
	(2,132,086.123)(4)		
1980	6,106,783.843		
	(871,127.151)(4)		
Total	37,223,730.974	60,493,229.797 (5)	61.5
Philadelphia	-	2,346.475	-0-
Denver			
1976	4,136,046.924		
1977	5,865,063.393		
1978	5,723,141.885		
1979	4,739,915.222		
1980	4,981,524.456		
Total	25,445,691.880	40,524,736.324	62.8
San Francisco			
1975	3,311,945.773	3,340,077.339	99.2
Total Bureau of The Mint	189,902,128.526	251,702,679.332	75.4
Federal Reserve Banks	- (6)	12,811,699.487	
Grand Total	189,902,128.526	264,514,378.819	71.8

UNITED STATES GOVERNMENT-OWNED GOLD
AUDITED AS OF SEPTEMBER 30, 1980

Footnotes

(1) Audit conducted by the General Accounting Office in cooperation with the Department of the Treasury.

(2) Audited gold transferred to the New York Assay Office on October 31, 1977.

(3) Audited gold transferred to the Melting and Refining Division within the New York Assay Office on December 7, 1977.

(4) Audit gold released for Treasury gold sales.

(5) This amount includes 1,427,922.413 fine ounces received in shipment from the bank of Canada, Ottawa, which is subject to verification.

(6) Gold at the Federal Reserve Bank of New York is audited periodically by examiners of the Board of Governors of the Federal Reserve System. Members of the Committee for Continuing Audits of United States Government-owned Gold representing the Mint and BGFO observed the audits at the invitation of the Board and the Federal Reserve Bank. As of September 30, 1980, members of the Committee had observed Board audits of 1,423,486 fine troy ounces representing 11.1 percent of the 12.8 million fine troy ounces under control of the Bank. The audit procedures followed were essentially the same as those followed at Mint institutions except that assay samples were not taken to verify the purity of the gold.

UNITED STATES GOVERNMENT-OWNED GOLD
AUDITED AS OF SEPTEMBER 30, 1981

	Gold Audited And Sealed	Gold Holding	Percent Audited
	(Fine Troy Ounces)		
Bureau of the Mint			
Fort Knox			
1974	31,095,438.808 (1)		
1975	15,273,290.116		
1976	13,713,923.796		
1977	17,243,968.437		
	(11,280.638)(2)		
1978	16,402,995.314		
1979	14,788,122.158		
1980	15,414,301.908		
1981	14,267,043.712		
Total	138,187,803.611	147,342,260.2	93.8
New York			
1976	10,313,909.044		
1977	7,281,145.221		
	(160,003.718)(3)		
1978	8,708,979.152		
1979	7,976,130.706		
	(2,132,086.123)(4)		
1980	6,106,783.843		
	(871,127.151)(4)		
Total	37,223,730.974	58,472,040.3 (5)	63.7
Philadelphia	-	2,346.5	-0-
Denver			
1976	4,136,046.924		
1977	5,865,063.393		
1978	5,723,141.885		
1979	4,739,915.222		
1980	4,981,524.456		
1981	4,727,129.103 (6)		
Total	30,172,820.983	40,524,704.7	74.5
San Francisco			
1975	3,311,945.773	3,340,077.3	99.2
Total Bureau of The Mint	208,896,301.341	249,681,429.0	83.7
Federal Reserve Banks	- (7)	14,444,617.2	
Grand Total	208,896,301.341	264,126,046.2	79.1

UNITED STATES GOVERNMENT-OWNED GOLD
AUDITED AS OF SEPTEMBER 30, 1981

Footnotes

(1) Audit conducted by the General Accounting Office in cooperation with the Department of the Treasury.

(2) Audited gold transferred to the New York Assay Office on October 31, 1977.

(3) Audited gold transferred to the Melting and Refining Division within the New York Assay Office on December 7, 1977.

(4) Audit gold released for Treasury gold sales.

(5) This amount includes 1,427,922.413 fine ounces received in shipment from the bank of Canada, Ottawa, which is subject to verification.

(6) Assay results for samples taken were not completed as of November 6, 1981.

(7) Gold at the Federal Reserve Bank of New York is audited periodically by examiners of the Board of Governors of the Federal Reserve System. Members of the Committee for Continuing Audits of United States Government-owned Gold, representing the Mint and BGFO observed the audits at the invitation of the Board and the Federal Reserve Bank. As of September 30, 1981, members of the Committee had observed Board audits of 3.8 million fine troy ounces representing 26.8 percent of the 14.4 million fine troy ounces under control of the Bank. The audit procedures followed were essentially the same as those followed at Mint institutions except that assay samples were not taken to verify the purity of the gold.

UNITED STATES GOVERNMENT-OWNED GOLD
AUDITED DURING 1981

	Gold Audited And Sealed (Fine troy ounces)
Fort Knox	14,267,043.712
Denver	4,727,129.103
	18,994,172.815

*Audit of gold at the New York Assay Office is scheduled for November and December 1981.

DEPARTMENT OF THE TREASURY
BUREAU OF GOVERNMENT FINANCIAL OPERATIONS

STATUS REPORT OF U.S. GOVERNMENT-OWNED GOLD
SEPTEMBER 30, 1981

*(Stated at Book Value of $42.2222 per Fine Troy Ounce)

SUMMARY

	FINE OUNCES	*BOOK VALUE
Gold Bullion	263,058,632.875	$11,106,914,208.99
Gold Coin	1,067,413.317	45,068,538.55
Totals	264,126,046.192	$11,151,982,747.54

ACCOUNTABLE FACILITY	GOLD BULLION FINE OUNCES	GOLD BULLION *BOOK VALUE	GOLD COIN FINE OUNCES	GOLD COIN *BOOK VALUE
Fort Knox, KY	147,342,260.179	$6,221,114,377.73	-	-
U.S. Assay Offices:				
New York	58,471,730.054	2,468,805,080.71***	310.227	$13,098.44
**San Francisco,CA	3,340,077.339	141,025,413.41	-	-
U. S. Mints:				
Denver, CO	40,524,704.656	1,711,042,184.91		
Philadelphia, PA	906.202	38,261.84	1,440.270	60,811.37
Federal Reserve Bank of New York (Gold Custody Account):				
FRB-NY Vault	13,377,755.714	564,938,277.33	73,451.741	3,101,294.10
U.S. Assay Office-NY	-	-	991,833.645	41,877,398.53
Federal Reserve Banks - (For display purposes)	1,198.731	50,613.06	377.434	15,936.11
Totals	263,058,632.875	$11,106,914,208.99	1,067,413.317	$45,068,538.55

**Includes 28,119.352 fine ounces with a book value of $1,187,260.90 in the form of 71 gold bars for display purposes at the San Francisco Old Mint Museum.

***This amount includes $60,290,025.71 (1,427,922.413 Fine Ounces) shipment received from bank of Canada-Ottawa, subject to verification.

Prepared by:
Monetary & Transit Accounts Section
General Ledger Branch
Division of Government Accounts & Reports

U.S. Gold Stock 1944 - November 1981
(millions of fine troy ounces)

Year	Gold Stock: Outstanding end of period	Gold Stock: Change during period	Net Sales or Purchasers: Foreign[1] Countries	Gold Pool	IMF	Domestic Producers & Consumers
1944	589.5					
1945	573.8	-15.7	-12.9	-	-	-2.8
1946	591.6	+17.8	+20.6	-	-	-2.8
1947	653.4	+61.8	+81.8	-	-19.6	-0.4
1948	697.1	+43.7	+43.1	-	-	+0.6
1949	701.8	+4.7	+5.5	-	-	-0.8
1950	652.0	-49.8	-49.3	-	-	-0.5
1951	653.5	+1.5	+2.2	-	-	-0.7
1952	664.3	+10.8	+11.3	-	-	-0.5
1953	631.2	-33.1	-33.3	-	-	+0.2
1954	622.7	-8.5	-9.3	-	-	+0.8
1955	621.5	-1.1	-1.9	-	-	+0.8
1956	630.2	+8.7	+2.3	-	+5.7	+0.7
1957	653.1	+22.8	+4.9	-	+17.1	+0.8
1958	588.1	-65.0	-65.5	-	-	+0.5
1959	557.3	-30.7	-28.5	-	-1.3	-0.9
1960	508.7	-48.7	-56.3	-	+8.6	-1.0
1961	484.2	-24.5	-27.5	-0.3	+4.3	-1.0
1962	458.8	-25.4	-21.3	-2.5	-	-1.6
1963	445.6	-13.2	-19.2	+8.0	-	-2.0
1964	442.0	-3.6	-12.3	+11.2	-	-2.5
1965	394.5	-47.6	-37.8	-	-6.4	-3.4
1966	378.1	-16.3	-13.9	-3.4	+5.1	-4.1
1967	344.7	-33.4	+2.9	-32.3	+0.6	-4.6
1968	311.2	-33.5	-6.0	-25.9[2]	-0.1	-1.5[2]
1969	338.8	+27.6	+27.3	-	+0.3	-
1970	316.3	-22.5	-18.0	-	-4.5	-
1971	291.6	-24.7	-24.1	-	-0.6	-
1972	276.0	-15.6	-0.1	-	-15.5	-
1973	276.0	-	-	-	-	-
1974	276.0	-	-	-	-	-
1975	274.7	-1.3	-	-	-	-1.3[3]
1976	274.7	-	-	-	-	-
1977	277.6	+2.9	-	-	+2.9	-
1978	274.9	-2.7	-	-	+1.4	-4.1[3]
1979	264.6	-10.3	-	-	+1.4	-11.7[3]
1980	264.3	-0.3	-	-	-	-0.3[4]
1981-Nov.	264.1	-0.2	-	-	-	-0.2[4]
		-325.4	-235.3	-45.2	-0.6	-44.3

1/ Official foreign monetary institutions.
2/ Sales through gold pool and to U.S. consumers ended March 18, 1968.
3/ Gold sold at public auctions.
4/ Gold sold in American Arts Gold Medallion Program.

Sources: Federal Reserve Bulletins, Annual Reports of the Director of the Mint.

U.S. Department of the Treasury
December 1981

DEPARTMENT OF THE TREASURY

TREASURY DEPARTMENT ORDER NO. 234-1

AUDIT OF GOLD STOCK

I hereby authorize and direct the Fiscal Assistant Secretary of the Treasury, with the cooperation and assistance of the Director of the Mint, to conduct a continuing audit of United States-owned gold for which the Department of the Treasury is accountable with the objective of verifying the accuracy of the inventory of gold and the adequacy of related accounting records and internal controls in accordance with Treasury Audit Policies established by Administrative Circular No. 224.

This order is issued under the authority contained in 5 U.S.C. § 301, 31 U.S.C. § 66a, and the authority vested in me as Secretary of the Treasury by Reorganization Plan No. 26 of 1950.

William E. Simon

Dated: June 3, 1975

The Department of the TREASURY NEWS

BUREAU OF THE MINT WASH., D.C. 20220 - W04-5011

FOR IMMEDIATE RELEASE September 20, 1974

INSPECTION OF GOLD AT FORT KNOX

The inspection by Members of Congress on September 23, 1974, of U. S. gold stocks stored at the Fort Knox (Ky.) Bullion Depository marks a unique departure from the long standing and rigidly enforced policy of absolutely no visitors, Mrs. Mary Brooks, Director of the Mint, announced today.

"On April 28, 1943, President Franklin D. Roosevelt inspected the Bullion Depository," Mrs. Brooks said. "His visit was the one and only time a gold vault was opened for inspection for anyone other than authorized personnel.

"The Congressional inspection adheres to the new open door policy of the government announced by President Ford. Treasury Secretary William E. Simon issued the invitation to Congressmen to inspect the gold at Fort Knox. By also inviting the press to witness the Congressional inspection, the Mint is clearing away the cobwebs and re-assuring the public that their gold is intact and safe. For the first time photographing is being permitted inside the Depository."

After the Congressional inspection, the Bullion Depository will once again be closed to visitors.

On September 24, 1974, a special settlement (audit) is scheduled to begin and at its conclusion a report on the audit will be issued.

The audit will be performed by a committee of auditors from the U. S. General Accounting Office (GAO) and the Department of the Treasury. The auditors from the Treasury will be drawn from the Office of the Secretary, the Bureau of Government Financial Operations, the U. S. Customs Service, and the Bureau of the Mint. In addition, the committee will include technicians from the Bureau of the Mint who are trained in assaying and weighing gold bullion.

The monetary gold stock of the United States totals 276.0 million fine troy ounces valued at $11.7 billion at the official rate of $42.2222 per fine troy ounce, and is stored in various federal depositories (table attached), the largest of which is at Fort Knox, Kentucky. 147.4 million fine troy ounces, valued at $6.2 billion, is stored in 13 vault compartments at the Fort Knox Bullion Depository.

CONGRESSIONAL MEMBERS

INSPECTING GOLD AT FORT KNOX

SEPTEMBER 23, 1974

SENATE

Walter D. Huddleston, (D) Kentucky

HOUSE OF REPRESENTATIVES

Clair W. Burgener, (R) California

John B. Conlan, (R) Arizona

Philip M. Crane, (R) Illinois

Walter E. Fauntroy, (D) District of Columbia

Angelo D. Roncallo, (R) New York

John H. Rousselot, (R) California

Gene Snyder, (R) Kentucky

Chalmers P. Wylie, (R) Ohio

ANNEX E

Contents of the Commission's Permanent Record

Contents of the Commission's Permanent Record

I. Legislation and Legislative History

-- P.L. 96-389, Section 10, authorizing establishment of the Commission.

-- Congressional Record of Senate discussion of establishment of Commission, June 16, 1980, S7071-2.

-- Congressional Record of House discussion of establishment of Commission, September 18, 1980, H9136-7.

-- Congressional Record of House appointment of members to Commission, March 23, 1981, H1041.

-- Congressional Record of Senate appointment of members to Commission, May 20, 1981, S5357.

-- Congressional Record of Senate agreement to extend Commission deadline, September 22, 1981, S10248-50.

-- Congressional Record of House agreement to extend Commission deadline, September 24, 1981, H6589.

II. Record of Meetings

-- July 16, 1981, informal notes.

-- September 18, 1981, transcript.

-- October 26, 1981, transcript.

-- November 12, 1981, transcript.

-- November 13, 1981, transcript.

-- December 11, 1981, transcript.

-- January 8, 1982, transcript.

-- February 12, 1982, transcript.

-- March 8, 1982, transcript.

III. Press Releases

-- June 22, 1981, press release announcing establishment of the Gold Commission.

-- July 6, 1981, press release announcing that Dr. Anna Schwartz will assist in the work of the Gold Commission.

-- October 22, 1981, press release announcing that Gold Commission will hold public hearings and invite written views.

-- November 4, 1981, press release announcing that Gold Commission will hold public hearings and providing names of witnesses.

IV. Written Testimony by Witnesses at November 12-13, 1981, Hearings

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-- Rothbard, Murray N., Polytechnic Institute of New York, "Testimony Before the U.S. Gold Commission," November 12, 1981.

-- Sennholz, Hans F., Grove City College, "Federal Gold Must Be Employed Productively," November 13, 1981.

-- Solomon, Robert, Brookings Institution, "Statement Before the Gold Commission," November 12, 1981.

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-- Weintraub, Robert E., Joint Economic Committee, "Restoring the Gold Certificate Reserve: A Proposal Prepared for Submission to the Gold Commission," November 12, 1981.

-- Williamson, John, Institute for International Economics, "Monetary Stability and Gold," November 13, 1981.

V. Written Submissions from the Public in Response to Commission Invitation

-- Barlow, Wallace, International Institute for Resource Economics, November 30, 1981.

-- Blain, Robert R. "The Necessary Characteristics of a Monetary Standard," November 24, 1981.

-- Braun, Conrad Jules, "The Unique American Path," November 12, 1981.

-- Browning, George L., "Rescuing America from False Money Concepts which are producing Social Unrest, Violence and Crime instead of Social and Economic Health," October 15, 1981.

-- Cobb, Joe, U.S. Choice in Currency Commission, November 12, 1981.

-- Dessaur, John P., "Returning the U.S. to the Gold Standard," November 1981.

-- Dockstader, C.F., "Tender and the U.S. Constitution," November 1981.

-- Durell, Edward, "Mr. President, Where is Our Gold?," November 1981.

-- Firth, Brian, "Why Not Bell the Cat?," November 1981.

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-- Lurio, Mitchell, "A Permissive Way to Achieve a Gold Standard Without Prior Fixing of the Dollar Price of Gold," November 14, 1981.

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-- Mann, Phillip H., Miami, Florida, November 3, 1981.

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-- Ockert, Carl E., "Flexible Gold Convertibility," November 6, 1981.

-- Popp, Edward E. "The Coinage and Use of Full Bodied Gold and Silver Coins," October 24, 1981; "To Stop Increasing the U.S. Government's Interest Bearing Debts," October 29, 1981.

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-- Wrisley, John, Columbia, S.C., November 10, 1981.

VI. Discussion Drafts by Dr. Schwartz

-- Options Concerning Gold The Commission May Want to Consider, July 8, 1981.

-- The Role of Gold in U.S. Experience 1834-1981, August 3, 1981.

-- Summary of Discussion at July 16 meeting; Agenda for September 18 and Future Meetings, August 4, 1981.

-- Gold Output, September 10, 1981.

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-- International Aspects of Monetary Standards, October 8, 1981.

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-- Draft of the Introduction to the Gold Commission Report, November 19, 1981.

-- Recommendations with respect to Role of Gold by Witnesses at the Hearings on November 12 and 13, 1981, November 20, 1981.

-- Proposed Statistical Appendix to the Gold Commission Report, December 9, 1981.

-- Questions Relating to the Role of Gold, December 17, 1981.

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-- Revision of the Introduction, February 12, 1982.

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-- Revision of Chapter 3: Types of Monetary Standards, February 26, 1982.

-- Revision of Chapter 2: The Past Role of Gold in the U.S. Monetary System, March 5, 1982.

VII. Treasury Staff Papers Prepared for the Commission

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-- Neal: Letter Requesting Analysis of the Proposal to Abolish the Taxation of Capital Gains on Gold, December 1981.

-- Paul: Paper on A Decade of Inconvertible Money, 1971-1981, July 1981.

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-- Reuss: Letter concerning proposed gold bullion coin recommendation and other matters, February 2, 1982.

Letter proposing alternative language for Commission recommendations, February 5, 1982.

-- Schmitt: Statement before the Gold Commission, October 26, 1981.

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-- Wallich: "Gold and the Dollar," Remarks at the Seventh International Working Conference sponsored by FOREX Research and the International Herald Tribune, Paris, France, November 23, 1981.

"Are There Alternative Ways of Fighting Inflation," Remarks at Cornell University, Ithaca, New York, October 29, 1981.

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-- Weidenbaum: Statement to the Gold Commission, January 8, 1982.

-- Wylie: Explanation of Views for the Gold Commission, December 17, 1981.

IX. Material Circulated to the Gold Commission at the Request of Members

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-- Collins, Barry R., letter to Secretary Regan, July 6, 1981.

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-- Leveson, Irving, the Hudson Institute, A Research Memorandum #113, "A Case Against the Gold Standard," November 1981.

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-- McMillan, George, letter to Secretary Regan, September 24, 1981.

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-- Puffer, K. Hart, a paper, "Lord John Maynard Keynes," October 21, 1981, and Memorandum to the Gold Commission, January 1982.

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-- Seggerman, G. A., Memorandum to the Gold Commission, September 21, 1981.

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