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

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Statement of Robert Z. Aliber

University of Chicago

Before Gold Commission

November 12, 1981

Introduction

These hearings are both timely and important. For hundreds, indeed, thousands of years, gold has had an important role both as an international money and as a domestic money. Gold's role as a money evolved in response to the demands of business and of investors to reduce the costs of transactions and to maintain the value of their monies. Gold proved better able to satisfy the demands for a means of payment, a unit of account and a store of value than other commodities. Within the last century, however, gold's role as a money has declined, especially in domestic transactions, because other types of monies could better serve these needs. Gold remains as important as a international money, both formally among the member countries of the European Community, and informally among the major industrial countries, even including the United States.

The United States needs a new policy toward gold; for a decade, there has been no effective policy. For the previous several decades, U.S. gold policy was dominated by an obsession with 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. Hence the advice of this

Commission on U.S. gold policy and how U.S. gold holdings can be used to achieve major U.S. objectives is extremely important.

The proposals that the United States now return to the gold standard result from the comparison between rates of inflation in the last several decades with the apparent long run price stability in the nineteenth century. The observation that the inflation of the last several decades would have been less severe if the monetary base had grown less rapidly cannot be faulted, since it is a definition; this observation leaves unanswered the questions about how the political pressures that resulted in the rapid growth of the monetary base would otherwise have been satisfied. The monetary inflation of the last fifteen years is not an aberration of U.S. institutions, but instead reflects very substantial pressures to finance larger government expenditures, to raise employment, and to satisfy consumer demands for housing and autos, and business demands for plant and equipment. The arguments that a return to the gold standard would lead to monetary and economic stability slight the cyclical variations in income and employment that were pervasive under the gold standard. The frequency and severity of financial crises that occurred on the average of once a decade--1907, 1893, 1890, 1882, 1873, 1857, 1847, and 1837 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 price level performance in the nineteenth century was atypical of the gold standard experience; the price level increased by a factor of five or six in the sixteenth century. Moreover the proposals to establish a gold standard fail to give adequate attention to the distinction between the operation of a gold standard in a society which was

largely rural and agricultural and its operation in a society which is primarily urban and industrial. Thus the shocks that might have led to decreases in prices with output more or less unchanged in an agricultural economy might instead lead to a substantial decline in output, with a modest fall in prices, in an industrial economy.

One argument sometimes presented in the support of the proposal that the United States return to gold standard in the near future is that this policy would facilitate a quick return to price stability. The paradox is that establishing a parity for the dollar in terms of gold in the next several years, at a time when the U.S. inflation rate is about ten percent and money interest rates are in the range of fifteen percent, is more likely to exacerbate rather than reduce the U.S. inflation rate.

The rationale for establishing a monetary standard is to facilitate realization of financial stability. A monetary standard is successful only if it is consistent with the financial and budgetary practices. The gold standard did not develop because of legislation; rather, hundreds of years after gold was used as a money, legislative fiat standardized the terms on which gold would be traded. Governmental initiatives to establish a standard which is inconsistent with the underlying economic and financial practices will almost certainly lead to the rejection of the standard. Consider several analogies. There are many examples of countries which have sought to establish gold parities or foreign exchange parities for their currencies, only to be obliged to abandon these parities because the parities were inconsistent with their financial and budgetary practices. The United States has had a ceiling on the Federal debt for at least fifty years as a way to limit the growth in government expenditures; however, whenever the growth of expenditures relative to revenue leads the Federal debt to press against the ceiling, the ceiling is raised with a delay of

little more than a week or two. It would be risky to argue that Bolivia, which has had more than one hundred revolutions and coup d'etats in the last century, would suddenly realize political stability if its population voted to adopt a constitution modeled on that of the United States. Many argue that one way to secure a quick return to price stability in the United States would be to adopt an income policy--a euphemism for price and wage controls; few would accept the proposition that such a policy would have a significant and lasting impact on the inflation rate if the monetary and fiscal policies remain excessively expansive. Similarly, it would be risky to suggest that U.S. monetary stability would be achieved in the next several years by requiring that the dollar be convertible into gold before the underlying conditions, in terms of the appropriate mix of tax, expenditures, and monetary policies, have been established.

The task of attaining price stability in the United States is not the institutional one of deciding on a parity for gold, and resolving whether 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 the belief the government will incur significant costs to achieve this objective. Economic policies and institutions lose credibility when there are frequent changes in growth rate of the monetary base, in the preferred definition of money, in the rate of price inflation and in the computation of the price level index, and in the estimates of the fiscal deficit. For more than a decade, the U.S. public has been abused by inflation and by promises that the Federal budget would be balanced within the next two or three years--an ever receding horizon. Any change in the

design of policies takes time before it becomes credible. Achieving price stability requires that the U.S. authorities follow the appropriate fiscal policies and that they demonstrate--by their actions--their commitments to price stability. There is no "quick fix" in monetary affairs; the task of restoring credibility in U.S. monetary institutions cannot be achieved simply because the U.S. government makes a promise--or a super-promise or a super-duper promise "guaranteed" by a gold convertibility commitment that changes in the U.S. money supply will depend on gold inflows and outflows, for there is no assurance that this policy will be maintained if it should lead to large business failures--or a surge in the inflation rate.

This statement about U.S. gold policy is in five sections. The first section discusses the range of U.S. gold policy options. The second section reviews the selected aspects of the history of U.S. gold policies. The third section deals with the problem of the choice of a new U.S. parity for gold. The fourth section evaluates the costs and the benefits of alternative U.S. gold policies. The fifth section suggests a new U.S. policy toward gold.

I. The Range of U.S. Gold Policy Options

The terms "the gold standard" and a "return to the gold standard" are somewhat ambiguous, if only because there are several types of "gold standards," with each type defined by the commitments about purchases and sales of gold, the prices at which these transactions occur, and the linkages between changes in the gold holdings of the U.S. monetary authorities and the changes in U.S. monetary liabilities. A gold standard consists of a set of policies about the price or parity of gold

in terms of other types of money, such as bank deposits, Federal Reserve notes, and token coin, and the relation between the growth or expansion of these monies relative to the growth or expansion of the gold holdings of the monetary authorities.

U.S. gold policy--or the gold policy of any country--involves the combination of answers to three questions. The first is whether the U.S. monetary authorities are committed to treaty, law, or practice to buying and selling gold, either with foreign official institutions or with private parties as well as with foreign official institutions. The second question, which is derivative from the first, is whether the commitments to buy and sell gold are at a fixed price--"the parity"--or whether these gold purchases and sales may be at the market price or some other price, perhaps one based on the market price. The third question (which is also derivative from the first, but not necessarily from the second) is whether there is a "monetary rule" so that changes in the liabilities of U.S. monetary institutions depend primarily or exclusively on changes in the gold holdings of the U.S. monetary authorities.

These three questions about U.S. gold policy can be arranged in a hierarchy. The primary question--the question at the base of the hierarchy--is whether the U.S. authorities buy and sell gold; if the U.S. authorities do not buy and sell gold, the next two questions are redundant. The second question in the tiering of the hierarchy is whether the U.S. monetary gold purchases and sales are at a variable price, perhaps the market price, or at a fixed price, the parity. The third question in the hierarchy is whether the U.S. authorities follow a monetary rule, so that changes in U.S. monetary liabilities are systematically related to changes

in the gold holdings of U.S. monetary institutions. There are a number of possible relationships between changes in U.S. monetary liabilities and changes in U.S. gold holdings; there might be a direct proportional relationship between changes in monetary liabilities of the central bank and changes in its gold holdings, with the fractional reserve multiplier two, three, five, or even one.

The essence of the gold standard is the concept of the "rules of the game"--the relationship between changes in the gold holdings of the monetary authorities and changes in the amount of base money, high-powered money, or the aggregate money supply. The purpose of the "rules of the game" was to protect the owners of bank liabilities from loss due to the failure of the banks. In the nineteenth century, monetary gold holdings were small relative to the total money supply. The "rules of the game" specified that gold inflows would be associated with increases in the bank liabilities, and gold outflows with declines in bank liabilities; in this way, both gold inflows and gold outflows would be self-correcting.

A range of U.S. gold policies can be identified by the combination of answers to the questions about whether the U.S. authorities buy and sell gold at a fixed or at a variable price, and the relationship between the changes in U.S. money supply and changes in U.S. gold holdings. The least ambitious U.S. gold policy would involve sporadic purchases and sales of gold by the U.S. monetary authorities, but at variable prices--perhaps at market prices. While U.S. monetary liabilities would change at the time of these purchases, just as they do when the U.S. Government buys aircraft and labor services, there would be no systematic relationship between changes in U.S. gold holdings and U.S. monetary liabilities;

changes in U.S. gold holdings would be only one of several factors that would lead to changes in U.S. monetary liabilities, and probably small or trivial relative to these other factors.

A somewhat more ambitious U.S. gold policy would involve commitments to buy and sell up to specified amounts of gold with foreign monetary authorities, perhaps at market or market-related prices; an even more ambitious policy would involve purchases and sales of gold at a fixed price with foreign monetary authorities and perhaps with private parties. In both cases there would be no systematic relationship between changes in U.S. monetary liabilities and changes in U.S. gold holdings; changes in the liabilities of U.S. monetary institutions would not depend primarily or exclusively on changes in the gold holdings of the U.S. monetary authorities.

The most ambitious U.S. gold policy would involve commitments by the U.S. monetary authorities to buy and sell gold at a fixed price combined with a commitment to limit changes in U.S. monetary liabilities to those resulting from changes in U.S. gold holdings; the U.S. authorities would follow a monetary rule based on changes in their gold holdings.

The choice among these possible U.S. gold policies depends on the objectives set by the U.S. authorities. If the objective is to limit variation in the foreign exchange value of the dollar, then the appropriate policy involves developing commitments about gold sales and purchases, or even establishing a parity for the dollar in terms of gold. If the objective is to prevent bank failures, then the appropriate policy involves designing a set of "rules of the game." If the objective of U.S. policy is to secure stability of the U.S. price level in the long

run, there is no systematic evidence that this objective will be satisfied by adopting a monetary rule based on changes in U.S. gold holdings.

II. A Synopsis of U.S. Policies Toward Gold

The current concern about whether the United States should go back on gold has two previous counterparts, one after the Civil War and the second after World War I. The first decision involve a return to an established gold parity; the second, a return to a new and higher gold parity.

The first U.S. gold parity was effectively determined in 1792. Gold was coined at the same fineness as in Great Britain. The U.S gold parity could be readily inferred from the gold content of the principal U.S. coin, the ten dollar eagle. Modest changes in the gold content of the eagle in the 1830s resulted in a \$20.67 parity for the U.S. dollar, a parity which remained unchanged for nearly a century

In March 1933, President Roosevelt nationalized U.S. gold holdings, and the \$20.67 parity became obsolete. At the end of January, 1934, a new U.S. parity of \$35 an ounce was adopted. The U.S. authorities bought and sold gold at this parity until August 1971; however, the gold transactions in the several years prior to closing the gold window in August 1971 were modest.

The first occasion when the United States went "off gold"--when the formal price link between the dollar and gold was broken was at the beginning of the Civil War; the second was in March 1933, and the third was in August 1971. These changes in U.S. gold policy were necessary because investors believed that the U.S. monetary authorities would no longer adopt the

domestic policy measures necessary to keep the gold price effective. At the time of the Civil War, the expectation was one of a substantial increase in U.S. prices due to inflationary war finance.

If, instead, the U.S. government had raised taxes to pay for the war, the U.S. Government might have been able to adhere to the \$20.67 parity. But the U.S. authorities probably felt that the increase in the tax burden would have been costly in political terms. So they preferred the inflation tax as the less costly way to finance the war.

Increases in the world commodity price level during and after World War I relative to the dollar price of gold led to considerable concern about a worldwide shortage of gold. The price of gold was too low. The shortage of gold became centered on the United States in the early 1930s.

In the early 1930s, increases in the demand for gold were triggered by two events. The increase in the number of domestic bank failures that began in 1929 meant that bank deposit liabilities were viewed as increasingly risky, and the decision of the British authorities to cease pegging their currency to gold, led to the depreciation of sterling. U.S. gold holdings began to decline. The U.S. authorities then faced a classic policy dilemma. If the U.S. authorities had adopted policies necessary to maintain the \$20.67 gold parity, then, given the depreciation of sterling, the problems of the U.S. banks would have been complicated, since U.S. interest rates would have been higher, and the U.S. commodity price level would have fallen more rapidly. More banks would have failed, and the Great Depression would have been more severe. If, instead the U.S. authorities had adopted the interest rate policy necessary to facilitate the stability of the domestic banks, there might have been an even more

rapid outflow of gold in response to the depreciation of sterling.

In the 1960s, the U.S. gold parity of \$35 might have been retained if the U.S. price level had fallen continually, especially relative to the German and the Japanese price levels. However, even if these bilateral exchange rate problems had been resolved by the appropriate changes in the foreign exchange value of the dollar, there might still have been a problem in maintaining the dollar price of gold in the face of a persistent demand for gold at the then prevailing--and modestly increasing--world consumer price level. Hence the situation after World War II was similar to the situation after World War I--there was a growing shortage of gold because of the combination of the increases in the world price level and a fixed dollar price of gold.

The U.S. authorities have "returned to gold" on two occasions. The first return to gold was at the beginning of 1879; the U.S. wholesale prices had declined to their pre-1860 levels. The second return occurred in January 1934; the new parity for the dollar was seventy five percent higher than the previous parity. To some extent the increase in the dollar price of gold in the early 1930s was a belated response to the increase in the world price level during the World War I period; the world price level in the 1920s was more than fifty percent higher than before the war.

The gold shortage that occurred in the 1960s was a result of the combination of the increase in the world price level in the 1940s and the 1950s and a dollar price of gold that had been unchanged since 1934. The policy dilemma is that the market price of gold in the last several years is much much higher than would have been predicted on the basis of

the increases in the world price level in the last few decades. The case for the gold standard rests on a stable relationship between the monetary price of gold and the world price level. If this relationship is believed to be stable, it is much too soon to establish a dollar parity for gold; either the market price of gold must fall or the world price level must increase. If this relationship is not stable, the case for a return to the gold standard as a stable monetary framework is extremely weak.

III. The Choice of the Appropriate U.S. Gold Parity

The motivation or rationale for using gold as a monetary asset is that a monetary system with gold is more stable than a system without gold. The greater stability might involve the movements in exchange rates, or changes in the domestic price level or changes in the domestic output level. The "association" between gold in the system and stability in the system might reflect that having gold "causes" stability by restraining expenditure policies. The alternative interpretation is that stability in the financial arrangements makes it possible to retain gold in the system; the instability in the financial arrangements drives gold from the system.

If the U.S. authorities decide to go "back on gold," they must choose a new parity for the dollar. This problem is much more difficult than on the previous two occasions when the U.S. authorities went back on gold. During the Civil War episode, the dollar price of gold increased by slightly more than fifty percent from 1861 to 1864 as the greenbacks and other fiat U.S. monies depreciated in terms of gold coin. Then the U.S. authorities went back on gold at the established parity after the continuous decline in the U.S. price level from 1865 to 1878. In the nineteen thirties, the

dollar price of gold was increased by about seventy-five percent with the replacement of the \$20.67 parity by the \$35.00 parity. The choice of the \$35.00 parity was a historical accident; still, the new parity was not much higher than the parity that might have been predicted on the basis of changes in world price levels in the previous several decades. In contrast, the dollar price of gold is now fourteen times higher than a decade ago, after having reached a peak twenty-eight times higher.

Consider that Rip van Winkle went to sleep in 1961, when the dollar price of gold was \$35.00 and the U.S. price level was 100. He wakes up in 1981, when the U.S. price level is 300 on the 1961 base. On awakening Rip van Winkel is asked, "What should be the new dollar price of gold?" On the basis of the traditional arguments about a proportional relationship between the world price level and the dollar price of gold, he might decide on $\$105 = \left(\frac{300}{100} \times \$35\right)$. This price is much, much lower than recent market prices of gold.

For any dollar gold parity to be maintained indefinitely, investors must believe that the "own return" on gold is smaller than the money return on riskless dollar assets. The "own return" on gold has two components--one is a monetary return from the anticipated change in the price of gold in terms of the dollar (or any other currency in which investors state their net worth), and the second is a convenience return from holding gold in one form or another. The monetary return on gold is the anticipated increase in the price of gold in terms of fiat money less any costs of storage and insurance. The convenience return, which is more subjective and particularistic to individual investors, may be the beauty of gold jewelry or the value attached to the precautionary "war chest" to

cope with political and financial uncertainty. The investors who hold gold in a period of stable commodity price levels place a relatively higher value on the convenience return than do other investors. If the dollar price of gold is to be maintained unchanged, then the interest rates on riskless dollar assets must increase to offset any increase in the anticipated return of gold.

The observed sharp changes in the market price of gold reflect sharp changes in the anticipated own return on gold--when the anticipated price of gold increases sharply, the anticipated own return also increases; investors bid up the price of gold until the anticipated return is not significantly higher than the return on dollar assets. If there is a fixed dollar price of gold, changes in the gold holdings of the monetary authorities reflect changes in the own return on gold relative to the interest rate on dollar assets.

The U.S. authorities may be able to manage interest rates on dollar assets to offset changes in investor's estimates of the return on gold. If investors believe the own return on gold is high, the authorities can increase the interest rates on riskless dollar assets. They can use moral suasion to dampen the investors' demand for gold. They can cajole investors; they can prohibit gold ownership.

In setting a dollar parity, the U.S. authorities must ensure consistency between the long run equilibrium price of gold and the recent market prices of gold. The problem arises because the recent market prices of gold appear to reflect continued high rates of inflation.

If the dollar price of gold was too high in the late 1930s, and too

low in the 1960s, then the dollar gold price might have been more or less appropriate in the 1950s. While U.S. monetary gold holdings declined modestly in the 1950s, the gold holdings of other countries were increasing as part of the general rebuilding of their international reserve assets.

If the United States achieves price stability in 1985, either because of a change in U.S. gold arrangements or independently of such changes, and the dollar price of gold were to increase in proportion to the increase in the U.S. price level in the last several decades, then the appropriate price would be about \$125--plus or minus twenty or thirty percent. The market price of gold is between three and four times higher. If there is an error in setting the new parity, and the new parity is not immediately convincing, the U.S. authorities may be obliged to sell gold to support the parity; if the error is large, then there could be a run on the U.S. gold stock. If the authorities choose a somewhat higher parity to reduce this risk, then they incur the risk that the dollar price of gold will be too high relative to the consumer price level. The source of the problem is that the prevailing uncertainty about the future inflation rate greatly complicates determining how far away from the long run equilibrium price the current market price of gold is.

The success of any gold policy requires that the monetary price of gold be neither too high nor too low relative to the consumer price level. Success means that the dollar price of gold can be maintained indefinitely--that the monetary price will not be changed--and that no significant or disruptive changes in the consumer price level and in domestic employment are required to ensure that the dollar price of gold can be maintained.

Thus there is need for extreme caution in setting a new U.S. parity for gold as long as inflationary anticipations are high--in the order of ten percent a year--and nominal interest rates are fifteen percent a year.

Those who argue for urgency in setting a dollar price of gold ignore the historical relationships between the monetary price of gold and the world price levels. Those who believe that recent market prices provide a guide for a new dollar parity subject the United States to the risk of massive inflation. If the history of the gold standard provides valuable insights, then the recent market prices are much above the long run equilibrium prices consistent with prevailing world price levels. Unless there is a stable relationship between the world price level and the dollar price of gold, there is no case for adopting a new parity for the dollar in terms of gold.

IV. The Implications of Alternative U.S. Gold Policies

The United States now has a number of options for its gold policy. The choice among these options reflects the priority among the U.S. objectives, especially between domestic objectives and foreign economic objectives. Hence the implications of each possible U.S. gold policy must be assessed in terms of its impacts on the foreign exchange value of the dollar, on the growth of the U.S. monetary base and on the changes in the U.S. price level.

Monetary history provides numerous insights about the consequences of gold price relationships that prove inappropriate. The flow of gold from the New World to the Old World in the Sixteenth Century was a response to the higher price of gold in the Old World--and a cause of the persistent increase in the price levels in Europe. The flow of gold from Europe to

the United States in the 1930s was a response to the higher price of gold in the United States; the consequence was a rapid growth in the U.S. monetary base.

I. U.S. gold policy remains unchanged. The probable impact is that the market price of gold will tend to move with changes in the U.S. inflation rate and changes in the dollar price of the Swiss franc. When expectations develop that the consumer price level will increase more rapidly, the dollar price of gold will increase. When the dollar price of the Swiss franc increases, the dollar price of gold will increase. Changes in the U.S. price level will result from changes in the rate of money supply growth. Changes in the foreign exchange value of the dollar also may affect the U.S. price level and the level of income and employment.

II. The U.S. monetary authorities might buy and sell gold with foreign monetary authorities at market-related prices. The market price is the basis for the price in this transaction, but this transaction does not go through the market; this transaction is "off-market." This type of arrangement favors the sellers of gold, since the opportunity to sell gold off-market reduces the likelihood that such sales might depress the market price of gold. This type of arrangement might be introduced along with bilateral commitments about the amounts of gold transactions that each monetary authority is committed to. For example, both the Bank of France and the U.S. Treasury might agree to buy up \$100 million or \$500 million of gold from each other at initiative of the other party. The U.S. authorities might have similar bilateral commitments with the monetary authorities in various other countries, although the size of the mutual commitments might differ by country. This approach might lead to increased

intervention in the foreign exchange market, and almost certainly, to a reduction in the range of movement in the foreign exchange value of the dollar. The dollar price of gold would continue to fluctuate in response to changes in the anticipated rate of inflation.

III. The U.S. authorities might indicate to foreign monetary authorities that they would buy and sell gold at an average of recent market prices. These transactions would also be off-market. Various bilateral commitments might be undertaken with particular foreign central banks about the volume of gold transactions.

IV. The U.S. authorities might establish a new parity for the dollar in terms of gold; the U.S. authorities might indicate that they are prepared to buy and sell gold at the parity, plus or minus small handling charges.

The implications of this policy depend on the relation between the dollar parity for gold, the market price of gold, and the anticipated changes in world price levels.

The practical factors suggest that the dollar parity can be effective initially only if the parity is higher than the market price, and perhaps by as much as 20 or 25 percent or more. The high level of the recent market price of gold relative to a long-run equilibrium price inferred from changes in the world price level over the last several decades suggests that establishing a parity for gold in the near-future is highly risky, and will continue to be risky as long as the rate of increase in the world price level is higher than two to three percent a year. The risk is that the U.S. parity is at too high a price, so that the U.S. authorities are required to buy large amounts of gold; indeed the potential exposure to

a "Golden Avalanche" is immense. This policy would then lead to significant increases in the U.S. price level. The flow of gold to the United States might lead to increases in U.S. income and employment from the growth in U.S. exports. Other countries might follow the U.S. initiative, and peg their currencies to gold or the dollar; if the U.S. inflation rate increases, however, some might continue to prefer that their currencies float in the foreign exchange market.

IV. The U.S. authorities might establish a parity for the dollar, with an indication that the parity would be reduced if U.S. gold holdings increase and increased if U.S. gold holdings decline. The advantage of a flexible parity is that the U.S. authorities are able to insulate the U.S. economy and perhaps even the U.S. monetary base from large gold inflows and outflows. The virtue of the traditional gold standard was that investors believed that the authorities were committed to maintain the parity. A monetary system based on gold which permits the authorities to alter the parity provides no assurance to investors that the policies that will lead to economic stability will be followed.

V. The U.S. authorities might establish a rule linking changes in U.S. monetary liabilities to changes in U.S. gold holdings. The move to a monetary system based on the textbook model of the nineteenth century gold standard would almost certainly not lead to monetary stability or to a stable price level, especially if such a system were adopted in the next several years. The risk is high that this adoption of such a policy in the near future would lead to a surge in the U.S. inflation rate. And the surge in the inflation rate might lead to an abandonment of this monetary arrangement.

V. Toward a New U.S. Gold Policy

The proposals that the United States return to the gold standard because of the strong association between the gold standard and long-run price stability exaggerate the economic stability and the price level stability associated with a gold standard arrangement. Moreover, such proposals slight or underestimate how prices and employment in an industrial economy would adjust to gold inflows and outflows. Finally, such proposals greatly underestimate the disequilibrium between the market price of gold in the last three or four years and the long term equilibrium price inferred from the world price level and changes in the world price level.

The U.S. Congress can legislate commitments to price stability without tying or linking such commitments to a particular gold parity. The key question involves the immediate and long run payoffs to price stability from the additional commitment to a gold parity and gold convertibility. Any additional benefit to stability would result both because the monetary authorities associate greater costs to altering this commitment than to altering other U.S. commitments designed to achieve monetary stability and price level stability, and because the additional commitment is credible to investors. So many commitments about economic policy have been made and violated that only the most naive of investors would believe the authorities attached much costs to violating the commitment about gold parity and gold convertibility. The more astute investors would recognize the authorities incurred very little cost when they closed the Treasury's gold window and altered the dollar price of gold in the early 1970s. Hence if the U.S. authorities were to establish a new parity for the dollar in terms of gold and make the dollar convertible into gold, it would take an extended period

before investors would attach significance to these new gold arrangement. Initially, investors would believe that if adherence to these commitments constrained attainment of some domestic or foreign economic objective, the U.S. authorities would abandon the commitment. Investors would believe the commitment credible only after the U.S. authorities had demonstrated that they would incur substantial costs to adhere to this commitment. Perhaps five or ten years might have to pass before these commitments are viewed as credible; in this sense returning to gold in the 1960s is very different from returning to gold in the 1870s, and in the 1930s. During this five or ten year period, commitment to gold would not add to monetary stability. If the immediate payoffs from undertaking a new set of commitments about gold in the domestic economy are low, the risks and the costs are high.

The important monetary role for gold is in the settlement of international payments imbalances. 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 reserve 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 to the valuation of monetary gold. A formula might be devised to value U.S. gold on 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 the 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.

Monetary arrangements have evolved past the point at which gold has a useful role as a domestic money. Nevertheless gold remains important as a money in international transactions U.S. gold holdings are significantly larger than those of any other country; indeed U.S. gold holdings are about as large as the combined holdings of the three countries with the next largest holdings. The U.S. national interest will be advanced with the development of arrangements for transactions in gold among central banks as a way to strengthen commitments to exchange rate stability.

Memorandum to the U.S. Gold Commission:
The Constitutional Requirements that U. S.
Currency Be Backed by Precious Metals

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Memorandum to the U. S. Gold Commission:
The Constitutional Requirements that U. S.
Currency Be Backed by Precious Metals

by Ralph Benko

Proof exists that the authors of the United States Constitution clearly intended to eliminate the use of (unbacked) paper money once and for all. James Madison, our fourth President, author of the Bill of Rights, and most influential of the framers of the Constitution, kept a nearly verbatim transcript of the proceedings of the Constitutional Convention. Published in 1840, it is entitled "Notes of Debates in the Federal Convention of 1787." This journal definitively establishes the actual intent of the framers of our national charter.

One of the great hardships that Americans had endured during colonial times, and under the Confederation, was runaway inflation. As William Folwell, President Emeritus of the University of Minnesota, accurately summed up the history of the period as it relates to paper money and the gold standard, in an article in the Minnesota Law Review:

In a few cases the issues (of paper money) were so moderate in amount and so faithfully redeemed that no mischief followed, and the public convenience was served. In most instances, however, the issues were so extravagant and redemption so remote and uncertain, that the miserable consequences had only the variety of degree between slight depreciation and absolute worthlessness. Values were unsettled, trade demoralized, labor defrauded, knavery was rampant, gambling universal and beggary overtook those people least able to protect themselves. In one instance the people rose in actual insurrection against the intolerable abuses of bad money. Things were at their worst perhaps in the half dozen years next preceeding the convention of 1787. The regulation of commerce between the states involving the establishment of a uniform currency was one of the motives which moved the people to demand a revolution in the general government.***

There can be no question but that the controlling minds of that convention supported by a large majority of the members meant to do these things: (1) to place the currency under the exclusive control of the national government; (2) to abolish all forms of paper money and leave the metallic currency coined under the authority of Congress the sole legal tender for all debts public and private. The feebleness of the few dissentients went no further than to advocate reserving to the national government the power to issue paper money in times of extreme distress. The convention however undertook the task of abolishing paper money so long as the constitution left by them should remain unamended.¹

A reading of the relevant debate fully supports Folwell's conclusions. The original draft of our Constitution included, at what is now Article I, Section 8, Clause 2, a Congressional power "To borrow money and emit bills on the credit of the United States". The delegates

were working from proposals obviously formed in part by the Articles of Confederation. There, in the fifth paragraph of Article IX, it had been set forth that "the united states in congress assembled shall have authority to ...borrow money, or emit bills on the credit of the united states...."

(Emphasis supplied.) The controversial language "and emit bills" gave Congress the power to issue paper money.

On August 16, 1787, the delegates, presided over by George Washington, and including Benjamin Franklin, turned their attention to the clause in question. The following debate ensued:

Mr. GOVR. MORRIS moved to strike out "and emit bills on the credit of the U. States"-- If the United States had credit such bills would be unnecessary: if they had not, unjust & useless.

Mr. BUTLER, 2^{ds} the motion.

Mr. MADISON, will it not be sufficient to prohibit the making them a tender? This will remove the temptation to emit them with unjust views. And promissory notes in that shape may in some emergencies be best.

Mr. GOVR. MORRIS. striking out the words will leave room still for notes of a responsible minister which will do all the good without the mischief. The Monied interest will oppose the plan of Government, if paper emissions be not prohibited.

Mr. GHORUM was for striking out, without inserting any prohibition. if the words stand they may suggest and lead to the measure.

Col. MASON had doubts on the subject. Cong^s he thought would not have the power unless it were expressed. Though he had a mortal hatred to paper money, yet as he could not foresee all emergencies, he was unwilling to tie the hands of the Legislature. He observed that the late war could not have been carried on, had such a prohibition existed.

Mr. GHORUM. The power as far as it will be necessary or safe, is involved in that of borrowing.

Mr. MERCER was a friend to paper money, though in the present state & temper of America, he should neither propose nor approve of such a measure. He was consequently opposed to a prohibition of it altogether. It will stamp suspicion on the Government to deny it a discretion on this point. It was impolitic also to excite the opposition of all those who were friends to paper money. The people of property would be sure to be on the side of the plan, and it was impolitic to purchase their further attachment with the loss of the opposite class of Citizens

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 Govern^t 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.

Mr. RANDOLPH, notwithstanding his antipathy to paper money, could not agree to strike out the words, as he could not foresee all the occasions which might arise.

Mr. WILSON. It will have a most salutary influence on the credit of the U. States to remove the possibility of paper money. This expedient can never succeed whilst its mischiefs are remembered, and as long as it can be resorted to, it will be a bar to other resources.

Mr. BUTLER. remarked that paper was a legal tender in no Country in Europe. He was urgent for disarming the Government of such a power.

Mr. MASON was still averse to tying the hands of the Legislature altogether. If there was no example in Europe as just remarked, it might be observed on the other side, that there was none in which the Government was restrained on this head.

Mr. READ, thought the words, if not struck out, would be as alarming as the mark on the Beast in Revelations.

Mr. LANGDON had rather reject the whole plan than retain the three words "(and emit bills")

On the motion for striking out

N. H. ay. Mas. ay. Ct. ay. N. J. no. Pa.
ay. Del. ay. Md. no. Va. ay.* N. C. ay.
S. C. ay. Geo. ay.

The clause for borrowing money, agreed to nem. con.

Adjd.²

The asterisk following Virginia's vote leads to a comment in the margin that is one of the most illuminating of the entire debate, or of any debate in the history of monetary affairs.

This vote in the affirmative by Virginia (to bar Congress' power) was occasioned by the acquiescence of Mr. Madison who became satisfied that striking out the words would not disable the Govt. from the use of public notes as far as they could be safe & proper; & would only cut off the pretext for a paper currency, and particularly for making the bills a tender either for public or private debts.³
(Emphasis in original.)

Contrast this with the legend on today's paper currency, our Federal Reserve Notes: "Legal tender for all debts public and private."

The hatred of the founders for paper money is also attested to by an address delegate Luther Martin delivered to the legislature of Maryland: "But, Sir, a majority of the convention, being wise beyond every event, and being willing to risk any political evil, refused to trust this authority to a government...and they erased that clause from the system."⁴

Delegate Martin, who opposed the gold standard, later opposed ratification of the Constitution. It is historically interesting that the only delegate at the convention to speak up as a friend of paper money in the August 16th debate was John Francis Mercer--also of Maryland. Mr. Mercer, the last delegate to arrive, joined the convention on August 6, nine weeks after its beginning, only six before its end. He, also, opposed ratification of the Constitution.

Constitutional historian Max Farrand points out that,

(T)he first men chosen by the legislature (as Maryland delegates) refused the appointment, because it would involve absence from the state when their presence and influence were needed to restrain a widespread movement for an issue of paper money. At any rate...(they) were elected but declined to serve, and the delegation finally appointed was regarded as inferior. ⁵

Of greater note are those who spoke forcefully against paper money. Men such as Oliver Ellsworth, later second Chief Justice of the United States Supreme Court, Senator,

framer of the Judiciary Bill that decisively shaped our federal courts; George Read, signer of the Declaration of Independence; John Langdon, who later as President of the Senate was the man who informed George Washington he had been elected our first President. Neither Mercer nor Martin's biographies reveal any significant act of public service, though Martin did prove himself a skilled defense attorney.

Alexander Hamilton, also a delegate to the Convention, was absent on the day of the paper money debate. But he--who authored most of the Federalist papers and later became first Secretary of the Treasury--left the nation in no doubt as to his opposition to paper money. In a 1790 report to the House of Representatives, Hamilton put forth his position clearly:

The emitting of paper money by the authority of Government is wisely prohibited by the individual States, by the national constitution; and the spirit of that prohibition ought not to be disregarded by the Government of the United States. Though paper emissions, under a general authority, might have some advantages not applicable, and be free from some disadvantages which are applicable to the like emissions by the States, separately, yet they are of a nature so liable to abuse--and it may even be affirmed, 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. In times of tranquillity, it might have no ill consequence; it might even be managed in a way

to be productive of good; but in great and trying emergencies, there is almost a moral certainty of its becoming mischievous. The stamping of paper is an operation so much easier than the laying of taxes, that a government, in the practice of paper emissions, would rarely fail, in any such emergency, to indulge itself too far in the employment of that resource, to avoid, as much as possible, one less auspicious to present popularity. If it should not even be carried so far as to be rendered an absolute bubble, it would at least be likely to be extended to a degree which would occasion an inflated and artificial state of things, incompatible with the regular and prosperous course of the political economy.

Among other material differences between a paper currency, issued by the mere authority of Government, and one issued by a bank, payable in coin, is this: That, in the first case, there is no standard to which an appeal can be made, as to the quantity which will only satisfy, or which will surcharge the circulation; in the last, that standard results from the demand. If more should be issued than is necessary, it will return upon the bank.⁶

It is well to recall that historians conclude that "Alexander Hamilton, in economic terms, literally built the United States".⁷

The integrity of the currency, backed by gold, was defended by such great jurists as Chief Justice John Marshall. Although no serious threat to the political institution of hard money took place during the lifetime of the framers of the Constitution, as that heroic generation declined in numbers and influence, some erosion in the national resolve began to occur.

In one instance, Missouri attempted to issue "certificates" redeemable for taxes or debts due the state; payable to public officers in salary and fees of office; and in payment for salt made at the State salt springs. Marshall immediately perceived this a form of paper money, and showed himself a steadfast foe:

At a very early period of our colonial history the attempt to supply the want of the precious metals by a paper medium was made to a considerable extent, and the bills emitted for this purpose have been frequently denominated bills of credit. During the war of our revolution we were driven to this expedient, and necessity compelled us to use it to a most fearful extent. The term has acquired an appropriate meaning; and 'bills of credit' signify a paper medium, intended to circulate between individuals and between government and individuals, for the ordinary purposes of society. Such a medium has been always liable to considerable fluctuation. 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. To cut up this mischief by the roots, a mischief which was felt through the United States, and which deeply affected the interest and prosperity of all, the people declared in their Constitution that no state should emit bills of credit.⁸

Although these words were uttered against the state's power, it is a purposeful indictment of the medium itself. Such an indictment would bar its use--perhaps except under "compelling necessity"--to the national government as well.

In short, the determination of the founding fathers to "shut and bar the door against paper money"⁹ is clear. And their work accomplished this aim, eliminating paper money, and inflation. It is a tribute to their work that, in the words of one Congressman recently writing on the subject: "Throughout the history of the United States, until 1933, there was no inflation except during brief periods of war-time when the promise to redeem the dollar into gold was suspended."¹⁰

It is not nostalgia that causes America to hold its Founding Fathers in deepest respect; and to consider the Constitution with some awe. In reviewing their words and their works, we view the minds of some of the greatest political geniuses recorded by history. This is why an appeal to the intent of the framers of the Constitution bears great importance. These were political wise man, whose precepts we depart from at our own peril. Such departures brought us to the point of our present inflation "destroying all confidence between man and man".¹¹

The work of the founders prevailed for decades after Madison's passing, he being the last surviving framer, in 1836. Other great statesmen in our history have risen to defend the role of gold in domestic and international monetary affairs. For instance, Daniel Webster addressed the House of Representatives in 1815, with these remarks:

The circulating medium of a commercial community must be that which is also the circulating medium of other commercial communities, or must be capable of being converted into that medium without loss. It must also be able, not only to pass in payment and receipts among individuals of the same society and Nation, but to adjust and discharge the balance of exchanges between different Nations. It must be something which has a value abroad as well as at home, by which foreign as well as domestic debts can be satisfied. The precious metals alone answer these purposes. They alone, therefore, are money, and whatever else is to perform these functions of money must be their representative, and capable of being turned into them at will. So long as bank paper retains this quality, it is a substitute for money; divested of this, nothing can give it that character.¹²

At another time, this great statesman remarked:

Neither Congress nor any other authority can legally demonetize either silver or gold. The command to Congress is to coin money, not to destroy it; to create legal-tender money for the use of the people; and the grant of authority to create money cannot be construed to mean authority to destroy money.¹³

As indicated above, America enjoyed a stable price level until 1933, "except during brief periods of wartime when the promise to redeem the dollar into gold was suspended".¹⁴

And so it was, the first major erosion of the integrity of the currency took place during the Civil War, America's greatest constitutional crisis. The war between the states wrought many distortions of our nation's charter; some by the poor judgment of political leaders; some by the excesses of the day; and some under pressure of utter need.

Constitutional scholars mostly recall such travesties as the Supreme Court's decision, in Dred Scott, to elevate slavery to the level of a constitutional right; or to events such as Lincoln's suspension of the writ of Habeas Corpus, when they review the distortions of the Constitution during these years. Less known, but as serious, was the issue of paper money legal tender for the first time since the Republic's birth in 1789.

The Civil War put immense stress on our political institutions. A nation whose primary expenses had been the

building of lighthouses and post offices, (when) the Treasury had got on comfortably with a handsome surplus of revenue (from customs duties).... But now instead of six millions the government needed two hundred and fifty. The banks could deliver no such sum, which was four times the combined reserves of the banks in New York, Philadelphia, and Boston, and possibly more than all the gold there was in the country.¹⁵

The debate in the House of Representatives on meeting this emergency is instructive. A measure to issue paper money to meet the pressing cash needs was presented by Rep. Elbridge Spaulding, of New York:

We were never in greater peril than at this moment.... The bill before us is a war measure, a measure of necessity and not of choice, presented by the Committee of Ways and Means to meet the most pressing demands upon the Treasury, to sustain the army and navy until they can make a vigorous advance upon the traitors and crush out the rebellion. These are extraordinary times, and extraordinary measures must be resorted to in order to save our government and preserve our nationality.¹⁶

This argument was met by Rep. George H. Pendleton, of Ohio, who said:

The wit of man has never discovered a means by which paper currency can be kept at par value, except by its speedy, cheap, certain convertibility into gold and silver.* * * The currency will be expanded; prices will be inflated; fixed values will depreciate; incomes will be diminished; the savings of the poor will vanish; the hoardings of the widow will melt away; bonds, mortgages, and notes--everything of fixed value--will lose their value; necessaries of life will rise in value; the government will pay twofold--certainly largely more than it ought--for everything that it goes into the market to buy; gold and silver will be driven out of the country.¹⁷

With a clear understanding that inflation was the price the nation would pay, Congress decided that it was better than the alternative--dissolution of the Union.

The constitutional question remained, to be reviewed by the Supreme Court.

When the case of Hepburn v. Griswold challenging the constitutionality of the greenbacks was heard by the Supreme Court on December 10, 1869, Salmon Chase was sitting as Chief Justice. He had, in fact, been Lincoln's Secretary of the Treasury, and had dutifully led the administration's fight for paper currency.

Nevertheless, when the decision came down on February 7, 1870, Chief Justice Chase, writing for the majority, held the emission prohibited by the Constitution.

(T)here is abundant evidence that whatever benefit is possible from that compulsion to some individuals or to the government, is far more than outweighed by the losses of property, the derangement of business, the fluctuations of currency and values, and the increase of prices to the people and the government, and the long train of evils which flow from the use of irredeemable paper money. It is true that these evils are not to be attributed altogether to making it a legal tender. But this increases these evils. It certainly widens their extent and protracts their continuance.

We are unable to persuade ourselves that an expedient of this sort is an appropriate and plainly adapted means for the execution of the power to declare and carry on war.¹⁸

The court took the most emphatic position possible in denying the use of paper money to the government. In this first instance of judicial review, the ban placed by the framers was honored in principal, although the question was not considered until five years after the surrender of Lee at Appomattox.

The Court's position was soon overrun, however. President Ulysses Grant's administration (which had been tarnished by a scandal in which the President was implicated in manipulations of the gold market by speculators Jay Gould and Jim Fisk, culminating on the "Black Friday", September 24, 1869) was appalled by the decision issued in the Hepburn case. When one of the members of the Court's majority retired, Grant immediately appointed two paper money

adherents. This tipped the balance so that the prior five man majority became a four man minority. The new Court lost no time in reaching out to find cases to use as a vehicle for overruling Hepburn. In a breathtaking violation of the legal doctrine of stare decisis, the Court found opportunity to overrule Hepburn in the very next term.

The two cases it chose, as vehicle, are collectively called The Legal Tender Cases. These reexamined the question of whether, under the pressure of such dire necessity as existed during the height of the Civil War, the Constitution forbade almost any power to the national legislature. On May 1, 1871, the Court held that, under those unique circumstances, paper money must be permitted.

Suffice to say that a civil war was then raging which seriously threatened the overthrow of the government and the destruction of the Constitution itself. It demanded the equipment and support of large armies and navies, and the employment of money to an extent beyond the capacity of all ordinary sources of supply. Meanwhile, the public Treasury was nearly empty, and the credit of the government, if not stretched to its utmost tension, had become nearly exhausted. Moneyed institutions had advanced largely of their means, and more could not be expected of them. They had been compelled to suspend specie payments. Taxation was inadequate to pay even the interest on the debt already incurred, and it was impossible to await the income of additional taxes. The necessity was immediate and pressing. The army was unpaid. There was then due to the soldiers in the field nearly a score of millions of dollars. The requisitions from the War and Navy Departments for

supplies exceeded fifty millions, and the current expenditure was over one million per day. The entire amount of coin in the country, including that in private hands, as well as that in banking institutions, was insufficient to supply the need of the government for three months, had it all been poured into the Treasury. Foreign credit we had none. We say nothing of the overhanging paralysis of trade, and of business generally, which threatened the loss of confidence in the ability of the government to maintain its continued existence, and therewith the complete destruction of all remaining national credit.¹⁹

The reversal, on these narrow grounds, may arguably be within the scope of the Constitution. In spite of Hamilton's hard line, the debates of the framers do seem to indicate some sympathy for the argument that, in extremis, this power--though pernicious--might be acceptable. Recall Col. Mason's concern that "as he could not foresee all emergencies, he was unwilling to tie the hands of the Legislature. He observed that the late war could not have been carried on, had such a prohibition existed."²⁰

Political economist Jude Wanniski recounts a parallel situation, and draws a significant conclusion:

At the siege of Leningrad in World War II, for example, the people of the city produced for 900 days at tax rates approaching 100 percent. Russian soldiers and civilians worked at their physical limits, receiving as pay the barest of rations. Had the citizens of Leningrad not wished to be taxed at that high rate in order to hold off the Nazi army, the city would have fallen, with many citizens paying the ultimate tax rate.

The number represented by Point E (on the Laffer curve, representing the optimum rate at which the citizenry wishes to be taxed) will change abruptly from one day to the next when one day the nation is at war and at peace the next.²¹

Since, as Hamilton implied, inflation may be considered a form of tax, whereby wealth is transferred from the earner to the government, it may be reasonable to accept the Legal Tender Cases conclusion that in times of warfare the power to debase the currency should not be withheld from the Congress. This is more poignantly true since although theoretically better resources may be available, we have to rely on the political leadership then at hand. There are no guarantees that at that uncertain time we will have leaders with the depth of intelligence and foresight to avail themselves of the better means. Some would argue that this was just the case during the Civil War.

The clear constitutional misstep was not to come until thirteen years later, in 1884, with the case of Julliard v. Greenman. It was in that year that the Supreme Court broke with the Constitution completely to hold that Congress had power to authorize paper money at whim, independent of desperate circumstances. To understand this aberration, it is necessary to understand the age. "It was a time, Roscoe Pound (Dean of Harvard Law School) noted, when both the courts and the Bar were reaching a low point of effectiveness."²²

In 1868, a radical House had impeached President Johnson. Chief Justice Chase presided at the trial in the Senate, which failed of conviction by one vote. The same year, Congress stripped the Supreme Court of a portion of its jurisdiction, and came close to adopting a rule that no law should be held unconstitutional by the court but by a two-thirds majority. As one observer of the Court notes,

Nearly all the strength the courts possess is derived from the Judiciary Act of 1789, with amending laws since passed; without these Congressional grants the courts could not function, and what Congress has created it can destroy. Old Oliver Ellsworth, the chief agent in establishing the American judicial system, was not the Constitution; he was merely a Senator from Connecticut, and his great Judiciary Act was an act of Congress, which Congress can at any moment repeal, in whole or in part.

The atmosphere of 1868 was full of threats of this kind.²³

And the threats took their toll. It is a remarkable tribute to Chase that he successfully opposed the Congress on the legal tender issue when it first came before him. After the death of Chase, however, the Court became docile, bending to validate the acts of the Congress. The constitutional misstep, the decision in Julliard v. Greenman,²⁴ is a product of this era. It reads as a paen to an unbridled federal power.

In Julliard, the majority opinion makes a cavalier analysis of the debates in the Constitutional Convention. It discounts Madison's vote to eliminate the power to emit bills so as to "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", because Madison "has not explained why"²⁵ he thought it would.

The Court then defers to the members of the Convention who did not speak up--we cannot know why they voted.

Next, reading September 14th minutes of the vote to prohibit the states from issuing paper money, the court refers to Mr. Gerry's motion at that point to also specifically prohibit Congress. The Court guesses that since this motion was "not seconded"²⁶ the Convention was not decided on this point. The truth was, however, this exchange took place three days before adjournment, at the end of fifteen exhausting weeks--the delegates had been away from their wives, family and business obligations for almost four months--when the end was in sight. The delegates were simply not eager to revisit points they thought they had satisfactorily settled. They were already sure they had stripped the federal government of the power to issue paper money: Gerry was gilding gold.

Finally, the court imagines it applies a coup de grace: "As an illustration of the danger of giving too much weight, upon such a question, to the debates and the votes in the Convention, it may also be observed that propositions to authorize Congress to grant charters of incorporation for national objects were strongly opposed, especially as regards banks, and defeated."²⁷ It does not appear to have occurred to the Justices that the Marshall decisions permitting incorporation of a bank--McCullough v. Maryland²⁸ and Osborn v. Bank of the United States²⁹--were delivered by the Court a decade or more before Madison's record of the debates became public and published.

The dissenter in Julliard, Justice Stephen Field, stands alone in his defense of the letter and spirit of the Constitution:

If there be anything in the history of the Constitution which can be established in moral certainty, it is that the framers of that instrument intended to prohibit the issue of legal tender notes both by the General Government and by the States; and thus prevent interference with the contracts of private parties.***

It would be difficult to believe, even in the absence of the historical evidence we have on the subject, that the framers of the Constitution, profoundly impressed by the evils resulting from this kind of legislation, ever intended that the new government, ordained to establish justice, should possess the power of making its bills a legal tender, which they were unwilling should remain with

the States, and which in the past had proved so dangerous to the peace of the community, so disturbing to the business of the people and so destructive of their morality.

The great historian of our country has recently given to the world a history of the Convention, the result of years of labor in the examination of all public documents relating to its formation and of the recorded opinions of its framers; and thus he writes:

'With the full recollection of the need or seeming need of paper money in the Revolution, with the menace of danger in future time of war from its prohibition, authority to issue bills of credit that should be legal tender was refused to the General Government by the vote of nine States against New Jersey and Maryland. It was Madison who decided the vote of Virginia, and he has left his testimony that 'the pretext for paper currency, and particularly for making the bills a tender, either for public or private debts, was cut off.' This is the interpretation of the clause made at the time of its adoption, alike by its authors and by its opponents, accepted by all the statesmen of that age, not open to dispute because too clear for argument, and never disputed so long as any one man who took part in framing the Constitution remained alive. History cannot name a man who has gained enduring honor by causing the issue of paper money. Wherever such paper has been employed it has in every case thrown upon its authors the burthen of exculpation under the plea of pressing necessity.' 2 Bancroft, History of the Formation of the Constitution, 134. ***

And when the Convention came to the prohibition upon the States, the historian says that the clause, 'No State shall make anything but gold and silver a tender in payment of debts,' was accepted without a dissentient State:

'So the adoption of the Constitution,' he adds, 'is to be the end forever of paper money, whether issued by the several States or by the United States, if the Constitution shall be rightly interpreted and honestly obeyed.' Id., 137" 30

The validity of Field's dissents in many other cases was later recognized. "Much of the substance of public law history in the next quarter century involved the elevation of the Field-Bradley dissents into the law of the Land."³¹ However, due to an accident of history, the concept in Julliard was not available for review by a more effectual court.

Congress had, even before Julliard was decided, passed the Specie Resumption Act (1875), and resumed the convertibility of the legal tender notes for gold (1879). Therefore, the constitutionality of the suspension could not be reviewed: no new cases could be generated by a law that Congress had, of its own volition, rectified. Although pro-inflation factions remained, and debate continued, the stability of the currency was restored. Although the constitutional foundation had been undermined by Julliard, the prevailing powers knew of the need for gold backed currency, and this gave rise to fifty years of price stability. If we have forgotten the conviction of the times, consider this observation by Paul Warburg, prime mover of the Federal Reserve System, as recently as 1922:

If it is true that without a reasonable stability of exchanges the economic equilibrium of the world cannot be properly restored; if, furthermore, it is true that exchanges cannot be stabilized without reestablishing a definite and freely functioning relation of currencies to gold, then we need not hide our heads for having been the first among the nations to return to an unreserved gold standard. Schemes of international currencies and dreams of monetary systems without any metallic basis are gradually dying away in the minds of serious students, and going, we trust, to their eternal resting-places.

It has been one of the outstanding results of the Genoa Conference that there now seems to exist a general and clear recognition of the fact that, in order to regain economic stability, every country in due time will have to return to a gold standard on its own individual plan and its own level. There is now a fairly common accord that, where the hawser snaps which ties the ship to the gold anchor, the entire economic craft is hopelessly set adrift. We rendered the world a distinct service, therefore, when, for once, we did not miss the opportunity that good fortune had given us, and got back to a safe place of anchorage where other vessels may tie up alongside of us, as one by one they may be able to escape from the bottomless and wild sea of confusion.²²

One of the greatest scholars of the gold standard, Dr. Melchior Palyi, wrote in his final work, The Twilight of Gold; Myths and Realities, published posthumously in 1972, that

"The student of the pre-1914 era cannot help but be impressed by the almost complete unanimity of the leading economists of the "classical", the historical, and every other school (including the Marxists!) in the belief that it was mandatory to organize and to stabilize the monetary system of a market

economy on a fixed monometallic base. It was taken for granted in the industrially advanced world that stability was the prime requirement of money, stability assured by a fixed price for a precious metal that was acceptable to mankind as a 'store of value'."33

The final assault on the laws guarding the integrity of the currency came in 1933, when the President consciously chose to reopen the Pandora's box of inflation, in a blind effort to undo the great depression.

In a blitz of "correlated proclamations, messages, declarations, resolutions, enactments, authorizations, embargoes, inhibitions, repeals, amendments, executive and departmental orders, regulations and requisitions",³⁴ as part of the Agricultural Adjustment Act of 1933, as amended by the Joint Resolution Voiding the Gold Clause in Government Obligations, paper money was again made legal tender. Some of the more radical contemporaneous measures outlawed the possession of gold, making possession, with minor exceptions, a felony. Not a law most citizens would want to test.

Prior decisions had temporarily made paper a legal tender, but left private citizens their right to contract in weights of gold, rather than dollars--an extension of the

barter system, to which collapse of the currency was driving the populace. Now, in 1933, even this was denied. Not only was paper made a legal tender--it was forbidden to make gold a standard of value. Yet the depression did not end.

Although the Agricultural Adjustment Act, on review by the Supreme Court, was held unconstitutional,³⁵ the provision making paper legal tender remains with us.

The Court examined the issues involved in the latest assault on the currency and the sanctity of contract, in a 1935 series of cases called the Gold Clause Cases. While these focused on the invalidation of the gold clause in bonds, they bespeak an economic ignorance, or naivete, no court could be guilty of today. In one of the Gold Clause Cases, Perry v. U.S.,³⁶ the decision to deny recovery to plaintiff John Perry was that, although Congress overstepped its constitutional boundaries, in being forced to accept paper rather than gold, "Plaintiff has not shown, or attempted to show, that in relation to buying power he has sustained any loss whatever."³⁷ (Emphasis supplied.)

Today, even the average man on the street no longer is confused by the nominal "dollar for dollar" rationale: He knows that inflation specifically means a loss of buying power, though the number of dollars he owns remains constant or even increases.

The Gold Clause Cases decisions are therefore on very weak ground, constitutionally and by the terms of their own reasoning. They are better remembered for an eloquent and impassioned four man dissent written by Mr. Justice McReynolds:

Just men regard repudiation and spoliation of citizens by their sovereign with abhorrence; but we are asked to affirm that the Constitution has granted power to accomplish both.... Not only is there no permission for such actions; they are inhibited. And no plenitude of words can conform them to our charter.... Loss of reputation for honorable dealing will bring us unending humiliation: the impending legal and moral chaos is appalling.³⁸

Conclusion

A careful reading of the state papers relating to the integrity of America's currency reveals three things.

First: The Founding Fathers, who had lived through periods of inflation and hyperinflation, intended to--and effectively did--remove the temptations of paper money from the hands of the state governments, and withheld it from the federal government. These men were intellectual giants. As the heirs to their good works, it is up to us to preserve their legacy, rather than subvert it.

Second: The integrity of our currency as established by the draftsmen of the Constitution was gradually eroded by the lesser intellects who from time to time attained positions of responsibility in the federal government. Although

the stark necessity of war and threatened national disintegration might have made paper money an unavoidable temporary expedient, there is no legal or constitutional justification for it in peace time. But, as Folwell pointed out, "There will always be lawyers who can untie or statesmen who can cut any knot however intricate, and judges who can find pretexts, when not precedents for practical solution."³⁹

Third: Although those who undermined the constitutional bars to paper money may have honestly sought to perform a public service, our experience of the past forty-eight years--and especially of the past ten--conclusively shows that the founding fathers were absolutely right in their effort to eliminate the mischief of unbacked paper currency. Let us not forget that the same man who wanted to "cut off the pretext for a paper currency, and particularly for making the bills a tender either for public or private debts", is he who gave us the Bill of Rights. Unless one is ready to argue that the First Amendment, or representative democracy, is obsolete, Madison's ideas cannot be dismissed as "inapplicable to today's conditions". Since the other political institutions Madison and his peers built continue to serve us 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. Monetarism is no new invention. In the 18th century it was asserted by Hume and Montesquieu. Madison was aware of its claims, and calmly set forth the sounder classical doctrines. Inflation, wrote Madison in 1780, "has not been the effect of the quantity, considered in itself, but considered as an omen of public bankruptcy."⁴⁰ He presents telling arguments to prove the case. In fact, the gold standard is as applicable in the 1980's as in the 1780's. The gold standard is the only monetary institution stable enough to support the immense dynamism of either an industrial or post-industrial economy.

It is, therefore, fitting to conclude this memorandum to the Gold Commission with a passage from the writings of Thomas Paine. Paine--who directly inspired the Declaration of Independence, and who throughout the war gave us ideals to fight for--once paid \$300 (paper) for one pair of woolen socks.⁴¹ 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.⁴²

Edited by Linda L. Pettit

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35. United States v. Butler, 297 U.S. 1 (1936).
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Respectfully submitted,

A handwritten signature in cursive script that reads "Ralph Benko".

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What Role for Gold in the Monetary System?*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, perhaps because, as Jevons said, "gold is perfectly suited for coining." 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 47 per cent-- an average annual increase of 1.8 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. 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.

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,

* This paper was presented by Edward M. Bernstein to the U.S. Gold Commission at a meeting on November 12, 1981.

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 Trough from previous peak	Expansion Trough to following peak	Complete cycle	
Trough	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.

questioned the desirability of employing them as the basis for payments under long-lasting contracts. He thought it would be better to have rents under long-term leases adjusted to changes in 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. Although he had a plan of his own for a metallic standard with a unit of money consisting of a fixed amount of gold and silver, symmetalism, he placed much greater stress on indexing.

"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. . . ."

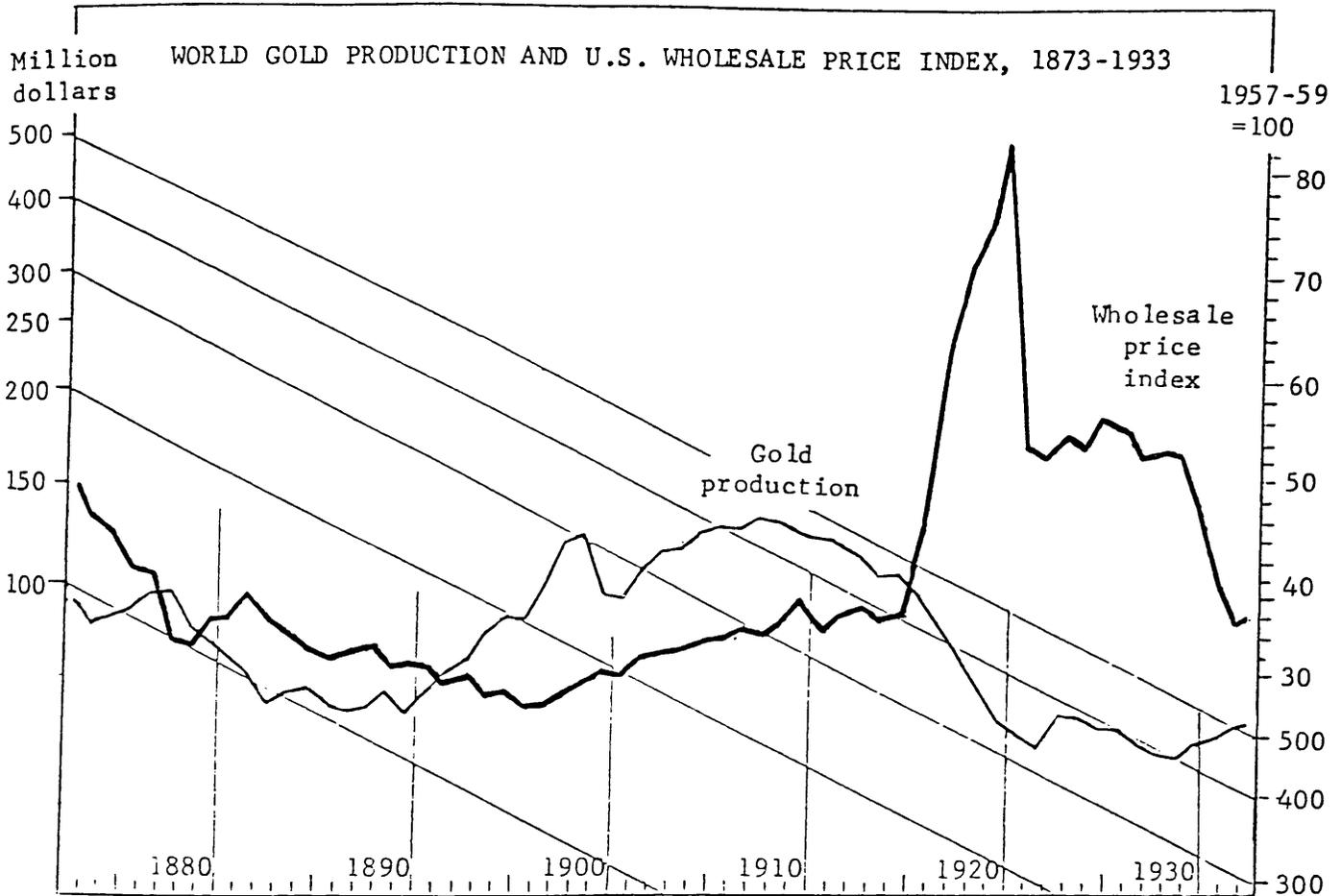
"[The Government] should publish tables showing as closely as may be changes in the purchasing power of gold, and should facilitate contracts for payments to be made in terms of units of fixed purchasing power. . . . In Mr. Palgrave's memorandum a most interesting example is shown of the kind of index 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

That is not to imply that economists were unconcerned about the reasons for the large changes in prices over periods of two or three decades. They were well aware that the prolonged rise or fall in prices 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 also 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.

If the monetary stock of gold were 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. It also shows the Bureau of Labor Statistics index of U.S. wholesale prices plotted on an arithmetic 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 abandonment 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 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 on the assumption that this would of itself stabilize prices.

Gold in the U.S. monetary system, 1934-71

The new gold standard, so painfully put together from 1925 to 1930, when Japan was the last of the great trading countries to return to gold, promptly fell apart from 1931 to 1936, when France was the last of the gold bloc to abandon the gold standard. 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 metallic and paper money legal tender in payment of all debts, public and private.

In October 1933, the President directed the Reconstruction Finance Corporation to buy newly-mined domestic gold, later also foreign gold, at prices determined in consultation with the President and the Secretary of the Treasury. 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 authorized 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 and if so in what sense? There was no redemption of U.S. currency in gold coin for private persons in the United States and abroad, a basic feature of the classical gold standard. 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 foreign monetary authorities. From an economic point of view, the most important aspect of the gold standard was the limitation it put on the money supply through the requirement of gold reserves. This was supposed to act on the monetary situation directly through the effect of an inflow and outflow of gold. 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 it had 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 placed no 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 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 a clear-cut issue of whether the growth of the money supply should be determined by the change in 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.

3. 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	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

The domestic price and cost situation was remarkably stable in 1958-65, particularly when measured by producer prices. 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 annual 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 the relevant 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 annual 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 annual 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 and fell at an average rate of 1.3 per cent from 1960 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 is likely to 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 under such conditions.

The reasons for the survival of the gold standard during this long period 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 wholly or mainly 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 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

* 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 and insurance costs on imports, and cheaper and more rapid internal communications; (4) the rise in the foreign exchange value of sterling; (5) technical improvements and new lower cost products; and (6) a reduction of the general rate of interest and the wider use of savings in productive investment.

under a gold standard. The production of gold outside the Communist countries reached a peak in 1966 and has declined by 25 per cent since then. In South Africa, production reached a peak in 1970 and has fallen by 32 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 is 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 \$425 an ounce were equal to 47.3 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.*

* "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 York, 1873).

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 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, or that it would be maintained indefinitely, 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.

A role for gold in the monetary system

Although it is not feasible to restore the gold standard, there are some features that could be incorporated in the national and international monetary system that would contribute to the maintenance of monetary stability. From an economic point of view, 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 are made subject to reserve requirements. The reserves would have to be of a kind that are not themselves liabilities of the U.S. Government, that would grow at a fairly regular rate, and that could not be injected into the world stock of monetary reserves or withdrawn arbitrarily from aggregate reserves. Mr. 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 but not excessive expansion of the money supply. If the intention is also to return to fixed par values, then it would be preferable to have the requirements in terms of reserves used in international settlements, a point that will be discussed below. If U.S. reserves are to increase and decrease with changes in the balance of payments, it would be desirable for the Federal Reserve System to have flexibility to adjust the money supply relative to reserves, at least the same degree of flexibility as it had before 1933.

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. That is obviously not possible under present conditions. Much can be done, however, to improve the present 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. The reason why exchange rates fluctuate so much is that 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 is sometimes made 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 keep 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 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 growth of aggregate 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 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 task to which the monetary authorities should devote themselves before undertaking far-reaching commitments on gold.

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**THE QUEST FOR REAL LONG TERM ECONOMIC GROWTH—
ASSESSING THE ROLE OF
A RESTORATION OF A GOLD STANDARD**

STATEMENT OF
DAVID B. BOSTIAN, JR.
PRESIDENT
BOSTIAN RESEARCH ASSOCIATES
BEFORE THE
GOLD COMMISSION*
DEPARTMENT OF THE TREASURY
WASHINGTON, D.C.
NOVEMBER 12, 1981

*The Congressionally mandated Gold Commission was established by Public Law 96-389 on October 7, 1980 to assess the role of gold in the domestic and international monetary systems. It is chaired by the Honorable Donald T. Regan, Secretary of the Treasury.

Bostian Research Associates

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THE QUEST FOR REAL LONG TERM ECONOMIC GROWTH -
ASSESSING THE ROLE OF A RESTORATION OF A GOLD STANDARD

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. My firm provides economic and investment research for institutional and corporate clients in the United States and Europe. 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. However, since monetary systems are not an end in themselves, but must serve a greater economic good, my statement will also address the necessary quest for maximum real long term economic growth.

Given the distressing conditions that have characterized world financial markets since President Nixon unilaterally ended the last link of the dollar to gold on August 15, 1971, it is understandable that this Commission was created. Those members of the Commission who fervently advocate a return to a gold standard have noble goals that seek a greater economic good because inflation has distorted economic life and harmed those who were least able to protect themselves. Likewise, those members who express reservations about a return to the gold standard do correctly see problems attendant to it in today's complex economic world.

It is my view that there are significant benefits, in terms of economic expectations, from the very existence of this Commission and its hearings. 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 approximate-

ly \$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!

However, before making an assessment of the more detailed aspects of a possible return to a gold standard, it is important to examine the nature of the economic problems we face today.

REVIEWING THE CHARACTER OF THE ECONOMIC MALAISE OF THE NINETEEN SEVENTIES

Despite the euphoria in the financial markets which greeted President Nixon's announcement of his New Economic Policy in mid-August of 1971, our immediate position on the "New Economics" was one of grave concern, but not merely because of the unilateral end to convertibility of the dollar into gold for foreign holders, which was part of the policy. In papers prepared in 1971, and again in early 1972, it was

stated that President Nixon's announcements of 8/15/71 removed all doubt about the end of laissez-faire with respect to government economic policies. While corporate managers cheered the "New Economics," its impact on financial markets was predicted to produce less cheer. Indeed, it was emphatically stated that "the economy of the entire free world is not free from the risks of the business cycle." Among the secular economic problems forecast at that time were declining U.S. productivity growth rates, huge government deficits, and increased burdens on real corporate profits resulting from such varied sources as government regulations, contractual pension costs, and heavy interest charges. It was also noted that the post-1970 economic upswing had required more fiscal and monetary stimulation than any prior recovery. As a consequence, the economy was expected to "suffer adverse counter-effects from that stimulation in the years ahead."

The aforementioned review is intended to emphasize that the wide array of economic problems that came to characterize the Nineteen Seventies was not solely the result of the missing gold discipline, though it was surely one negative factor. Looking back over the past ten years, several summary statistics offer a sobering mosaic. In 1971 the real Gross National Product was \$1,108 billion. As of the second quarter of 1981 real GNP was \$1,510, an increase of only 36%. By contrast, during that ten year period the Monetary Base moved

from \$77 billion to \$164 billion, an increase of 112% and the aggregate M-2 soared from \$659 billion to \$1,736 billion, an increase of 163%! Inflation, of course, was rampant. The Producer Price Index was 113.8 in mid-1971 and was 269.9 in mid-1981. Likewise, the GNP Implicit Price Deflator moved upward from 96.01 in 1971 to 191.1 in the second quarter of 1981.

Interest rates reflected the progressive debasement of our dollars. In mid-1971 the 91-day Treasury bill rate was 4.7%, and one decade later had risen to 14.7%! Triple A corporate bonds had an average yield of 7.5% in mid-1971 and by mid-1981 their yield had risen to 14.3%! Home mortgage rates increased from 7.4% to 14.3% during that period. If increased mortgage rates were not enough of a burden on the consumer, his average weekly earnings, expressed in constant dollars for the spendable portion, actually declined from \$92.70 in 1971 to approximately \$81.50 in mid-1981. In 1971, the average unemployment rate was 5.9% and it was recently reported at 8.0%.

Another important source of the malaise of the Nineteen Seventies was the persistent decline in productivity growth rates throughout the decade, a decline that was even more severe than that envisioned in our 1971/1972 forecasts. In 1971 the annual growth rate of productivity was 3.4%. For the full years 1979 and 1980 it was -0.3% and -0.2%, respec-

tively. Despite year to year fluctuations, the growth rate of U.S. productivity was in a dismal slump throughout the entire decade of the Seventies. It is my view that weak U.S. productivity growth may have contributed more to the economic malaise of the past decade than generally realized, a tenet that will be addressed later in my statement.

THE OPEC CARTEL AND THE ATTENDANT MULTIFOLD INCREASE IN THE PRICE OF OIL MUST BE CAREFULLY ASSESSED IN ANY SEARCH FOR THE CAUSES OF PRESENT DAY ECONOMIC PROBLEMS

While the absence of a gold discipline may be pointed to as one reason for the serious inflationary problem that faces our country today, clearly the events of late 1973, which some might describe as an act of "economic warfare," must not be overlooked. The OPEC oil embargo and the multifold price increases in oil that followed throughout the decade caused many present day economic problems, directly or indirectly. We are aware that some may argue that OPEC acted to defend itself against inflationary forces already in motion in late 1973. Likewise, in a secular sense, it may be argued that the OPEC price increases were beneficial because conservation of scarce resources was encouraged as a result. Nevertheless, the tremendous increase in the price of petroleum products would have held significant deflationary implications for the industrial world had not a major portion of those higher oil price expenditures been monetized. One can argue whether the higher oil prices caused

inflation or the money that was created to offset those higher prices caused inflation, but the result was the same. It was a grave situation with no easy solution.

The main point is that the OPEC price increases were external to the sphere of control of any monetary authority. Some would posit, incidentally, that the OPEC price actions would never have occurred if the major industrial countries had been on a gold standard. On the other hand, one might conclude that OPEC would have engendered a worldwide deflation had an inflexible gold standard been in effect at that time?

MONETARY POLICY, WHILE IMPORTANT, CANNOT PROVIDE THE SOLUTION TO EVERY COMPLEX ECONOMIC PROBLEM TODAY

Our discussion of OPEC is not intended to suggest that we fail to advocate a monetary discipline, because excessive monetary creation has, historically, been a source of inflation. However, the sources of inflation are far more complex than just money creation. It is possible that, in some respects, complete monetary control is beyond the scope of the Federal Reserve today. Furthermore, while the Federal Reserve has been attempting this "control," interest rates moved to astronomical levels in both nominal and real terms, further increasing the federal deficit by increasing the debt service cost.

Additionally, higher interest rates have attracted more dollars to money market funds which has increased the growth of the more inclusive monetary aggregates, in turn causing the Federal Reserve to exhibit increased restraint, which pushed rates even higher and drew more money into short term instruments. This is not the complete explanation of the vicious cycle that has occurred, but it is part of it.

In sum, the recent monetary policy may actually have had both an inflationary and destabilizing effect on the economy. This is not to say that we fail to respect Chairman Paul Volcker and the resolve he has shown. It is to say that the complex political/economic circumstances in which we find ourselves today are not subject to effective management by monetary policy alone.

THE CLASSICAL QUANTITY THEORY OF MONEY MAY PROVIDE IMPORTANT INSIGHTS INTO THE PROPER POLICY

As I have stated, much of the excessive monetary creation and inflation that engulfed the industrial world in recent years was the result of the extreme oil price increases levied on the industrial nations by the OPEC cartel and the consequent decision of the Carter Administration and others to monetize those price increases. In sum, OPEC raised prices through its cartel power and money was created to avoid the potentially dire consequences of the OPEC move, i.e., significant inflation originated from a factor in

the total economic equation other than money, i.e., the pricing power of the cartel.

This illustration sets the stage for a brief discussion of the quantity theory of money. Despite its simplicity, it illustrates that there are important factors other than just the quantity of money for policymakers to consider. The equation has two sides with two factors on each side. Briefly, this classical theory states that the quantity of money (QM) in circulation times the velocity of circulation (V) equals the quantity of goods and services (QG) times the average price of those goods and services (P).

$$QM \times V = QG \times P$$

The main point in reviewing this basic economic equation is to emphasize that there are other important factors beyond the quantity of money that can influence economic conditions. The Federal Reserve, of course, focuses primarily on the quantity of money. It can control velocity only indirectly, if at all. The influence of Federal Reserve policy on factors on the right side of the equation is indirect at best and often perverse. In our view, attempts of the Fed to restrain prices or inflation may be counterproductive because the quantity of goods and services may also be diminished, i.e., both QG and P will decline.

The thrust of the sought-after incentive effects in the Reagan program is to seek increases in the quantity of goods and services through the widely discussed "supply side" effects. On the right side of the equation, if QG goes up, then P must come down. This can be accomplished without resort to manipulations of the QM factor on the left side of the equation.

The point being emphasized here is that economic policymakers should increasingly focus on the right side of the equation and specifically on actions which increase the quantity of goods and services. Price levels can be held in a stable pattern simply by continuously increasing the quantity of goods, even as the QM and/or V factors are rising. This is not an argument for abandoning prudence in the management of the monetary aggregates. It is an argument for emphasizing policies other than just monetary restraint to bring inflation under control because monetary policy in today's complex financial environment cannot effectively be used as the primary instrument to fight structural inflation. The recent high levels of interest rates that have resulted from excessive monetary restraint in a volatile financial environment have increased costs in both consumer and capital sectors as well as for the government.

Indeed, this is the time for a monetary policy of less restraint and a fiscal policy that is more disciplined, given

present economic conditions! I would emphasize, however, that there is little evidence that budget deficits are necessarily linked to inflation or interest rates, despite the widespread concern about the present budget deficit projections, a concern that I share, though not to the point of hysteria.

GREATER PRODUCTIVITY IS A MISSING LINK IN THE QUEST FOR
MAXIMUM REAL LONG TERM ECONOMIC GROWTH

While productivity is a widely discussed economic concept, few observers appear to appreciate its true significance. Increased productivity is a vital means by which the "QG" factor in the quantity theory equation can be affected in a positive manner without requiring undue ease on the part of the Federal Reserve ("QM" factor) and with a very favorable effect on prices ("P" factor).

One primary reason for the recommendation of R&D tax credits in my statement before the recent tax reduction hearings was our strong conviction that technological innovation during the Nineteen Eighties will be a vital source of productivity growth. Indeed, it is our strong conviction that the new decade may be characterized by major technological developments which will enhance the quantity and quality of goods available at stable or even lower prices. This is an economic area beyond the realm of monetary policy, but one of vital importance.

If the national preoccupation with monetary policy could be redirected to a national focus on the many facets of productivity enhancement, the prospects for an extended period of real economic growth would be greatly enhanced in a way that no monetary policy could hope to achieve. Significantly, a recent national poll by Louis Harris & Associates revealed a major shift in the national attitude toward productivity.

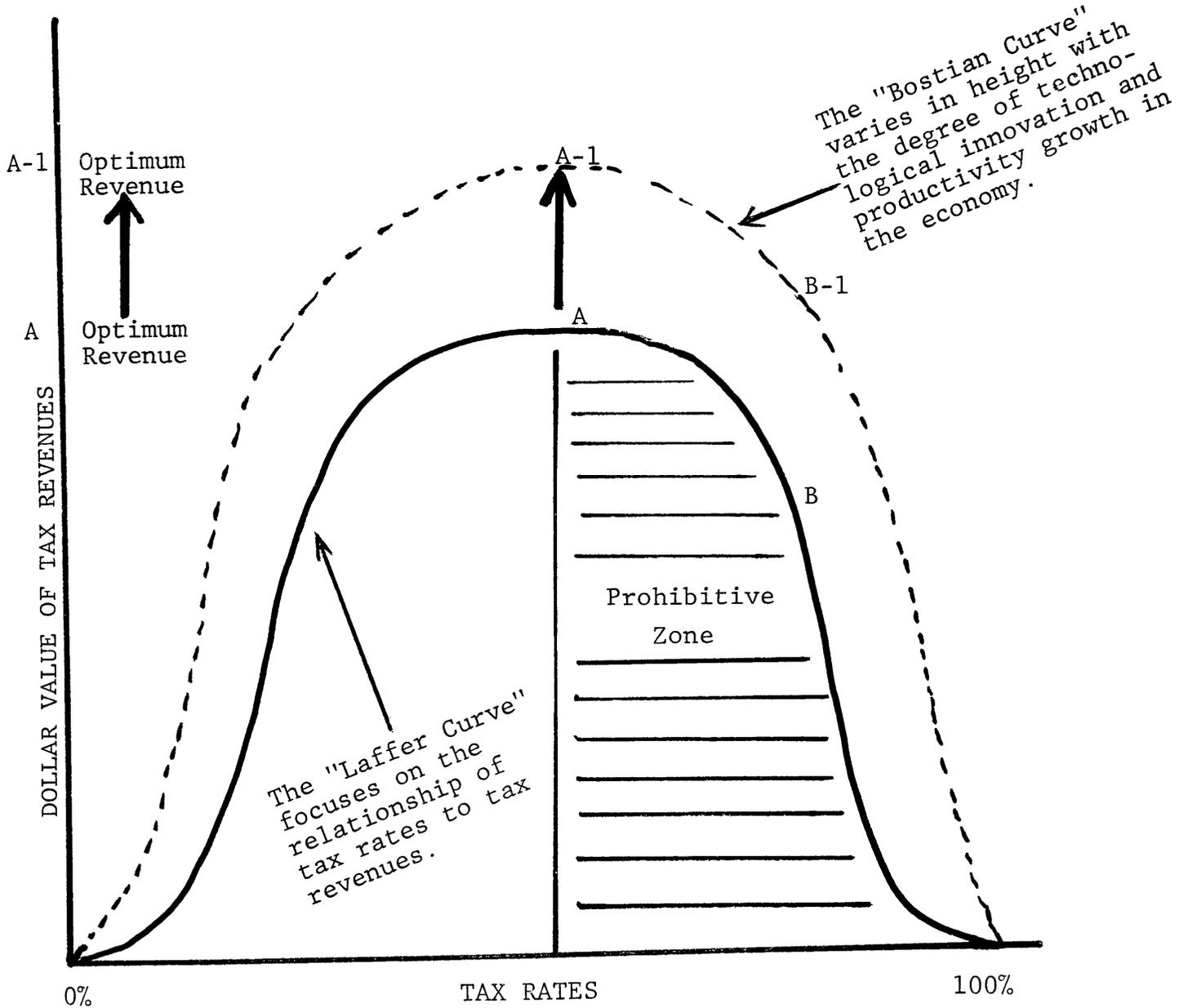
Today, according to that Harris poll, 80% of the public views declining productivity as a "serious problem requiring urgent attention" versus a view ten years ago that productivity meant "worker exploitation." Clearly, the time is propitious for a national focus on productivity enhancement. In our view, a true definition of "supply side" economics encompasses far more than just the incentive effects of tax reductions! It should encompass a national effort to study all factors that increase the supply of goods and services that must be balanced against the total stock of money. A national effort is needed to increase productivity through avenues as varied as increased automation through robotic technology to improved national attitudes toward quality in both goods and services. This, of course, is an important topic for discussion elsewhere.

THE "SUPPLY SIDE" VIEW OF THE ECONOMY MAY BE TOO NARROW IN FOCUS, DESPITE THE MERIT OF ITS BASIC TENETS

My May 18th statement to the Senate Finance Committee questioned the simplicity with which supply side economists view the world. While the noted proponents of the supply side theory, to include economist Arthur Laffer, are to be congratulated for directing long overdue attention to the importance of incentives in the economy, it was our assessment that merely engaging in across-the-board tax reductions is not the optimum way to enhance productive economic activity or maximize federal revenues. A brief review of the position of that May 18th statement is useful.

Economist Arthur Laffer believes the U.S. economy is now in the "prohibitive zone" of the Tax Rate/Revenue Curve illustrated by the following diagram. By reducing tax rates, he hopes to increase government revenue by moving from point B upward toward optimum point A. However, the Bostian Curve variant of the Laffer Curve varies in height with the degree of technological innovation and productivity growth in the economy. An economy with an innovative and highly productive capital stock would produce greater revenue at all tax rates, including the optimum one. For example, an upward move from point B-1 toward optimum point A-1 would result from the same tax rate cuts yet provide greater revenue. The Laffer Curve does not exist in a capital vacuum. Specifically, if an investment innovation policy is imple-

THIS DIAGRAM IS AN ANNEX TO THE STATEMENT OF DAVID BOSTIAN
BEFORE THE U.S. SENATE COMMITTEE ON FINANCE, MAY 18, 1981



THE LAFFER CURVE VERSUS THE BOSTIAN CURVE

Economist Arthur Laffer believes the U.S. economy is now in the "prohibitive zone" of his Tax-Rate / Revenue Curve. By reducing tax rates, he hopes to increase government revenue by moving from point B upward toward optimum point A. However, The Bostian Curve variant of The Laffer Curve varies in height with the degree of technological innovation in the economy. An economy with an innovative and highly productive capital stock would produce greater revenue at all tax rates, including the optimum one.

mented, the economy would generate more tax revenue at any tax rate, including the optimum one. Furthermore, an innovative capital stock would ultimately reduce structural inflation through increases in productivity growth. In essence, the Laffer Curve would be far higher today if the pro-investment conditions of the Nineteen Fifties and Sixties were recreated by economic policies targeted for same.

A conclusion of our May 18th testimony noted that the greater incentives which the supply side economists seek are all well and good, but are not the complete answer in the search for sustained real economic growth. There is a considerable risk that the result of untargeted and across-the-board tax cuts will be an actual swing back toward pro-consumption economics with a far lower than hoped for portion of the tax cuts actually being saved.

Despite the widespread evidence that the economy is now performing in a manner that reinforces skeptical assessments of the narrow supply side view of the economic world, there is persistent advocacy of an immediate return to the gold standard from that quarter.

Professor Laffer was recently quoted as stating that any "further delay in restoring dollar-gold convertibility will undo the Administration's success...while threatening financial and political tumult." However, it is my concern

that a sudden return to a gold standard, given the heavy domestic and international debt structure today, might result in the financial and political tumult that is feared. Likewise, just as it is our view that an economy characterized by high rates of productivity growth will ultimately increase the height of the Tax Rate/Revenue Curve (Laffer Curve), so the uncertainties and instabilities associated with an immediate return to a gold standard would actually lower the Tax Rate/Revenue Curve at the very time that projected budget deficits are growing! Nonetheless, I would agree with Mr. Laffer's statement that "it isn't gold, but the standard that is important. Its purpose is to provide the central bank with a rule for the maintenance of a stable price level."

AN EVENTUAL RETURN TO A GOLD STANDARD WOULD PROVIDE A DISCIPLINE FOR THE MONETARY AUTHORITY, BUT ONE MUST CRITICALLY ASSESS THE DEGREE TO WHICH MONETARY AUTHORITIES DETERMINE THE GROWTH RATE OF THE MONETARY AGGREGATES

My statement must draw attention to yet another possible fundamental caveat in searching for stable economic growth through a return to a gold standard. That question revolves around the basic causes of growth in the monetary aggregates. Omitting consideration, for the moment, of uncontrollable inflationary forces such as OPEC, there is an even more basic, and controversial, question of whether the Federal Reserve's actions determine the growth rate of

the monetary aggregates or the behavior of the private sector determines that growth rate.

It has been our view, dating back to those papers mentioned at the outset, that the causal mechanisms in the economy are not well understood. With respect to the question raised, I think there is weighty evidence that aggressive price and wage policies in the private sector tend to ultimately "force" the Federal Reserve to accommodate the demands for funds because the banking system tends to make loans first and search for reserves (non-borrowed or borrowed) after the fact. This problem also can be attributed to federal deficit spending as well. If the federal government and major corporations have little sensitivity to interest rates in their quest for funds, then there is little to restrain their demand for funds. A recent paper by Dr. Basil Moore, reported in the *Journal of Portfolio Management*, reinforces the concern raised here: "The economics profession in general, and Monetarists in particular, are not justified in regarding the money stock as an exogenous control variable simply because it appears in principle to be under the control of the monetary authorities." There is, in my view, sufficient truth in this position to raise the question of whether any standard would effectively restrain money growth without additional institutional changes.

ANY RETURN TO A GOLD STANDARD MUST BE GRADUAL. THE ADVANTAGES OF A GOLD STANDARD ARE PRIMARILY ITS FAVORABLE IMPACT ON INFLATIONARY EXPECTATIONS, BUT THE RISKS IN SUCH A STANDARD REVOLVE AROUND ITS INFLEXIBILITY IN A POLITICALLY AND FINANCIALLY VOLATILE WORLD ECONOMY

As I have suggested, there are advantages to be derived 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. Note the gold stock trend in the attached multi-decade graph as a point of interest.

- 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. Note the multi-decade graph of price movement attached.

- 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.

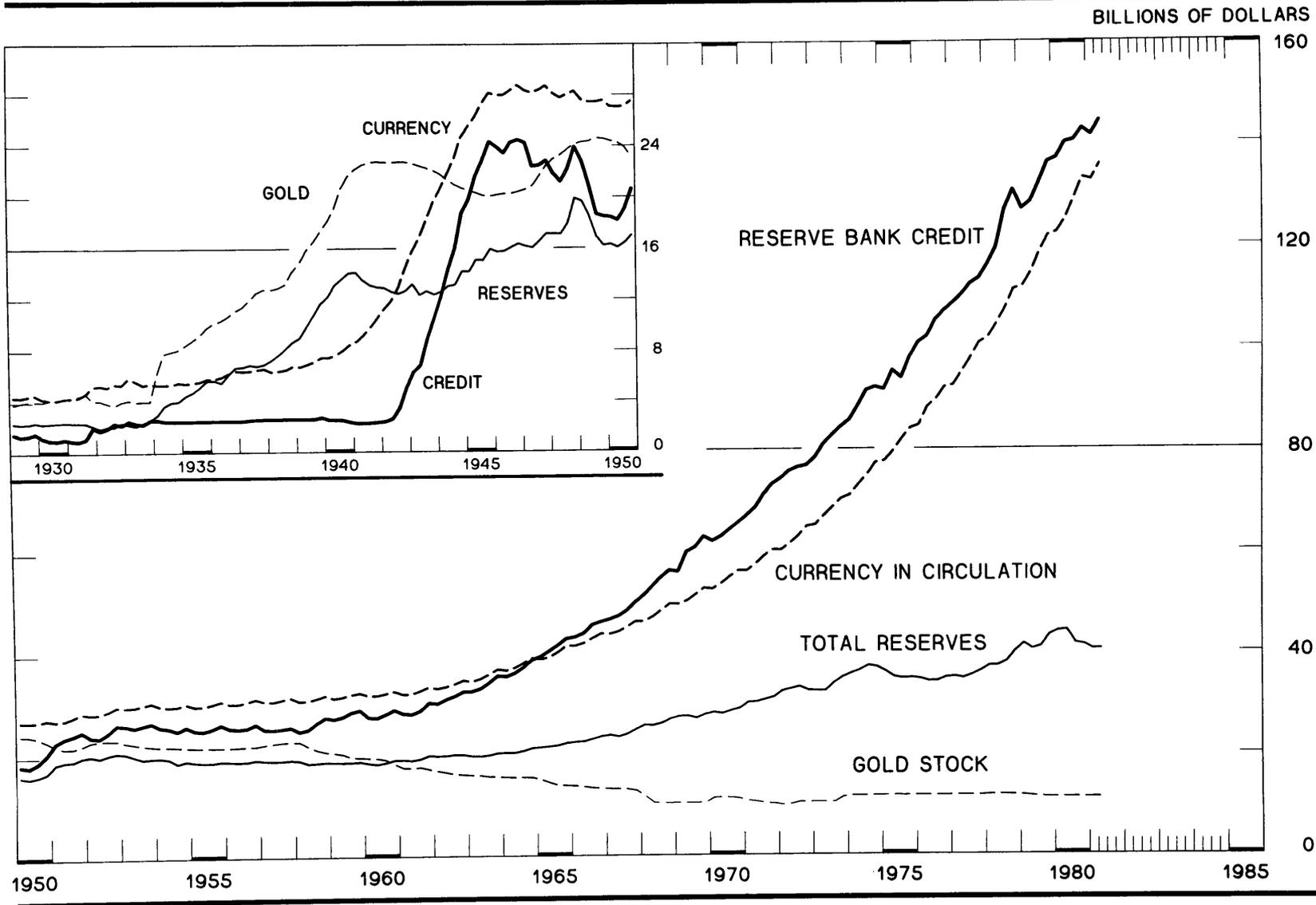
CONCLUSION:

As stated at the outset, we must move with caution in re-establishing 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.

RESERVES AND RELATED ITEMS

MEMBER BANKS

AVERAGES OF DAILY FIGURES, QUARTERLY



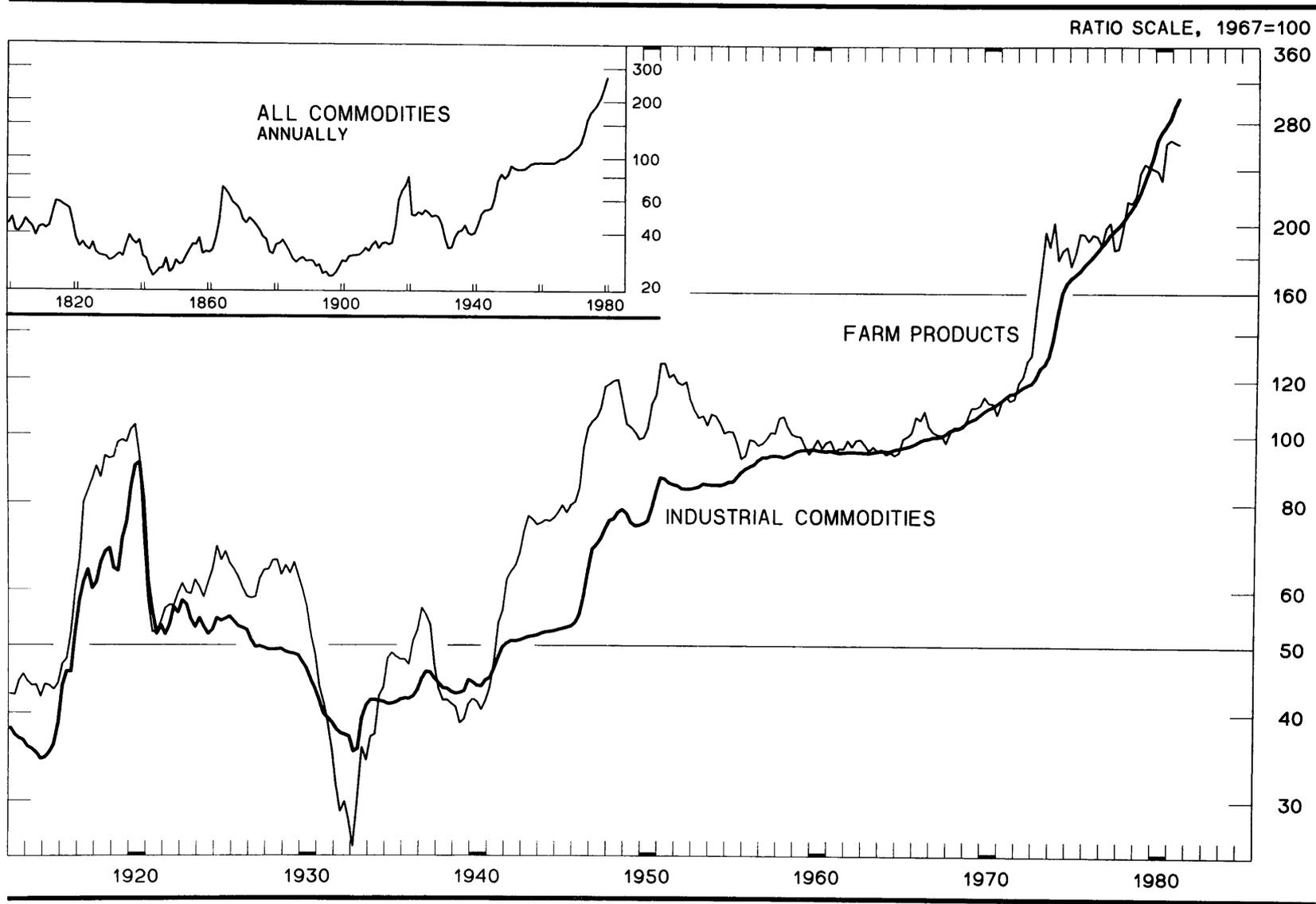
(Graph courtesy of The Board of Governors, Federal Reserve System)

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19-A

PRODUCER PRICES

QUARTERLY



(Graph courtesy of The Board of Governors, Federal Reserve System)

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19-B

THE FOLLOWING BACKGROUND PAPERS ARE AVAILABLE TO MEMBERS OF THE GOLD COMMISSION ON REQUEST:

- Economic Policy At A Secular Crossroads, 2/14/79 address to the annual Financial Conference of the Conference Board,
- The Economic Outlook, 4/29/80 address to the New York Association of Business Economists,
- Capital Investment and Productivity: Economic Policy Determinants of the Nineteen Eighties, 5/6/80 address to the Financial Analysts of San Francisco,
- A Corporate Economic Perspective, 9/24/80 address to the Listed Company Advisory Committee of the American Stock Exchange,
- Investment Implications of the Conservative Political Climate, 1/31/81 address to the annual Wall Street and the Economy Conference of the New School,
- Enhancing Long Term Economic Growth Through a Balanced Tax Reduction Bill, 5/18/81 statement before the hearings of the Committee on Finance of the U.S. Senate.

Statement before the U.S. Gold Commission

November 13, 1981

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The idealized gold standard as it appears in textbooks conveys a sense of automaticity and stability -- a self-correcting mechanism with minimum human intervention which assured rough stability of prices and balance in international payments.

The actual gold standard could hardly have been further from this. We must first appreciate that the major countries of the world were on the gold standard proper only from the 1870's to 1914, and briefly during the late 1920's and early 1930's. The first period went down in history as the Great Depression -- until, that is, the second period came along to exceed it in depth and severity. The United States was on the gold standard, strictly speaking, only during 1879-1933, with a brief break in 1918.

With a dose of nostalgia, the gold standard period looks somewhat better to us than it did to contemporaries. In the United States the last third of the 19th century was a period of unprecedented controversy over the monetary standard, first over the resumption of gold convertibility at a fixed price for the greenbacks issued during the Civil War, then over the monetary role of silver. Legislation was almost constantly before Congress to change monetary relationships. The year 1896 saw the only U.S. presidential campaign devoted to the issue of the monetary standard. We now know that most of the attempts to alter monetary relationships and to dislodge

the U.S. from a gold standard failed, but the point is that the issue was a source of continual turmoil and uncertainty, not serene stability.

Moreover, price stability was not assured either during the gold standard period proper or over a longer period during which gold was a dominant influence. Price movements (as recorded in the Warren and Pearson index) were substantial. Between 1896 and 1913 U.S. prices rose nearly 50 percent, or an average of 2.4 percent a year over a 17 year period. Only during one decade in the period 1879-1914 was there an average decline in prices (prices also declined in 1919-1921 from World War I highs and again in the early 1930's, when unemployment reached 24.9%). While price increases during the period 1879-1914 look low by comparison with 1974-80, they were high by comparison with the mid-fifties to mid-sixties, except during the decade of depression ending in the mid-1890's.

Price "stability", in the sense of return to earlier levels of prices, obtained over longer periods only by judicious choice of the years for comparison. Table 1 shows cumulative price movements from peak to trough (excluding the U.S. Civil War) in four countries during the century 1814-1913. While each country had its distinctive national developments, the parallelism among major currencies is striking. Prices declined about 50% in Britain, France, Germany, and the United States from the highs of the post-Napoleonic period to 1849, then rose about 50% until the general establishment of the gold standard in the early 1870's, then fell nearly 50 percent again until the gold discoveries of the late 1890's, then rose sharply in the two decades before World War I. This is hardly a pattern of stability, even long-term stability, although there were long periods of substantial price decline as well as of price increase.

But the full swings are so long in duration - 40 to 60 years - that they can hardly have offered much comfort for any but the longest-term financial contracts, and then only because of the accidents of war or discovery.

The variations in prices were partly due to swings in new gold supplies. But they were also due to changes in the relationship between money and economic activity. And, most important, they were due to variations in non-metallic sources of money, especially bank deposits, which in the United States grew by a factor of 12 between 1879 and 1913, compared with a three-fold growth in currency holdings by the public and a 6½-fold growth in bank reserves. The phenomenon was widespread. Table 2 shows the growth in various forms of money in eleven industrial countries between 1885-1913. Monetary gold grew 120 percent. Demand deposits, in contrast, grew 400 percent, from 39 percent to 63 percent of the money supply. Private banks responded to the need for additional means of payment.

If we turn from history to the contemporary setting, there are three broad roles that gold might play in the U.S. monetary system, each allowing numerous variations in detail.

First, it could be required as "backing" for some portion of domestic monetary liabilities, e.g., currency or currency plus bank deposits with the Federal Reserve Banks, as was the case until 1968.

Second, it could be fully convertible by U.S. authorities at a known price into dollars held only by foreign monetary authorities. This was the regime that prevailed from 1935-1971.

Third, it could be fully convertible into currency or other acceptable means of payment at a fixed price determined by the U.S. government, as during the period 1879-1933. The government would

TABLE 1
Wholesale Price Indices, 1814-1913

	US	UK	GERMANY	FRANCE
Indices (1913 = 100)				
1814	178	178	129	132 ^(a)
1849	80	90	71	96
1872	133	125	111	124
1896	67	76	71	71
1913	100	100	100	100
Changes (in %)				
1814-1849	-55	-49	-45	-27 ^(b)
1849-1872	+66	+39	+56	+31
1872-1896	-50	-39	-36	-43
1896-1913	+49	+32	+41	+41

Notes:

(a) 1820

(b) since 1820

TABLE 2

Comparative Evolution of Money
And Reserve Structure, 1885 and 1913

	Three Countries ¹		Eleven Countries ²	
	1885	1913	1885	1913
	(\$ billion)			
I. Money Supply	6.3	19.8	8.4	26.3
A. Gold	1.4	2.0	1.8	2.7
B. Silver	0.7	0.6	1.0	1.2
C. Credit Money	4.1	17.2	5.6	22.4
1. Currency ³	1.6	3.8	2.3	5.9
2. Demand Deposits	2.6	13.3	3.3	16.5
I. Monetary Reserves	1.0	2.7	1.5	4.0
A. Gold	0.6	2.1	0.9	3.2
B. Silver	0.4	0.6	0.6	0.8
I. Total Gold and Silver	3.1	5.4	4.3	7.9
A. Gold	2.0	4.1	2.7	5.9
B. Silver	1.1	1.2	1.6	2.0

buy gold offered to it, and sell gold asked of it, to any party, public or private, against acceptable means of payment.

The rationales in the late 20th century for these alternative monetary roles for gold are very different, and unfortunately they are in conflict. The first role would serve the dual purpose of giving some part of the public confidence in the currency that it may lack now, and of exercising restraint on the growth of the money supply or at least that portion of it that is linked to gold. To serve this objective requires a "binding" link to gold and a steady, predictable accretion of monetary gold to permit secular growth in the supply of money. Such growth would presumably best be provided by purchases of new gold by the monetary authorities. Such purchases would evidently have to be at (fluctuating) market prices for gold, thus creating a problem for the valuation of the existing and steadily rising gold stocks. It would be possible, but somewhat cumbersome and artificial, to create a buffer account between the periodic official purchase of gold and the formal monetization of gold, in order to insulate monetary gold from erratic market price fluctuations. The link to market gold, in short, would have to be attenuated in some way in order to provide the steady monetary discipline that provides the rationale for gold backing. But this attenuation would inevitably be artificial in character in such a way as to cast doubt on the proposition that the currency was truly backed by gold. Moreover, unless the link to markets is completely severed (as it is at present), the revaluation of monetary gold to bring it into closer alignment with market prices would greatly expand the value of monetary gold, which unless carefully and persuasively handled, could provide so much room for monetary maneuver that the desired discipline would be entirely lost.

The second type of role, convertibility into dollars held by foreign monetary authorities, operates on a quite different principle. Monetary discipline would be imposed in the United States through its balance of payments and the willingness of foreign central banks to accumulate dollars. If in their judgment foreign authorities had accumulated excessive dollar holdings, they would convert the excess into gold at a known price. The United States would have to take whatever steps were necessary to reduce the rate of foreign accumulation of dollars to acceptable levels -- or else suspend gold convertibility, as it did in 1971.

The difficulty with this commitment for the United States is that at the end of 1980 there were already around \$250 billion in the hands of foreign monetary authorities and an additional \$700 billion, give or take several tens of billions, in dollar deposits (other than European inter-bank deposits) outside the United States. If present U.S. gold reserves were valued at \$420 an ounce, they would come to \$110 billion, a sum that might be deemed adequate (credible) to cover possible gold conversions from existing official dollar holdings; but even that would be totally inadequate to cover conversions of dollars held outside the United States that might end up in the hands of foreign monetary authorities as a result of their own policies on other events external to the United States (e.g., a decision by OPEC to invoice oil in currencies other than the U.S. dollar, or to hold a higher share of their assets in currencies other than dollars, as Iran threatened to do in late 1979).

This contingency could, of course, be handled by placing a much higher than current market value on the monetary gold held by the United States. If it were to do so, the United States would have to decide whether it was willing to buy gold from monetary authorities

at the much higher price, and whether "monetary authorities" would include those of the major gold producing countries, i.e., whether newly produced gold would be purchased at that price.

But if the gold were valued at a price high enough to cover the contingency of massive conversions of dollars, it would be so abundant as to fail to provide any monetary discipline at all. Moreover, a much higher than market price would require close policing to prevent non-monetary gold from entering the monetary system, or alternatively, non-monetary gold would be taken in such abundance as to undermine monetary discipline.

The same problems arise with even greater force for the third type of role for gold convertibility into dollars at a fixed price for all parties, private as well as official. In periods of political and economic calm around the world, the convenience of paper money and deposits would dominate behavior; but in periods of uncertainty and political turmoil, many would convert to gold at the expense of official U.S. gold holdings. Credible re-establishment of gold in this monetary role would therefore require ample gold reserves to cover the contingency of large-scale conversion. But gold reserves valued at a price high enough to provide this assurance would by the same token exercise no effective restraint on monetary policy in the short- and medium-run. Monetary restraint would have to be discretionary, as it is today.

There is another disadvantage with re-instituting gold in a monetary role that is in any way linked to the market for gold, directly or indirectly. The principal producers of gold in the world, together accounting for nearly 80 percent of world production, are South Africa and the Soviet Union. Both countries exercise considerable discretion in the amount of gold they actually

put onto the market rather than allow competitive market incentives to prevail. Both are, in very different ways, at political odds with other members of the community of nations. To restore an important monetary role for gold in any form with links to the gold market would provide a windfall of considerable magnitude to those two countries -- every \$100 per ounce in the price is worth about \$1 billion to the Soviet Union on its current estimated gold production, and \$2.2 billion to South Africa -- since, for the reasons given above, a credible regime of gold convertibility would require a substantial increase in price above the current market level. An ill-conceived attempt to avoid this and to rely on new supplies to provide for limited monetary growth would place the monetary system of the United States, and the West, 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 a monetary role. Yet the choice of a price, while crucial, is unavoidably arbitrary and is known to be arbitrary. So long as this is so, a rule based on a supposedly fixed price of gold cannot be a credible rule by virtue of the link to gold. If gold were to become unduly constraining, its price could be changed, and that is widely known -- indeed, is intrinsic in the process of setting a price in the first place. In this respect, the situation is fundamentally different from the situation in the 19th and early 20th centuries. Then the dollar price of gold was historically given and not generally open to question (except for minor adjustments on several occasions to preserve the relationship to silver). The price was not conceived

as a policy variable. Now it is, indeed must be. Yet gold ceases to provide monetary discipline if its price can be varied. So long as the price of gold is a policy variable, a gold standard cannot be a credible disciplinarian. It provides no escape from the need for human management.

Presentation to the Gold Commission
by Richard L. Davies, Managing Director
The Gold Institute/l'Institut de l'Or
November 13, 1981

FACILITATING THE OPTIONS OF USING GOLD AS AN AUXILIARY CURRENCY

The Gold Institute/l'Institut de l'Or is the developmental, technical and industrial information 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 advantageously 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.

The excellent historical summaries of previous monetary systems which have been researched and presented by the Secretariat of this Gold Commission are of great value in developing recommendations for what should be done now with respect to gold, beginning with the situation as we find it today.

For this, we must recognize that each nation of the world has sovereign responsibility for its own economic and governmental activities, for issuing its own currency, and for determining the characteristics of that currency. Trade and financial relationships between the nations require exchange rates between the various currencies. At present these exchange rates are generally of a

floating nature with only modest and temporary interventions to interfere with their free movement.

It is recognized that sometimes economic and governmental policies of one nation result in its currency remaining nearly constant in its purchasing power; whereas another nation, either continually or temporarily, follows economic and governmental policies which result in its currency having a steadily declining purchasing power. In such cases, the value of this second currency must decrease in relation to that of the first, and also in relation to gold as an independent currency. The real change in these relative values is inexorable. If a government or even a whole group of governments attempts to deny this change by regulations or legislation to set an arbitrary value for the depreciating currency, the real exchange rates insist on expressing themselves, even if through black markets inside a country of the more rapidly depreciating currency, or through free markets in other countries.

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 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, medallions, and other gold pieces of precisely marked purity and weight.

Just as the overwhelming proportion of transactions in the United States in the years following the Civil War were carried out in "greenback" dollars, and in Brazil most transactions have always been in cruzeiros, so in the United States at present the overwhelming proportion of transactions are, and will be, carried out in current dollars. However, while the United States is in this period of depreciating value of its national currency, gold is most useful as an auxiliary currency, for some governmental transactions and for some private transactions.

With regard to gold for governmental use, it should be noted that gold at its market value represents well over half the foreign reserves which the governments of the world hold in readiness for transactions among themselves; and the United States government is in the fortunate position of holding more gold than any other government.

Residents of the United States 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, many productive operations have been made possible by dollar financing, with corresponding repayments in dollars.

During the Bretton Woods agreement period in Brazil, there were times when the annual interest rate for dollars was 6% while the annual interest rate for cruzeiros was 40%. Today an example of a cruzeiro interest rate is 65% per year.

Examples of the use of gold as an auxiliary currency in 1981 include the payment of dividends in the form of gold by Ranchers Exploration and Development Corporation, Albuquerque, New Mexico; RefineMet International Company, Woonsocket, Rhode Island; and Peregrine Petroleum Limited, Calgary, Canada; and a 3-1/4% 15 year bond issue with both principal and annual interest payable in metallic gold. These RefineMet bonds are traded at prices related to current gold bullion prices, with a yield of about 3-1/4%. The trustee 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.

For the further convenience of those who wish to use gold as an auxiliary currency, international bullion dealers such as J. Aron & Company, Inc., Mocatta Metals Corporation, Sharps, Pixley Incorporated, Bache Halsey Stuart Metal Co., Inc., Gerald Metals, Inc., Samuel Montagu & Co. Limited, Tanaka Kikinzoku Kogyo K.K. will hold gold for a customer in the form of bullion or coins, and transfer it as directed. Also, leading banks provide customers with certificates for gold deposited with them. Among these are Citicorp, Rhode Island Hospital Trust

National Bank, The Bank of Nova Scotia, and Canadian Imperial Bank of Commerce. For example, when a customer deposits metallic gold with Citicorp he receives a certificate showing the amount in thousandths of a troy ounce. If he wishes to pay a specific amount of the gold to someone else, he so directs on the back of the certificate, and Citicorp issues a new certificate for the amount transferred to the payee, and another new certificate to the original holder for the remainder.

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. One helpful step which could be taken now for this would be to streamline the method by which the current one ounce and half ounce gold medallions are being made available to United States citizens and corporations in return for dollars at prices related to the daily world market exchange rate between gold and the dollar. An important supplement to this might be for the government to make similarly convenient arrangements to pay dollars for any of the medallions turned in, at prices related to the dollar versus gold exchange rate on the day of that transaction. Some post offices which regularly handle postal money orders, or some Federal Reserve member banks which regularly handle foreign exchange might most readily provide either or both of these services.

Special attention should also be given to the minting of gold coins, in addition to the medallions already authorized, as is now being proposed by Senators Symms, Goldwater, Helms and McClure, and by Congressman Crane, in Bills which are before Congressional Committees represented in this Gold Commission.

Encouragement could also be given to financing 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 examples of the beneficial use of an auxiliary currency to accomplish this in other countries.

We appreciate the opportunity of presenting our observations, and continue to be at the disposition of the Gold Commission.

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SOME NEW USES OF GOLD

Gold has been well characterized as of renewed importance in the banking and monetary systems and as investment. But equally important is the increasing contribution it is making as an element in the structure of our daily life.

Gold atoms are among the Lord's most miraculous creations. Each one is beautifully formed, with a nucleus made up of 79 protons and 118 neutrons, surrounded by 79 electrons precisely arranged in six concentric shells or orbits containing 2, 8, 18, 32, 18, and 1 electrons respectively.

This is a piece of commercial gold leaf, such as brightens the domes of capitols and churches and elegant interiors throughout the world. A small piece of it the size of your thumbnail, 5/8th of an inch, or a centimeter and a half, across, is composed of a billion billion of these gold atoms. One hundred thousand of these small pieces make a troy ounce. Thus, even if gold cost \$1,000 per troy ounce, the billion billion gold atoms in this thumbnail size piece of gold leaf would cost only one cent; or a half cent if gold were \$500 per troy ounce.

Gold shares the valuable properties of other metals. Its atoms pass along thermal energy quickly to each other, making gold a good conductor of heat. Its electrons move smoothly from one atom to another so that gold is a good electrical conductor.

In two ways, however, it surpasses all other metals. First, its atoms have a peculiarly strong affinity for each other, persistently keeping their integrity in chain-like form even when hammered to thinnesses or drawn to finenesses at which any other metal would break. Thus, in engineering terms, gold is the most malleable and ductile metal available to industry. Also, the affinity of gold atoms for each other permits excellent gold to gold bonding by simple thermal compression.

Second, more than any other metal, gold resists chemical reaction with other elements. In industrial, as well as metaphorical terms, it is truly the noblest of metals. It is chemically self-sufficient, shunning chemical alliances with other species. Surrounded by elements which would attack, react with, corrode or destroy other metals, gold remains unperturbed, with its rare properties unimpaired, whether at ordinary temperatures, or in extreme cold, or at red heat.

These characteristics of gold have led to its selection in the communications equipment of today and in the designs of millions of new devices for the electronic world which we are now entering. Telephones, radio, television and aircraft equipment, as well as the thousands of new types of electronic devices, utilize solid state circuits in the form of modules which must be reliably connected and disconnected. Whereas silver contacts are excellent for electric power circuits, the electronic circuits use very low voltage and amperage and little contact-to-contact force, so that if a contacting pair were to form a surface oxide or sulfide, the applied electronic load could not penetrate these insulating films, and disastrous results in the performance in the electronic equipment could occur. Even partial "tarnishing" could ruin the electronic contact.

Because coatings for electronic connectors and contacts remain unaffected and perform reliably at low and high temperatures even when exposed to corrosive atmospheres, gold is now used in the production of the electronic systems of spacecraft, jet fighter planes and missiles, assuring reliable transmittal of signals from source through connector to receiver, without even a millisecond interruption.

The millions of circuits in the new generation of computers rely on gold for crucial connections. All the new airplanes are operated with on-board computers. A break in a circuit for a fraction of a second could change the airplane's course or result in costly damage, or loss of the plane. The incremental cost of gold as compared with using a less expensive metal in an electronic connector might run as high as \$5. Failure of any one connector could cost millions of dollars.

In aerospace, telecommunications, computers or other new electronic equipment where absolute performance is demanded, it is gold that makes product reliability a reality.

Even this small calculator, like the ones so many of us use, relies on gold in its circuits. The manufacturer might save up to a dollar by substituting other metals for the gold. But the cost of just one mistaken decimal point or digit could be immensely costly to someone using the calculator for a business transaction, and could destroy that manufacturer's reputation and market.

In photography, gold is used as a toner with silver halide to make images more life-like.

The brilliant performances of Polaroid's SX-70 cameras and Eastman Kodak's Instant Colorburst cameras are carried out through circuits activated by gold electric contacts.

And now, gold has been called to an additional role. Polaroid has developed a self focusing device for its SX-70 camera. It uses this thin disc of pure gold, one and a quarter inches in diameter, backed with Kapton and aluminum, forming a transducer. This sends out a chord

4 ultrasonic tones, and then receives the echo from the subject to be photographed. The length of time for the echo to come back tells the camera how far away the subject is, and the lens is correctly focused, all in milliseconds, as I am demonstrating now.

Because of its unique ductility and freedom from atmospheric damage, gold is the ideal material for this and other transducer devices to convert electrical into mechanical impulses, and mechanical into electrical impulses.

The beauty and permanence of gold has led to its use in buildings from the time of Solomon's Temple. One of the applications, in the form of gold leaf, has continued unchanged in quality. This is gold leaf which is currently being used and which shines so splendidly a few blocks from here on the masonry of the Helmsley building, as you look south on Park Avenue; at Rockefeller Center; at the Waldorf Astoria; and on magnificent domes and elegant interiors throughout the world. It is almost exactly the same as the gold leaf used on temples in the Middle East more than 2,000 years ago.

Architects are increasingly specifying this real gold leaf. Now, however, a new and even more important use of gold in architecture has been developed. If you take a piece of glass like this and apply to it around two millionth of an inch of pure gold, the gold is transparent and you have a gentle, soft, greenish blue light coming through, but an amazing thing is happening: the visible light comes through but the heat rays or infrared rays are bounced back. The glass is transparent but it acts as a selective mirror against heat rays.

So, an architect who wants to have not only a building which is beautiful from the outside, but a building which also has warmth and pleasurable appearance inside, selects gold-coated glass. And when he does so he saves great amounts of energy, because in the summer time, when the sun is shining outside, the air conditioning required to keep the building cool takes very much less energy than if the windows were clear and the heat rays could come in.

And the reverse happens in the winter. The warmth we all feel in this room is radiant heat. In the winter this radiant heat is expended out into the cold outside world through ordinary windows, requiring much energy from the heating system to keep the room warm. But again, when gold glass windows are used, the radiant heat is reflected back into the room and much less energy is required.

Beyond this saving of energy every day in the summer and in the winter, there is a saving in the first cost of the building, because the architect can use a smaller air conditioning system and a smaller heating system when he uses gold glass.

Keen Engineering Company of Vancouver, British Columbia has just completed an analysis comparing capital and energy costs for a new building in Edmonton, Alberta, called Energy Square, which uses gold glass. There was a saving of more than \$37,000 in total capital cost,

as compared with the capital costs if clear glass had been used. In addition, there is a continuing saving in energy costs at the rate of more than \$5,000 per year.

It was found that if the same building were to be built in a typical midwestern U.S. city, the total capital costs of the building using gold glass would be \$82,000 less than if clear glass were used; and there would also be a \$10,000 per year continuing energy saving.

This new use of gold can be expected to increase. A booklet describing the beauty and economic advantages of gold in architecture has now been prepared by The Gold Institute and is now in the hands of more than 3,000 leading architects throughout the world.

As we move further into the nuclear era, gold is showing great possibilities, and is emerging as a valuable tool. Unlike many other metals, gold has a single natural isotope. It is not radioactive, but is stable even in the presence of radioactivity which would upset the properties of many other metals. Gold remains impervious to attack or corrosion. This has led the most responsible nuclear designers such as those in Sweden to propose the use of gold for the permanent enveloping of capsules of radioactive waste, to protect the people of the future.

Also in the development of fusion energy, gold is playing a role in both of the two most promising avenues of exploration -- that is, the magnetic containment method and the inertial containment method.

In the first, deuterium-tritium hydrogen isotopes are brought to fusion temperature while being compressed in powerful magnetic fields within a vacuum vessel, sealed to prevent any trace of impurities from coming through the seal. At Oak Ridge, a large vacuum vessel, wholly gold-lined, was used. At Princeton, seals can be made in the form of one meter hoops of pure solid gold rod the thickness of a pencil lead.

In the inertial containment method, tiny hollow spheres of gold along with other materials encase pellets of the hydrogen isotopes. When hit from all sides by laser beams or beams of electrons or ions, the hollow gold spheres implode, resulting in the extraordinary compaction and temperature necessary to fuse the isotopes and to generate many times the energy put into the system.

The United States, the Soviet Union and a Europe-Japan coalition are each spending more than 600 million dollars per year now on these two methods, racing for the prize of being the first to produce fusion energy commercially. It would appear that gold will be used in whichever system wins out.

Finally, I should mention a use of gold, in small quantities, but of enormous benefit. Many sufferers from certain types of rheumatoid arthritis are thankful for the relief given by doctors throughout the world who administer intramuscular injections of gold medications. Among these are gold sodium thiomalate solution called "Myochrysine", made by Merck, Sharp & Dohme, and gold thioglucose called "Solganol", made by Schering. The gold content in both medications is approximately

50%. Dr. John T. Decker, Chief of Arthritis & Rheumatology Branch, National Institutes of Health and Dr. Henry Roth of the Arthritis Association have found that gold treatment offers many victims of rheumatoid arthritis a strong probability of recovery, rehabilitation and prevention of disability. They estimate that around 100,000 people in the U.S. alone are currently receiving the benefits of gold treatment.

The Gold Institute/l'Institut de l'Or monitors developments throughout the world on uses of gold and is at the service of all those who can advantageously use gold in the products of tomorrow.

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THE GOLD INSTITUTE/L'INSTITUT DE L'OR REFINING STATISTICS

Production and Disposition of 995+ Gold Bullion by Participating Refiners in the United States

	TROY OUNCES		THOUSAND TROY OUNCES		
	September 1981	Sep 1981	Aug 1981	Jan-Sep 1981	Full Yr 1980
<i>MONTHLY RATE</i>					
THESE REFINERS' PRODUCTION, BY SOURCE					
From Primary (ores & concentrates)	69,710	70	71	68	58
From Coins	0	0	0	0	0+
From Old Scrap (used gold products)	293,919	294	288	492	538
From New Scrap (in-plant clippings, waste)*	46,702	47	38	43	34
TOTAL PRODUCTION	410,331	410	398	603	629
TOTAL PRODUCTION Less New Scrap*	363,629	364	360	561	596
ABOVE TOTAL PRODUCTION, BY OWNERSHIP					
From Refiners' Own or Purchased Materials	188,152	188	210	423	406
Refined on Toll for Others	222,179	222	188	180	223
DISPOSITION BY THESE REFINERS					
Converted (fabricated) in Plant	53,497	53	58	42	41
Shipped Out: Own Materials	134,054	134	166	400	373
Against Tolls	194,469	194	179	156	222
TOTAL DISPOSITION	382,020	382	402	599	635
TOTAL DISPOSITION Less New Scrap*	335,318	335	364	556	602
<i>TOTAL FOR PERIOD</i>					
RESULTING CHANGE OF THESE REFINERS' STOCKS (Production Minus Disposition)	+28,311	+28	-4	+42	-75

Production and Disposition of 995+ Gold Bullion by Non-U.S. Participating Refiners

	TROY OUNCES		THOUSAND TROY OUNCES		
	September 1981	Sep 1981	Aug 1981	Jan-Sep 1981	Full Yr 1980
<i>MONTHLY RATE</i>					
THESE REFINERS' PRODUCTION, BY SOURCE					
From Primary (ores & concentrates)	2,018,463	2,018	1,973	2,030	2,101
From Coins	160	0+	0	17	24
From Old Scrap (used gold products)	270,164	270	169	196	322
From New Scrap (in-plant clippings, waste)*	13,758	14	10	12	16
TOTAL PRODUCTION	2,302,545	2,303	2,152	2,255	2,464
TOTAL PRODUCTION Less New Scrap*	2,288,787	2,289	2,142	2,243	2,448
ABOVE TOTAL PRODUCTION, BY OWNERSHIP					
From Refiners' Own or Purchased Materials	2,086,308	2,086	1,875	1,987	2,011
Refined on Toll for Others	216,237	216	277	267	453
DISPOSITION BY THESE REFINERS					
Converted (fabricated) in Plant	79,969	80	72	59	31
Shipped Out: Own Materials	1,995,600	1,996	1,820	1,931	2,008
Against Tolls	280,415	280	134	263	432
TOTAL DISPOSITION	2,355,984	2,356	2,026	2,253	2,471
TOTAL DISPOSITION Less New Scrap*	2,342,226	2,342	2,016	2,241	2,455
<i>TOTAL FOR PERIOD</i>					
RESULTING CHANGE OF THESE REFINERS' STOCKS (Production Minus Disposition)	-53,439	-53	+126	+17	-84

* PRODUCTION From New Scrap is 995+ Gold Bullion made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes; since it is in continuous cycle from new scrap to 995+ Gold Bullion, to new scrap, some like to see the production and disposition totals after deducting the new scrap from both.

THE GOLD INSTITUTE/L'INSTITUT DE L'OR

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The Gold Institute/l'Institut de l'Or has researched and analyzed reports of the U.S. Bureau of the Census and the International Monetary Fund to prepare the following new summaries for the members of The Gold Institute/l'Institut de l'Or.

NET MOVEMENT OF GOLD BULLION OVER THE BORDERS INTO (+) and OVER THE BORDERS OUT OF (-) THE UNITED STATES

-----In Thousands of Troy Ounces-----

<u>Source or Destination</u>	<u>September 1981</u>	<u>August 1981</u>	<u>Monthly Average Jan-Sep 1981</u>	<u>Monthly Average Full Yr 1980</u>
Switzerland-----	+ 26	- 27	+ 10	+ 2
Canada-----	+ 22	+205	+115	+ 29
Brazil-----	+ 16	+ 9	+ 10	+ 4
Uruguay-----	+ 13	+ 24	+ 9	+ 2
Chile-----	+ 8	+ 10	+ 8	+ 5
Argentina-----	+ 5	+ 10	+ 4	+ 3
West Germany-----	+ 1	+ 1	- 3	- 12
Japan-----	0	+ 17	+ 7	+ 13
Indonesia-----	0	+ 1	+ 2	+ 9
USSR-----	0	0	+ 4	+ 11
Peru-----	0	+ 4	+ 4	+ 2
Netherlands-----	0	0	0	+ 10
Yugoslavia-----	0	0	+ 3	+ 4
South Africa-----	0	0	0	+ 5
Ecuador-----	0	0	0	+ 1
Cuba-----	0	0	+ 1	+ 1
Paraguay-----	0	0	0	+ 3
Dominican Republic-----	0	0	0	+ 3
Hong Kong-----	0	0	- 3	0
Mexico-----	0	0	- 11	- 33
Italy-----	- 6	0	- 1	0
France-----	- 14	- 11	- 10	- 5
United Kingdom-----	-256	- 49	-370	-115
International Monetary Fund-----	0	0	0	+189
Other Countries-----	- 1	- 1	0	0
Net movement of existing gold bullion into (+) and from (-) the United States-----	-185	+195	-221	+128
Gold bullion created by U.S. refiners participating in Gold Institute refining series-----	<u>+410</u>	<u>+398</u>	<u>+603</u>	<u>+629</u>
Resulting supply of gold bullion to the United States-----	+225	+593	+382	+757
ADDITIONAL MOVEMENT OF GOLD TO THE UNITED STATES IN THE FORM OF COINS*				
From South Africa-----	+ 35	+133	+ 81	+131
From Canada-----	+ 36	+ 65	+ 50	+ 69
From Other Countries-----	+ 76	+ 70	+ 71	+ 57
Total-----	<u>+147</u>	<u>+268</u>	<u>+209</u>	<u>+257</u>

Calculated by The Gold Institute from Census reports.

Reserves of Various Countries
 reported as equivalent million troy ounces of gold
 (based on London PM fix)

Country	-----December 31, 1979-----			-----July 31, 1981-----		
	Physical Gold	Other Reserves	Total Reserves	Physical Gold	Other Reserves	Total Reserves
United States	264.60	10.56	275.16	264.17	34.34	298.51
West Germany*	95.25	71.30	166.55	95.18	91.88	187.06
France*	81.92	23.85	105.77	81.85	48.16	130.01
Switzerland	83.28	22.30	105.58	83.28	19.82	103.10
Japan	24.23	26.49	50.72	24.23	52.62	76.85
Saudi Arabia	.58	26.15	26.73	4.57	54.08	58.65
Great Britain	18.25	26.78	45.03	18.89	30.59	49.48
Canada	22.18	3.86	26.04	20.90	2.88	23.78
South Africa	11.34	.59	11.93	12.24	1.32	13.56
Brazil	1.70	12.17	13.87	2.04	10.14	12.18
Other Countries	<u>339.76</u>	<u>288.47</u>	<u>602.08</u>	<u>345.34</u>	<u>408.79</u>	<u>857.53</u>
WORLD OTHER THAN EASTERN BLOC	943.09	486.37	1429.46	952.69	754.92	1707.61

*France committed about 21 million troy ounces of gold and West Germany committed about 23 million troy ounces of gold to the European Community pool and were credited with European Currency Units (ECU's). Following IMF procedures, in this report the physical gold in these ECU holdings is included as part of "Other Reserves".

All figures calculated by The Gold Institute from International Monetary Fund data.

Statement Before the Gold Commission

November 13th, 1981

Rudiger Dornbusch

Massachusetts Institute of Technology

Lack of fiscal discipline, high real interest rates and persistently high inflation, all draw attention to disarray in our macroeconomic policies. The present Enquiry on the Resumption of Specie Payments is an important opportunity to look for more coherent policies and for institutions that lend stability and credibility to these targets.

I will argue three points. First, that the historical experience under the 19th century gold standard does not warrant the notion that a gold-based currency provides a stable macroeconomic framework. A gold-based monetary system offers the costs and uncertainties of a commodity standard without many of the advantages of a managed paper standard. Second, that in the absence of a monetary role for gold, the existing public gold holdings should be denationalized with the proceeds used for debt retirement. Third, that monetary growth should be more narrowly confined, by formal rules, to managing price level stability. Such rules would directly contribute to stability but also exert beneficial effects in respect to fiscal discipline.

1. The Historical Experience With Gold

The gold standard of the 19th century, lasting to World War I, is often thought of as a period of unrivalled price stability, a period of economic progress and a world economy open to trade, investment and capital flows. In

her careful review of the gold standard for this Commission, however, Dr. Schwartz has drawn attention to the fact that the gold standard was not, in fact, a period of short term economic stability. Quite on the contrary, macroeconomic instability was very severe and, in many respects, more so than we have experienced in the past twenty years.

At the outset it must be admitted that the average rate of inflation during the gold standard was extremely low. Table I shows that for the US, the UK and Germany, the average inflation rates in the late 19th century and early 20th century average less than one percent. In the last twenty years, by contrast, they have run to substantially higher rates.

Table I A COMPARISON OF MACROECONOMIC STABILITY
(All data in percentage rates)

Variable	US		GERMANY		UK	
	1879-1913	1960-79	1870-1913	1960-79	1870-1913	1960-79
Per Capita GNP Growth	2.2%	2.7%	1.7%	3.3%	1.2%	2.2%
Average Inflation Rate	0.5	4.6	0.4	2.7	-0.2	8.3
<u>Variability of:</u> *						
Unemployment	4.5	1.4	1.6	1.5	1.8	1.5
Inflation	5.5	4.3	5.7	3.9	7.1	4.0
Money Growth	6.7	1.9		n.a.		n.a.
Real Interest Rates	13.2	3.5		n.a.		n.a.

* Variability is measured by the standard deviation of the relevant series.
Sources: US Historical Statistics, Citibank Data Base, B. R. Mitchell European Statistics, and Friedman, M. and Schwartz, A., A Monetary History of the US.

Several other measures of macroeconomic performance suggest, however, that the gold standard was clearly inferior to the last twenty years' macroeconomic performance. Average growth rates of per capita GNP are higher now than they were then. The variability of unemployment, inflation, money growth and real interest rates, all were higher under the gold standard than they are today. In Table I, the US unemployment rate, for example, is shown to have had three times the variability under the gold standard that we have experienced in the last twenty years. For the UK and Germany the reduction in variability, by comparison, is only marginal, but still is lower now than under the gold standard. Perhaps more surprising to those who think of the 19th century as a period of price stability is the fact that inflation was more variable compared to even the last twenty years.

Of particular interest is the behavior of real interest rates. Table I shows that the realized real interest rate under the gold standard has a variability nearly four times as high as in the recent period. Figure 1 shows the real interest rate on 4-6 months commercial paper (at annualized rates, using wholesale prices as the deflator). Noting the +/- 60% scale on the axis, there is little doubt that real interest rates were extraordinarily volatile.

It is also the case that real interest rates were by no means uniformly low. Table II shows the average realized real rate on commercial paper for ten year periods. During periods of deflation, real rates were persistently high, during periods of inflation they were negative.

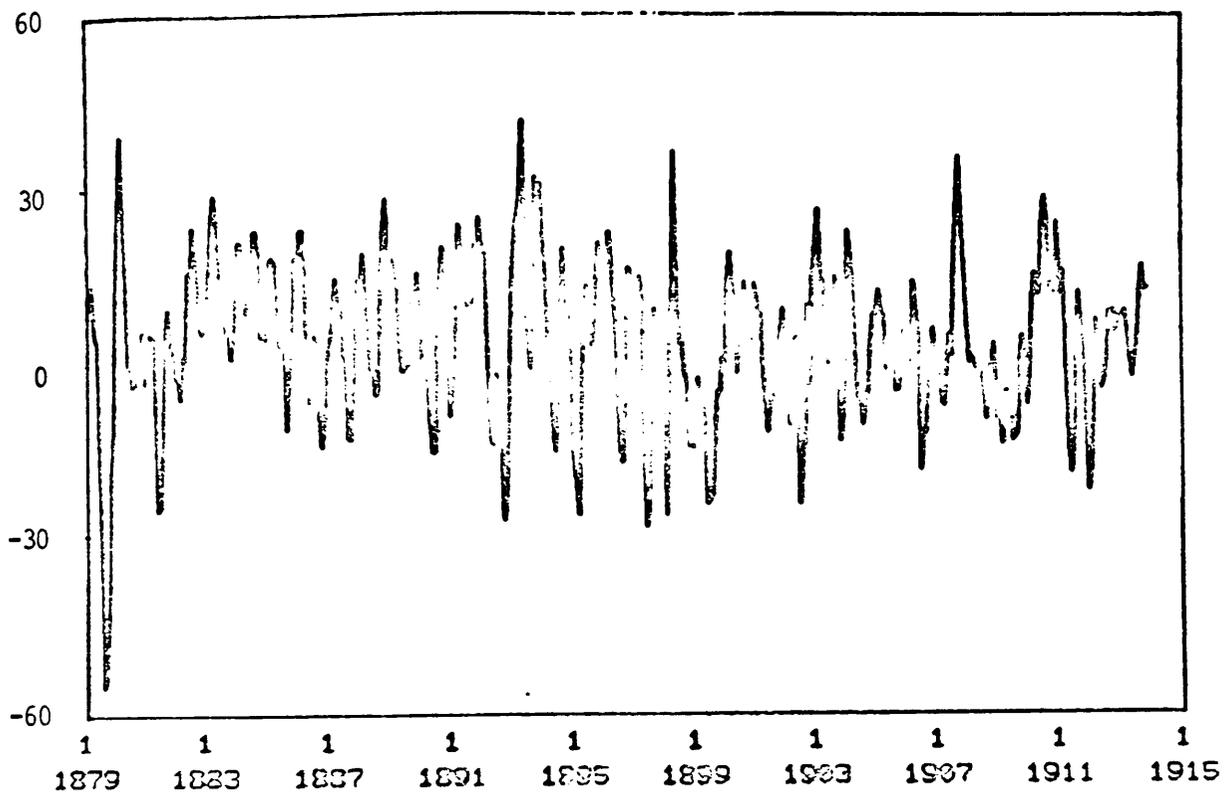
Table II AVERAGE REAL RATE OF INTEREST ON COMMERCIAL PAPER
(Percent per Year)

	1870-79	1880-89	1890-99	1900-10
	7.4%	7.2%	3.1%	-2.1%

Source: L. Summers, "The non-Adjustment of Nominal Interest Rates: A Study of the Fiscal Effect." Unpublished manuscript, M.I.T., 1981.

Figure 1 Realized Real Rate of Interest on Commercial Paper
1879-1913

Percent



The ultimate case for the gold standard rests on the long run stability of prices. The stability of prices is guaranteed by the limited gold deposits and by the automatic response of gold extraction to changes in the real price of gold. With rapidly growing money demand gold appreciates in terms of goods and thus provides an incentive for more rapid extraction. Conversely, with slow growth in money demand, the real price of gold declines, thus checking the rate of increase of gold holdings.

From the perspective of the early 1920s, having witnessed war inflation and a 50% collapse of prices in the US and UK, and the hyperinflation of Germany and Central Europe, Keynes and other observers looked on the gold standard as a period of price stability. Thus Keynes notes in 1923:

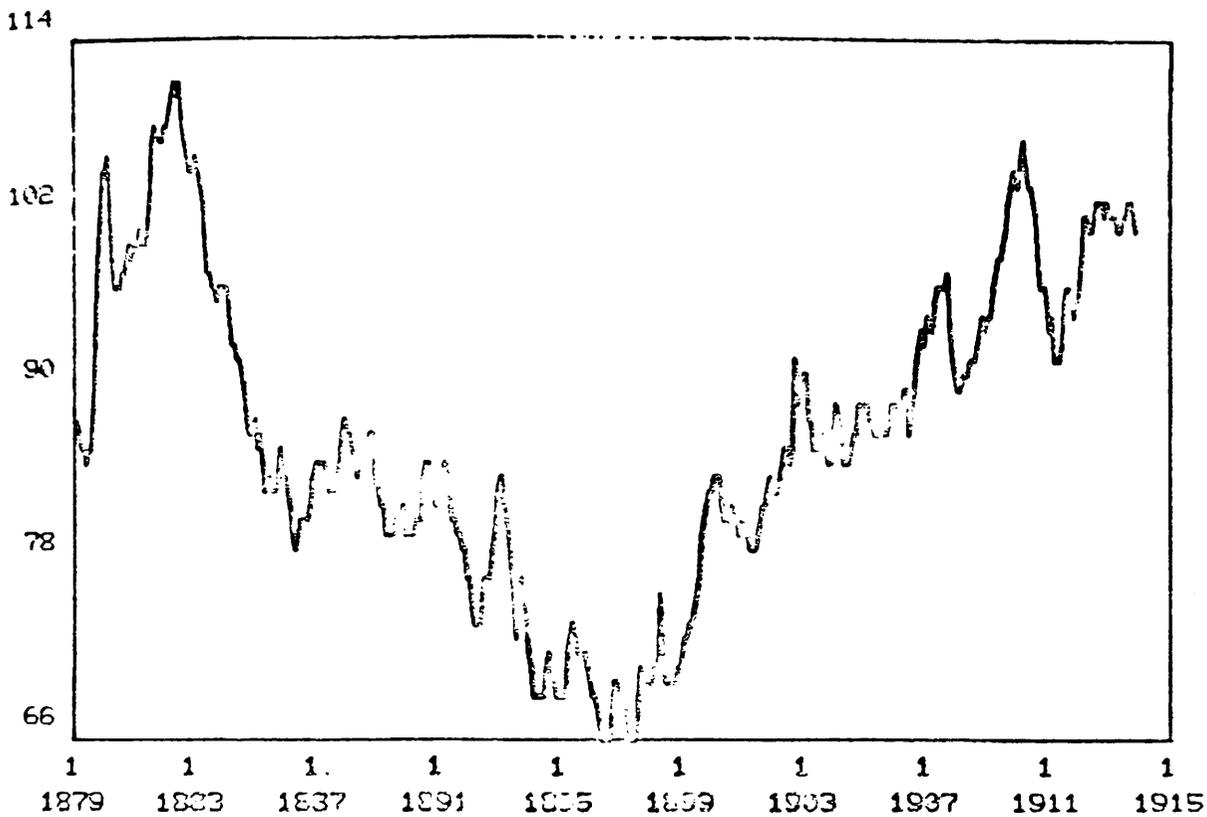
"For the next seventy years, with some temporary fluctuations, the tendency of prices continued to be downwards, the lowest point being reached in 1886. But while this was a tendency as regards direction, the remarkable feature of this long period was the relative stability of the price level. Approximately the same level of prices ruled in or about the years 1826, 1841, 1855, 1862, 1867, 1871, and 1915... . No wonder that we came to believe in the stability of money contracts over long periods. The metal gold might not possess all the theoretical advantages of an artificially regulated standard, but it could not be tampered with and had proved reliable in practice."¹

But, in fact, one must take a very long perspective, indeed, to find in the 19th century price stability and stable money. How inadequately the money supply process worked to stabilize prices is shown in Figure 2. Here we show wholesale prices in the US for the period 1879-1913. Note that in the very year of gold resumption inflation was in excess of ten percent. In the period from 1884 to the mid 1890s prices were falling. From the mid-1890s to 1913 they were on average rising.

It is true that by 1913 prices were about at the same level as they had been in 1880. But surely that was in no part due to any systematic aspect of

¹ J. M. Keynes, "The Social Consequences of Changes in the Value of Money," in Essays in Persuasion. Norton, pp. 88-89.

Figure 2 Wholesale Prices in the U.S.:1879-1913
(Index 1910-14 =100)



the gold standard. It was due to the entirely unanticipated gold discoveries in South Africa. Long run price stability was altogether accidental. It was the outcome of random gold discoveries and systematic economizing on monetary gold, not a built-in feature of the gold standard.

The long run price trend under a gold standard depends on the balance between the growth in monetary and industrial gold demand and the rate of extraction of gold. New discoveries of gold, by raising the expected path of prices, lead to transitory expansions in activity and unanticipated inflation. Unexpected increases in monetary or industrial gold demand, as well as unexpected reductions in the productivity of mines, lead to depression of activity and deflation.

The real price of any commodity exhibits substantial variability as beliefs about prospective demand and supply lead speculators to reset the path of prices and resource extraction. Under a gold standard the volatility of the real commodity price becomes a macroeconomic problem. This is so because the dollar commodity price is pegged while the general price level is imperfectly flexible. Adjustments in the real commodity price therefore must be compensated by adjustments in economy-wide activity and real interest rates. To the extent that a good part of the "news" concerning gold is unrelated to macroeconomic activity, it gives rise to excess variability in output and prices that can be avoided by an appropriately framed monetary rule.

2. Further Arguments Against Gold

There are three further important arguments against gold as a central part of the monetary system. The first is the resource cost of maintaining

gold cover, the second concerns the extraordinary difficulty of choosing a support price. The third consideration regards international aspects.

Under any form of gold standard where issue of high powered money is to be backed by gold, we face the choice of two possibilities. Either growth in real money demand is satisfied by deflation or else the monetary authorities have to acquire gold to cover issue of high powered money. The expense of providing gold cover is in fact very substantial. At present, the ratio of the monetary base to GNP is about 6 percent and, under price stability this ratio might rise to 10%. Real money demand grows at about 3% per year. Thus, on a path of price stability and maintaining 100% marginal cover on money issue the monetary authorities would be absorbing gold worth .3% of GNP every year. That would be the real resource cost of running a full gold standard. To warrant such an investment, we would certainly require more of a stability advantage from the gold standard than we can in fact expect.

The transition to a gold standard--the monetary authorities being committed to buy and sell gold at a fixed dollar price--presents an extraordinary difficulty. If the support price were chosen too low, excessive industrial use and low extraction would lead to the prediction that the support cannot be maintained and therefore, in time, leads to a run. Conversely, if the support price is set too high, all the speculative holdings of gold would find their way into the Bank, leading to a monetary expansion. There is little guidance in the free market price. It is certainly the case that the proposal to go onto gold at the market price, a specified period of time ahead, satisfies precisely the conditions of a speculative "bubble." It is perfectly conceivable that the gold price skyrockets since all considerations of fundamentals have been removed by the undertaking to adopt the gold standard at the market price,

buying up all speculative holdings.

I believe a move to a gold standard would definitely be adventurous. Moving to gold implies that in the transition control of the money supply is placed in the hands of gold speculators. There is no reason to assume that the wrong choice of gold price might not lead to a twenty percent rise in money or a twenty percent fall. But then what is the right price?

The international aspects of the gold standard pose additional, severe problems. Whether other countries join, or do not join, the US in moving to gold has significant implications for world monetary gold demand, and thus for the appropriate support price. Perhaps the worse possible outcome is one where a group of countries decides to first watch the US experiment and then, once successful, join by moving on gold. In that event, speculation about foreign monetary policy exerts major macroeconomic effects at home. The evidence surrounding British resumption of gold in 1925 makes the interdependence point very forcefully.

But it is also important to recognize that an international gold standard with fixed exchange rates forces onto prices and commercial policy much of the adjustment that today is taken up by exchange rates. It is worth recording in this context that restrictive commercial policies were, certainly in the case of the US, very much part of the gold standard experience. If the 1980s are expected to be a period of substantial changes in international comparative advantages and shifting patterns of trade, then a gold standard may, by no means, afford the adjustment and flexibility that we can get from flexible exchange rates.

3. A Gold Policy

Present US gold holdings are about 264 million ounces. At a price of around \$400 an ounce, the gold stock is worth about \$100 billion. Assuming that the US does not adopt a gold standard there is no reason to continue carrying the gold stock, and I would advocate an immediate and complete sale. Any clearcut decision in respect to gold cannot fail to affect significantly the world price of gold. But, given the decision, the change in price is substantially the same whether the gold is auctioned off now or is offered more gradually for sale. What is the case, though, is that the present value of sale revenues is larger, the earlier the decision is made.²

The revenues from the gold auction could be used to reduce the public debt. With the current debt in the hands of the public, at \$600 billion, the gold sale could lead to a sizeable reduction in debt. The debt reduction, in turn, would reduce interest burdens and hence prospective budget deficits with their implications for inflation and/or taxation. Selling the gold stock and using the proceeds to retire debt effectively amounts to denationalizing the gold stock with every taxpayer and/or money holder benefiting or sharing in the proceeds by a reduction in prospective taxes that would have been required to service the debt.

I do not see any merit in proposals to maintain a ceremonial role for gold. If we are to be on a paper standard then price performance, not gold cover, are the criterion by which we judge the success and stability of policies. The more clearly we focus on policies that will ensure price level stability, the better the system will be understood, and the more accountable policymakers will be for delivering results. In this context I would think that special arrangements for the valuations of gold certificates or the creation of gold

² On this point see the study by S. Salant and Dale Henderson, "Market Anticipations of Government Policies and the Price of Gold." Journal of Political Economy, 4, 1978.

coins for the benefit of native-born Americans detract from the important issues at stake. We certainly would not want adoption of a new monetary standard to be based on an alliance of confusion.

4. Monetary Rules

The 1960s make the case for actively managed monetary and fiscal policy. With the same force the 1970s established the need for a firm anchor that ties down monetary policy and prevents a stance of accommodation that ultimately validates and leads to the very expectation of stubborn, persistent inflation. The costs of eliminating the inflation now almost, and perhaps do, overshadow the advantages that we hoped to achieve from monetary accommodation.

Fiscal policy has always been pursued largely in an independent fashion of what monetary policy might be. Monetary policy, by contrast, has traditionally adjusted, accommodating fiscal policy and avoiding large increases in real interest rates. The lack of coordination has, of course, meant too much money and too much inflation, and budgets that have been too easy to be compatible with a high growth economy.

The disillusionment with discretionary monetary policy is sufficiently wide-spread to consider now a fundamental change in monetary rules. Such a change would not be necessary had we not had an experience of adverse supply shocks that progressively raised inflation. It is made necessary by the fact that inflation now is unacceptably high and that return to price stability may be importantly helped by the establishment of monetary rules. The rule that is most persuasive is for the monetary authorities to create high-powered money at a specified rate, say 5% per year, but to correct that path, with a feedback whenever prices move, on a half-yearly basis, more than one percentage point

away from a target path. Whether the target path is a constant price level, or one of very moderate inflation, is a secondary issue compared to the principle of a clearly predictable behavior of the price level.

A paper standard with a monetary rule and a feedback arrangement adopts all the important features of the gold standard. Monetary growth is limited and changes in the purchasing power of money, relative to a path of price stability, affect in a stabilizing direction the rate of money creation. But, of course, the system has much more stability than a gold standard in that there need not be any concern about troubles in South Africa's gold mines or Russian sale of gold. The serious problem of the gold standard--making gold problems macroeconomic problems--are entirely avoided as are, of course, the resource costs of operating a gold standard.

At present, the Federal Reserve is implementing controlled money growth. In so doing, it has forced up real interest rates to levels only matched in the 19th century experience. The high real interest rates, in turn, force recognition that fiscal policy is as much the culprit of macroeconomic instability as is past monetary accommodation. An explicit monetary rule will have important advantages in forcing increased fiscal discipline. Movements in real interest rates are a more potent and more immediate reminder to Congress that fiscal policy is out of line with the objective of price stability than is the slow accumulation of inflation. A monetary rule will exert important stabilizing influences on fiscal policy and thus will make it unnecessary to take the unsatisfactory road of balanced budget legislation.

Rules need exceptions otherwise they will not be credible. Under gold standard suspension of specie payments and "during crisis, discount freely" were the policy. Of course, while being a policy they were only infrequently allowed. The same, in a modern version, should be done with monetary rules. Well specified events should allow for accommodating monetary policies, but the events must be sufficiently extraordinary to remove any doubt about the trend behavior or prices.

Moving to a monetary rule will only marginally affect the costs of disinflation that the economy will undergo on the way to price stability. Economists have no trouble suggesting more activist rules that might lessen the output cost and enhance the speed of adjustment--wage controls, wage synchronization, TIPS--and they may all be important. But they can only be discussed in a serious way once the basic path of prices and that means the path of monetary and fiscal policy is set. It is for this reason, too, that a formal establishment of monetary rules is a priority.

Views Presented to the Gold Commission

by

William Fellner
American Enterprise Institute
Yale University, Emeritus

I. Four Conclusions.

A. When specific conditions are satisfied, the gold standard can function efficiently and it has major advantages over the available alternatives.

B. In what I regard as the now foreseeable future, these conditions will not be satisfied, and there is no doubt in my mind that 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 carry the identical risk of political arbitrariness which we must learn to overcome in our present monetary system and, by covering up the essence of the matter, such constructs 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 in those circumstances gold 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 earlier inflationary periods and of the recent era are avoided.

(2) The essential condition that needs to be satisfied for gold to serve 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. This is what is needed for ensuring that an institutionally fixed nominal (current dollar) price of gold should be associated with a reasonable approximation to the stability of the general price level. To what extent and with what qualifications 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. In some future period these conditions might again be met.

(3) However, it seems quite clear to me that these conditions are not met in the present circumstances. Nor will they be satisfied in any future period near and foreseeable 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 (an "if" to which I will return later) 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 is not responsive to a rising real price of gold. Hence, 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 decline of the world output including rough allowances for the output of the two large 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 suggesting such a response to recent price trends.

(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 we decided to tie our currency to gold, and thereby 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 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 would be rising from its initial level, and it would be rising at a hard-to-predict and presumably irregular rate.

With the nominal price of gold held constant, this would express itself in substantial and disturbing deflationary pressures on the general price level unless the nominal (current-dollar) price were raised successively or central banks and other official agencies now jointly holding between 1,100 and 1,200 ounces of gold 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 the management of such a system the same kind of political leeway the misues of which we must try to overcome in the management of inconvertible paper money.

(5) I have so far been concerned with the problems that would arise in the present circumstances if all countries whose official agencies own major amounts of gold attempted to cooperate in restoring the gold standard. If the other countries did not participate in such an effort, then for us there would arise the additional difficulty of becoming exposed to large inflationary gold inflows or large deflationary gold outflows caused by political decisions abroad to sell to us or to buy from us gold at the fixed price we would be setting. To suspend purchases or sales of gold at the officially set price would be even more alien to the principles underlying the gold standard than would adjustments of the official price be, but essentially the same basic criticism needs to be made of both these techniques. Both would require coping with the same risk of political arbitrariness and irresponsibility with which countries will have to cope successfully under inconvertible paper if they are to restore healthy productivity and employment trends.

(6) In these remarks I deliberately did not touch on the transition difficulties of feeling out the initially "correct" price of gold. These difficulties might also be substantial but transition difficulties are unavoidable in any effort to eliminate our inflationary disturbances. In the present circumstances, and in those now foreseeable, the difficulties standing in the way of returning to the gold standard are far deeper.

However, I will end by referring back to all four conclusions expressed at the beginning of this paper. In particular I will repeat that I consider the more distant future unpredictable in this regard, and that I feel opposed to the resumption of gold sales by the Treasury.

Statement by Alan Greenspan*

before the
Federal Gold Commission
November 13, 1981

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In years past, the desire to return to a monetary system based on gold was perceived as nostalgia for a bygone era, when times were simpler, problems less complex, and the world not threatened with nuclear annihilation. But after a decade of destabilizing inflation and economic stagnation, the restoration of a gold standard has become an issue that is clearly rising on the economic policy agenda.

The increasingly numerous proponents of a gold standard persuasively argue that large budget deficits and large federal borrowing requirements would be difficult to finance under such a standard. Heavy claims against paper dollars currently cause few technical problems, for the Treasury can legally borrow as many dollars as the Congress authorizes. But with unlimited dollar conversion into gold, the ability to issue dollar claims would be severely limited. Obviously if you cannot finance federal deficits, you cannot create them. Taxes would then either have to be raised or expenditures lowered. The restrictions of gold convertibility would therefore profoundly alter the politics of fiscal policy that have prevailed for half a century.

Even some of those who conclude a return to gold is infeasible remain deeply disturbed by the current alternatives. And yet, even those of us who are attracted to the prospect of gold convertibility are confronted with a seemingly impossible obstacle: the latent claims to gold represented by the huge world overhang of fiat currency, mainly dollars.

The immediate problem of restoring a gold standard is fixing a gold price that is consistent with market forces. Obviously if the offering price by the Treasury is too low, or subsequently proves to be too low, heavy demand at the offering price could quickly deplete the total U.S. government stock of gold, as well as any gold borrowed to thwart the assault. At that point, with no additional gold available, the U.S. would be off the gold standard and likely to remain off for decades. Alternatively, if the bid price is initially set too high, or subsequently becomes too high, the Treasury would be inundated with gold offerings. The payments for the gold drawn on the Treasury's account at the Federal Reserve would add substantially to commercial bank reserves and probably act, at least temporarily, to expand the money supply with all the inflationary implications thereof. Monetary offsets to neutralize or "ear-mark" gold are, of course, possible in the short run. But as the West German monetary authorities soon learned from their past endeavors to support the dollar, there are limits to monetary countermeasures.

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The only seeming solution is for the U.S. to create a fiscal and monetary environment which in effect makes the dollar as good as gold, i.e., stabilizes the general price level and by inference the dollar price of gold bullion itself. Then a modest reserve of bullion could reduce the remaining narrow gold price fluctuations effectively to zero, allowing any changes in gold supply and demand to be absorbed in fluctuations in the Treasury's inventory.

What the above suggests is that a necessary condition of returning to a gold standard is the financial environment which the gold standard itself is presumed to create. But, if we restore financial stability, what purpose is then served by a return to a gold standard?

Certainly a gold based monetary system will not necessarily prevent fiscal imprudence, as 20th century history clearly demonstrates. Nonetheless, once achieved, the discipline of the gold standard would surely reinforce anti-inflation policies, and make it far more difficult to resume financial profligacy. The redemption of dollars for gold in response to excess federal government induced credit creation would be a strong political signal. Even after inflation is brought under control the extraordinary current political sensitivity to inflation will surely remain.

Concrete actions to install a gold standard are premature. Nonetheless, there are certain preparatory policy actions that could test the eventual feasibility of returning to a gold standard, that would have positive short term anti-inflation benefits, and little cost, if they fail.

The major roadblock to restoring the gold standard is the problem of re-entry. With the vast quantity of dollars world-wide laying claim to the U.S. Treasury's 264 million ounces of gold, an overnight transition to gold convertibility would create a major discontinuity for the U.S. financial system. But there is no need for the whole block of current dollar obligations to become an immediate claim. Convertibility can be instituted gradually by, in effect, creating a dual currency with a limited issue of dollars convertible into gold. Initially they could be deferred claims to gold, for example, five-year Treasury notes with interest and principal payable in grams or ounces of gold.

With the passage of time and several issues of these notes we would soon have a series of "near monies" in terms of gold and eventually, demand claims on gold. The degree of success in restoring long-term fiscal confidence will show up clearly in the yield spreads between gold and fiat dollar obligations of the same maturities. Full convertibility would require that the yield spreads for all maturities virtually disappear. If they do not, convertibility will be very difficult, probably impossible, to implement.

A second advantage of gold notes is that they are likely to reduce current budget deficits. Treasury gold notes in today's markets could be sold at interest rates approximating 2% or less. In fact from today's markets one can construct the equivalent of a 21 month Treasury gold note yielding less than 1%, by arbitraging regular Treasury note yields for August, 1983 maturities (13.2%) and the forward delivery premiums of gold (13% annual rate) inferred from August, 1983 futures contracts. Presumably five year note issues would reflect a similar relationship.

The exchange risk of the Treasury gold notes, of course, is the same as that associated with our foreign currency Treasury note series. The U.S. Treasury has, over the years, sold significant quantities of both DM and Swiss franc denominated issues, and both made and lost money in terms of dollars as exchange rates have fluctuated.

tuated. And indeed there is a risk of exchange loss with gold notes. However, unless the price of gold rises 84% over a five year period (13% compounded annually), interest payments on gold notes in terms of dollars will be less than conventional financing requires. The run-up to \$875 per oz. in early 1980 was surely an aberration, reflecting special circumstances in the Middle East which are unlikely to be repeated in the near future. Hence, anything close to a doubling of gold prices in the next five years appears improbable. On the other hand, if gold prices remain stable or rise moderately, the savings could be large: each \$10 billion in equivalent gold notes outstanding would, under stable gold prices, save \$1-1/4 billion per year in interest outlays.

A possible further side benefit of the existence of gold notes is that they could set a standard in terms of prices and interest rates that could put additional political pressure on the administration and the Congress to move expeditiously towards non-inflationary policies. Gold notes could be a case of reversing Gresham's Law. Good money would drive out bad.

Those who advocate a return to a gold standard should be aware that returning our monetary system to gold convertibility is no mere technical, financial restructuring. It is a profoundly basic change in our economic processes. However, considering where the policies of the last fifty years eventually led us, perhaps there are lessons to be learned from our more distant gold standard past.

"GOLD AND MONETARY FREEDOM"

Testimony Of

PROF. HENRY MARK HOLZER

Before The

UNITED STATES GOLD COMMISSION

Cash Room, Treasury Department Building
Washington, D.C.

November 12, 1981

Good morning Dr. Schwartz and members of the Commission. As you know, I am not an economist but rather a Professor of Law at Brooklyn Law School in New York City. My field is constitutional law, and I have lectured and written extensively on the legal aspects of gold and the nature and scope of government monetary power. For example, two of my books are entitled, respectively, THE GOLD CLAUSE and GOVERNMENT'S MONEY MONOPOLY. (Both were published by Books In Focus, Inc., 160 East 38th Street, New York, N. Y., 10016).

I must confess to a certain ambivalence this morning because, while I appreciate having been invited to testify before this Commission, at the same time I feel like the lawyer who must tell a court that it lacks jurisdiction.

I have come here to say that despite this Commission's good faith, it cannot discharge its Congressionally delegated task--to ". . . make recommendations with regard to the policy of the United States Government concerning the role of gold in domestic and international monetary systems"--without first understanding, and then admitting, some hard truths about our Nation. Let me explain.

Dr. Allan Greenspan has written ". . . that the gold standard is an instrument of laissez-faire and that each implies and requires the other." ("Gold and Economic Freedom," The Objectivist, Vol 5. No. 7, July 1966, p.1). 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.

As to economic freedom, tax laws have redistributed wealth on the basis of need and otherwise removed from productive use capital necessary for reinvestment, diverting it to countless ends disapproved by those from whom the money was taken.

Antitrust and fair trade laws have, contradictorily and impotently, attempted

to compel competition and protect consumers from themselves. Instead, such laws have caused business decisions to be predicated, not on marketplace considerations, but on guesswork as to how bureaucrats and judges would interpret unintelligible laws.

Labor laws have created compulsory unionization, with its many attendant problems for unwilling employees and employers--and contributed greatly to America's steady decline as the world's preeminent industrial power.

Wage and hour laws have required private employers to establish pay scales and working conditions mandated, not by the free market and mutual agreement, but by government fiat.

Restraints on the use of private property are commonplace--in the name of zoning and so-called civil rights.

Liberty of contract is substantially restricted--in the name of equalizing bargaining power and the so-called public interest.

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. The Constitution also expressly barred the states from coining money, emitting bills of credit, and making anything but gold and silver a tender in payment of debts. Clearly, when the work was finished in that hot Philadelphia summer of 1787, 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. Congress wanted to charter the first Bank of the United States. The question was whether the legislature possessed the power, and

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. Washington signed the bank bill, and for nearly thirty years afterward few people noticed that 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, a story too well known to the members of this Commission to recount here. Suffice it to say that 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 non-delegated, extra-constitutional monetary power. In the first important legal tender case to reach the Court, Hepburn v. Griswold, while a bare majority held that the act could not be applied to a debt contracted before legal tender became law, every one of the justices (majority and dissent) nevertheless 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. Noble 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.

Dr. Schwartz and members of the Commission, I have come to Washington today to say that 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, Though mine may be a lonely voice crying in a wilderness of omnipotent government, I emphasize that there is no middle ground.

If this Commission wishes to recommend a gold standard, it must first understand the nature and scope of our Nation's lack of economic and monetary freedom, and then communicate that understanding to the American people. Only then, and in that context, can a gold standard recommendation from this Commission have any real meaning.

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.

Thank you.

Testimony Before the Gold Commission

Roy W. Jastram

November 13, 1981

I am before this Commission today to give information I consider pertinent to the objectives of your study...and to answer any questions you might care to ask.

I feel it might be useful to you in evaluating my testimony to know that my interest in the relationship of gold to prices began in 1936 with a modest paper on the subject. My interest intensified in 1968 with the conjunction of rising gold prices and soaring inflation... intensified to the point that as a result I wrote a book. I asked myself if something might be learned from the behavior of prices over centuries under a precious metal discipline that would help to solve some of the problems inherent in our crumbling monetary and fiscal system of recent years.

I am here today as an analyst, not as an advocate of a single point of view. I do not believe that a return to a gold discipline would be a magic cure for all our economic ills. Nor do I take the opposite extreme of blaming on a Gold Standard every economic ill that humanity was heir to during its tenure. Instead, I would like to take some time to sum up, very briefly, the conclusions I have reached based on my research.

I trust you have had an opportunity to read my booklet issued by the Joint Economic Committee titled The Gold Standard; Its History and Record Against Inflation, distributed by Senator Jepsen in October. I do not intend to repeat the material in that study. But I will draw upon it as I go along and am prepared to answer any questions you may have about its contents.

Let me state first my position on monetary reform:

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.

(Here I am not singling out our present Federal Reserve Board. I believe they have the best record of restraint in this country in modern times.)

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 everything I have said up to now my conclusion is:

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.

The first of the five points I made at the beginning I think we can take as widely accepted....so I would like to discuss the other four a little more fully.

I want to give you evidence from history that a rule of law is better than a rule of men in the ability of a monetary system to stabilize prices. I will draw upon England.

Please look at the Chart passed out to you titled, "The English Experience." This illustrates the interesting transition from a rule of law to a rule of men, and back again. The concomitant results are pictured statistically. CP stands for the wholesale commodity price index; PPG stands for the purchasing power of gold; gold stands for the price of the metal.

In one form or another, England was on a gold standard from 1717 to 1931; except for the Napoleonic Wars, when she was off between 1797 and 1821 (mark those years on your Chart).

From 1717 until 1797 currency was convertible with gold at a steady price of 3 pds 17 shillings 10-1/2 pence. The supply of money adjusted accordingly, and wholesale prices moved along a level plane. It was a rule of law in monetary affairs.

Then in 1797 England went off the gold standard, due largely to wartime events. The official money supply was then solely the responsibility of the Board of Directors of the Bank of England. It was a rule of men. Notice the sharp rise in the wholesale price level (CP) by 50 percent.

The "Bullion Committee" was formed by Parliament to investigate this unprecedented inflation. Nothing remotely like it had happened in the past 150 years. The Bullion Committee concluded that the central cause was

the overissue of Bank of England notes. It did not accuse the Directors of malfeasance, however. The Bullion Committee simply regarded the Directors as men who had had a greater responsibility thrust upon them than anyone could be expected to bear.

"The most detailed knowledge of the actual trade of the country, combined with the profound Science in all principles of money and circulation, would not allow any man or set of men to adjust, and keep adjusted, the right proportions of circulating medium in a country to the wants of trade."

As the Directors later publicly stated, the Bank of England did not force its notes on the public. It merely supplied the public demand. How, therefore, could the Directors be accused of issuing too much paper? So much for the rule of men.

In 1821 England returned to the rule of law at the old gold-convertibility rate of £3, 17s, 10.5d. And long-run stability returned to the commodity price level.

In 1931 the rule of law was rescinded and the rule of men returned. The catastrophic result can be seen in the last 1-1/2 inches of Chart I.

A century later the German inflation illustrates the same point. You see, these lessons are not easily learned.

An observation much closer to home illustrates point 5: the stabilizing effect of gold. In the charts which Dr. Schwartz has prepared for you, you will see that during the gold standard years of 1834 to 1861 and 1880 to 1914, wholesale prices move along a horizontal plane, rising and falling with changes that finally average out to zero. In contrast to this stability, our present inflation has lasted almost fifty years at one rate or another.

The monetary history of England which I have already used to underline point 4, the rule of law versus men, can be used also to prove point 5...for price stability disappeared when the gold standard was removed and returned when it was reinstated.

Now I would like to turn to an entirely different aspect of the gold controversy that concerns me.

The national controversy over the gold question has come on so rapidly that the ordinary media for exchange of argument, evidence and exchange of opinion have been too slow. For the scholar, these would have been the academic journals, in which it now takes up to two years for a manuscript to be published. Instead, the written controversy has appeared in signed articles in a few major newspapers and magazines where the lead time is much shorter. By the nature of these publications, editors are not likely to find space for reasoned refutations of spurious or faulted positions to which their readers were exposed weeks earlier. Thus errors and fallacies of fact and reason may go unchallenged. And, being unchallenged, accepted as correct.

It is for this reason that I wish to take this opportunity of a public hearing to put in the record corrections of fact and reasoning that are long overdue.

Fallacy 1

"In the United States there were 12 panics and crises between 1815 and 1914" (From a report submitted to this Commission by a member: EMB, Ltd. Report No. 80/19)

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 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."

Fallacy 2

"If the United States could achieve such a degree of price and exchange stability [a long list is enumerated] there would be no need for a gold standard." (EMB, Ltd., Report No. 80/19 and on numerous occasions elsewhere.)

On the contrary, if such a stability ever were achieved, and some of the requirements stated in the original are redundant, the United States had better insert the linch-pin of a gold standard quickly at that fortuitous juncture. For our entire recent history tells us that otherwise stability would be a short-lived condition.

Fallacy 3

"Severe joblessness was also a sporadic problem in earlier decades when the U.S. was on a highly rigid gold standard." (Wall Street Journal, September 3, 1981)

From the context it is clear that this statement refers to the period roughly from 1880 to 1914. These were the years of massive immigration of unskilled populations from Europe and elsewhere. Was this really to be blamed on the gold standard?

Fallacy 4

"The general U.S. price level declined sharply between the mid 1860's and the late 1870's - which happens to be one of the few intervals between 1834 and 1933 when the country wasn't on some sort of gold standard." (WSJ, Sept. 3, 1981.)

At best, this is a non sequitur. To paraphrase: "How can you say the gold standard is a protection against inflation when we had a great deflation when we weren't on the gold standard?" Yet the unsuspecting reader says "Ah ha! Another point against the gold standard."

Fallacy 5

"According to the National Bureau of Economic Research, the nation had 10 official recessions between 1880 and 1914. These slumps were long and deep, too, quite different from the six-month recession we had in 1980."

(WSJ, August 18, 1981.)

This is not so much a fallacy as a misleading statement because the comparison is incomplete. There certainly were 10 recessions in these 35 years because the National Bureau is accepted as authoritative on this score. But the same authority designates 8 recessions in the last 35 years. The author does not trouble to mention that the number of recessions is not all that different for an equal number of years. What he does take the trouble to emphasize is that the last recession was shorter than any under the gold standard. What the unknowing reader is not told is that it is also the shortest recession on record; gold standard or not - and certainly not typical of recessions since World War II.

Fallacy 6

The use of real per capita income as a measure of the comparative fluctuations in the economy with and without the gold standard. (WSJ, Sept. 17, 1981; the Staff of the Gold Commission.)

I want to argue that real per capita income gives a misleading comparison.

Between the period of the classical gold standard ending in 1914 and the era of managed money inaugurated by Franklin D. Roosevelt, two structural shifts occurred in American society of a magnitude to create a watershed in the economic history of the United States.

One was the unionization of labor.

The other was the great social support programs of the New Deal.

Both of these had the effect of reducing the number of people deprived of income, and of stabilizing the income of those who remained employed. In brief, both imparted a tendency to diminish declines in real per capita income. The second had as a major component anti-recession measures at the macro level.

Both of these structural changes have been imbedded in our economy ever since.

Compare, now, with the American economy prior to World War I - before 1914; the period of the classical gold standard.

Unionization was a rarity. Where present it was ineffective in guaranteeing employment and weak in preventing wage reductions.

At the macro level it was a free-fall economy. Anti-recession measures were no part of national policy. A Humphrey-Hawkins bill would have been laughed out of Congress. That was the economic environment in which the classical gold standard was asked to work.

Now the Commission Staff (and other writers) ask us to compare the variances in real per capita income under the gold standard and without it. This is a flawed and biased comparison.

So I use a different measure of the severity of recessions with the gold standard and without it. I use statistics on Manufacturing Production in the United States.

During the 10 recessions officially recognized by the National Bureau of Economic Research in the 35 years of 1880 through 1914, Manufacturing Production fell on the average by -3 percent. By way of comparison, in the 8 recessions officially recorded in the last 35 years the average fall in Manufacturing Production was -9.5 percent. Over three times as great.

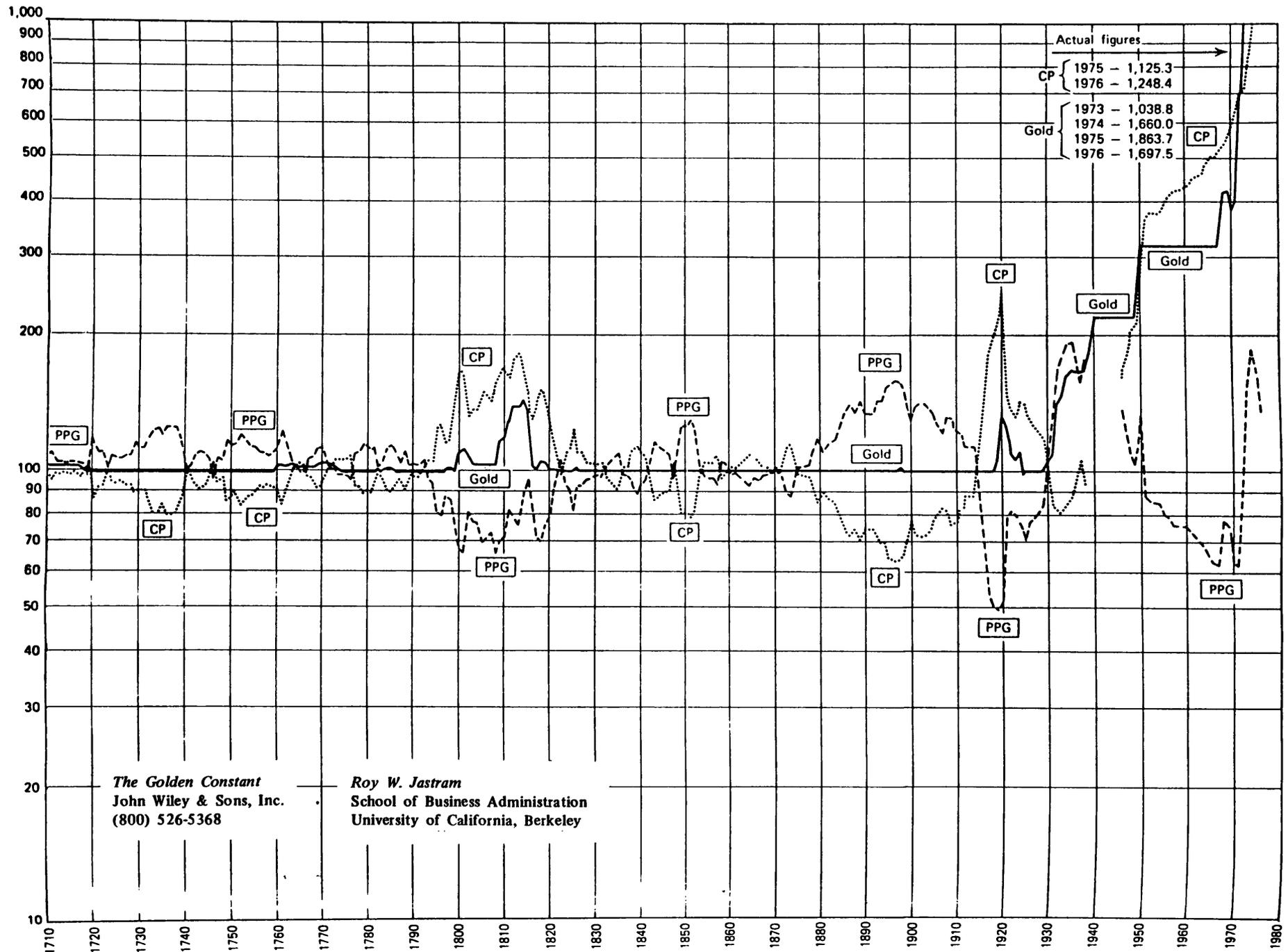
Now it happens that this last calculation includes the recession of 1945, which some might say was unfair to include because of war-related circumstances. So leaning over backward to be fair, I will exclude it and recalculate.

Over the remaining 7 recessions in the post-war period the average fall in Manufacturing Production was -6.2 percent - still twice as great as when on the classical gold standard.

I grant that no economic measure is perfect for comparisons over time. Manufacturing Production, itself, suffers from the weakness that it does not reflect agricultural production. And in comparing years since the New Deal with years before 1914 it also reflects a bias toward the non-gold standard years because of government support programs. But I submit that it yields a far less tilted comparison than the Real Income per Capita data used by your Staff.

I would like to conclude my testimony on a more positive note. This Commission is certainly aware by now, if it wasn't before, of the tremendous concern in this country for the return of a trustworthy currency. The outpouring of material you have received, collectively and in person, the continuous iteration by the media, all make that point... and lead me to believe that a way will be found. It is my personal opinion that gold will play an important part in the solution.

Chart 1 The English Experience: Indexes of the Price of Gold, Com-
modities, and Purchasing Power, 1560-1976: 1930=100.0



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Roy W. Jastram
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Statement by Helen B. Junz*

before the

Federal Gold Commission
November 13, 1981

.....
Mr. Chairman, Members of the Commission, I am pleased to appear before you to help contribute to your study of the role of gold in domestic and international monetary systems. Because of the time constraint and the large number of broadly-gauged comments you already have received, I will focus 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.

Most industrial countries in recent years have, for one reason or another, attempted to achieve their policy goal of regaining price stability with a minimum of output loss by combining monetary restraint with relative fiscal laxity. As a result, government borrowing requirements in many nations have exploded over the past decade, so that budget deficits currently are dominated to varying degrees by debt servicing requirements. Thus, efforts to bring credit expansion under control in most countries center increasingly on bringing the government sector under control as well.

But, at a 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

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Monetary System (1), 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. But if this is so, it is hard to understand why they would be able to keep the undertaking 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 clearly is fraught with practical problems. Limiting convertibility in this way requires 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. This is what people usually mean when they talk about a return to "the gold standard". Under ideal circumstances, the gold standard will, indeed, work to stabilize the domestic price level. For that to happen, the supply of gold needs to expand exactly in line with the growth of the 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, primarily South Africa and the Soviet Union, there can be no assurance of a continuous, smooth flow of new supply. I imagine, since 1973/74, one does not need to be reminded of the consequences of having supply decisions for a core commodity concentrated in the hands of a small number of producers.

A perhaps even more serious problem regarding the operation of a gold standard system springs from the fact 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. Thus, Colonel Quadaffi, for example, could successfully help destabilize the U.S. economy by demanding gold for his accumulated stock of dollar assets.

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. The basic will to slim down must be there. 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.

(1) ALL the EEC countries, except the United Kingdom and Greece.

WHY GOLD IS NOT THE ANSWER

STATEMENT BY PETER B. KENEN, PROFESSOR OF ECONOMICS AND INTERNATIONAL FINANCE
AND DIRECTOR OF THE INTERNATIONAL FINANCE SECTION, PRINCETON UNIVERSITY, BEFORE
THE GOLD COMMISSION

November 12, 1981

Mr. Chairman and Members of the Commission:

My statement has four parts. In the first, I review some of the arguments for returning to a gold standard. In the second, I take up an important point made by one member of the Gold Commission--that a return to earlier gold-standard arrangements would not achieve the aims of those who advocate a larger role for gold. In the third, I review some of the international problems that the United States might face if it returned to gold unilaterally. In the fourth, I address myself to those who do not favor a return to gold but believe that the present situation is illogical--that something sensible should be done with the U.S. gold stock.

The Arguments for a Gold Standard

You have received and discussed a number of proposals that would give gold a central role in the domestic monetary system. The proposals differ widely and so do the arguments advanced on their behalf. I will comment briefly on four main lines of thought.

Some believe that gold is "honest" money. They say that money should be costly to produce--that it should have intrinsic value. Those who bring goods and services to market should be paid in money containing an equivalent in real resources. This doctrine appeals to concepts of value and justice handed down for centuries and embodies views about the nature of the contract between citizen and sovereign. Its advocates invoke the decision of Alexander Hamilton in 1792 to include gold in the U.S. monetary system (although their views about the social contract are closer to those of Thomas Jefferson). Exponents of this argument say that paper money should be fully backed by gold and freely convertible into gold coins. Some go further. They say that demand deposits should be fully backed by gold--that banks should be pure service institutions. I will come back to these proposals in another context. At this point, I am concerned with the argument made in their favor.

If the U.S. Government were required to mint new coins from the output of gold mines in the United States, the coins would embody the real resources required to produce them. But this is not sufficient reason for producers of other goods and services to regard gold coins as "honest" money. The value of money derives from our ability to use it--to exchange it for goods and services--not from the cost of producing it. An "honest" money is one whose purchasing power is stable over time. If there were new discoveries of gold in the United States or dramatic improvements in methods of gold mining, the real-resource cost of a gold coin would fall sharply, and gold would not be an "honest" money. Those who accepted gold coins yesterday would be "cheated" tomorrow by a rise in the prices of other goods and services. I am not saying that these discoveries are likely to take place. I use this illustration to identify the fallacy that underlies this line of argument.

This brings me to the second and third sets of arguments advanced by the advocates of a gold standard. We are told that a gold standard is in fact the best way to maintain price stability over the long run. We are told 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. In Figure 1 of her paper, we find that the level of wholesale prices in 1861 was almost identical to the level in 1834, at the start of the first gold-standard era in U.S. history. But the fluctuations in that index were fairly large. The record of the second era, from 1879-1933, is even harder to assess. Prices declined in the first third of that period and rose in the second, and they rose very sharply in the third, with the start of the First World War. Furthermore, there were large short-term fluctuations in output per capita during that gold-standard era.

Looking over our own monetary history and the histories of other countries, I am inclined to agree with the conclusion that one of you drew during that earlier meeting. There are two ways of reading the record. Some say that the gold standard gave us comparative price stability. It may be more accurate to say, however, that we were able to stay on the gold standard during periods that were intrinsically stable and were forced to abandon gold when those periods ended.

I will have more to say about long-term stability. First, let me deal with the argument we have been hearing recently, that a quick return to the gold standard will dispel uncertainty about the future, assuring the success of the economic policies adopted by the present administration. This claim is based on two

suppositions. The first is the one I have already examined--that a gold standard will confer long-term price stability. I am skeptical. The second is the promise that the elimination of uncertainty will bring down interest rates and pave the way for a supply-side miracle. I am very skeptical. But let me grant both premises for the sake of analysis. It is still hard for me to see why a speedy return to gold will eliminate uncertainty. It could instead intensify and prolong uncertainty.

Consider the legislation introduced by Senator Jesse Helms. Six months after Congress adopts the Senator's bill, the Federal Reserve banks will start to buy and sell gold freely at a "standard" price. This will be the average of the market prices prevailing in the week before convertibility. There is no way to know how approval of this legislation would affect market prices in that critical week. More importantly, there is no way to know what will happen once the "standard" price is fixed. It may be one at which the public sells large quantities of gold to the Federal Reserve banks. If this happened, the legislation mandates an expansion of the monetary base at a rate much faster than those we have seen recently. The price might be one in which the public buys large quantities of gold, in which case the legislation mandates a rapid contraction of the monetary base. In either case, moreover, the Federal Reserve System might have to declare a "gold holiday" within a year or so, after which it would start all over again at a new "standard" price. This proposal seems to me a recipe for heightening and prolonging uncertainty, not a way to end it quickly.

Before returning to the problem of a long-term price stability and its implications for the type of gold standard we would have to adopt, let me say a word about the fourth type of argument advanced on behalf of gold. It has not figured prominently in your discussions but has come up from time to time. It is the case for going back to pegged exchange rates. I will say more about international aspects of the gold standard in the next part of this statement. I confine myself here to three observations.

First, it is not necessary to bring gold back into the monetary system, internally or internationally, in order to peg exchange rates. Gold did not play an important part in the functioning of the Bretton Woods System. Some say that a larger role for gold might have kept that system from breaking down. If the United States had been compelled to sell gold, instead of piling up dollar liabilities to foreign central banks, it might have brought its balance of payment

under control before the situation got out of hand. I am not convinced. If the United States had been compelled to sell gold, it might not have solved its payments problem earlier. It might have closed the gold window earlier. I remind you, moreover, that the last years of the Bretton Woods System were filled with efforts to reduce the role of gold, culminating in the First Amendment to the Articles of Agreement of the IMF, authorizing the creation of Special Drawing Rights (SDR).

Second, one must ask whether we should go back to pegged exchange rates. Those who favor this option believe that floating rates have been a major cause of international disorder since 1973. Here again, another interpretation is more plausible. Floating rates were adopted to insulate national economies and monetary systems from disorder and disturbances produced in part by other countries' economic policies. These were transmitted brutally by pegged exchange rates.

Third, I would remind those who favor pegged exchange rates that we cannot adopt them unilaterally. To do so de facto, we would require the cooperation of the other countries to whose currencies we wanted to peg the dollar. To do so de jure, we would require a formal decision by the membership of the International Monetary Fund. Recalling the events of 1970-71, moreover, I would warn emphatically against a move to any pegged-rate system that does not give the United States a large measure of control over the effective exchange rate for the dollar. Exchange rates cannot be pegged immutably. The world is changing too rapidly. But we should not have to do what we did in 1971, when we had to attack the entire pegged-rate system in order to alter our own exchange rate and then had to expend much political capital in an abortive effort to reconstruct the system.

Gold and the Money Supply

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 be different from any earlier gold standard. It must be able to prevent the monetary system from creating or accommodating inflationary pressures. Earlier gold standards restricted to some significant degree the autonomy enjoyed by central banks and governments. Studies by Ragnar Nurkse and Arthur Bloomfield, however, show that central banks were able to violate the "rules" of the gold standard. A central bank could in-

crease the money supply even when it was not gaining gold. It was able to "sterilize" the effects of gold outflows. In our own country, the links between gold and money supply were very loose, even before the First World War. I venture to suggest that, had they been much tighter, they might have stifled the long-term development of the U.S. economy.

These thoughts lead back to the point I made earlier. Those who believe that the supply of gold should control completely the supply of money must advocate radical reforms. The currency must be backed completely by gold, and bank deposits must be backed by gold or bank notes. It would not be sufficient to restore convertibility at the margin.

These radical reforms 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 rightness of any single concept. It also reflects an important economic process--financial innovation. The attempt to control one monetary aggregate has fostered the creation of substitutes for some of the components of that aggregate. When the monetary authorities have clamped down on the supply of one asset, the financial system has produced substitutes for it. Thus, the very attempt to control a monetary aggregate systematically reduces the relevance of that aggregate. If we went all the way to the sort of gold standard I described earlier, financial institutions would undermine the aim of the exercise by creating close substitutes for the monetary aggregate that we had tied to gold.

You have been presented with other proposals, like those of Robert Weintraub, that are much less radical. These involve the notional use of gold to impose a rule on the Federal Reserve System. At an earlier session of the Commission, someone noted that gold is not needed for this purpose. Paper clips would do just as well. In all seriousness, one could impose a rule without referring to any extraneous standard. Let me go a step further. If one wants a monetary rule to stabilize the price level, one might want to tie the rate of increase in the supply of money directly to the rate of increase in prices. I know what some would answer--that a reactive rule of this sort can produce instability, because of the lags that separate a change in the money supply from a change in the price level. In light of what I said before, however, about the built-in obsolescence of money-supply concepts, a reactive rule might not be worse than one that called for constant growth in one monetary aggregate.

International Aspects

I have been discussing the case for a gold standard to maintain domestic price stability. Most discussions focus on another purpose. In the vast literature on the theory and history of the gold standard, it is viewed as a way of imposing balance-of-payments discipline, even when submission to that discipline could destabilize the domestic economy. In most descriptions of the gold standard, national money supplies are regulated primarily by gold flows between countries and only secondarily by flows between the central bank and a country's own citizens.

In your deliberations, you have concentrated on a return to gold by the United States, acting unilaterally. I understand your reasons for doing so. The legislation establishing this Commission instructed you to focus on U.S. gold policy. Under the Articles of Agreement of the IMF, moreover, an 85 per cent majority of the voting power exercised by members of the IMF would be required to re-establish pegged exchange rates, let alone an international gold standard. (The present Articles might not even permit a return to par values based on gold. That would require an amendment.) Nevertheless, you should pay close attention to the international ramifications of any unilateral decision.

Under present international monetary arrangements, a foreign government is free to 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 that pegs its currency to the dollar can maintain the peg only by purchasing and selling dollars as circumstances dictate. A number of countries operate this way. Other countries buy and sell dollars too, as a way to maintain a fixed peg to some third currency. The dollar is used widely for official intervention in foreign-exchange markets.

If the United States restored convertibility between the dollar and gold, there would be one important change. Other countries could still peg their currencies directly to the dollar, as some of them do now. They could also move to a gold standard, however, which would likewise fix the prices of their currencies in terms of the dollar. More importantly, both groups of countries, those pegging to the dollar and those pegging to gold, might buy gold from or sell gold to the United States.

There is another difficulty. Foreign governments and central banks hold some \$167 billion in balances with U.S. banks, Treasury bills, and other dollar claims. In addition, they hold \$80 billion or more of Euro-dollar deposits. (Private institutions and individuals hold dollars too.) These could be used to purchase gold from the United States, and the monetary base could thus be affected significantly by foreign purchases that had nothing to do with ongoing balance-of-payments flows.

The gold standard would not stabilize the money supply in the United States. It would instead impose a crude sort of balance-of-payments discipline. Furthermore, that discipline would not be imposed symmetrically on all countries. It would be imposed erratically and irregularly on the United States by the gold transactions of other governments. Finally, an international gold standard, whether put in place by formal agreement or by the sequential decisions of individual governments, is utterly incompatible with exchange-rate flexibility. Unless you believe that we should go back to pegged exchange rates, you must ask whether the United States should chart for itself a course that it might not want others to follow.

Some of the proposals put before you attempt to rule out these possibilities. Convertibility between gold and the dollar would be available only to citizens of the United States. This limitation would have to be enforced very strictly. I can think of two methods. First, one could require citizens appearing at the "gold window" to declare under oath that they are acting for themselves or for other citizens, not for foreigners. Second, the United States could impose a strict embargo against gold imports and exports. These techniques might not work well. Violators would be rewarded handsomely by large gaps between the official price of gold in the United States and the price on the international market.

Countries that left the gold standard were sometimes made to do so by international crises or by the policy mistakes of other governments. Great Britain returned to the gold standard in 1925 at an unrealistically high gold price for the pound. We will never know whether it could have mastered the consequences of its own error. It was forced to leave the gold standard six years later, in 1931, because France had returned to the gold standard at an unrealistically low gold price for the franc. The two countries' unilateral decisions had created an unsustainable exchange-rate relationship between their currencies. The decision of the United States

to close the gold window in 1971 was prompted by a big increase in its balance-of-payments deficit and the fear of large gold losses.

The earlier episode involving Britain and France teaches an important lesson. A step-by-step return to the gold standard, with each country free to choose the gold price for its currency, could produce nonsensical exchange-rate relationships. This is the lesson Ragnar Nurkse drew from that earlier episode, and it inspired the decision taken at Bretton Woods to establish the new par-value system multilaterally, with the aid and advice of the International Monetary Fund. Even so, the exchange rate for the pound was badly chosen, and sterling was devalued substantially in 1949. If we do not domesticate the gold standard completely by prohibiting exports and imports of gold or by the other device I suggested, we may wander into the same sort of muddle again.

What to do with the Gold Stock

If the United States does not move to a gold standard, and I hope that you will recommend against that course, what sense can one make of the present situation? The United States holds 264 million ounces of gold, worth more than \$110 billion at current market prices. If gold is to play no major role in the monetary system, should the United States continue to sit on this huge pile of metal?

If the United States could sell its gold without depressing market prices, the Treasury would have a profit approaching \$100 billion (the difference between the current market price and the old official price at which the Treasury would have to redeem Gold Certificates). It could use the windfall to solve the problems of the Social Security Trust Funds and thus halt the upward creep of Social Security taxes. It could use the windfall to finance the budget deficit and thus spare itself the need to borrow. There would then be nothing in the way of a supply-side miracle. I have another idea. Instead of using gold to discipline monetary policy, we could use it to discipline fiscal policy. Congress could require that budget deficits larger than some arbitrary number, say \$50 billion, be financed by issuing gold-backed bonds. As these would bear low interest rates compared to other bonds, large deficits would not feed upon themselves. The President and Congress, moreover, would have an additional incentive to hold down budget deficits. Otherwise, they would run out of unencumbered gold.

Please do not take these suggestions seriously. The United States should hold onto its large gold stock, even though this may seem illogical. The United States has huge stocks of tanks, aircrafts, and missiles. It does not want to use them but cannot get rid of them. Would that we could beat our swords into plowshares and sell off the plowshares to finance budget deficits. The United States should keep its gold for the same reason that it holds these other stocks--because the future is uncertain 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 governments may decide collectively to restore a connection between currencies and gold. One can conceive of circumstances in which we may want to redeem the dollars held by foreign governments (or back them with gold) as part of a new agreement on reform of the international monetary system.

This Commission should not try to concoct a new use for gold as a concession to those who desire something more dramatic or as a way to prove that its deliberations have been useful. In the words of another economist on another occasion: Don't just do something. Stand there!

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 the gold standard offer their nostrum as a means of stabilizing prices but offer few details about how this desirable goal would be reached. All that we are usually told is that the gold standard is a "supply-side" solution, a radical change that will reduce interest rates, stabilize prices and eliminate the summers excess supply of zucchini. None of these claims is true.

Most of the claims mix wishes, hopes and dreams into a pot-pourri of misinformation. 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 so as 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 sizeable change affecting world demand and supply of goods and services -- causes domestic prices of goods and services to change.

These are not speculations about what may happen. They are a description of 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 even from decade-to-decade. The price level was approximately the same in 1913 as in 1882, but this gives a misleading suggestion of price stability. Recorded prices of goods and services fell 47% from 1882 to 1896 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 from 1945 to 1980, and expansions and recoveries were about one-third shorter. Per capita real income, a useful measure of standard of living, rose more slowly. In fact, the most reliable statistics we have suggest that real per capita income rose a bit faster in the disappointing decade of the 1970's than under the gold standard 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 between events in 1879 to 1913 with 1945 to 1980 cannot, by themselves, decide the issue of whether the gold standard is superior or inferior in some global sense. They do tell us, however, 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 and third thoughts about returning to a gold standard -- any kind of gold standard.

Advocates of the gold standard complain about current variability of money growth and about the uncertainty created by changes in monetary policy. A return to gold does not solve these problems by eliminating or reducing uncertainty about weekly, monthly or yearly money growth. On the contrary, 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 many other factors. From 1879 to 1913, many of the major countries either adopted or remained on the gold standard. They accepted part of the responsibility for fixing the price of gold. Every fifty 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 fifty 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 new 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 fifty years or every

century. This happened in the past because new gold mines 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 that 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 ninety per cent 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 Federal Reserve 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 twenty-four collective eyes, represented on the Federal Reserve committee that makes monetary policy decisions, finally convinced a majority of the committee's 12 members that one target achieved is better than a basketful of failed promises. The twenty-four eyes are now glued on one target -- the announced growth rate of the money stock -- in hopes of repairing the Federal Reserve's damaged credibility. Let's hope they stay there.

A gold standard is not a more believable way, or a more reliable way, to control money or the monetary base. Such statements are the 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 United States. People pound on the door, offering gold in exchange for dollars. The Federal Reserve, 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.

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 \$35.00 an ounce, we did a lot of buying. The stock of monetary gold rose fifty per cent 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 thirties, or deflationary gold flows? Don't make the mistake of thinking that someone else knows exactly the right price to set and keep constant for the next hundred years. They don't. That's why advocates of the gold standard, despite their frequent public statements, never suggest or even 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 and takes big jumps everytime the Russians start the motors on their tanks.

The administration knows that we cannot fix exchange rates or the price of gold and control money. Secretary Regan and Under secretary Sprinkel should be lauded for insisting on a freely floating dollar. A free float removes one of the obstacles to better monetary control. It is a step on the path to lower inflation that has already 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.

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.

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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

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.

If we care about these things, we should have second thoughts about returning to a gold standard.

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

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.

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The Case For A Price Rule

Such As The Gold Standard

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Testimony before The Gold Commission,
Washington, D.C.
November 13, 1981

Our Plight

Why should we return to a price rule such as the gold standard? The answer is quite simple: it is the only way out of the prolonged period of stagflation the United States has been experiencing.

President Reagan has promised to end stagflation with substantial cuts in marginal tax rates. We are all familiar with the stories of how he has expended large amounts of political capital to push those tax cuts through Congress. Yet his program is in trouble. On the one hand, legislation is in place to reduce tax rates by about 23% over four years. On the other hand, inflation continues to raise tax rates through bracket creep. Even the rosy inflation projections of the Reagan Administration imply that the net tax cut over his four year term will be only 7½% for the median taxpayer. Inflationary expectations incorporated in financial market prices paint an even gloomier picture. By the time indexation of the tax schedule begins in 1985, tax rates will be higher than when Ronald Reagan took office!

The Reagan Administration has since shifted the emphasis of its economic program. Now the goal is to balance the budget by 1984. But again the presence of current and expected high rates of inflation are frustrating that policy. The higher projected deficits are only a symptom of the havoc wreaked by inflation.

Higher expected inflation means higher interest rates, which means higher costs of debt servicing. Debt servicing, which was only 7.3% of the budget in fiscal year 1976, is now about 10% of the federal budget. A lowering of market interest rates would mean a substantial reduction of expenditure by the U.S. Government. High inflation also retards growth. On the one hand this slows the growth of tax revenues. On the other hand it simultaneously slows job creation, directly increasing expenditures on

unemployment and other federal social transfer programs.

This experience of the Reagan Administration is quite instructive. No matter to which policies they turn, they continue to face the same barriers to success - inflation. None of these policies will succeed unless inflation is first eliminated. Today, inflation is the problem.

The Two Opposing Views of Curing Inflation

While many may agree that inflation is the problem, the existence of this Commission is evidence that there is no consensus about how to deal with it. There seems to be basically two approaches competing for the designation of official inflation combatting policy. One can be labelled a "quantity rule" approach. Its adherents assert that the source of inflation is the rapid expansion of the supply of money. Their proposed cure: give the Federal Reserve more power and incentive to tinker with the supply of money.

The second approach is that of a "price rule." Its adherents assert that the value of money continues to depreciate because the government refuses to anchor the price of money. Current inflation reflects the current depreciation of the dollar in terms of goods. High interest rates reflect expectations of further depreciation in the future. Their proposed cure: have the Federal Reserve once more intervene to stabilize the relative price of money now and in the future.

The Shift in Policy Over the Last Twenty Years

The last twenty years has seen a steady shift in U.S. monetary policy away from the price rule approach and towards quantity rule approach. It is revealing to observe that this period has also coincided with a steady and dramatic rise in the levels of dollar inflation and dollar interest rates.

Twenty years ago the U.S. and the free world were operating under the

international monetary system called Bretton Woods. According to the Bretton Woods Agreements, the U.S. was required to redeem the value of the dollar in terms of gold at a constant price of \$35 per ounce. Other countries in turn agreed to redeem their currencies at a constant dollar price. With these promises of redemption in place, monetary stability was the watchword of the time. Between 1947 and 1964, dollar inflation averaged only 1.4%. Treasury bill yields averaged only 2.1 percent.

The first serious break in this agreement to stabilize relative prices came in 1965 as the U.S. removed its commitment to redeem Federal Reserve deposits in gold at \$35 per ounce. Markets reacted adversely to this reduced commitment. Over the 1965-67 period, interest rates jumped to an average 4.4 percent, and inflation rose to 2.0%.

On March 18, 1968, the U.S. formally abolished as well the 25 percent gold reserve requirement behind Federal Reserve notes. While the U.S. government retained some commitment to redeem the dollar into gold for foreign central banks, it was completely eliminating its commitment to redeem dollars in private hands at a constant price. The market's faith in the future value of the dollar was further jostled. More rapid depreciation of the dollar followed as the rate of inflation rose to 3.3% between 1967 and 1971. Treasury bill yields jumped to an average 5.8%.

The promise to redeem the dollar received another blow on August 15, 1971, as President Nixon caught wind of foreign governments' intentions to convert large amounts of dollars to gold and promptly slammed shut the U.S. gold window. The probability of even indirect dollar convertibility was now greatly diminished. Again, markets responded by anticipating greater depreciation of the dollar relative to commodities. Inflation in the year and a half after this action jumped to an average 6.5%. Interest

rates fell, however, to 4.3%.

While the dollar's commodity redemption value had been eliminated, at least the dollar retained a relatively fixed value in terms of other currencies. In December 1971, the countries of the world agreed to the Smithsonian Accord which attempted to restore fixed exchange rates but without dollar convertibility into commodities. This limited promise of redemption, too, was broken in February 1973, when the dollar was again officially devalued, and redefined in terms of SDRs. These actions ushered in the current period of "floating" rates. Inflation and interest rates ratcheted up another notch. Between 1973 and 1977, inflation averaged 9.1% and Treasury bill yields averaged 6.2 percent.

As if the lack of redemption under floating rates were not enough, the Carter Administration decided in mid-1977 to give the distrust of the dollar a big boost. In a misguided attempt to stimulate output and improve the U.S. trade balance, Treasury Secretary Blumenthal went around the world "talking down" the dollar. The government was simply telling the market that the U.S. would intervene in foreign exchange markets to "maintain orderly markets," or stabilize the dollar, at much lower values. The markets responded quickly as the dollar plunged against major foreign currencies. Inflation and interest rates responded, too. Inflation bounded upwards at a 10.6% annual rate between the third quarters of 1977 and 1979. Interest rates now reached an average level of 7.4 percent.

More was yet to come. Even as the promises to redeem the dollar in terms of commodities and other currencies were broken, the Fed still retained one last price rule. Fed policy in the late 1970s centered on interest rates, particularly the rate on Fed funds. Interest rates are a relative price, the value of today's dollar relative to tomorrow's dollars.

Stabilize that price, and at least the market has some certainty about the value at which today's dollars will be redeemable in the future. The switch in Federal Reserve policy in October 1979 towards targeting monetary aggregates, however, eliminated this final price rule. Volcker and Company are probably sincere in their assertions that they are targeting the Ms. But, the further abandonment of price rules, only led to more instability.

Not surprisingly inflation and interest rates reached new record highs. By the beginning of 1980 inflation rates hovered around the 20% mark and interest rates were approximately 12.5%. Near the end of 1981 the situation is not much improved. The price indices may tell us that we have experienced slightly less inflation in the recent months as the economy has slowed down, but T-bill rates of around 15% tells us that the market is expecting as much inflation as ever in the next few months down the road.

The Failure of the 'Quantity Rule'

The adverse impact of the move towards a quantity rule is not at all surprising. A quantity rule is an indirect, imprecise tool for achieving desired policy. For example, we do not care per se what the supply of money in the U.S. is. What we are so concerned with is how rapidly the dollars in our pockets or portfolios are deteriorating in value. Even the most ardent proponent of a quantity rule would have to admit that, at the very least, such inflation depends on the supply of dollars relative to the demand for them.

Hence, for a quantity rule to be truly successful in controlling inflation, the Fed not only would have to accurately control the supply of money, but that supply must be continually adjusted to fluctuations in an accurately measured demand for money. As detailed more completely in the

appendix, several obvious problems arise.

First, most economists would agree that our ability to accurately forecast the demand for money is extremely limited. The title of a widely-read academic article in the mid-1970s, "The Case of the Missing Money," is indicative of the problems faced by money demand forecasters. Surprising shifts in the demand for money have been reported in recent years, not only in the U.S., but throughout the world.

Second, even if the demand for money could be accurately estimated, estimating the money supply figures is problematical. Figures must be collected from many banks, and pass through several hands. The data must then be corrected for seasonality and trading day variations. The possibility for substantial measurement errors is great, as the money markets found in the fall of 1979 when a mistake by one New York bank caused the weekly money supply figures to be misquoted by \$3.5 billion!

Third, economists cannot even agree what the correct measure of the money supply is, much less that the Fed controls it! There is a growing consensus, however, that those narrow definitions of money on which policy decisions are focused represent only a small fraction of what constitutes money. The market for money is like the world's oceans. Both consist of a global network of interconnected sources of liquidity. The quantity of dollars issued by the Fed, while sizeable like the Atlantic Ocean, is but one source of liquidity. Economists in the last few years have repeatedly documented that there exist many domestic and international substitutes for Federal Reserve liabilities. These substitutes, including bank deposits, money market funds, Eurodollars, credit cards, and even foreign currencies, are like the other global bodies of water.

So, claiming the Fed can control the supply of dollars in the U.S. is analogous to asserting the Fed can accomplish a task as enormous as controlling the level of water in the Atlantic Ocean. The skeptic immediately raises two fundamental questions. Can the level of water in the Atlantic be controlled? And, even if it could, what are the spill-over effects?

Imagine, for a moment, that a depressor large enough to cover the Atlantic Ocean could be constructed. The Fed pushes it down. Does the water level drop? Chances are such a depressor cannot be sufficiently fine tuned to perfectly fit every nook and cranny in the coastline. Water quickly leaks around the edge, and the water remains near its old level.

Similarly, even conventional monetary textbooks detail a number of ways the public in the U.S. has of getting around Fed restrictions in the U.S. money market. Hold down the number of Fed created dollars entering the U.S. money markets, and more money leaks from the public into banks, money market funds, or bank deposits with low reserve requirements. The domestic dollar money supply remains near its initial level.

Imagine, alternatively, that the giant depressor actually did lower the level of the Atlantic Ocean. Two undesirable phenomena now quickly occur. First, as the level of the ocean falls, the Atlantic becomes less and less useful for commercial purposes. Large tankers, for example, which previously found the waters navigable now must use other oceans or seas. As the water level continues to fall, more and more boats are forced into surrounding oceans. Second, as the Atlantic's level falls, the levels in the world's other oceans simultaneously rise to absorb the diverted water. Movement in one ocean is offset in another.

Likewise, if the Fed were able to depress the level of MIR, its officials would be patting themselves on the back for an illusory victory.

Just like with the Atlantic Ocean, the Fed's actions would induce reactions which at the very least offset its goals. As the quantity of traditional dollars in the U.S. become harder to find, navigating commerce in dollars becomes harder. Just as boats move to other waters, commercial activity moves to other money instruments, or even other currencies entirely. In either case, the immediate goal of control is accomplished only by destroying a costless natural resource. Boats or commerce can no longer conduct their business by the most direct, least cost path. The Fed actions impose a cost or tax on domestic dollar activity, which reduces the usefulness of dollars.

Liquidity now spills over into other markets. It was David Hume who first pointed out over two hundred years ago the analogy that money demand, like water, seeks its own level. Depress the level of money available in one market, and money levels rise in other markets to satisfy the remaining demand. Depress the quantity of currency and checking accounts available in the U.S., and the quantity of foreign branch (Eurodollar) banking, foreign currency (Eurocurrency) banking, money market funds, repurchase agreements, or other money substitutes quickly rise. In our analogy, the Fed's attempt to lower the Atlantic Ocean causes offsetting floods in the Pacific and Gulf regions.

In short, the money aggregates which have become the subject of so much Fed policy debate are only a small part of the relevant world money market. Money markets have a will of their own, and they have developed numerous successful methods of circumventing the Fed's desire to control one small sector. Money levels rise and fall with the desires of the public for liquidity, not with the Fed's wishes.

So the Fed's new obsession with money growth rate targets is a search

for a mythical formula which is bound to fail. But 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 not the quantity of dollars, but the certainty of a dollar being as valuable tomorrow as it is today. In other words, let's forget the obsession with quantity rules, let's rekindle our interest in price or redemption rules. People need an incentive for holding more money, and what better incentive than increased certainty from improved stability in purchasing power. 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. The Fed has to move back into the redemption business.

With increased certainty through redemption, as the demand for money expands, the supply grows stride for stride. The blip in money supply, however, does not forebode inflation. The Fed eliminates that possibility through its promise of redemption. This important lesson was learned from the Swiss in the beginning of 1978, as holders of money around the world flocked to the Swiss franc. As turbulence (lack of redemption) surrounded other currencies (particularly the dollar), the private market voted with its checkbooks to move to the Swiss franc. The quantity of Swiss francs surged, yet the Swiss franc price level continued to fall throughout most of 1978. In contrast, inflation surged in the U.S. at a 9.3% rate in 1978 as the Carter Administration proclaimed its desire to redeem dollars at much lower levels, or "talked down" the dollar.

The Key to Price Stability - A New "Price Rule"

The central focus of any new monetary policy must therefore be a willingness to stabilize the value of money. If we want to significantly reduce inflation and inflationary expectations, let's do it directly by returning stability to the purchasing power of money. So let's declare the monetarist experiment with quantity rules over and done. Let's drop that indirect destined-to-fail target of controlling the quantity of money. Let's redirect the Fed's energies and once again establish the principle of the redemption of money. There are at least three different roads back to redemption. They are not, however, equally desirable.

One possibility is for the Fed to reestablish control over interest rates. This alternative is at best a short term solution, for it only stabilizes the relationship between prices today and tomorrow. But it does not anchor either price level in terms of commodities, so it does nothing to stabilize either today's inflation or tomorrow's. Such a move would put us where we were in pre-October 1979. We would be marginally better off, though still not well off by historical standards.

A second alternative is for the Fed to reestablish control over exchange rates. Such a move stabilizes spot (or future, depending on which market is used for intervention) prices in our country relative to those abroad. The system still does not anchor spot prices across countries. This alternative would bring us to where we were in the early 70s.

The third possibility is to reestablish control over commodity prices by establishing a gold or other commodity based system. By far this is the superior system. It does what none of the alternatives do - stabilizes spot inflation. In addition, as the faith in continued redemption grows, this system does what an interest rate policy would do - stabilizes spot prices

relative to future ones. Furthermore, in a world of countries on a commodity standard, it stabilizes exchange rates and inflation across countries as well. Inflationary expectations drop, and interest rates fall. Hence, low interest rates are a sign of faith in the government commitment to redeem its money, not "easy money."

Why A Gold Based Price Rule?

A price rule stabilizing the dollar in terms of commodities, then, is clearly superior to one in terms of bonds or other currencies. The only remaining question is which commodity(s)? Theoretically the standard could be gold, another single commodity or a basket of commodities (a price index).

One might argue that a basket of commodities is preferable as it governs dollar prices across a broader spectrum of goods. A serious drawback to the use of such an index, however is the fact that it is a human construct. There is the real possibility of pressure to manipulate such an index for political purposes by changing its composition. One need only be aware of the recent political controversies surrounding the consumer price index to understand this point.

A single commodity is therefore less prone to political manipulation. But which one? There really is no a priori way to choose say, gold over oil. But it is interesting how world markets repeatedly turn to gold as the reference value of money. Perhaps it is the fact that gold can easily be divided, stored, tested for purity and is in limited supply that makes it so attractive. Whatever the reasons, gold is historically the market's choice, and the burden of proof is on those who wish to buck this trend by relying on some other commodity.

But even deciding to tie the dollar to a commodity at best goes only half way towards producing a stable monetary system. The precise nature of

the link between the commodity and money is at least equally important. For example, simply supply a gold cover of say 40% behind Federal Reserve liabilities does not in and of itself produce price stability. What stabilizes expectations of current and future inflation is the government's willingness to intervene to maintain the value of paper in terms of the commodity.

Hence, regardless of precisely which external standard is chosen, it is even more important that Fed behavior be governed by two basic rules:

- If the dollar price of the standard starts to rise, the Fed must intervene to buy back dollars at the fixed price in terms of the standard

- If the dollar price starts to fall, the Fed must intervene to sell dollars at the fixed price in terms of the standard. The precise choice of a standard may not be as critical as the decision to adopt a price rule with a minimum of government policy discretion.

Another desirable feature of the price rule is that it eliminates much of the guessing and uncertainty which characterize the current system. A commodity such as gold is traded in international commodity markets. Hence, the Fed will know when private market perceptions of monetary stability change by watching the commodities ticker tape. The Fed also knows precisely how much intervention is needed. They intervene until the commodity price is stabilized. Similarly, the private market quickly and efficiently knows whether the Fed is "playing by the rules." As long as the commodity price is stable on the ticker, the Fed is maintaining its commitment.

A "price rule" with little or no government discretion is therefore a straightforward and uncomplicated policy. All relevant information concerning the Fed's policy actions is available directly and continuously from the marketplace. The probability of policy error is much smaller than with

our current system of quantity rules. The risk of utilizing dollars in commercial or financial trade is greatly reduced. The probability of price stability would be greatly enhanced.

Appendix A

The Tenuous Case for a

Quantity Rule

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Testimony before the Gold Commission
Washington, D.C.
November 13, 1981

Appendix A The Tenuous Case for A Quantity Rule

Briefly summarized, the quantity rule argument is based on three key assumptions. First, there exists some relevant supply of dollars in the U.S. which constitutes the money supply of the United States. Second, this quantity of dollars can be altered by actions of the Federal Reserve. Third, by restricting this supply of dollars, inflation can be controlled. Each of these assumptions, however, rests on rather tenuous theoretical and empirical evidence.

(1) The Quantity of U.S. Dollars Determines U.S. Inflation

This assertion is a bit of an oversimplification. Most monetarists would assert that theirs is a theory of the relationship between money and nominal income. However, many would then agree that the primary long run impact is on the price component of GNP. Hence, inflation is a monetary phenomenon.

Interestingly, the relationship between money and nominal income correctly emphasizes that inflation is determined by the supply of money relative to the demand for money. Simply controlling the supply of money is not sufficient for controlling inflation. Discretionary monetary policy would require an accurate measure of the demand for money as well as the supply. However, precise quarter-to-quarter, much less month-to-month or week-to-week, estimates of changes in the demand for money still elude economists. Hence, active intervention to stabilize prices accurately and directly is not technically possible.

Monetarist theory should not be unjustly accused of completely ignoring money demand. The quantity rule argument states that if the growth of dollars can be stabilized, the demand for money in the private market will hopefully adjust accordingly, easing inflationary pressures. In other

words, if somehow the growth in the supply of money can be stabilized, perhaps the periodic ups and downs in money demand, which we have trouble anticipating, can be overlooked and somehow still produce price stability.

A basic dictum of the theory of economic policy, however, is that, when faced with a problem, the economically most efficient way of dealing with it is to tackle the problem directly. The problem is a changing price level, not changes in the supply of money. The quantity rule argument, therefore boils down to a very indirect approach to inflation. A more direct approach would be economically superior.

(2) The Quantity of Money in the U.S. is Altered Directly by Actions of the Federal Reserve

Suppose the above problems of indirectly approaching price stability and the inability to measure accurately money demand could be ignored. Even under these restrictive assumptions, would relying on the Federal Reserve to limit the quantity of money result in price stability?

The answer is no, because price stabilization would still require the Federal Reserve to control the relevant supply of money. Two problems arise at this point. First, what is the relevant supply of money, and second, does the Fed have the ability to significantly manipulate it?

It is common in policy circles today to assert that one of the narrower definitions of money, such as M1B, is the relevant supply and that it is controlled by the Fed. Yet any basic money and banking textbook contains numerous examples of why, even within a closed economy, this assertion is not correct. For example, the supply of money is recognized in these books to be a product of the money multiplier (largely influenced by the private market) and the monetary base (largely influenced by the Fed, at least in the short run). Changes in the level of the monetary base are then assumed to result in near proportional changes in the supply of money. However, to

the extent the private market alters the size of the money multiplier, the proportional change in the money supply is tempered.

The alteration in the value of the money multiplier could occur in at least three ways. For example, the public could raise or lower the relative quantities of currency and deposits held. Given the monetary base available, a rise in the relative quantity of currency held reduces the reserves available to the banking system, contracting the supply of deposits, and thus money. Or, where reserve requirements differ across types of deposits, a change in the relative quantities of say demand and time deposits can also result in a change in nonrequired reserves held by banks. Finally, banks can alter the level of reserves held in excess of Fed requirements and thereby alter the amount of deposits possible from a given level of reserves.

Several years ago, Arthur Laffer and I examined the relative importance of the private sector and the Fed in influencing the old M1 over periods of less than one year.¹ Our results were very interesting. We found that over months, quarters, and semi-annual periods the public's abilities to influence the ratio of currency to deposits and the composition of deposits were far more important than changes in the monetary base for explaining the movements in M1. Only for annual changes did the influence of the monetary base become important. However, as described below, with integrated global money markets, it is possible that even these annual changes in the monetary base reflect demand-induced changes by the public as much as Federal Reserve policy. We concluded that short term changes in the money supply do not materially reflect Federal Reserve policy.

¹ "Factors Influencing Changes in the Money Supply Over the Short Term," Economic Study, H.C. Wainwright & Co., August 18, 1977.

In two subsequent papers for H.C. Wainwright & Co. Economics,² we investigated a further set of problems. Even if changes in the money supply figures reflect Fed policy, can one get relevant information from the reported money supply figures? Our conclusion was that one cannot. The seasonal adjustment procedures employed by the Fed produces two troubling sets of problems.

First, there is very little relationship between the pattern of period to period changes in the initially released data and the pattern in the data after final revisions. Hence, historical relationships between the money supply and the economy estimated from the "smoothed" final revised data are an unreliable guide to the significance of newly-reported monetary changes.

Second, the seasonal adjustment procedures are unsuccessful in eliminating seasonal patterns, while simultaneously introducing new forms of distortion. Time series analysis showed that even the final seasonally adjusted money supply series is not free of observable seasonal patterns. Simultaneously the final series reflects temporal blending, distortions, and omissions from the original data. These conclusions imply that the current money supply figures are, at best, useless and may be misleading indicators of monetary pressures on the economy. In addition, they suggest strongly that the final adjusted series commonly employed in empirical work is inappropriate for determining lags, timing or any relationship between money and the economy other than the crudest correlations.

One can therefore conclude that even from the conventional closed economy, narrowly defined money perspective there are serious questions

²"Constraints on the Usefulness of Just-Released Money Supply Figures," Economic Study, December 13, 1977, and "Distortions in the Seasonal Adjustments of the Official Money Supply Data," Economic Study, September 20, 1978.

about whether the Federal Reserve is capable of accurately and effectively altering the supply of money.

As the perspective broadens, these questions compound. The monetary theory literature, for example, abounds with articles trying to define precisely what should be included in a relevant definition of the supply of money. There are certainly numerous domestic alternatives to the money assets included in M1B - time deposits, certificates of deposit, money market shares, repurchase agreements, commercial paper, credit cards, etc. These alternatives clearly represent a spectrum of monetary assets which are decreasingly subject to Federal Reserve regulation. They therefore represent a spectrum of assets whose quantities are increasingly likely to respond to the demands of the private sector. They provide direct access to the public for circumventing the liquidity policy of the Fed.

Given these alternative assets, were the Fed to, say, reduce the supply of monetary base in an attempt to reduce liquidity, the private sector could respond with greater use of, say, money market funds, repurchase agreements, and credit cards. The Fed's policy might even successfully reduce M1-B. But since the relevant definition of monetary instruments includes more than what is measured by M1-B, the decline provides a false signal. The decline in M1-B is offset by the rise in the alternative instruments. While the Fed, through its powers, might alter the relative quantities of the different forms of money, it is unable to directly control the total quantity.

The ability of the Federal Reserve to influence the supply of money in the United States is compromised still further if the perspective is broadened to the open economy. The proper framework then becomes a global money market where the U.S. is one of only many countries, the dollar is

only one of several major currencies, and the Federal Reserve is but one of numerous participants in the global money market. The literature on the Monetary Approach to the Balance of Payments has detailed how under fixed exchange rates the Fed or any central bank has little, if any, power to control the nominal, much less real, quantity of money in a country. The traditional monetarist response to this compromise of central bank powers is to call for sealing of domestic money markets through flexible exchange rates.

Yet even perfectly flexible rates fail to remove all international routes of circumventing the Fed's attempt to restrict the supply of money in the U.S. One important remaining route is the Eurodollar market. The Eurodollar market gained prominence in the late 1960s and early 1970s as a way of circumventing Regulation Q. While domestic interest rates on certificates of deposits had ceilings, Eurodollar rates were free to rise. Hence, U.S. banks increasingly turned to their Eurobranches to raise funds, and Eurodeposits grew rapidly.

The Eurodollar market was also a convenient avenue through which to circumvent the Fed's attempts to restrict money growth by raising reserve requirements. For example, when the Fed raised marginal reserve requirements on large denomination CDs in November 1978 in an attempt to constrict the dollar money supply, U.S. banks merely allowed their foreign branches to issue more CDs. Save for prudence, these Eurodollar deposits were exempt from reserve requirements, and the proceeds could be lent directly to the U.S. parent bank. Not surprisingly the relative amount of large denomination CDs issued in the Eurodollar market rose steadily in the months following November 1978. In October 1978 the liabilities of foreign branches to the U.S. (other than parent banks) were 12.8% of the level of large U.S. market CDs. By August 1979, that ratio had jumped to 23%. A greater proportion of

dollar financial intermediation had moved to the Euromarket, beyond the control of the Federal Reserve.

The monetary authorities, of course, realized how their attempts at monetary restriction had been circumvented. So on October 25, 1979, when the Fed again tried to reduce money supply growth by raising marginal reserve requirements on domestic CDs, it included one more restriction. This time it tried simultaneously to plug the Euromarket loophole by raising marginal reserve requirements on net liabilities of parent banks to foreign branches. But again the banks found ways to circumvent these restrictions on "managed liabilities."

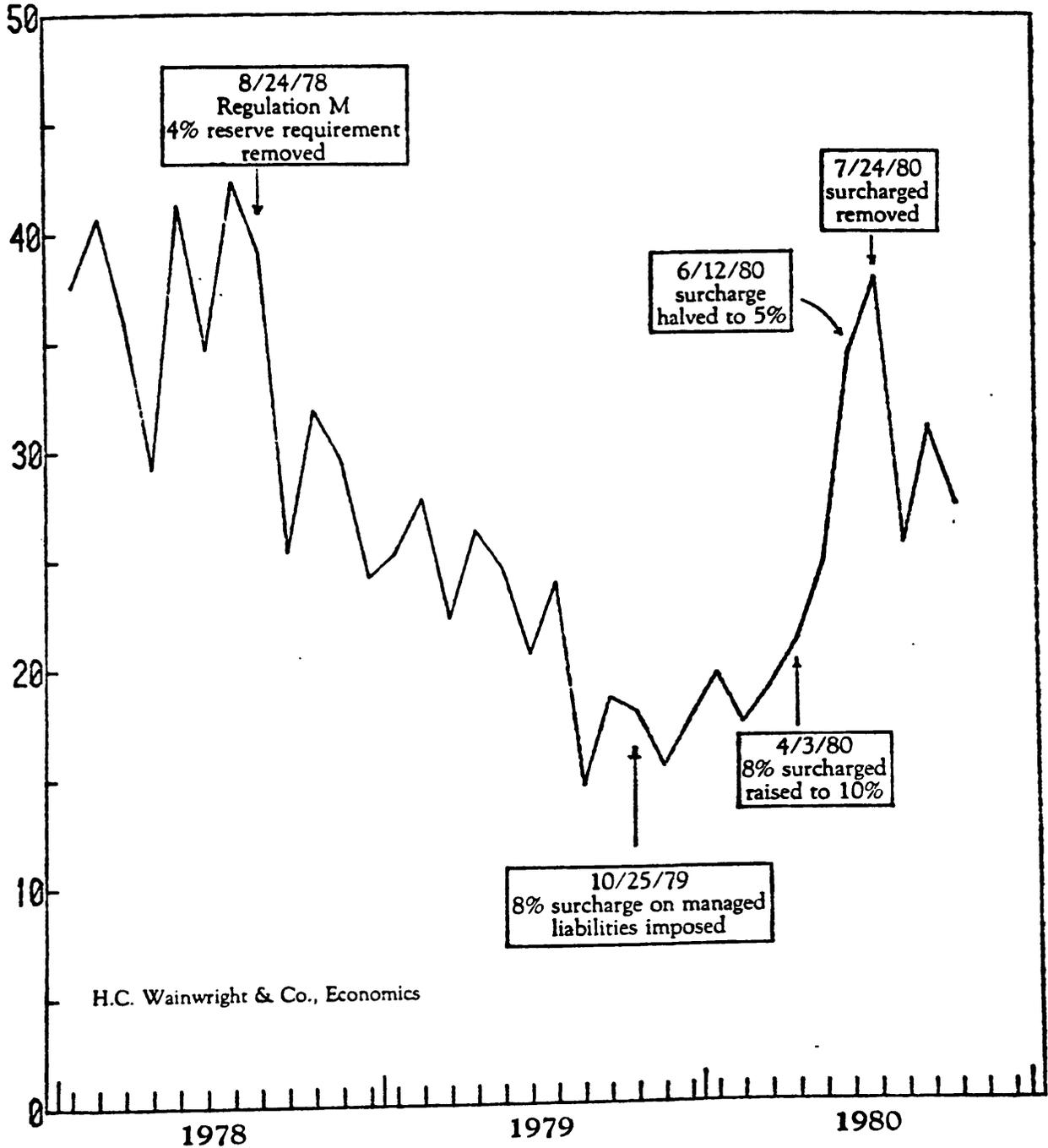
For example, foreign branches have a choice of directly loaning to U.S. residents and corporations or loaning through the U.S. parent bank. The Fed's higher marginal reserve requirements on foreign branch loans to parent banks had raised the relative cost of lending in the U.S. market through the parent bank. True to form, the proportion of total foreign branch lending directly to the U.S. market rose following the October 1979 imposition of marginal reserve requirements (Figure One).³ Interestingly, the proportion of direct lending had been falling since August 1978, when the previous 4% reserve requirement on liabilities to foreign branches (Regulation M) had been eliminated.

In March 1980, the Federal Reserve raised the marginal reserve requirement and widened the range of liabilities to foreign branches to which the marginal reserve requirement applied. Once again, foreign branches responded in predictable fashion (Figure One). And, following the elimination of the marginal reserve requirements in July 1980, the proportion of direct lending

³ From Marc A. Miles, "The Monetary Control Act of 1980," Economic Study, H.C. Wainwright & Co., Economics, March 18, 1981.

Figure One
Bypassing the Domestic Banking System
(2) Direct U.S. Loans by Foreign Branches
(unadjusted for seasonal variation)

Percentage of Overseas Funds Channeled to the U.S. Market
Directly Rather than Through Parent Banks



again decreased. These experiences illustrate directly how there remains a growing proportion of dollar financial intermediation beyond the grasp of Fed authority.

The Eurodollar market can therefore serve as a buffer for counteracting and easing the effects of domestic monetary policy. For example, Figure Two⁴ shows the growth rate of the U.S. monetary base and the growth rate of Eurodollars. The two series move in opposite directions. When the growth of the monetary base slows, the Euromarket expands more quickly, and vice versa.

In the perspective of global, integrated money markets there is a second way that the private markets can circumvent Fed restrictions - through greater reliance on foreign monies. The analysis of this phenomenon has come to be called international money portfolio diversification, or currency substitution. Summarized, this analysis observes an asymmetry in the theory of financial assets. Rational individuals are assumed to diversify their holdings of bonds and equities across currency denominations, but these same rational individuals are assumed not to diversify money holdings. If the same behavior is allowed to exist for money as for other assets, the relative quantities of domestic money held will vary with the relative return (cost) and risk of the domestic currency.

An important implication of this analysis is that the ability of the Federal Reserve to effectively regulate is seriously reduced. Regulation is a tax on financial intermediation. More regulation on dollar money markets means the relative cost of intermediating through dollars rises. The availability of foreign money provides an additional route to avoid those costs. In an integrated global money market of competing currencies,

⁴ From Arthur B. Laffer and Marc A. Miles, International Economics in an Integrated World, Glenview, Ill: Scott, Foresman and Company, 1982.

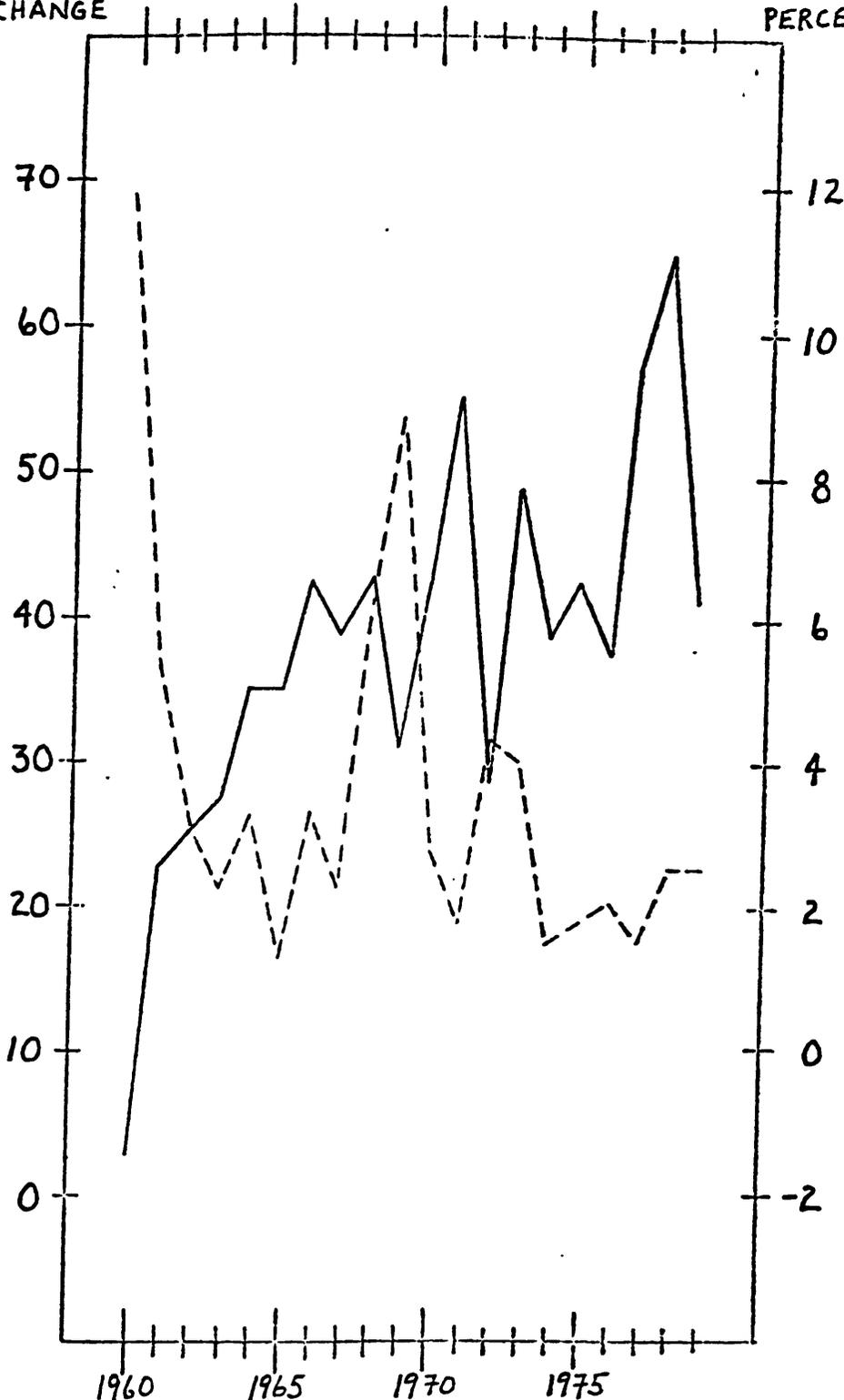
Figure Two

EURODOLLARS* AND THE U.S. MONETARY BASE

1960 - 1979

EURODOLLARS
PERCENT CHANGE

MONETARY BASE
PERCENT CHANGE



END OF YEAR DATA.

* EXTERNAL LIABILITIES OF BANKS IN EIGHT REPORTING EUROPEAN COUNTRIES, IN U.S. DOLLARS.

--- GROWTH IN EURODOLLARS (PERCENT CHANGE).

— GROWTH IN U.S. MONETARY BASE (PERCENT CHANGE).

SOURCES: BIS ANNUAL REPORT,

INTERNATIONAL FINANCIAL STATISTICS.

less intermediation will occur through dollars, and more through other currencies. Hence, even if more regulation permits the Fed to control more precisely the supply of dollars, the extra control is obtained at the cost of further eroding the relative position of the dollar in domestic and foreign portfolios. The Fed has more control over an increasingly less important quantity.

Another important, interesting implication is that with an international market of competing currencies, additional regulation may have the precise opposite of the desired effect. Since regulation serves as a tax, any increase in Fed authority comes at the expense of declining world demand for the dollar. If anything, that adds to inflation.

Hence, the third assumption of the quantity rule, that restricting the quantity of dollar reduces inflation, is called into question directly. A further implication is that alleged attempts to extend the control of the Federal Reserve through legislation such as the Monetary Control Act of 1980, may prove to be counterproductive.

Concluding Remarks

Together these arguments emphasize a basic dilemma for those who favor quantity rules. On one hand, the relevant supply of money in an integrated world money market is much broader than mere M1-B or M2. Clearly, however, the Federal Reserve does not have the ability to control the various money substitutes contained in such a broader definition.

On the other hand, the Federal Reserve may control a very narrow measure such as the monetary base. However, this narrow measure does not provide the means to control the much broader, relevant definition.

Hence, there is no way to institute a relevant quantity rule. And even if one could, simply controlling the supply of money cannot guarantee

stable prices. Precise information about swings in money demand would be needed, which current technology cannot provide. Instead the Fed should concentrate on a more direct method of price stability by adopting a price rule which will stabilize the value of the dollar. The only tools necessary for the price rule are a ticker tape providing up-to-date information on the free market price of the reserve commodity, and a government willing to intervene to maintain the stability of that price.

TESTIMONY OF ANDREW G.E. RACZ
TO THE GOLD COMMISSION
NOVEMBER 12, 1981

SECRETARY REGAN, MEMBERS OF THE COMMISSION, LADIES
AND GENTLEMEN.

WHEN CANDIDATE REAGAN FIRST MENTIONED GOLD PRIOR
TO THE 1980 ELECTION, AND WHEN PRESIDENT REAGAN CREATED THE
GOLD COMMISSION, HE ALREADY MADE MONETARY HISTORY. THIS
ADMINISTRATION HAS REVERSED THE MISTAKEN PHILOSOPHIES OF
PREVIOUS ADMINISTRATIONS BY RECOGNIZING THAT GOLD IS A
MONETARY ASSET AND GOLD HAS AN INCREASING, AS OPPOSED TO A
DECREASING, ROLE IN INTERNATIONAL MONETARY AFFAIRS. THE
VERY EXISTENCE OF THE GOLD COMMISSION IS ONE OF THE FIRST --
AND MAYBE ONE OF THE MORE SIGNIFICANT -- VICTORIES OF WHAT
IS COMMONLY CALLED "REAGANOMICS" TODAY.

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.

LET ME NOW TURN TO SPECIFICS.

I SUGGEST THAT THIS COMMISSION IMMEDIATELY RECOMMEND THAT THE PRESIDENT DECLARE:

1) GOLD AND SILVER ARE VITAL NATIONAL AND MONETARY ASSETS;

2) AN EMBARGO ON ANY FURTHER SALES OF GOLD AND SILVER EXCEPT UNDER POLICIES WHICH I WILL LATER ENUMERATE (HOPEFULLY, TO BE ACCEPTED BY THE GOLD COMMISSION); AND

3) REVALUATION OF GOLD AND SILVER HOLDINGS AT CURRENT MARKET PRICES AND INCORPORATION OF THEM INTO OUR NATIONAL RESERVE ASSETS.

THESE POINTS WHICH FORM THE FIRST BUT ELEMENTARY PART OF MY RECOMMENDATIONS REQUIRE NOTHING MORE THAN A PHILOSOPHICAL CHANGE FROM THE NEGLECTFUL ATTITUDE OF SOME PREVIOUS GOVERNMENT OFFICIALS OF NOT OBSCURE POSITION WHO WANTED TO SQUANDER AMERICAN GOLD AND WHO STATED THEIR INTENTION TO PUT GOLD NEXT TO PORK BELLIES IN THE FINANCIAL PAGES WHERE THEY THOUGHT IT BELONGS.

PRESIDENT REAGAN SHOULD DECLARE THAT THE ERA OF GOVERNMENTAL GOLD ILLITERACY IS PERMANENTLY OVER. 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.

3) THE TREASURY SHOULD BE GIVEN PERMISSION FOR ITS AGENTS TO ACQUIRE GOLD IN PRIVATE TRANSACTIONS FROM OTHER COUNTRIES, FROM MINES IN ANY PART OF THE WORLD AND FROM HOARDERS.

4) FROM NEWLY ACQUIRED GOLD, THE TREASURY IS EMPOWERED TO SEEK PROFITS AND TRADE IN GOLD NO DIFFERENTLY THAN CENTRAL BANKERS HAVE CARRIED ON THEIR CURRENCY PURCHASES AND SALES IN TIME-HONORED FASHION FOR GENERATIONS.

BASICALLY, THERE SHOULD BE NO CONCEPTUAL DIFFERENCE BETWEEN BUYING AND SELLING SWISS FRANCS OR YEN AND BUYING AND SELLING GOLD AND SILVER. THE ONLY DIFFERENCE IS THAT IT IS OUR STATED NATIONAL INTENTION TO INCREASE OUR ASSETS IN THIS VITAL STRATEGIC MONETARY RESERVE. APART FROM THE STRENGTH AND THE INTEGRITY OF THE DOLLAR, GOLD WOULD BE CONSTRUED AS THE MOST VITAL MONETARY RESERVE THAT WE HAVE.

THE INCREASE IN THE PRICE OF GOLD HAS, IF ANYTHING, FAVORABLE IMPLICATIONS FOR THE UNITED STATES.

5) THE TREASURY PREPARE FOR THE IMMEDIATE SALE OF APPROXIMATELY \$50 BILLION GOLD-BACKED BONDS WITH A 7 PERCENT COUPON CONVERTIBLE INTO GOLD AT \$550 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 THE 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, IT 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, 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. SHOULD THE REPUBLIC OF WEST GERMANY, FRANCE OR THE BANK OF INTERNATIONAL SETTLEMENT FOLLOW OUR LEADERSHIP, IT WOULD SIMPLY CREATE AN EXTRA PAGE IN THE LONDON FINANCIAL TIMES WHERE GOLD- OR SILVER-BACKED BONDS WOULD BE TRADED SIMILAR TO HOW TODAY'S EUROCURRENCY BONDS IN SWISS FRANC, DEUTSCHE MARK, POUND STERLING AND YEN ARE TRADED EVERY DAY. IF GOLD- AND SILVER-BACKED BONDS EXPAND THE DEPTH OF THE INTERNATIONAL CAPITAL MARKETS, SO MUCH THE BETTER. WITH LOWER INTEREST RATES AND VAST SAVINGS ON BALANCE OF INTEREST EXPENDITURES, WE WOULD OPEN AN AVENUE TO DEMONSTRATE THE MONETARY SUPERIORITY OF THE UNITED STATES AND ITS PRINCIPLE MONETARY ALLIES VIS-A-VIS THE SOVIET UNION.

THIS ADMINISTRATION HAS COME TO POWER TO ACHIEVE MILITARY PARITY WITH THE KREMLIN AT A COST OF \$1.5 TRILLION,

30 TIMES MORE THAN MY PROPOSED FIRST \$50 BILLION GOLD-BACKED BONDS; AND AT A COST WHICH IS PROJECTED TO REACH \$4 TRILLION IN THE NEXT 12 YEARS.

HAVING BEEN BORN IN HUNGARY, LET ME SAY THAT I AM GRATEFUL THAT PRESIDENT REAGAN FULLY UNDERSTANDS THE NECESSITY TO STAND UP TO RUSSIAN IMPERIALISM. AT THE SAME TIME, LET ME POINT OUT THAT BY COMBINING MONETARY AND MILITARY POLICY, WE CAN ACHIEVE MILITARY SUPREMACY OF THE UNITED STATES.

ACCORDINGLY, I HEREBY RECOMMEND THAT IN ORDER TO TAKE ADVANTAGE OF THE RESULTING AND VERY OBVIOUS SAVINGS OF FLOATING ONE AND PERHAPS SEVERAL OF THE GOLD- AND SILVER-BACKED BONDS WITH DIFFERENT CHARACTERISTICS, THE TREASURY CREATE A NON-MARKETABLE, 8 PERCENT "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 PERCENT, 10-YEAR DEBT TO THE TREASURY WITH THE COMMITMENT THAT NO FURTHER LOANS WOULD BE ISSUED TO THE ABOVE-MENTIONED COUNTRIES. GERMAN AND FRENCH BANKS COULD ALWAYS BE BAILED OUT BY THEIR RESPECTIVE GOLD RESERVES. THE JAPANESE HAVE THEIR TRADE SURPLUS, AND ENGLAND HAS ITS OIL.

THE FREEDOM BONDS, OF COURSE, ARE MADE POSSIBLE BECAUSE OF THE SAVINGS CREATED BY GOLD-BACKED BONDS AND POTENTIAL DROPS IN INTEREST RATES. THAT IS WHY I WANT TO CALL GOLD- AND SILVER-BACKED BONDS "DEFENSE BONDS." HOWEVER, LET'S NOW VISUALIZE THE SUBSEQUENT EVENTS. IF RUMANIA WANTS TO ROLL-OVER A \$5 BILLION OBLIGATION, OF WHICH SAY \$2 BILLION IS NOW HELD BY AMERICAN BANKS, NEGOTIATIONS ABOUT LATE INTEREST PAYMENTS OR POSSIBLE REFINANCING WOULD BE HANDLED NOT AS A COMMERCIAL BUT AS A POLITICAL TRANSACTION. I, THEREFORE, RECOMMEND THE ESTABLISHMENT OF A STANDING COMMITTEE HEADED JOINTLY BY THE SECRETARY OF STATE AND THE SECRETARY OF THE TREASURY WHERE EACH AND EVERY ONE OF OUR

NEWLY CREATED CUSTOMERS -- NAMELY THE DEBT-RIDDEN, DESPERATE MEMBERS OF THE RUSSIAN EMPIRE -- WOULD COME FOR A LOAN.

LET ME NOW CALL A SPADE A SPADE. WHO IS FINANCING THE TROUBLE IN CENTRAL AMERICA? WHO IS PAYING FOR CUBAN TROOPS GALLIVANTING IN AFRICA? WHO IS REALLY PAYING FOR RUSSIAN GRAIN IMPORTS? FINALLY, WHO PAID FOR THE MILITARY EQUIPMENT SENT TO VIETNAM TO SLAUGHTER AMERICAN BOYS, AMERICAN LIVES, AND INDIRECTLY FORCE TWO AMERICAN PRESIDENTS OUT OF OFFICE? LET'S STOP LIVING A LIE!! DIRECTLY OR INDIRECTLY, ALL THESE MONIES WERE BORROWED BY THE SOVIET UNION, BY ITS EASTERN EUROPEAN SATELLITES, AND CHASE MANHATTAN AND OUR OTHER MOST RESPECTED FINANCIAL INSTITUTIONS LENT THEM THE FUNDS.

THE TIME TO DEMONSTRATE OUR MONETARY SUPREMACY AND ENTER INTO CONSTRUCTIVE NEGOTIATIONS IS ABOUT TO BEGIN.

I HAVE HAD COUNTLESS DISCUSSIONS ON THIS SUBJECT OR PARTS OF THIS SUBJECT WITH MANY WELL-KNOWN AMERICANS, SOME OF WHOM HAVE HELD HIGH OFFICE IN THE LAST TEN YEARS IN

OUR NATION'S CAPITOL. NONE HAS BEEN MORE HELPFUL THAN FORMER SECRETARY OF THE TREASURY, GOVERNOR JOHN B. CONNALLY WHO ASKED ME TO CONVEY A SINGLE MESSAGE TODAY -- THE TIME FOR ACTION WAS YESTERDAY!!

LET'S VISUALIZE FOR A SINGLE MINUTE THAT BY CUTTING OFF EASTERN EUROPEAN AND RUSSIAN CREDIT THE PRESIDENT COULD START NEGOTIATING WITH THE LEADERS OF THE KREMLIN. THERE WOULD BE NO NEED FOR GENEVA. BORROWERS ALWAYS GO TO THE LENDER. WE CAN NEGOTIATE RIGHT HERE IN WASHINGTON. HOWEVER, I HAVE NO INTENTION OF MAKING THE NATION'S CAPITOL FAMOUS FOR ENTERTAINING THE WORLD'S LEAST CREDITWORTHY BORROWERS.

HERE IN WASHINGTON, A DAY AFTER ISSUING THE GOLD-BACKED BONDS AND FREEDOM BONDS, A 5 PERCENT CUT IN OUR 5-YEAR, \$1.5 TRILLION DEFENSE APPROPRIATIONS WOULD REPRESENT A \$75 BILLION SAVINGS. DO WE DOUBT THE WELL-DEMONSTRATED NEGOTIATING SKILL OF PRESIDENT REAGAN TO CUT 5 PERCENT FROM OUR DEFENSE APPROPRIATION IF MONETARY SUPREMACY PERMITS HIM TO NEGOTIATE FROM STRENGTH? PRESIDENT REAGAN HAS ALREADY

PROVEN HIMSELF AS A TRUSTED BUDGET CUTTER. 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 PERCENT 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 \$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.

IT IS FAR TOO OBVIOUS THAT THIS REPUBLICAN ADMINISTRATION HAS ALREADY CREATED A REVOLUTION IN ITS ECONOMIC POLICY. IS IT OUR NEXT OBJECTIVE TO BUILD BOMBERS AND BE REMEMBERED AS A GOVERNMENT WHICH IS THE ARCHITECT IN THE CREATION OF THE MOST POWERFUL, SOPHISTICATED AND DANGEROUS

MILITARY MACHINES? WHY NOT GO DOWN IN HISTORY AS THE ADMINISTRATION THAT MADE THE DOLLAR THE MOST RESPECTED CURRENCY AGAIN, THAT IT RECALLED GOLD INTO ACTIVE SERVICE AND VIA ITS GOLD POLICY, USED MONETARY -- AS OPPOSED TO MILITARY -- POWER TO NEGOTIATE TO CUT THE MILITARY BUDGET. LET 1981 BE THE YEAR WHEN WE MAKE THE WORLD RECOGNIZE OUR MONETARY POWER. ACCORDINGLY, WE MUST CREATE AN ACTIVE GOLD POLICY WHICH WOULD BRING ABOUT THE CREDIBILITY OF OUR MONETARY SUPREMACY. WE COULD HAVE THE UPPER HAND IN NEGOTIATIONS AND IN BRINGING ABOUT A MORE STABLE INTERNATIONAL ENVIRONMENT. WE WOULD MAKE THE USSR RECOGNIZE THAT ITS MILITARY SUPREMACY BUILT ON CREDIT -- AMERICAN CREDIT -- HAS A SHAKY FOUNDATION AND IS . . . A THING OF THE PAST.

THE MONETARY SUPREMACY OF THE UNITED STATES WILL BECOME IMMEDIATELY RECOGNIZABLE. JUST LET A RUMANIAN DELEGATION COME TO WASHINGTON FOR A \$2 BILLION ROLL OVER. WE CAN BRING UP CASTRO'S \$6 BILLION YEARLY ALIMONY FROM THE KREMLIN. THE FOLLOWING WEEK EAST GERMANY MAY BE HERE AND

WE BRING UP AFGHANISTAN. JUST BEFORE CHRISTMAS THE HUNGARIANS WILL ARRIVE AND WE CAN TALK OF THEIR SENDING FOOD TO NORTH VIETNAM.

WHILE I APPRECIATE THAT SUCH NEGOTIATIONS REQUIRE A SENSE OF HUMOR, BORROWERS RARELY LAUGH WHEN THEY NEED EXTRA CREDIT OR THE ORANGE JUICE AND BANANAS DISAPPEAR FROM THEIR SHOP WINDOWS JUST BEFORE THE CHRISTMAS HOLIDAYS.

DISCUSSION ABOUT THE PERMANENT USE OF GOLD IS A HEALTHY AND CONSTRUCTIVE UNDERTAKING. I HAVE CONCENTRATED ON ONLY ONE ISSUE: HOW TO RECALL GOLD INTO ACTIVE SERVICE; MAKE IT AN ACTIVE -- AS OPPOSED TO PASSIVE -- RESERVE ASSET; SUBSTITUTE MILITARY SUPREMACY WITH MONETARY SUPREMACY. NONE OF THESE DISCUSSIONS WOULD HAVE BEEN POSSIBLE IF NOT FOR THE FORESIGHT OF THIS ADMINISTRATION WHICH PUSHED GOLD INTO THE FOREFRONT OF STUDY AND EVALUATION. THE MONUMENTAL SIGNIFICANCE OF THE GOLD COMMISSION, MR. CHAIRMAN, IS ALREADY A MATTER OF HISTORICAL RECORD.

THANK YOU.

TESTIMONY BEFORE

THE UNITED STATES GOLD POLICY COMMISSION

Washington, D. C.

November 13, 1981

Alan Reynolds

Vice President, Chief Economist

Polyconomics, Inc.

Morristown, N. J.

For the past decade, I have been a vigorous publicist for monetarist solutions to inflation. A student of Karl Brunner and protege of Milton Friedman, I readily embraced the neat simplicity of that clubby view of the world, and too effectively sold it to others. As recently as 1978, I was openly skeptical about a gold standard. I was wrong.

When the U.S. formally ended the last link between the dollar and gold in 1971, the British economist Sir Roy Harrod wrote that it was perhaps the most important event in monetary history. "The British suspension of 1931," he noted, "was followed by a decade of great disorder in the international monetary system. Will the world do better this time?" The answer, we now know, was "no."

Most of what we all learned about the gold standard in the past generation is at best confused, if not backwards. The purpose of a gold standard is not to reduce the use of money, nor the real value of the money stock, but to increase it. The purpose is not to reduce the amount of long-term credit, but to increase it. The purpose is not to reduce the flexibility of the monetary system, but to increase it. (Such seemingly heretical assertions will be explained later.)

The economy's precarious dependence on short-term credit mirrors the growing unwillingness of people, and the institutions entrusted with their savings, to commit funds for long periods of time--to finance bonds, stocks or mortgages. It is not possible to exaggerate how dangerous this situation is. It is not a new problem, but has accelerated markedly since the 1968-73 moves away from gold. This is not a coincidence. Interest rates on prime corporate

bonds never exceeded 5-6 percent under any gold standard that I am aware of-- certainly not in this country. High interest rates and a shortage of long-term financing are universal symptoms of managed money schemes. It is not just an opinion that a gold standard would dramatically reduce long-term interest rates: few assertions in economics are so well supported by hundreds of years of experience.

The collapse of the U.S. bond market may be moderated during recessions, since bankrupt firms cannot borrow, but the secular drift toward ever higher interest rates has continued since 1968 and will again unless the cause is remedied. The cause is not fiscal--no measure of government borrowing shows any systematic connection with bond yields, here or abroad. The problem is a lack of confidence that the dollar will hold its value over time. People do not trust the money.

A monetary illness requires a monetary cure. A serious illness requires appropriately strong medicine--not strong in the sense of painful, since the illness itself is painful, but something more than a placebo.

We have a confidence problem. It is acutely serious. In the entire history of the world there has only been one solution to eroding confidence in money, and that is a national pledge to guarantee to exchange that money for something of universally accepted value.

A "basket of commodities" will not serve this purpose. That intellectual abstraction is too complex, impossible for wary dollar-holders themselves to control through their own decisions to hold dollars or gold. What is needed is nothing less than universal convertibility of dollars into gold at a fixed ratio or "price."

My own progressive disillusion with managed money grew out of the past decade of experience, the practical problems with counting and controlling money, and persuasive intellectual arguments by Professors Benjamin Klein at U.C.L.A., Robert Barro at Rochester, Robert Mundell at Columbia, Jurg Niehans at Johns Hopkins and others. In a sense, the rediscovery of the gold standard is part of the revival of classical economics, a variation of which is called supply-side economics.

Ideas have consequences, and the economic ideas of the 1960s provided the necessary excuses for ending any and all institutional constraints on monetary policy. In particular, the prevailing theory was that money could be increased or decreased in order to stabilize real output, that more money could buy less unemployment, that monetary policy could ignore the rest of the world, that we could improve the terms of trade by shrinking the unit of account (through devaluation). Today, younger economists would agree that more money (or devaluation) just gives you more inflation, and that inflation is bad for production and employment.

"Policy is out of date," wrote Robert Mundell, "when a theory more obsolete than necessary is used, and theory is backward when policy makers have to develop ad hoc theories of their own or rely on the luck of intuition." Our monetary policy remains in the nationalistic fine-tuning mode of the sixties, long after the underlying theory has been demolished. The evident failure of monetary policy has forced policy makers into such desperate ad hoc theories as blaming recessions on tax cuts. What is needed is the guidance of non-obsolete theory, rather than endless interviews with economic advisers of the past five administrations.

Elusive Quantities

In 1974, Paul Volcker contrasted the "European banking view" that monetary reform meant convertibility and exchange rate stability with the "American academic view" which was "considerably more smug." The academic view, Volcker observed, ignores the fact that "flexibility can be abused. It forgets that we need to be working toward rules of conduct that assure a more cooperative and cohesive system than we now have." Volcker was writing about international order, but it is equally true at home that "we need rules, guidelines, codes of conduct." Non-binding and variable annual targets for a variety of "M"s do not meet the description.

Part of my disenchantment with manipulating quantities of money follows from the evident confusion about how to define, count or measure money. In the last three months, non-borrowed reserves were rising at a 14% annual rate, but one version of the monetary base was up at only a 1% rate. Short-term business credit, from banks and commercial paper, was growing at a 30% annual rate, but M1B was growing at only a 3% rate. If the retail RPs tied to all-savers certificates are added to M2, as they probably should be, M2 rose at a 12% annual rate. This is why experts can and do disagree about whether money is tight or loose, and about whether more money would make interest rates rise or fall.

The money market funds doubled in less than a year and are now larger than the currency stock. Is that savings or a checking account, or what mixture of which? Money can be wired to a Caribbean branch overnight, in which case it disappears from M1B and avoids any reserve requirement. Or it can be invested in a repurchase agreement overnight (with the same effect) or over a three-day weekend, in which case it even drops out of M2. Working with a bank's

cash management specialists quickly destroys illusions about the "M"s.

I am still a monetarist in the sense that I am persuaded that inflation is a monetary phenomenon, and that the quality of money has something to do with its quantity. The problem lies with putting these ideas into practice. Simple formulae for defining and controlling money appear increasingly and irreparably inadequate. We do not and can not know how much of what kinds of money is consistent with stable purchasing power and efficient financial conditions. All monetarism can offer is crude thumb rules based on broad trends in a past quite different from the present or future.

A monetarist may tell you that it is a "good bet" that a 6% increase in M1B will give you a 9.3% increase in nominal GNP, though annual increases in M1B velocity have recently ranged from less than zero to nearly 6%. Favorite "lags" run from months to two years. This is not the sort of bet that public officials should make with the public's money. My own bet is that M1B velocity will be much more rapid in the future than in the past unless new confidence in money keeps long-term interest rates at past levels.

It is sometimes suggested that a gold price rule may have been suitable for simple times, but not for the complex financial arrangements of today. I would argue the opposite, that quantity rules were relatively viable in, say, France from 1919 to 1925 (though they did not work) when most money was simply Bank of France currency. Today, the growing complexity of "money" makes it far more essential to anchor it to something solid, through convertibility into a real asset.

Two objections can be handled with appropriate brevity. One is that any monetary rules may need to be bent, therefore we should avoid all rules and

instead institutionalize the bending. Another is that a viable gold standard must be "managed," therefore we should forget the standard and rely on unrestricted management. These are perhaps the two most common complaints about a gold standard, and the most difficult to comprehend.

It is, of course, a truism that any rules may be bent during times of extreme crises. That is no excuse for operating on sheer whim during normal times. Brief suspensions of convertibility in the past were of no consequence, but devaluations were indeed relatively serious. Yet the U.S. changed the gold price only four times from 1792 to 1973. That is stable enough. The deliberate debasement of 1934 was totally unnecessary and destructive, but we probably should have devalued when we did not--after the Civil War and during the 1960s. The devaluations in 1971 and 1973 were too little, too late. In any case, the risk that the dollar may be redefined every 36 years does not require that it be redefined every 36 minutes.

The Historical Record

The case for a gold standard, like the case for inconvertible paper money, cannot rest entirely on history. We are doing a better job with paper money than we did during the previous two experiments--the Continental dollar and the greenback. Presumably we could also do a better job with a gold standard than our ancestors did. After all, we have computers, better data and modern communications technology.

It is not useful to compare any actual gold standard with some purely hypothetical "improved" paper standard, managed by omniscient economists. Nor is it even accurate to compare the 1879-1914 results with the entire postwar

period, since Bretton Woods certainly provided a form of gold convertibility until 1968. The relevant comparison is between the post-1968 era and such golden eras as 1879-1929 or 1946-1968.

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.

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 stan-

dard 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.

A monetary standard cannot cure all of our problems, but neither can it be blamed for all of the problems of the past. It is not yet clear that recessions in the post-1968 period will be shorter or less severe than they were under various forms of gold standards. However, we operate today with a number of advantages that have nothing to do with enlightened monetary intervention: Less dependence on volatile agriculture and durable goods, a much larger service sector, improved inventory control, improved information and communications, better regulation and insurance of financial institutions.

The Commission's discussion paper "The Role of Gold in U.S. Experience" is quite clear that the major monetary crises under a gold standard were due to sustained refusal to abide by the simple rules. The inflation and deflation after World War I, as well as the initial deflation from 1929 to 1931, were because "the United States did not follow gold-standard rules." The same is true of the worldwide inflationary crisis since the mid-1960s.

Still, the historical record of recessions under a gold standard has suffered from bad data. Victor Zarnowitz finds evidence that mere pauses in growth have been wrongly classified as recessions in 1845, 1869, 1887 and 1899. As a result, expansions from 1834 to 1919 averaged 37 months--about the same as between the 1970 and 1974 recessions.

Jeffrey Sachs likewise categorized recessions since 1893 by their severity,

and found only one strong contraction and one moderate contraction in the pre-Federal Reserve period. The rest were mild. By contrast, we have experienced three strong contractions and three moderate contractions since 1914.

Michael Darby found that unemployment rates in the 1930s had been exaggerated by failure to count those on government work programs (including my father) 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%) of any in this century except for Franklin Roosevelt's first term (15.7%) and President Wilson's second (19.6%). Unemployment averaged more than 7% from 1975 to date. From 1899 to 1929, unemployment reached 7% 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 inherently more difficult than those we face today.

Considering only the U.S. experience, prices were unquestionably more stable in both the short and long runs under gold than under paper; long-term financing was therefore a third as costly as it is today. There is nothing in the historical record to suggest that recessions or unemployment are inherently more likely under a gold standard than under any observed alternative. Insofar as recessions have been due to monetary policy, the worst recessions in this century--beginning in 1920, 1929 and 1974--can more plausibly be attributed to deliberate refusal to abide by the rules of a gold standard.

Foreign history has also been widely misunderstood. Recent research by Benjamin and Kochin has established that chronic high unemployment in interwar Britain was not due to the return to prewar gold parity in 1925, but was instead due to excessively generous unemployment benefits (which added five to eight

percentage points to the unemployment rates). Actually, the growth of real income was nonetheless quite strong in Britain in the late 1920s, nearly 4% a year.

The second error is based on a recent misinterpretation by Thomas Sargent of what France did to stop inflation after July, 1926. I have prepared a detailed paper on this episode with quite different conclusions.

The French budget was not significantly out of balance in 1925-26, but the Bank of France was nonetheless permitted to violate a previous "quantity rule" --a legal limit on the volume of currency. The currency supply rose 27% from July 1925 to July 1926. That led to an immediate fall in the franc and soaring inflation, until a gold cover was adopted on August 7 and convertibility restored at year end. This allowed the Treasury to sell long-term bonds at reasonable interest rates. Sales tax revenues rose with inflation and taxes stated in a specific amount of francs were adjusted to keep pace with inflation, but real tax revenues did not go up. Tax rates on incomes, estates and securities transactions were dramatically reduced in order to stop the flight of capital, strengthen the franc and raise more revenue. After the restoration of convertibility, the stock market rose twice as rapidly as it did in the U.S.

Within a single year, 1926, France provided an example of an unsuccessful quantity rule, a somewhat excessively deflationary gold cover, and a marvelously successful resumption of convertibility. The idea that constructive reforms must take many years simply assumes that people can't tolerate too much of a good thing.

The Meaning of A Standard

Many of the apparent objections to a gold standard are based on extremely restrictive notions of what a gold standard is. An article in Hard Money News for example, writes that "a true gold standard is characterized by an absence of legal tender laws, the unimpaired circulation of gold coins and either 100% backing for all bank notes and deposits issued against gold, or free banking." Professor Milton Friedman likewise writes that "a true gold standard is one in which people use gold as money...in which, if paper circulates, it is in the form of a literal, 100 percent warehouse receipt for gold."

By defining anything else as a "pseudo" standard, such all-or-nothing choices leave no room for degrees of imperfection. Instead of considering varying blends of gold rules and discretion, we are confronted only with an artificial all-or-nothing choice.

Some advocates of gold are not really talking about any sort of monetary standard at all. They are advocating private money, either as an alternative to central banking or as a competitor for legal tender. Aside from the experience of Scotland before 1844, this is largely a hypothetical utopia, difficult to compare with actual experience. In any case, it seems beyond the mandate of the Commission.

The idea of providing gold convertibility for only a few new bonds does nothing to protect the value of outstanding debt and non-interest bearing debt (that is, money). If convertibility is a good idea, it should be applied to all dollar-denominated assets (or government liabilities). Otherwise, continued paper inflation could make redeeming gold bonds quite costly for taxpayers.

So-called convertibility between dollars and gold at whatever the market will bear simply defines the absence of a gold standard. Having a market for gold has nothing to do with inflation or the monetary role of gold. This is also true for gold coins minted at a floating dollar price. There is nothing objectionable about coinage, but it does little to protect the paper.

The idea that more gold coins would be used as an alternative form of money is quite unlikely. If American citizens could be persuaded to double their holdings of gold coins, it would still be a trivial amount compared with the volume of money or transactions. If the government faced serious competition from private money, the threat of nationalization of gold and repudiation of gold clause contracts (as in 1933) would surely thwart that development.

I would define a "real" gold standard as convertibility at a relatively fixed price, and would judge the "purity" of the standard by how well convertibility is maintained and how universally it is applied. International convertibility is thus impure, yet a gold standard nonetheless. Any increase in the dollar supply that exceeds the demand for dollars will then spill over into foreign markets, be converted into marks or yen, and result in foreign central banks converting dollars into gold reserves.

A pseudo gold standard is a gold "cover" or "backing" without convertibility. This is, at best, a quantity rule in disguise. It is an unnecessary addition to convertibility, a grossly inadequate substitute, and it is both potentially too rigid and too likely to be discarded.

Curiously, the Commission's initial "Outline of Areas for Consideration" lists only a gold cover, a cover plus convertibility and something called a "pure" gold standard. The idea of convertibility without a cover, which seems

to me to be the essence of the meaning of any commodity standard, needs to be added to the agenda.

A common confusion about "backing" the dollar is to assume that every piece of currency and bank deposit might actually be exchanged for gold bars or coins, so the government must hold a gold stock large enough (at some price) to do that. If prices are expressed in terms of dollars, turning in more and more dollars for gold would drive prices toward zero and the value of remaining dollars toward infinity. Clearly, the process stops well before that point. Convertibility is a self-limiting mechanism, requiring only a small buffer stock to meet unanticipated withdrawals. The net effect of inflows and outflows, with supporting monetary procedures, is zero over time. As Flood and Garber put it, in a successful gold standard "either currency will dominate gold in private portfolios or portfolio gold and currency will be perfect substitutes."

A gold standard, as I envision it, need not eliminate fractional reserve banking, nor paralyze the Federal Reserve, nor impose fixed exchange rates on other countries. The Fed's tools would remain the same, only the targets would change. At present, the Fed changes two short-term interest rates to affect borrowed reserves in order to influence a variety of measures of money in the hopes of achieving long-run price stability. Under a gold standard, the Fed would instead operate directly on the price of gold as a proxy for all prices. They would simply expand money to stop a persistent gold inflow, or slow the growth of money to stop a persistent gold outflow.

The discussion to date is full of assertions about there being "no alternative" to the present non-system. Others say that inflation has to somehow be ended first, before we institute any serious plan to end it. These sorts

of "change-is-impossible" statements are literally meaningless, having no logical or factual content. Most important, they presume that the status quo is viable, which is at least debatable.

The return to gold in the past was not usually a matter of intellectual consensus, or of some economist's amateur opinion about political feasibility. Instead, countries returned to gold because they found themselves in a chaotic financial situation much like the one we are in, though rarely this bad.

As Good as Gold?

Stabilizing the ratio of dollars to gold will stabilize the general price level if the "price" of gold is a good proxy for other prices--that is, the relative price doesn't change too much. Walras' Law teaches that relative prices will not get too far out of line because excess demand in one market means excess supply in another. "Try to imagine, for example, inflation carrying a loaf of bread to \$100 when the same \$100 will buy an ounce of gold," writes Congressman Kemp. Still, we need to put some numbers on it.

The post-1968 experience is clearly irrelevant. When gold stops being a unit of account, it becomes a commodity and an investment (a hedge against unpredictable paper money) and its spot price therefore swings sharply. The volatility of the gold-dollar ratio (and of the oil-dollar or wheat-dollar ratios) since we left the gold standard is hardly evidence that the ratio should not again be stabilized, as Hall and Nordhaus imply.

Remembering that wholesale price indexes were dominated by volatile farm prices around the turn of the century, the toughest test would be to measure gold's purchasing power relative to that wholesale index. That is, if some-

one held an ounce of gold in, say, 1890 and switched it for dollars to buy goods in 1884, how would that gold have held its value against the wholesale price index? (The dollars themselves actually did much better: we are testing the relative price of gold.)

The answer may bewilder those who claim that gold provides a stable anchor only over fifty years or so. Using random five-year intervals from Jastram's data, 1880 through 1914, the annual rates of change in this measure of the relative price of gold were:

1880-84	-0.9%
1885-89	+4.1
1890-94	+1.7
1895-99	+1.9
1900-04	-3.3
1905-09	-1.8
1910-14	-1.5

Over the whole 34 years, of course, the relative price of gold was virtually constant, as it was from 1802 to 1972. But anything that holds its purchasing power over wholesale prices this well over five-year intervals has to be considered an amazingly good proxy for all prices.

The recent producer price indexes have become more diversified, therefore less subject to the swings from a bad to bumper wheat crop. Yet the comparison of inconvertible Federal Reserve notes with this price index does not suggest that paper is a better proxy than gold. On the contrary, producer prices rose at a 6.8% rate relative to the paper dollar from 1970 to 1975, 8% from 1975 to 1979. Crude materials prices, which are more comparable to the ancient index, more than tripled since 1968. Gold is clearly a better proxy for other prices

than anything else that has been tried, particularly including inconvertible Federal Reserve notes. If the yardstick is the goods and services that can be bought with a unit of account, gold is clearly the superior yardstick.

In my judgment, fears of the consequences of setting the wrong price are greatly exaggerated. What Britain did in 1925 and the U.S. did in 1934 were extreme cases, comparable to pegging the gold price today at either \$42 or \$800. Clearly, such extremes would cause deflation or inflation, as they did in those cases. Such examples are irrelevant. Within a more reasonable price range, there would be enough discretion in the system to smoothly neutralize any such one-time pressures. After any brief adjustments were worked out, the trend rate of inflation would be essentially zero.

The Gold Supply

Anna Schwartz's September 10 memo to the Commission on Gold Output speaks of "periods of a falling price level matching periods of low growth rates of gold production and periods of a rising price level matching periods of high rates of gold production." Yet the Schwartz data show no such connections. The two periods of most rapid increases in the gold supply (1834-1848 and 1934-40) were accompanied by less than 1% annual deflation or inflation. The deepest deflation (1920-33) was matched by an above-average increase in gold output.

Aside from the Great Depression, no period before 1968 shows rates of inflation or deflation larger than about 2 percent a year, yet the memo concludes that "a stable price level...is plainly refuted by the data." The case against a gold standard should not be based on exaggerated ideals of stability. The link between gold output and prices was close in only one period, 1950 to 1968, yet the memo says "it is clear that no gold standard was in operation

over the the post World War II inflation experience."

In the absence of facts, the memo turns to theory: "If the annual rate at which 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.... If the supply of monetary reserves will not match the growth in demand for money, the price level will fall." (emphasis added)

If productivity gains were very large and increases in velocity were very small, a prolonged decline in the gold supply might either stop that assumed real output growth or produce a gradual deflation of prices--but not both. That is, the deflation must be a result of real income growth in this analysis. A period of rising living standards accompanied by a 1-2 percent annual decline in prices would seem to be the least of our worries. Adherence to a gold standard would have minimized the disruptive deflations of 1921 and 1929-33, just as it would make persistent inflation impossible. The post-Civil War deflation was also the deliberate consequence of managed money (retiring greenbacks), and was not necessary or desirable.

The standard theory of exhaustible resources teaches that expected inflation will induce hoarding of such resources by both buyers and sellers. Inflation raises demand and reduces supply. That is true of oil, and it is true of gold. Indeed, it may help explain the stability of the oil price in terms of gold, which is typically 15 barrels of oil per ounce of gold.

In any case, a gold standard would make postponing gold production less attractive as a hedge against inflation (that is, a rise in the gold "price," relative to dollars). There would be more incentive to produce gold, less incentive to hoard it. The evidence on gold production after 1970 is therefore relevant

only to the present monetary arrangements, not to a gold standard.

Known gold reserves that are economically recoverable at present prices and interest rates tell us little about what would be discovered under different conditions. This is like saying the U.S. has only enough "proved reserves" of oil to last a decade or two--which has been true for many decades.

Questions about the adequacy or volatility of the gold supply are perhaps important with a rigid gold cover with 100% reserve banking. They are not particularly relevant to a managed fractional reserve system with convertibility, as I propose. The monetary authority could easily compensate for erratic gold output.

It is not true either in theory or historical fact that the quantity of some measure of money must be rigidly linked to global gold production, nor that production determines supply (since stocks can be increased or decreased).

In his modern classic, The Theory of Money, Jurg Niehans demonstrates (with ample algebra) that in "a gold standard world the quantity of money, while perhaps valid as a broad tendency, does not strictly apply. While gold discoveries will certainly tend to push prices up, it would be a coincidence if the money supply and commodity prices moved up in proportion.... Once the government has fixed the price of gold, there is no reason why resources, technology, tastes, and growth rates should not always move in such a way that the resulting commodity price level or output in current prices is just proportionate to the resulting money supply. Quite generally, the quantity theory of money implies a denial of an economic theory of the money supply with respect to those types of money for which a quantity theory is said to hold."

Worries about money growth being "too slow" must first offer some tiny shred

of evidence that more money means more production and employment. In fact, the evidence is that the growth of money is at best unrelated to real growth, and it appears more likely that too much unwanted money severely depresses real growth. The most important attribute of money is predictability, not volume.

The habit of equating rising prices with prosperity is a hangover from the Great Depression (which, in fact, was prolonged by applying that notion), as is the corollary of equating deflation with recession or lower prices with lower output. To simplify a complex issue, real progress really depends on the relationship between prices of inputs (costs) and the prices of outputs (prices). A gold standard lowers at least one major input cost, namely interest rates. The evidence for that is formidable.

Resource Costs

A purely academic objection to a gold standard is that it supposedly involves large "resource costs"--mining the gold. A similar argument, notes Houston McCulloch, could be made for bicycle locks and chains: "If metal locks could be replaced with symbolic paper locks, resources would be released that could be used productively elsewhere. As long as thieves honor paper locks as they would metal locks, your bike will be perfectly secure." As Benjamin Klein put it, "a commodity standard...can be thought of as a public investment in long-term monetary trust."

Clearly, the resource costs of perpetual inflation far exceed any conceivable cost of additional mining. Martin Feldstein's research suggests that "it is quite possible that the present value of the losses associated with a permanent increase in the rate of inflation is infinite." Edward Foster finds

that high inflation is inherently more variable, and John Makin finds that "a rise in inflation uncertainty...significantly depresses real economic activity." Anything that will stop chronic inflation is a bargain.

Besides, we already have over 8,000 tons of gold at Fort Knox. That resource cost has been paid. Far from needing more gold to run a gold standard, it would be better to have much less once confidence in convertibility is established. Robert Hall even suggests that no government reserves would be ideal. A huge gold hoard facilitates procrastination, as we saw from 1958 to 1968. The British avoided that temptation by maintaining a tiny gold inventory. Even a minor "run" on the gold window was thus met with appropriate corrective measures, to slow the increase in money. If more gold is ever needed, the government can sell bonds to acquire it.

In short, the resource costs of a gold standard need not be larger than under current gold policy, and could well be smaller. The net resource costs, including the efficiency gains from eliminating chronic inflation and the related financial paralysis, would be infinitely cheaper than under the present regime.

International Considerations

There are sizable efficiencies in tying national currencies to one another, just as it was more efficient for the United States to adopt a single money rather than fifty monies. Still, any nation or currency bloc that wishes to float against a gold dollar should certainly be free to do so.

William Nordhaus says "a workable gold standard must be joined by all major nations. The United States would therefore spend political capital attempting to persuade others to join a new gold regime." We should, of course,

consult with our trading partners, but there is no need for persuasion.

"The dollar became the numeraire for the system," wrote Robert Aliber, "not because of any treaty or agreement, but because various countries had decided, in their own self-interest, to peg their currencies to the dollar." That would again be true under similar arrangements. "The virtue of gold in the monetary system," Aliber added, "is that it is a useful kind of international money with a long history of acceptance."

If other countries chose to adjust their policies in order to maintain stable exchange rates with the gold dollar, then they would become part of the gold bloc. If any of them deviated from the required policies for too long, exchange rates could and would be adjusted. Again, there is no either-or choice between a fixed exchange rate rule and the total disregard for exchange rates implied in the notion of floating.

It is revealing that so many critics of a gold standard are so certain that other countries would peg to a gold dollar. That can only mean that they too understand that no inconvertible managed money could hold its value well enough to compete with a gold dollar. If a managed money could do as well or better than gold, then other countries would surely prefer managing their monies and floating against the gold dollar. To predict that they will not in fact do that is to concede that gold is a superior unit of account, as indeed it surely is.

The Commission's October 8 memo on international aspects poses a variety of non-existent problems. It suggests that "to restore the external value in relation to gold would require an amendment of the Articles governing the IMF." In fact, nothing could prevent other countries from pegging to a gold convertible dollar, nor require them to do so.

The memo also says "a real shock...occurred as a result of the increase in the price of oil." Yet the dollar price of oil is nominal, not real, and it is not unrelated to the actual and prospective value of the dollar. A shrinking dollar made it easier for other countries to acquire dollars and use them to bid up the price of oil; a shrinking dollar also made OPEC reluctant to trade a tangible asset for insecure claims on future dollars. Supply shocks can, however, occur, but more or less money cannot solve a reduction in the world volume of wheat or oil, nor in the terms of trade. Creating more money to offset less supply is a sure formula for stagflation.

The promise of a money that is immune to foreign demand and supply is sheer illusion. No monetary system, in reality or imagination, could insulate the dollar's purchasing power against a global crop failure, oil cartel, gold rush or bubonic plague. Money is money, reality is reality.

"One option," the October 8 memo concludes, is "improved discretionary control of the money supply." This is like saying that one alternative to observed reality is an unobserved utopia. "The objective of a unilateral gold standard," says the memo, "would be to control the growth of the money supply." That is emphatically incorrect: control of "the money supply" is a quantity rule, not a price rule. The objective of any gold standard is to stabilize the purchasing power of the dollar. This would be true regardless of whether or not other countries tied their currencies to the dollar; if not, the dollar would hold purchasing power and other currencies would lose purchasing power relative to the dollar.

The U.S. certainly could be the only country on a gold standard--we are a sovereign nation--but there is no chance that most major nations would not want to join us within an hour or two. The alternative would be to watch their

currencies sink against the dollar.

The claim that nations did not abide by the rules of the gold standard is both exaggerated and of doubtful significance. James Ingram and Harold Fried found that from 1959 to 1974, central banks violated the Bretton Woods rules less than one-third of the time. That is, the money supply usually moved in the same direction as international reserves. But "the United States was the most consistent violator of this rule."

Donald McCloskey and Richard Zecher provided a detailed explanation of why and how the 1879-1914 gold standard "worked quickly and well" despite deviations from the rules. International markets were tightly integrated, even then, so that potential arbitrage created parallel moves in prices and interest rates in different countries. As Alfred Marshall put it, "So long as national currencies are effectively based on gold, the wholesale price of each commodity tends to equality everywhere." This does not require loading-up ships with gold and sending them between nations: all tradable commodities and securities are involved in the stabilization process.

McCloskey and Zecher found that the money supply increased at an annual rate of 5.7% from 1882 to 1913, though international gold flows would have called for a reduction. Annual increases in the GNP deflator were 0.2%; real growth averaged 3.7%. Again, the supposedly rigid link between prices and international or domestic gold flows is simply a myth.

Any attempted separation of domestic and foreign monetary influences is artificial under any monetary arrangements. There is one global market for dollars and it affects all prices expressed in dollars, from Saudi oil to Kansas wheat. It would not be possible to have strictly domestic converti-

bility so long as airplanes, ships and radio signals are allowed to enter and leave this country. Nothing flows around regulatory barriers more easily than money.

It is also impossible to manage the creation of money at home, independent of foreign disturbances. That is a Quixotic goal, regardless of the name of the monetary system. A small impoverished island can insulate itself against world markets, or a great economy can become a small impoverished island by attempting to do so.

The Soviet/South Africa Question

Anxieties about the fact that the Soviets and South Africans are major gold producers are rarely specific, therefore hard to soothe. Annual production is so small relative to outstanding stocks that anything short of a complete multi-year shut-down could easily be handled. The Soviets, unlike the South Africans, presumably have large gold inventories which they could swap for dollars, as could most European countries. The questions are why would they do so, and what would they do with the dollars? After all, the Soviets can and do swap gold for dollars now, and the Saudis often swap dollars for gold.

The absence of convertibility was great boon to the Russians and South Africans, who were able to acquire more and more dollars (and therefore U.S. goods) with fewer and fewer ounces of gold. The idea that the Soviets would unload their best international asset to acquire short-term dollar purchasing power seems irrational, and they could do so under any monetary system.

If convertibility were both national and international, with perhaps some minimum (\$10,000) on transactions, then we should be watching the net inflow

or outflow of gold and dollars from both sources. In both cases, the usual reason why dollars would become marginally more attractive than gold is that the demand for money exceeds the supply--that is, there are pressures toward deflation. An inflow of gold for dollars thus means we should print more dollars, regardless whether the inflow is from Moscow or Minneapolis.

Suppose a wave of nationalizations in, say, France, led to a conversion of French wealth into dollars which were then used to buy gold. In the first instance, the franc would fall, acquiring fewer dollars per franc. Interest-bearing dollar assets would surely be more attractive than gold, whose command over dollars was fixed. If there was nonetheless an outflow of gold to France, a brief tightening of U.S. monetary policy would probably be in order.

If foreign governments were deliberately manipulating gold stocks to upset the gold-dollar ratio, this would be readily apparent and easily neutralized by offsetting open market operations. Because foreign governments know that, they would not attempt such suicidal speculation. The required "cornering" of the gold market is actually no more likely than cornering the dollar market (it would be costly and risky to acquire enough gold or dollars).

Here is an unusually concrete concern expressed by Andrew Racz: "If... the price of oil goes to \$50 or \$60 per barrel, the run on gold in an open monetary system with fixed parities could not survive a matter of weeks." Apparently Mr. Racz envisions the added OPEC dollar income being invested in gold, the price of which would be fixed, rather than in securities that pay interest or dividends. That would be uncharacteristically unwise. Oil consuming countries are more likely to sell some gold to acquire the dollars needed to buy oil, which pushes in the other direction. In either case, the

probable magnitudes would be easily manageable.

One of the worst gold drains in history happened in Britain in October and November, 1907, because of the U.S. banking panic. The Bank of England lost 27% of its gold reserves in a single week. The discount rate was promptly raised from 4½% to 7%, according to Wesley Mitchell. Within two weeks, "gold began to flow into England freely" and by December 11 the reserve was about the same as before the crisis. The discount rate was then lowered to 5% by January 16. Although such a sudden run on gold stocks is extremely unlikely in today's environment, the British lesson is that it would nonetheless be manageable within a month or two. It simply requires quick action to demonstrate that convertibility will be maintained.

The main cause of the British gold drain was a series of frauds and failures of a few U. S. banks. This led to an intense scramble for cash by depositors and the banks themselves (to build up their reserves) and even caused the circulation of makeshift substitutes for money, like "clearing house certificates." In meeting depositors' demands for money, banks "used gold coin with unaccustomed freedom. The very unpopularity of the latter medium rendered it more acceptable to banks that were endeavoring to restrict withdrawals of deposits." When paper money is potentially convertible into gold, people much prefer to use the paper rather than gold coins. (There are already plenty of gold coins around, and creating more will not improve the quality of paper money and bonds, which are far more important.)

Efficiency vs. Discipline

My own support for gold convertibility is not fundamentally based on distrust of government officials or central bankers, nor on the need for "discipline" as that is commonly understood (i.e., a limit on budget deficits or printing money). Any governmental monetary system must rely on the assumption of good faith. Most of the errors that led to the assault on gold in 1933 and 1968-73 were just that--errors. Those were periods of unprecedented confusion among economists, most of whom rationalized the monetary manipulations.

The purpose of a gold standard is to improve the efficiency and predictability of monetary policy by providing a flexible signal and mechanism for balancing the supply of money with the demand for money at stable prices. Any move to convert gold into dollars becomes a conspicuous error signal that the supply of money is inadequate to avoid deflation (as in 1929-30). A move to convert dollars into gold likewise signals that policy is veering toward inflation (as in 1965-73). The market thus determines the appropriate flow of money, preventing either inflation or deflation.

Those who see the gold standard as a method of slowing the growth of the money supply may be surprised to learn that the growth of the money supply was faster under the most pristine gold standard (1879-1914) than it was in the postwar period. According to Bordo, annual increases in M2 were 6.1% from 1879 to 1913, with zero inflation, but M2 increased by 5.7% a year from 1946-79. According to Hoehn, M2 grew by 7.7% a year from 1896 to 1914, but inflation averaged 1%; M2 grew by 7.1% a year from 1951 to 1980, but inflation averaged 4%. Clearly, the falling demand for money (rising velocity) is at least as significant as the rising supply.

As Robert Hall explains, the substantive effect of the classical gold standard "came from the legal definition of the dollar, not from the government's control of the money stock. Essentially the same control of prices could have been achieved just from the definition of legal tender, without any control of the private creation of money. In any case, there was no serious attempt to control the deposits of banks, which were a growing fraction of the money supply."

The gold standard is thus unconcerned with adding "discipline" to the money supply, particularly in ways that would prevent monetary authorities from meeting cyclical or seasonal needs.

"It is known from macroeconomic theory," writes Niehans, "that monetary expansion can stimulate output and employment only in the short run, while the long-run effect will be only on prices. This means that a long-run expansionary trend has no desirable real effect. It may thus be argued that a fractional gold standard permits, by and large, just those short-run variations in monetary policy which are necessary for an effective stabilization policy, while at the same time prohibiting those long-run inflationary (or deflationary) trends which result from weak governments or bad economics."

There is a sense in which a gold standard does foster long-term fiscal prudence, as explained by Thomas Sargent: "When a government finances its term debt without indexing repayment to the price level, the freedom to expand government demand debt and longer term debt without the limits imposed by the gold standard gives the government a wide range of options about if, when, and to what extent to default on its long-term debt by monetizing it and depreciating its real value." That is, the absence of convertibility means that government can partly repudiate past debts by inflating, thus reducing the real value

of 2.9% savings bonds. (This point is also stressed by Greenspan.)

When this risk is well known, however, longer-term interest rates adjust upward as lenders demand insurance against long-run inflation before they will buy long-run claims to dollars (bonds) from either governments, corporations or home buyers. This is the dismal situation in which we find ourselves. In such a fully-anticipated inflation, a gold standard makes it much easier to finance short-term deficits, not harder.

By guaranteeing the long-run purchasing power of the dollar, the government can again sell bonds at much lower interest rates, as France did after 1926. The falling debt service costs, as well as related gains in private profits and employment, also eliminate the sort of budget problem caused by perpetual slumpflation. That is, our budget difficulties have a monetary origin, not the other way around. The government cannot finance its borrowing in a responsible manner for the same reason that corporations have been forced into short-term paper and home buyers forced into three-year mortgages. The monetary system does not inspire long-term confidence.

Wesley Clair Mitchell, in 1904, thus figured that the issuance of greenbacks in the Civil War added more to debt service than it saved by not issuing bonds. "The resort to a legal-tender paper currency," wrote Mitchell, "is a confession of acute financial distress and as such must depress the market for bonds. Therefore, to the financial loss caused by the increase of expenditures should be added a second loss from the unfavorable terms to which the government had to submit in selling its securities." Modern greenbacks are having the same effect.

Disinflation Strategies

Some people are not worried that a gold standard would not work, but that it would. William Nordhaus, for example, writes that "it is hard to see why the cross of disinflation would be markedly reduced under the gold standard." This is simply an argument for capitulating to inflation--an objection to any serious proposal to even reduce inflation, much less end it. On its own terms, however, any alleged problems in adjusting to zero inflation would indeed be "markedly reduced under the gold standard."

The analysis of why the gold standard is the least troublesome method of ending inflation is loosely plagiarized from Robert Barro and Alan Stockman of the University of Rochester. High long-term interest rates clearly reflect the expectation that inflation and short-term interest rates will remain in the double-digit range, on average, for decades, unless monetary policy is changed. The increasingly high cost of keeping money in forms that earn little or no interest has encouraged people to economize on cash balances--that is, to conduct more spending in any month or year with a smaller and smaller amount of currency and transactions balances. As a result, the velocity of money has increased, and can be expected to increase more rapidly in the future.

Barro estimated that the rise in prime corporate bond yields from 4.5% in 1965 to 9.6% in 1979 raised the average inflation rate by almost 2% per year. With comparable bonds now yielding 15-16%, the prospective rise in inflation from rising velocity is becoming far more threatening.

Any pre-1980 "trends" in velocity are irrelevant, because interest rates have since moved into previously unknown territory. At these rates, it pays to waste a lot of resources economizing on cash balances and devising innovations

that frustrate control over narrow definitions of money. And this phenomenon is not likely to be temporary (though temporarily alleviated by recession) since, as Barro wrote, "high long-term interest rates seem principally to represent the financial markets' prediction of an explosion in future monetary growth and long-term inflation--a possibility that arises because of the shift to a paper money regime that possesses no nominal anchor."

The increasing volatility of interest rates likewise implies increasingly unstable demand for money, so that rigid money supply rules could generate wide swings in inflation.

Donald Hester and others have highlighted the difficulties of controlling the volume of money in an inflationary environment that fosters an accelerating proliferation of money substitutes. If it could be done, however, a slowdown of money growth would be far more painful than gold convertibility.

If money growth is brought down gradually, as Herb Stein suggests, it would take a decade or more to eliminate inflation. People will surely not believe that such a policy will persist through several changes of administration. Therefore, wage and price contracts will continue to incorporate the assumption of eventual "reflation," and velocity may well increase more rapidly than the growth of money declines.

If money growth were instead brought down to, say, 2% a year and held there, people might eventually believe it and therefore interest rates would plummet. With low interest rates, the demand for money would soar, velocity would fall. Any rigid quantity target (including a gold "cover") cannot cope with this rational adjustment to disinflation. With falling velocity, 2% money growth could produce an abrupt deflation, with widespread bankruptcies as prices fell

faster than contracted costs. If money growth is then increased, that violation of the quantity rule undermines its credibility and revives all the symptoms of expected inflation. Neither a gradual nor sudden reduction in money growth can succeed.

A gold standard will have no problem in meeting the surging demand for money that must temporarily accompany any credible effort to end inflation. The nominal price of gold would be pegged, so that deflation would be avoided. There would be no arbitrary limit whatsoever on the money supply, and the workings of convertibility ensure that the added money supply would match any added demand for money. Only a large change in the relative price of gold could cause inflation or deflation, and such changes are likely to be tiny and glacial when compared with recent swings in the supply of and demand for money.

To summarize, it is beyond reasonable doubt that gold convertibility would provide more stability to the purchasing power of the dollar, both short-term and long, than any observed or hypothetical alternative. That, in turn, would certainly increase the supply of long-term financing at dramatically lower interest rates, without which the economy cannot possibly stage a healthy, sustainable economic expansion.

A gold standard is, in my judgment, quite inevitable. The only question is whether it will be properly constructed to ward off financial crisis, or hastily patched together after even more damage is done.

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TESTIMONY BEFORE THE U.S. GOLD COMMISSION

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Washington, D.C.

by

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The most important aspect of the gold problem is how we answer this seemingly simple but vital question: Whom do we trust, the people or the government?

In recent years, economists and other analysts have come more and more to see the errors and fallacies of government control and central planning, and the great importance of maintaining the rights of private property and of free markets and free enterprise. But while the economics of free market and property right has been extended in recent decades, there is one glaring gap: the crucial area of money. Why are we ready to accept freedom and private property, why are we ready, in short, to trust the people in all their economic affairs -- and yet make a glaring exception in the case of money? Why do we favor freedom in many areas, and yet advocate total control over the supply and lending of money in the hands of the central government? For if we leave it up to the federal government to control the issue of dollars and demand liabilities to dollars, we are granting it this vital power. Money is relevant to the lives of every American. And yet we are willing to put our lives and our fortunes, if not perhaps our sacred honor, in the hands of the Federal Reserve, the monopoly creator and con-

troller of all dollar issues.

It might be well for us to ponder how perhaps the most despotic regime of this century -- Pol Pot's Cambodia -- was able to exercise its genocidal policies over the Cambodian people. It did so by abolishing all use of money, so that no one could use money to purchase goods, and everyone had to go to the central government to receive their meagre rations of food or clothing. The point here is not that I think that the Federal Reserve policies rank with Pol Pot's -- only to underscore the vital importance to everyone's life of the people directing the control of their nation's money rather than the government.

Yet in the field of money we have allowed the U.S. government to confiscate everyone's gold in 1933, supposedly for the duration of the depression emergency. But here we are, nearly half a century later, and the people's gold, seized from them, still remains buried at Fort Knox. If we truly believe in free markets, free people, and private property, we must proceed to denationalize gold, and let the people take back their gold property which was, in effect, stolen from them in 1933 and never returned.

But let us go back to our central question: do we trust the people or the government? I would like to submit that it is pre-

cisely the area of money -- an area nationalized throughout the world -- where we cannot trust government at all, and even less so than in other areas of the economy. For government operation using taxpayer money rather than voluntary investment or payments from consumers always tends to be unsatisfactory and hopelessly inefficient. But in the area of money there is another vital factor, which causes the government to be inherently inflationary. Most economists will now concede that the major, if not the sole, cause of our chronic and ever accelerating inflation is the excessive creation of new money. But there is only one institution to blame for this, because there is only one institution that we all recognize to be the sole issuer and controller of dollars: the federal government and particularly the Federal Reserve. But if, as I maintain, government is inherently inflationary, then putting the Fed or any other government institution in charge of the supply of money is equivalent to letting the proverbial fox guard the chicken coop.

Why do I say that government is inherently inflationary? Simply because government, like many of the rest of us, is chronically short of funds -- that is, it would like to spend more than it can take in in taxes without stirring up too much political unrest.

To pay for the remainder, it can borrow from the public, or better yet, it can create new money and use it to finance its ever-larger deficits. The point is that economically, if not legally, the federal government -- now the Federal Reserve -- enjoys the monopoly of legalized counterfeiting, of creating new money out of thin air, or out of paper and ink. I submit that any institution, no matter how noble its possible motives, will use any power that it has, especially the power to counterfeit. By creating new money, the government can finance its deficits, and subsidize favored political and economic groups by supplying cheaper credit than they would otherwise enjoy. Since the government, as monopoly issuer of fiat money, has the power and the ability to counterfeit, it will tend to keep using such power.

If we look at the record of governments throughout history, we see a dismal story of such counterfeiting -- of fiat money, of runaway inflation that wiped out entire classes of people as well as destroying the value of the nation's currency. There is no economic holocaust -- no recession or depression -- that can touch the widespread and intense agony of runaway inflation. And if we continue our present course of trusting government rather than the people or the market, we will eventually have such hyper-inflation in America. Let us

not forget that two of the notable runaway inflations in the twentieth century had disastrous political consequences: the German inflation of 1923 destroyed the middle class and paved the way for Hitler; and the Chinese inflation of the 1940s was instrumental in the loss of China to the Communists.

It is also unassailably true that the Western world enjoyed far greater price stability under the gold standard than we have had since. If we take the period since the founding of the American Republic, prices were far more stable than they have been since we were taken off gold in 1933. This is still more true if we realize that two of the major inflationary episodes occurred when the federal government issued fiat dollars inconvertible into gold -- i.e. when we were off the gold standard -- the War of 1812, when the government allowed the banks to issue dollars and not redeem them; and the Civil War, when North and South alike issued irredeemable greenbacks. And the situation improves still more if we take the pre-Federal Reserve era before 1913 and compare it with later periods, for an unmanaged gold standard with free or semi-free banking works much better and more stably than a gold standard managed -- and therefore distorted and crippled -- by a central bank such as the Federal Reserve.

It is possible, though not easy, to write off this historical record of the virtues of gold and the vices of fiat paper by attributing it to coincidence and various special features in the past. But if we understand that government, as legalized monopoly counterfeiter, is inherently inflationary, then we will see that the historical record is not a problem or puzzle, but simply confirms and illustrates our basic insight.

If we must denationalize gold, then we must also and at the same time denationalize the dollar-- taking the issuance of dollars out of the hands of the government or the central bank. To eliminate and exorcise the spectre of inflation, we must see to it that gold, dollar, and money are in the hands of the people, of the free market, rather than the central bank.

How can this be done? How can we establish freedom and private property in money, while denationalizing gold and the dollar? Only by restoring the concept of the "dollar", not as an independent entity, but what it was before 1933: simply a unit of weight of gold. That is what a "gold standard" means. But in order for the dollar to truly be a certain weight of gold, it must be redeemable on demand at that weight. Only if the average person can redeem his dollars at a fixed weight of gold coin can a true gold

standard exist or perform its important functions.

This means that nothing less will do. A return to something like the Bretton Woods system, where the dollar was supposedly fixed in terms of gold but where only foreign central banks could redeem in gold, would be a sham and would only end in the same sort of disaster as did Bretton Woods in 1971. The dollar must be redeemable in gold not just to foreign governments but to everyone, Americans and foreign citizens alike. Only in this way can the dollar be tied firmly to the stable level of gold. Also it is important that gold be redeemable in coin and not merely bullion. For redeemability in bullion, such as existed in England during the 1920s and the United States from 1933 to 1971, might benefit wealthy businessmen and international operators, but it deprives the average person of the right to keep his property in gold rather than paper or deposit dollars.

It is furthermore important not to introduce escape clauses into the gold standard or to provide for changes in the definition of gold weight. A gold standard with an escape clause is useless, for it simply signals everyone that we don't really mean it, that the gold discipline to guard us from inflation won't really be enforced. Similarly with changes in definition. The gold standard

is unfortunately commonly talked of as "fixing the price of gold." The gold standard however, does not fix the price of gold in terms of dollars; rather it defines the dollar in terms of a weight of gold. Changing that definition makes as little sense, and is even more pernicious, than changing the definition of a pound from 16 to 14 ounces. Just as an "ounce" or "pound" is each a unit of weight and therefore fixed in relation to each other, so should be the dollar and a weight of gold.

But just as "pound" and "ounce" are initially arbitrary definitions and, once chosen, should remain fixed, so the initial definition of a dollar in terms of gold is also arbitrary. No one takes seriously the current statutory definition of the dollar as approximately \$42 per ounce, because there is no real way in which the dollar and gold are related. We should pick the most convenient initial definition and stick to it from then on.

I suggest that the most convenient definition would be one that would truly embody the dollar as a unit of weight of gold: a 100% reserve of the gold stock to the dollars - paper money and demand deposits - outstanding. This would be at approximately \$1600 an ounce. This high price -- or rather low weight-- of gold would not be inflationary, if, as should be done, reserve requirements

are 100% from that point on. In no case should higher value of the gold stock be used to pyramid more inflationary dollars on top of gold. Furthermore, this sort of 100% gold dollar would enable the rapid liquidation of the Federal Reserve System and the establishment of sound uninflated free banking.

There are several common criticisms of the idea of a return to the gold standard. One is that we would be relying on the fluctuations of the supply of gold production on the market. We are fortunate, however, that gold is such a durable commodity that annual production can only be a small proportion of the total stock, and will therefore have little impact on prices. This is in contrast to paper money, which can be increased at will and nearly costlessly by the central government. No one says that gold is an abstractly "perfect" money, whatever that may be. It is far more trustworthy, however, than government.

Secondly, gold has often been blamed for the severity and extent of the Great Depression of 1929 and the 1930s. We should turn that charge around and point out that the New Deal could not get us out of the depression despite taking us off the gold standard in 1933. But more important, the crash of 1929 was caused, not by the gold standard but by the unsound management of the gold

stand^{ard} by the Federal Reserve System. Throughout the 1920s, the Fed unwisely kept pumping inflationary money and credit into the economy in order to help Great Britain to try to get out of the severe economic problems it had gotten itself into in the 1920s. Britain had gone back to gold at an overvalued pound in the 1920s, and tried to offset the resulting deflation and inability to export by getting other countries to inflate and to return to a phony "gold exchange" standard pyramiding money on top of the English pound. The United States was induced to inflate its own money and credit in order to keep Britain from losing gold to America. The tragic result was the 1929 crash and all countries going off gold.

At the onset of the crash, President Hoover, later followed by Roosevelt, prolonged the depression indefinitely by a host of "New Deal" measures: inducing businesses to keep wage rates at pre-1929 boom levels; vast loans to near-bankrupt businesses; public works expenditures; farm price supports; budget deficits; and the rest of the by now familiar apparatus of New Deal measures.

Another criticism of gold is that the two countries most benefiting from a gold standard would be particularly unpalatable politically: South Africa and the Soviet Union, the two leading

gold producing countries. But we have never balked at purchasing oil, minerals, or other important goods from politically repellent nations. Why stop at gold? Furthermore, if the United States becomes healthier economically and defeats inflation by adopting a gold standard, this would help us far more than we would be hurt from Russia's gain from a higher price of gold.

A fourth complaint is that, while an international gold standard would be acceptable, the United States could never successfully go back to gold on its own. Lengthy international negotiations and numerous conferences would need to be held before a gold standard could return. But I see no reason why the U.S. could not return to gold immediately on its own. The resulting stability and end to inflation would set a superb example for foreign nations. I am sure that such hard money countries as Switzerland, France, and West Germany would be delighted to embrace the gold standard should the U.S., now the leading fiat money country, take the lead. But even if they do not, there is no harm done, for a gold dollar would, like the current paper dollar, be freely fluctuating in relation to other fiat paper currencies. A gold standard in the U.S. alone need provide no international monetary ^{shock} to other nations.

In addition, it is often said that we cannot go back to gold unless we first adopt monetary and fiscal stability, but if

we can do that, why bother about gold? The answer is that governments need a leash, a tight rein, in order to cease their counterfeiting and inflationary activities. The same argument, after all, could be used against a Bill of Rights, a constitution, or any other restraint on government. The point is that we always need a checkrein on government, in all areas. In the monetary area, the best checkrein is one wielded not by government itself but by the people themselves through being able to redeem their dollars whenever they wish in gold coin.

This does not mean that gold is a panacea for all our ills, and we must avoid the danger of overselling gold and thereby raising false hopes that would soon be dashed. Gold would not be an instant cure or quick fix for recession, sluggish growth, or high interest rates. It is indispensable for checking inflation, but the Fed could still inflate or mismanage in the short run even under the gold standard if it is determined to do so. But not for long, for it would be subjected to gold discipline, which it would have to heed. Eventually, as I have noted, we should consider liquidating the Federal Reserve System and returning to a world of unmanaged free banking under the gold standard. Short of that, I would like to see, in addition to the gold standard, a law preventing the Fed from purchasing any further assets (that are not gold), and thereby

stopping the continual creation of new reserves for the commercial banks.

But I would urge that if a gold standard is adopted, it be a genuine gold standard, one where the public can redeem their dollars at will at a fixed weight in gold. While even such a gold standard would not be a panacea, it is indispensable for ending inflation and returning to sound money. Anything else would be merely a sham, and would only wrap the prestige of gold around a program of permanent inflation. Such a hoax is bound to fail; it would be worse than nothing, because then the gold standard would be unfairly discredited along with the ever shrinking dollar. The American public deserves a gold standard in reality and not just in name.

Federal Gold Must be Employed Productively

It is futile to discuss the return to a gold standard or the use of gold in our monetary system as long as the federal government suffers large budgetary deficits. The government needs an elastic paper standard that can be stretched to finance some \$60 billion of regular deficits, another \$30 billion of off-budget deficits, and another \$60 billion of new direct loan obligations, for a total federal sector deficit of more than \$150 billion a

(1)
year.

It does not make much difference for the credit markets whether a private borrower with a federal guarantee in hand raises a million dollars in order to engage in some form of urban renewal, or the Treasury itself raises the money and loans it to a renewal authority. It does not matter whether Chrysler Corporation, equipped with a federal guarantee, raises a billion dollars directly or through a federal agency that borrows the money for Chrysler. It is irrelevant for the capital market whether the needed funds are to cover a budget deficit or the purchase of a \$21.9 billion Strategic Petroleum Reserve. In both cases scarce funds are withdrawn from the capital markets and economic resources are directed toward "socially desirable uses" rather than market-determined employment. Interest rates, which tend to reflect the demand and supply constellation of the capital markets, can be expected to soar and thus "crowd out" other demand and activity.

No capital market in the world can facilitate such sector deficits unless it is made to expand through currency creation

(1) Budget of the United States Government, Fiscal Year 1982,
pp. 8, 16, 17, 18, 324, 613.

and credit expansion. In a system rigidly circumscribed by a gold standard the deficits would trigger an immediate market collapse with soaring interest rates, surging unemployment and slumping economic activity. Undoubtedly, the public would point at the gold standard and hold it responsible for the depression. Therefore, we would be indulging in daydreaming if we were to expect the U.S. Congress to readily submit to the strictures of a gold standard. And even if it were to acquiesce, it would brush the standard aside at the early signs of an economic depression. The deficit apparatus presupposes an elastic currency and credit system that can be made to expand with the budgetary deficits and thereby shift some of the burden from the capital markets to millions of money holders.

And yet, the time will come when the federal government will be forced to live within the limits of its tax revenues. We need not speculate on why and when that day will come. We may have to suffer more in order to learn more. But we are confident that the time will come, perhaps later in this decade, when the gold standard must be considered in earnest.

In the meantime, the fiat standard as we have known it since August 15, 1971, can be made to serve government for all its needs. But this very serviceability of the fiat standard makes the federal gold hoard of some \$100 billion needless, redundant, and enigmatic. Surely, we know how it was acquired. But we fail to comprehend why it should remain forever barren and forgotten in the vaults of Fort Knox. It has vast purchasing power that should be put to fruitful use in these years of social needs and economic crises.

It is essential that the federal government free itself from the idle hoards of gold and make it possible for the American people once again to become its real owners. There can be no better use for the federal hoard than its ready employment as media of payment for the current deficits. Instead of raising needed funds through the sale of new Treasury bills, notes and bonds, which drain and strain the capital markets, raise interest rates and depress economic activity, the Treasury should offer quantities of gold in full payment of its obligations. There is no need for gold sales or liquidations. The Treasury merely replenishes its empty coffers with the available gold and makes payment in gold whenever the need arises. In order to be proper and right the ratio of dollar obligations to the gold quantity offered as payment should be determined by the world market price on the day of payment.

The advantages of this direct method of disposal are numerous. Given the magnitude of the present budget deficits, the gold hoard would come into the people's possession in just a few years. In short, order the idle hoard of Fort Knox would be converted to productive capital meeting the urgent needs of government finance. And the people would come into the possession of an economic good that is the most marketable good of all.

There is no need for a federal mint to strike gold coins in sufficient quantities for federal deficit payments. Reliance on a federal mint would delay the gold disposal for many years and may even jeopardize it in the end. Therefore, it is essential that payees of the federal gold have ready access to a number of

private mints that will, on short notice, convert the bullion to marketable coins. Of course, payees must also have the right to retender the Treasury notice of gold delivery as they do in all commodities markets. The person receiving the notice must be free to go to the gold market and sell a like amount and retender the notice.

Would such a direct disposal of the federal hoard depress the dollar price of gold? It probably would -- provided the Federal Reserve System does not intervene with new credit expansion in order to facilitate the gold transfer. Free from all pressures to finance the deficits it can remain inactive throughout the disposal period. A declining dollar price of gold would be all the more beneficial as it would hasten the disposal.

The U.S. dollar would be strengthened immeasurably by the transfer. After all, the Federal Reserve System could abstain from currency creation and credit expansion, which would stabilize the fiat dollar immediately. The inflation discount, which springs from present depreciation and anticipation of future depreciation, would soon fade away, which would give new purchasing power to the U.S. dollar. Some goods prices may even decline. In international money markets the stabilization would afford new strength to the dollar and reconfirm its vital function as international money. Once again it would become the strongest currency in the world, which would generate more world demand for U.S. dollars, which in turn would give additional strength. The world is on a U.S. dollar standard now. Its stabilization would be the most beneficial service the U.S. Government could render to people everywhere.

The American people, especially, would benefit from a strong international dollar and from favorable exchange rates that reduce the dollar price of foreign goods for American consumers. The same dollar outlay buys more foreign goods. On the other hand, rising dollar exchange rates make American goods and services more expensive to foreigners, who would have to curtail their American purchases of commodities, services, businesses, and other property, which again would benefit American consumers. The American benefits would be the price the world would willingly pay for a stronger world dollar.

The U.S. Government would be the greatest beneficiary. The gold disposal would bring instant relief to the depressed capital markets and lower interest rates immediately. Without the demands for deficit financing the markets would recover vigorously, lifting U.S. Treasury obligations to unaccustomed heights. Provided the Federal Reserve remains inactive, the Treasury bill, note and bond markets would spring to life. In time, falling interest rates would probably reduce the interest charges on the federal debt from some \$100 billion a year to \$50 or \$60 billion, which would be a saving in cost no one can overlook.

Revival of the Treasury bond market also would permit the U.S. Treasury to refund its massive short-term bill and note obligations with long-term bonds. The Treasury could finally reverse its ominous trend toward shorter and shorter debt maturity, which casts doubt on the credit of the United States, makes debt management most precarious and expensive, and above all, endangers the liquidity of all credit markets. Moreover, a reduction in

the volume of Treasury bill obligations would simultaneously curtail the volume of "eligible paper" on which commercial banks are building their credit expansion. The banks would have to curtail their fiduciary expansion, which would give more strength to the dollar.

The American people would reap immeasurable benefits from the gold disposal. No supply-side policy ever designed could match the gold disposal in its energizing effects on the national economy. It is difficult to imagine the impact of rapidly falling interest rates on the bond market, stock market, commodities market, real estate market, and above all, the labor market. There would be an explosion of economic activity the world may never have seen before. Wage rates and levels of living would rise again, giving new hope and confidence to the American people. That prospect alone should dispel all doubts and fears arising from the gold disposal.

At the present the credit markets are suffering from a severe strain of excessive public and private demands which, according to many analysts, may lead unavoidably to another credit crunch. But no matter what the coming months may bring, prompt release of federal gold would provide instant liquidity and bring welcome relief to financial institutions. The liquidity provided by gold probably would differ substantially from that created by new Federal Reserve credit. The former would calm the markets as the gold settles in private reserves and cashes; the latter would excite the markets, raise inflation expectations, and depress capital markets further. Of course, financial institutions would have to be

set free from all present restrictions on the use of gold as reserves.

It is difficult to visualize the salutary effects of this new liquidity for savings and loan associations and other thrift institutions that are barely surviving. Lower interest rates would breathe new life into the suffering institutions, which would permit them to render the vital services for which they were meant. The housing industry, which is lingering in the deepest slump since the 1930's, would experience new activity that would meet the pent-up demand for new housing. The stock and bond markets would soon recover from 15 years of stagnation that, in conjunction with the dollar depreciation, inflicted staggering losses on most investors. After waiting so long, many may get their money back when the Dow Jones Industrial Index soars to 2000.

Even real labor income, which has been falling in recent years due to rising taxation and dollar depreciation, may rise again as a result of the revival of capital markets. It is difficult to imagine the reaction of American corporations to the fall of interest costs of long-term capital to five or six percent. The steel industry and even the automotive industry would abound with new life when they can raise funds at 6%. They could afford to modernize their antiquated equipment and match their technological know-how and managerial ability with that of their competitors abroad. Once again the U.S. could become a world model of modern technology and superior productivity.

The supply-side economists, who are enjoying such high regard with the Reagan Administration, should welcome the energizing

effects of a gold disposal. Without it, I am afraid, their ship will run aground the budget deficits, most of which were inherited from previous administrations. The tax cuts designed to release productive energy are partially negated by massive deficits that consume productive capital. Moreover, their timid pleas for a few spending cuts are lost in the pressure-group chorus of demands for more spending. They are discouraged now and may be discredited in the eyes of the American public if the American economy, in the coming months, should sink into a deep recession. Many critics of supply-side economists are envisioning just that.

It would be difficult to find opponents who would defend the present state of affairs: rampant inflation, record interest rates, economic stagnation, rising unemployment, and falling levels of living. But certain objections to the gold disposal undoubtedly will be raised and need to be answered.

The goldphiles would be dismayed about the prospect of declining gold prices. But it is unlikely that they would oppose a policy of gold disposal. After all, they should be the first to see the wisdom of a wider diffusion and ownership of gold. They should welcome the powerful economic stimulus such a policy would create although it would depress the dollar value of their investment portfolios. Having prospered in the past as a result of the free market for gold, they could not argue with the market now. Surely, they would not emulate those other industries, such as steel, automobile, and agriculture which, upon facing a painful readjustment, are quick to rush to Washington and yammer for protection and relief.

The advocates of a classical gold standard may raise objections on the ground that the federal hoard will be needed for an eventual return to the gold standard. They are indulging in day-dreaming when they envision an early return. The fiat money forces are much too strong and public support for deficit spending yet too powerful to expect a currency reform in the foreseeable future. Moreover, they are grievously mistaken in their belief that a massive quantity of gold, like that in Fort Knox, will be needed for a restoration of a gold standard. In reality, a very small quantity that can be readily bought in the gold market would be needed to redeem all paper dollars when such a reform becomes reality.

Finally, we must anticipate strenuous objections from those Americans who are concerned about the defense of the United States. They are pleading for a strategic stockpile of gold that would be needed in the case of national emergency, a reserve needed for international payments when all other media are failing, or for military payments in isolated parts of the world where gold is money, but the U.S. dollar is not. However, such arguments, although valid, do not justify the hoard of some twenty percent of the world monetary gold in federal possession. A small quantity available in the open market would suffice to meet all emergency needs. After all, the strategic defense of these United States does not rest on the gold vaults of Fort Knox, but on the willingness and preparedness of the American people to fight in self-defense.

Naturally, disposal of the federal gold hoard offers no panacea for the cure of all ailments, economic, social and political.

It does not cure the temptations to redistribute income and wealth through the political apparatus, nor for government to live beyond its tax revenues. It cures neither individual crime nor neighborhood pollution. But it would release a vast amount of productive energy at a moment of time when it is urgently needed. Above all, the gold disposal would buy the federal government the time needed to bring its financial house in order.

The time may be put to good use and the last penny of sector deficit may be covered, not by more coercive extractions from taxpayers, but through economy and moderation. Under such conditions it would become possible in time to restore the classical gold standard.

If the time is wasted, bickering and arguing on various schemes of redistribution, the gold disposal will merely produce another case of federal intoxication for which we must pay the price later. When all the gold has been spent and federal deficits once again need to be covered by currency creation and credit expansion, the old ailments are bound to return. But no matter how the federal government may act in the coming years, the beneficial effects of the gold disposal will endure for a long time to come.

Hans F. Sennholz

Statement by Robert Solomon*
Guest Scholar, The Brookings Institution

before the

Gold Commission
November 12, 1981

I welcome the opportunity to present my views to this Commission, which is charged with conducting "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 . . ." My credentials as a witness are that I have spent more than thirty years as a professional economist in the fields of domestic and international monetary economics, that I was on the staff of the Federal Reserve Board for twenty-eight years closely involved in the formulation of domestic monetary policy and active in the inter-agency policy process with respect to the international monetary system. I spent two years (1972-74) as a vice-chairman of the Committee on Reform of the International Monetary System (Committee of Twenty) and have written a widely-read book in the field: The International Monetary System, 1945-1976: An Insider's View (Harper & Row, 1977).

In this statement I shall first identify what I regard as the major issues raised by the Commission's assignment and then present some observations on each of these issues.

*The views expressed are my own and are not necessarily those of the officers, trustees, or other staff members of the Brookings Institution.

Issues to be Faced

(1) The broadest issue is, what would the United States, and the rest of the world, gain from giving gold a more important official role, up to and including a form of gold standard?

(2) What changes, if any, would be made in the exchange-rate system under which the world is now operating? That system is a hybrid one, in which countries have freedom of choice among free floating, pegging to another currency or a basket of currencies, or establishing a regional system of par values (as in the European Monetary System) where the regional bloc floats. In practice, a substantial proportion of world trade -- well over half -- is conducted under floating exchange rates. If a change in the role of gold implied a change in existing exchange rate arrangements, a number of major questions would arise.

(3) Would the U.S. dollar, and other currencies, be interconvertible with gold domestically? What effects would this have on monetary policy?

(4) Is it envisioned that the price of gold would be fixed in terms of dollars? How would the price be chosen and, equally important, how would it be maintained in the face of the sorts of political shocks that have sent the gold price through such wide gyrations in recent years? What are the implications for monetary policy of movements in the market price of gold?

(5) What sort of international convertibility would be established?

In practice, if the answer to the first question under Issue 3 is "yes," it would be virtually impossible to prevent foreign holders of dollars from presenting them for conversion into gold. What are the implications for U.S. monetary policy and for the operation of the international monetary system?

(6) What is the significance of the fact that the U.S. Treasury holds more than 260 million ounces of gold? Does this require, as some have suggested, that a choice has to be made between remonetizing gold and selling it off?

What is to be Gained from a More Important Role for Gold?

The end of inflation once and for all is the promised goal of most advocates of linking the dollar to gold. There can be no quarrel with this objective. What is open to question is whether linking the dollar, and other currencies, to gold will achieve the objective.

There are differences among the various proposals and I do not claim to have seen all of them.

The most straightforward suggestion is to restore a gold certificate reserve for the Federal Reserve System. ^{1/} The purpose is to impose a monetary rule that would limit growth of the money supply. This is the monetarist approach. It is designed to assure that the Federal Reserve

^{1/} Robert E. Weintraub, "Restoring the Gold Certificate Reserve" in The Gold Standard: Its History and Record Against Inflation, A Study prepared for the use of the Subcommittee on Monetary and Fiscal Policy of the Joint Economic Committee, Congress of the United States, September 18, 1981.

restrains monetary expansion to a rate consistent with zero inflation. In effect, this approach imposes a discipline on the central bank. The objection to it is that it would deprive the Federal Reserve of all discretion in its operations, including counter-cyclical policy adaptations. Furthermore, the present Federal Reserve policy appears to be quite strongly disciplined. As Jude Wanniski, a gold advocate, has stated (see below), "it is not discipline that Paul A. Volcker needs."

Some advocates of a return to gold reject monetarism (as well as Keynesianism). They believe that the traditional process by which the Federal Reserve tries to regulate the volume of bank reserves and therefore the monetary aggregates is doomed to failure. What they propose is a mechanism by which the supply of money is determined by the demand for money.^{2/} They believe that if the Federal Reserve is required to supply neither more nor less cash balances than are demanded, inflation will be banished. The way they would bring this about is to make the dollar convertible into gold. If the public holds more dollars than desired, dollars will be exchanged for gold and the Federal Reserve will respond by reducing bank reserves. If the public wishes to hold additional money, gold will be converted into dollars at the "gold window" and the Federal Reserve will increase the supply of bank reserves.

The flaw in this type of proposal, in my view, is that it fails to distinguish between "money to hold" and "money to use." Those members

^{2/} See Lewis E. Lehrman, Monetary Policy, The Federal Reserve System, and Gold, Morgan Stanley & Co., January 29, 1980; Jude Wanniski, "A Job Only Gold Can Do," The New York Times, August 27, 1981, p. A31.

of the public who want more money in order to spend it on goods and services will be exercising a "demand for money" indistinguishable from the demand of those who wish to increase their cash balances held on deposit or in the form of currency. Letting the demand for money determine its supply will not assure a noninflationary economy. It could have just the opposite effect.

Another view on ending inflation is that once the dollar is declared to be convertible into gold, the public will be confident of the future value of money. The demand for money -- to hold as a cash balance -- will increase, thereby reducing the excess supply of money. "The real answer is not to try to manipulate the supply of dollars but to create demand for them." ^{3/} We are not told how convertibility of the dollar into gold would prevent excess creation of dollars that might be used for excess spending.

In none of these proposals is the inflation process addressed in a fundamental way. Inflation involves an interaction of wages and prices and occasional external shocks such as large increases in oil prices. How a linkage between the dollar and gold would cope with these aspects of inflation is a question that the Commission should expect the gold proponents to answer.

More generally, the belief that there is a simple solution to the inflation problem, though seductive, is in my opinion misleading. The worsening of inflation in the 1970s can in no way be attributed to the breaking of the link between the dollar and gold on August 15, 1971. That interpretation

^{3/} Arthur B. Laffer and Charles W. Kadlec, "The Point of Linking the Dollar to Gold," The Wall Street Journal, October 13, 1981, p. 32.

is a gross distortion of history: it is easy to show that for many years before 1971, gold had little if any influence on U.S. monetary policy. Just as there is no simple explanation for the acceleration of inflation, there is no simple way to bring inflation back down. We do not have a magic monetary wand to wave and thereby do away with inflation.

Apart from ending inflation, I am aware of no other benefits that are supposed to result from returning to a gold standard. It is significant that most foreign officials and bankers show no interest in a return to gold. ^{4/}

Implications for Exchange Rates

Most of the recent proposals for a return to gold hardly acknowledge that the United States is part of an international economy. Arthur Laffer's "blueprint" does state: "With the value of the dollar defined in terms of gold, there would no longer exist any reason for the U.S. government to be concerned with the foreign exchange value of the dollar. The official policy of the U.S. should remain that the dollar would be free to seek its own level." ^{5/} This proposal recognizes, if only briefly, that the dollar is linked to other currencies via exchange rates and it foresees the possibility of continued floating of those exchange rates.

Whatever judgments the Commission arrives at regarding the role of gold, it is important, I believe, to avoid pushing the world back to the straitjacket of fixed exchange rates. Ample evidence is available to support the proposition

^{4/} "Foreigners Doubt U.S. Return to Gold," The Wall Street Journal, September 28, 1981, p. 31.

^{5/} Arthur B. Laffer, "Reinstatement of the Dollar: The Blueprint," A. B. Laffer Associates, February 29, 1980.

that the dollar and other major currencies (such as the yen) or currency areas (such as the EMS) need scope for variation as is possible at present. The present system is far from perfect but an attempt to restore fixed exchange rates would surely fail.

Domestic Convertibility

It is possible to imagine the restoration of gold to a significant role in the international monetary system without domestic convertibility, as in the period after 1933. But, given that U.S. citizens may now purchase and hold gold and given the nature of the current proposals for a gold standard, it is not likely that anyone will advocate a system in which only foreign monetary authorities may convert dollars into gold or gold into dollars at the U.S. gold window. Therefore the impact of domestic convertibility needs to be examined.

I have pointed out above that there is a flaw in the argument that the decisions of U.S. citizens to purchase or sell gold against dollars is an appropriate guide to monetary policy.

Beyond that, domestic convertibility could raise serious problems if it were combined with a fixed official price for gold, as is discussed in the next section.

The Dollar Price of Gold

Most proposals for a return to gold that I have seen are rather vague on the price at which the dollar would be made inter-convertible with gold. Yet it is clear from the events of recent years that the market price of gold

can change drastically in response to events that have little to do with the monetary system. Furthermore, the increasing use of gold in industry, together with an inelastic supply, could lead to an upward secular trend in the market price of gold. If the market price rises relative to the official price, gold will be bought from the monetary authority and sold in the market. If the market price falls below the official price, the opposite will happen. In either case, the impact on gold reserves and therefore on monetary policy could be destabilizing.

To my knowledge, the Laffer proposal is the only one that recognizes this problem. It provides for the possibility of temporary suspensions of the official dollar price of gold, while the market price moves to a new level under the impact of "conditions beyond the control of the monetary authority." This provision might give greater discretion to "the monetary authority" than some gold advocates would find acceptable.

One alternative to this type of flexibility would be an attempt to peg the market price of gold. Quite apart from the questionable feasibility of such an effort -- as was demonstrated when the gold pool was abandoned in March 1968 -- it would affect monetary policy in an undesirable way. Imagine a political disturbance in the Middle East and a sharp run-up in the market price of gold. Sales of gold by monetary authorities would, under gold standard rules, require a contraction of bank reserves and a general tightening of monetary policy even though that might not be at all appropriate to the condition of the domestic economies.

Another option would be to let the official price move with the market price. This would eliminate the potential for arbitrage mentioned above. But it would introduce flexibility into the value of gold reserves. Presumably the Federal Reserve would not be expected to alter its policy in response to pure valuation changes in gold reserves. The guide to monetary policy would have to be changes in the quantity of gold in the reserves.

While this option might be technically workable, it would not satisfy those who are seeking to restore the discipline of gold. If the official price moved with the market price, gold buyers and sellers would be indifferent as between using the market and undertaking a transaction with the monetary authority. Thus changes in the quantity of gold reserves would be arbitrary and haphazard. They would not provide the sort of guidance to monetary policy that is being sought by gold advocates.

These advocates face a dilemma regarding the official price of gold. If they use the market price, the discipline of gold disappears. But it is not realistic to select an official price that can be maintained indefinitely. They want to introduce an automatic system uninfluenced by human discretion. But the need for policy judgment keeps re-asserting itself.

International Convertibility

As noted, if official convertibility were established at home, it would be almost impossible to deny it to foreign holders of dollars. And anyone who wanted to restore (or establish) the classical gold standard would not wish to deny convertibility to foreign holders of dollars.

Yet it has to be recognized that foreigners, both official and private, hold substantial amounts of dollars. Banks located in the United States have more than \$200 billion of liabilities to foreigners. Branches of American banks abroad have dollar liabilities to foreigners of \$275 billion. And non-American banks have very large dollar deposits. Thus potential claims on the U.S. gold stock, which is worth about \$110 billion (at a gold price of \$425 per ounce), are huge. These claims would be exercised, along with purchases by Americans, if an official gold price were established and the market price rose above it.

Concern over potential gold purchases by official holders of dollars under a reformed international monetary system led, during the deliberations of the Committee of Twenty, to the proposal for a substitution account that would exchange outstanding official dollar holdings for SDRs. It is difficult to imagine such an exchange of private dollar holdings.

Thus the problems discussed under "The Dollar Price of Gold" above would be compounded under a system of international convertibility.

What Should We Do with Our Gold?

It is sometimes suggested that since the United States holds such a large amount of gold, a decision must be made about its role: either it should be remonetized or sold off.

In my view this is not a pressing problem. The U.S. gold stock should be regarded as part of the national patrimony, worth \$110 billion at the current market price. There is no reason to dispose of it just because

it does not play an important monetary role. And there is no reason to try to invent a monetary role just because we hold the asset. The U.S. Government owns many non-monetary assets. They have different uses. There may be occasions when, as in the past, it will support U.S. objectives to sell gold in the market or to buy it in the market. But until then, gold does not have to burn a hole in our pockets. We are not forced to decide to do something with our gold assets just because they exist.

A SUMMARY OF
"FREE BANKING UNDER A LABOR STANDARD"

Earl A. Thompson, UCLA

Returning to a simple, pre-1933, freely convertible gold standard would undoubtedly be the single worst economic policy in U.S. history. Under a simple, convertible gold standard and free banking, the money price of gold is pegged by the government; so the average money prices of all goods, i.e., "the price level," varies directly with the free market evaluation of these goods relative to gold. A jump in the public's demand for gold would, by forcing the government and other money suppliers to absorb money in exchange for gold under free convertibility, depress the price level by a percentage drop equal to the percentage increase in the relative value of gold.

The magnitudes involved are hair-raising. For example, suppose that in August, 1971, President Nixon, rather than abandoning the last vestiges of the gold standard, returned us to the freely convertible, competitive-banking, gold standard, the type of return last tried in the late 1920's by several European countries. Since the remainder of the 1970's was marked by a 2,000% increase in the real value of gold, the price level would have had to fall to $\frac{1}{20}$ th of its 1971 level in order to prevent a drain of our gold reserves. This might not sound bad; but to maintain 1980 profits and production, 1971 workers would have had to be willing to continue working at wages close to $\frac{1}{20}$ th of their 1971 level rather than either jumping on to employment insurance, welfare, and governmental training programs or quitting to search out what they erroneously perceived to be now-greener pastures. Experience shows that they would not have been so willing. The comparatively small, 25% wage reduction during the great depression, when government

welfare alternatives were virtually absent, produced a decrease in employment of about 25%. And we're talking -- realistically -- about a reduction in the wage level to $\frac{1}{20}$ th, not $\frac{3}{4}$, of its normal level!

Our economic and political system barely survived the celebrated return to the discipline of the gold standard in the late 1920s. Such a return in the early 1970s would have clearly shattered our system beyond recognition. The old gold standard always was vulnerable to variations in the value of gold relative to other goods. It never was a desirable system in terms of business-cycle-stability. What would make it an order-of-magnitude worse in modern times is the much greater volatility of the relative values the public places on gold. Gold's possible future use as a high-technology conductor and as a middle class consumption good for a rapidly awakening Orient, coupled with its long term fixity of supply, has made gold a tremendously speculative asset by historical standards.

All this is not to say that our current system is ideal. It surely is not. Nor is it to say that all gold-based systems are inferior to our own. A freely competitive banking system making the dollar convertible into the varying quantity of gold necessary to buy a fixed amount of U.S. industrial labor, say five minutes of it, would effectively stabilize our overall wage level. A jump in the relative value of gold would then simply reduce the amount of gold -- but not labor -- one could get in return for his dollar. Our various wholesale and retail price levels would gradually fall with technical progress. Such a system would produce much more business cycle stability than we now have. Moreover, by freeing our financial system of the myriad of interventions and returning free markets to the financial sector, the fixed-wage level gold standard would also provide for much more

financial efficiency than we now have. In fact, under modern theories of finance and business cycles, it would be a perfect system.

The inevitable suspensions of convertibility and subsequent, temporary inflations that occur during major wars would also occur under this labor standard. But the depressing effects of postwar resumption at prewar money wage rates are uniquely avoidable under a labor standard by simply allowing for automatic resumption at the official ends of our future, hopefully infrequent wars. In contrast, under a simple gold standard, the gradually increasing price of gold following resumption results in gradual, labor-confusing deflation and, therefore, substantial, inefficient unemployment.

A system of freely competitive banking under a labor standard would also be extremely easy to administer as it would require absolutely no discretionary policy intervention, no money supply regulation, and no international monetary cooperation. Nor would such a system tie us to any "cross of gold," while gold would probably be normally used for conversion, the government could substitute non-gold assets at its convenience. The only governmental commitment would be to redeem each dollar for other assets sufficient to trade for a fixed amount of labor in the open market.

FREE BANKING UNDER A LABOR STANDARD

Prepared for the U.S. Gold Commission
November 1981

By Earl A. Thompson, UCLA

Macroeconomic ills -- inefficient fluctuation in employment, persistent and highly variable rates of inflation or deflation, and governmentally created, artificial scarcities of money -- have received a significant and probably increasing portion of economists' attention over the past couple of centuries. Yet no one to my knowledge has specified a financial system that would, at least within familiar economic paradigms, guarantee a simultaneous cure for all these maladies without creating new ones. Economists seem to believe that such a system does not exist. However, there is a financial system -- one with free banking and a labor standard -- that would, at least theoretically, simultaneously preclude all of these macroeconomic ills regardless of the kinds of shocks that hit our economy and without any reliance on discretionary policy intervention.

The first part of this paper describes a competitive economy with free banking under a labor standard and discusses some problems of implementation. The second explains its efficiency compared to the existing system. The third explains its efficiency compared to other systems such as the

classical gold standard, commodity-bundle convertibility systems, and gold-based fractional reserve systems.¹

A simple advantage of this theoretically perfect system is that it requires no international cooperation whatsoever. Hence, international banking and trade issues will receive no detailed consideration in this paper.

¹Theoretical background for these efficiency arguments can be found in my 1974 and 1977 papers. These papers explain the static efficiency of a competitive banking system. The 1974 paper also points out a critical dynamic defect in the classical gold standard in that shifts altering the free market value of gold, relative to other outputs, alter money wage and employment levels more than under a modern, fixed-money-supply regime; correspondingly, it points out that by far the worst depressions of modern history, all of which occurred under a gold standard, were the obvious results of such shifts. The papers make no mention of the labor standard developed here. The latter did not occur to me until a UCLA graduate student, Gertrud Fremling, informed me of the possibility of a "variable gold standard," a standard apparently first proposed by Simon Newcomb before the resumption of the U.S. gold standard in 1879 and again later by his student, Irving Fisher (in Stabilizing the Dollar) in 1920, prior to the European gold-standard resumptions of the mid-late 1920's. (Each policy suggestion was ignored and, as a result, each resumption created a needless and severe depression.) Their suggested monetary standard tied the amount of gold one could obtain for his currency to an index of commodity prices. A similar, simple type of convertibility, suggested by many authors, ties the dollar to a given commodity bundle rather than just gold. My variation on the Newcomb-Fisher theme ties gold payments to a wage index rather than a commodity price index and allows substitutes for gold payments at the convenience of the government. If these authors had the modern theory of rational unemployment and the monthly, 30 million-worker, BLS wage index available to them, I suspect they too would have espoused some kind of labor standard.

I. THE MEANING OF A LABOR STANDARD WITH FREE BANKING

A. A Labor Standard. A labor standard, like a classical gold standard, allows people to convert their currency into "gold," the non-currency asset of the government that it finds most convenient to redeem for currency. But unlike the classical gold standard, the quantity of gold one can obtain for his currency is not a given constant. One obtains, instead, an amount of gold just enabling him to purchase a 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, for whatever reason, the free market level of money wages were to increase. 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.

While gold, the metal, could possibly become relatively inconvenient for the government to deliver in this arbitrage process, there is no reason for a legal commitment to payments in the form of this metal. Other, sometimes more convenient redemption assets, such as other metals, may be used instead. Even bonds may be used on a temporary basis. The converter is only interested in what the asset obtained for his currency will fetch in private markets; an amount that stays the same under fixed labor convertibility regardless of which asset the government surrenders to redeem the public's currency.

In a world, like our own, with many kinds of labor, each receiving its own variable money wage rate, our standard would stabilize the quantity-weighted average wage rate, e.g., the 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 amount, say five minutes, of man-hours of U.S. labor. (Other countries would be encouraged, in the interests of their own economies, to tie their currencies to their own wage indices rather than the dollar.)

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. The best method that has occurred to me is to have the government make its conversion payments assuming that the wage index will be at its theoretical value, but compensate (charge) all large converters ex post for the subsequently observed deviation in the index from its theoretical value. Thus, the government would make its March conversion payments assuming that the average cost of five minutes of labor during March will be \$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 then depress the expected wage level until it reached, on balance, 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, 5 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 redistributive component of the increase in the value of existing long-term bonds.

B. Free Banking. An economy with free, unconstrained, competitive banking has no governmental regulation on the quantity of money it can issue. There are no reserve requirements held by the government and no restrictions on interest payments. Federal reserve banks would serve only as clearing houses. Banks would be free to print their own notes as long as the notes could be easily distinguished from those of other entities and were convertible into government issue or gold. Deposit insurance would, however, be maintained to reduce the individual over-risk incentives

of banks due to the inability of some of the creditors of a bank's financially dependent creditors to observe, and thereby economically appreciate, the quality of the loans made by the bank.

Most important, as emphasized by the nineteenth century advocates of laissez-faire banking, currency overissue and underissue by the government would be impossible in such a system. An unprovoked governmental injection of currency would, if not immediately neutralized by private conversion, put upward pressure on wages and create an arbitrage profit to conversion, a profit that would not be removed until the injection is neutralized by the arbitrage-motivated conversions. Similarly, if government currency came into short supply, private gold sales to the government would expand the currency supply before wages could fall to any appreciable degree. This classical "Law of Reflux" would thus assure against governmental overissue and underissue without any reliance whatever on system-wisdom on the part of government authorities.

II. THE ECONOMIC EFFICIENCY OF FREE BANKING UNDER A LABOR STANDARD

A. Financial Efficiency

By allowing banks to freely compete with other debt issuers rather than choking them back with reserve requirements and restrictions on interest payments, we would remove the current, artificial excess of bank lending rates over certain borrowing rates, an excess that has unnecessarily increased borrowing costs to business and forced small depositors around the country to inefficiently substitute back and forth into and out of a myriad of very short term asset positions in order to avoid the artificially low interest rates offered them by the banks. (I have estimated our loss in real wealth from this contrived, inefficient redirection of short term lending away from banks to be in excess of \$200 billion in 1980 dollars.) Substantial additional savings would come from the cessation of our speculation-inducing, frustrating attempts to control the economy's various money supplies and also from the end of federal regulation of individual banks. (Although some additional governmental expenditures would be required to make conversion payments and issue currency in exchange for gold, there is little reason to believe that they would exceed the simple transaction-cost component of current governmental attempts to keep our various money supplies within their targeted ranges.)

As average output prices decline over time under a simple labor standard at a rate equal to the increase in the real wage rate (about 2% annually if history is any guide) the holding of currency would be rewarded by a real interest rate that is probably only slightly below the typical real rates on other assets. While this is approximately optimal, knowledge of an exact optimum would not be possible unless private banks are just as good

at producing currency as the government, in which case the exact optimum occurs where the money rate of interest competing banks would pay to induce people to hold their currencies matched the governmental rate of zero. Even at this exact "optimum," there may be special social costs of adjusting the physical attributes of the government currency supply based on the gradual deflation of output prices. As a result, even if future governments have no serious competition in the business of supplying currency, it may be better, as a practical matter, to allow a gradual, committed, fixed escalation of the wage-level, a gradual and constant decrease in the amount of labor one can obtain for his dollar through conversion. This trend value, having strong psychological as well as economic returns and costs, is best, I believe, left to the political process to determine.

My suggestion then would be to reduce the labor content of the dollar so that money wage growth increased in the following sequence:

10%	1st year
8%	2nd year
6%	3rd year
4%	4th year
2%	5th year
2%	6th year
2%	7th year
2%	8th year
2%	9th year
2%	10th year.

At the end of the eighth or ninth year, I'd see if several, private, competing substitutes for treasury notes and coins were developing. If they were, I'd examine the implicit interest rate on them and reduce the wage inflation rate by this rate so as to make this competitive interest rate zero. If such substitutes were not developing, I'd have congress vote on whether to keep the rate at two percent or go to one or zero percent.

It should be pointed out that short-term interest rates under wage-level constancy would normally be so low that the government's short-term debt would be essentially non-interest bearing. Currency would be so readily held as an appreciating short-term asset that treasury bill financing requirements would be reduced to insignificance. The resulting savings in transaction costs provide an additional reason for preferring constant rather than constantly increasing money wage rates. With money wages rising around 2% per year, the average annual treasury bill rate would be around 2%, and bills, as now, would be a frequently important source of government finance.

In either case, competitive interest rates on savings accounts would be so low that demand deposits would replace time deposits and existing nonbank financial intermediaries would either become banks or be absorbed by banks. The substantial, socially wasteful, transaction costs people now endure in switching between savings accounts, treasury bills, and bank checking deposits would be gradually eliminated as the system approached its noninflationary equilibrium.

B. Dynamic Efficiency

While some swings in overall commodity prices and outputs would remain under labor convertibility, there is no reason for us to want them eliminated. Such fluctuations may merely reflect the changing values informed individuals place on commodities over time. What we should want eliminated are the erroneous decisions by labor over what we have come to know as the business cycle. These errors are based on the inability of labor to distinguish changes in the economy's overall wage level from changes in relative wages

between various kinds of employment. Economists have long observed that whenever the overall wage level drops below its usual trend, many workers leave their current employments. This may be because they have some form of rigid, fixed-wage contract with their employers; but more likely they erroneously believe that wages have not also fallen elsewhere -- that there has been a change in the relative returns across different types of employment rather than a change in the overall wage level. In either case, the result is excessive job-search, occupational re-tooling, and, perhaps, leisure during a period of decreasing wages and too little of such activity during booms. Moreover, during normal times, i.e., when average wages are on trend but there are still unexpected expansions in employment opportunities in some industries but contractions in others, laborers being offered lower than expected wages are, in our economy, tempted to believe that the economy is in recession, i.e. that wage offers have been reduced everywhere else too, and will remain in this low-valued use too long. This creates too little normal, "frictional" unemployment -- too little job mobility -- in our economy and is a partial rationale for our expensive system of unemployment compensation.

These inefficiencies in the labor market, and the highly expensive policies that are employed to combat them, would all be immediately removed by adopting a system of labor convertibility.

There are many sources of inefficient employment cycles in our current economy. Increases in money demand -- when not matched by equal increases in our governmentally controlled money supplies -- induce people to sell assets, create lower prices and wage offers, and therefore inefficient unemployment. Increases in the price of imported oil -- when not matched

by immediate jumps in the money supply -- cause decreases in the productivity of labor, lower wage offers throughout most of the economy, and inefficient unemployment. Whatever the cause of such unfortunate business swings, labor convertibility would eliminate them. It would do this by automatically neutralizing such shocks with immediate, endogenous changes in the privately determined money supply. An increase in money demand would just be supplied by the unconstrained, private bankers or through reductions in conversions with the passive Federal Reserve, which would be filling its originally mandated function of quickly responding to the "needs of trade." A lower productivity of labor through higher costs of imported oil would, by raising the price of non-labor commodities and the demand for money, induce an equal increase in the supply of money and no inefficient unemployment. The business cycle, as it is usually conceived, would be dead.

Moreover, the economy would gain through increased mobility and ordinary job search and could justifiably cut way down on its expensive support of unemployment compensation.

III. THE SUPERIORITY OF LABOR TO OTHER CONVERSION STANDARDS

A. Commodity Index Convertibility

Commodity index convertibility, and thus price level stability, in our modern economy would be substantially inferior to labor convertibility. This is because the world in recent years has become much more subject to large jumps in the values of assets that will be fixed in supply to the world in the foreseeable future, gold, oil, collectables, etc. This means that keeping average commodity prices constant still creates a great deal of money wage variability and unemployment. We would, for example, have had falling money wages and much more unemployment during the sluggish 1970's under a constant commodity price index than under our current, feeble, government-controlled monetary system. Depression levels of employment would have been approached and fixed-commodity-bundle convertibility probably abandoned as a financial system. In contrast, no such instability exists under labor convertibility, a system that allows price levels to rise and fall with the rise and fall in commodity demands.

The superiority of labor convertibility over commodity index convertibility is so substantial given the recent instability of commodity values that even though I estimate a jump of about 20% in our national wealth by going from our current system to labor convertibility, I would recommend our current system over commodity index convertibility. The depression-potential of price-level-stability is just too great in a modern economy.

B. The Classical Gold Standard

Returning to a simple, pre-1933, freely convertible gold standard would undoubtedly be the single worst economic policy in U.S. history. Under a simple, convertible gold standard and free banking, the money price of gold is pegged by the government; so the average money prices of all goods, i.e., "the price level," varies directly with the free market evaluation of these goods relative to gold. A jump in the public's demand for gold would, by forcing the government and other money suppliers to absorb money in exchange for gold under free convertibility, depress the price level by a percentage drop equal to the percentage increase in the relative value of gold.

The magnitudes involved are hair-raising. For example, suppose that in August, 1971, President Nixon, rather than abandoning the last vestiges of the gold standard, returned us to the freely convertible, competitive-banking, gold standard, the type of return last tried in the late 1920's by several European countries. Since the remainder of the 1970's was marked by a 2,000% increase in the real value of gold, the price level would have had to fall to $\frac{1}{20}$ th of its 1971 level in order to prevent a drain of our gold reserves. This might not sound bad; but to maintain 1980 profits and production, 1971 workers would have had to be willing to continue working at wages close to $\frac{1}{20}$ th of their 1971 level rather than either jumping on to employment insurance, welfare, and governmental training programs or quitting to search out what they erroneously perceived to be now-greener pastures. Experience shows that they would not have been so willing. The comparatively small, 25% wage reduction during the great depression, when government welfare alternatives were virtually absent, produced a decrease

in employment of about 25%. And we're talking -- realistically -- about a reduction in the wage level to $\frac{1}{20}$ th, not $\frac{3}{4}$, of its normal level!

Our economic and political system barely survived the celebrated return to the discipline of the gold standard in the late 1920s. Such a return in the early 1970s would have clearly shattered our system beyond recognition. The old gold standard always was vulnerable to variations in the value of gold relative to other goods. It never was a desirable system in terms of business-cycle-stability. What would make it an order-of-magnitude worse in modern times is the much greater volatility of the relative values the public places on gold. Gold's possible future use as a high-technology conductor and as a middle class consumption good for a rapidly awakening Orient, coupled with its long term fixity of supply, has made gold a tremendously speculative asset by historical standards. In sharp contrast, under a labor standard with free banking, a jump in the relative value of gold would simply reduce the amount of gold -- but not labor -- one could get in return for his dollar. Wage and employment levels would remain unaffected by the shift.

Historically, the most serious practical defect in the gold standard appears because of wartime suspensions of convertibility rights. During major wars, the executive branch of government has the justifiable power to finance expenditures by expanding the currency supply, thus taxing preexisting currency at will through the familiar inflation tax. To do this, the government must, of course, suspend convertibility. The resumption of convertibility at historical conversion rates is the root cause of the worst depressions in world history. Such resumptions inevitably forced price levels back to around prewar levels as the relative price of gold had little

reason to fall from prewar levels. Monetary authorities in each postwar decade (1820's, 1870's, 1920's) had hopefully bet that the free market, equilibrium real price of gold had, for some reason or another, fallen at least 50% although gold discoveries occurred during these periods. The bets were based more on wishful thinking than anything else. In any case, the gradual increase in demand for gold stocks occasioned by these returns to the gold standard each, inevitably, led to gradual decreases in the world price level and depressions. (The best economists, and informed speculators, were well-aware of all this. Ricardo preached bullionism to save gold reserves prior to resumption in the 1820's. Keynes preached England's continuance of the gold exchange standard for the same reason. Fisher, as we have said, preached a variable gold standard and fixed level of commodity prices. So did Newcomb in 1879. All were ignored. Speculators after Europe's return to the gold standard was completed in 1928 believed, correctly, that the only hope for the world economy was for the U.S. to induce, through domestic inflation, a large outflow of gold to support Europe's new gold demands. They bid up the price of shares in U.S. companies in expectation of the correct, stimulative, U.S. policy. But our ill-conceived monetary policy in mid-1929, one designed to reduce stock market speculation, signalled the unwillingness of the U.S. to sustain such a boom, and the world economy, quite naturally, collapsed, with the informed speculators getting in and out at just the right times, leaving everyone else taking a bath. I would expect a very similar sequence if Europe were to now return to the gold standard.)

An important advantage of a labor standard in this regard is that a resumption shock under a labor standard would have a single, one-shot effect on the wage level. Consequently, most all laborers would recognize

that all labor services after resumption was worth much less money than during the war and that the universally lower money wages would buy about the same basket of consumer goods as their previous wages did. It follows that postwar resumption at the original exchange rate would induce almost no inefficient unemployment. It could therefore be automatically imposed at the official ends of our future, hopefully infrequent, wars. Guaranteed, immediate postwar resumption would have the added advantage of preventing post-war recessions borne out of the expectation of lower future prices and wages. Advancing such periods of expected deflation to wartime converts the social cost of postwar recessions into the social benefit of decreasing the real cost of wartime finance.

C. Gold Exchange Standards

Gold exchange standards, under which we provide gold convertibility for foreigners but not ourselves (in order to conserve on gold supplies) have none of the advantages of domestic convertibility standards. We would, like in both postwar periods of this century, have central-bank rather than private determination of our money supplies. As a result, we would suffer from the same susceptibility to exogenous shocks that we have under our current system.

While the system would provide some, at least temporary, discipline on monetary authorities, I don't believe that they need ~~it~~ ^{such discipline}. Their job is hard enough without it. For example, if the authorities had to maintain such convertibility during the 1970's in the face of the gigantic excess demand for gold at an average of \$35, they would have had to deflate in a way very similar to the way a classical gold standard in order to maintain our gold

reserve. The appropriate monetary policy in the 1970's was stable growth except for upward jumps immediately following the oil price jumps. While the authorities certainly missed the mark by letting money supplies rise only gradually and giving us a costly secular-inflation, at least they did not give us the hair-raising depression that we would have had under the discipline of the gold or gold exchange standard.

It's true that we could, under a flexible gold exchange standard, adjust the price of gold with market conditions. But we would have no "standard" at all if we continually adjusted the price of gold. We would just have our current, inconvertible, fiat money economy. And adjusting the price of gold in jumps rather than continuously would provide no obvious benefits to anyone except gold speculators, monetary authorities, and international economists. We would have the same business cycle, the same artificial scarcities of domestic money supplies and dependence on monetary authorities, and approximately the same incentive to inflate as we have under the current, slightly more flexible, monetary system.

D. Gold Reserve Systems

Gold reserve systems limit the supplies of certain kinds of money to fixed multiples of certain gold stocks. An excess of existing over required gold supplies makes the system behave in the same, unconstrained fashion as our current system. If and when the constraint is reached, we tie the hands of our monetary authorities so that they are unable to respond to recessionary shocks. Only extreme monetarists appreciate this kind of discipline. And even if monetary authorities had no control of the gold base and the monetarist judgment that business cycles are largely a Fisherian "Dance of the Dollar" were correct, we would still suffer from either (a) artificially

created shortages of money in the case of an exogenously increasing gold base and secular inflation or (b) a liquidity trap economy subject to a vicious, endless spiral downward in prices and interest rates. (This is not commonly known; it's based on a fallacy in Keynesian logic. I'll send a paper on request. The dynamic story goes: prices fall a little. This lowers real profit rates a little. This in turn increases the demand for money despite the reduced transactions-demand for money because of the high interest sensitivity of the demand for money at low interest rates. This lowers prices some more and the sequence is repeated until the price level reaches zero!)

If, however, only government-produced money, i.e. currency, were constrained by this gold reserve requirement, and if all quantity restraints were taken off the existing banking system, the new system being based on competitive banking with convertibility into U.S. currency, then these defects would not exist. We would still, however, be subject to unintended variations in the currency-gold stock and in the demand for government currency relative to other forms of money. So there are many "ifs" for a gold reserve system to avoid some very large costs; and, even when the conditions are met, the system is less stable and requires more governmental wisdom than a labor standard. The same, of course, could be said for any variant of our current system in which we remove all constraints on our banks and have the government control only the supply of its own currency.

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CERTIFICATE RESERVE: A PROPOSAL
PREPARED FOR SUBMISSION TO THE GOLD COMMISSION

By

ROBERT E. WEINTRAUB

SENIOR ECONOMIST, JOINT ECONOMIC COMMITTEE

IN 1934, CONGRESS PASSED AND PRESIDENT ROOSEVELT SIGNED LEGISLATION THAT MADE IT A CRIME FOR AMERICANS TO USE GOLD AS MONEY. HOWEVER, UNTIL THE 1960'S, GOLD CONTINUED TO BE USED TO SETTLE THE DOLLAR CLAIMS OF FOREIGN CENTRAL BANKS AND OFFICIAL INSTITUTIONS AND THE FEDERAL RESERVE CONTINUED TO BE REQUIRED TO HOLD GOLD CERTIFICATES AS RESERVES BEHIND ITS NOTE AND DEPOSIT LIABILITIES. IN 1965, THE CERTIFICATE RESERVE WAS ELIMINATED FOR THE FEDERAL RESERVE'S DEPOSIT LIABILITIES. IN 1968, THE REQUIREMENT WAS ELIMINATED FOR NOTE LIABILITIES. THAT SAME YEAR, OUR TRADING PARTNERS AGREED INFORMALLY NOT TO CONVERT THEIR DOLLAR CLAIMS INTO GOLD. IN 1971, CONVERTIBILITY WAS SUSPENDED FORMALLY.

WHEN THESE DECISIONS WERE MADE, IT WAS WIDELY BELIEVED THAT THEY WERE FOREVER. NOW, THE GOLD COMMISSION IS DEBATING WHETHER TO RECOMMEND REVERSING ANY OF THEM, OR EVEN ALL THREE. THE COMMISSION'S CHARGE IS "TO MAKE RECOMMENDATIONS....CONCERNING THE ROLE OF GOLD IN OUR DOMESTIC AND INTERNATIONAL MONETARY SYSTEMS." IT MIGHT RECOMMEND THAT WE RETURN TO THE GOLD EXCHANGE INTERNATIONAL STANDARD, WHICH WAS FORMALLY ABANDONED IN 1971; THAT WE RESTORE THE GOLD CERTIFICATE RESERVE FOR FEDERAL RESERVE NOTE AND/OR DEPOSIT LIABILITIES WHICH WAS ELIMINATED IN THE 1960'S; THAT WE DEFINE THE DOLLAR AS A WEIGHT OF GOLD AS WE DID BEFORE 1933; OR ANY COMBINATION OF THE THREE. IN TURN, CONGRESS

COULD ACCEPT, MODIFY, OR REJECT THE COMMISSION'S RECOMMENDATIONS.

MY HOPE IS THAT THE COMMISSION WILL RECOMMEND AND THE CONGRESS LEGISLATE RESTORATION OF THE GOLD CERTIFICATE RESERVE. SINCE REMOVING THE GOLD CERTIFICATE RESERVE REQUIREMENT FOR FEDERAL RESERVE NOTE LIABILITIES IN 1968, M1B MONEY GROWTH HAS ACCELERATED FROM A YEARLY AVERAGE OF 2.4 PERCENT IN THE 1956 TO 1967 PERIOD TO 6.4 PERCENT IN THE 1968 TO 1980 PERIOD AND 7.5 PERCENT IN THE 1977 TO 1980 PERIOD. FASTER MONEY GROWTH WAS ACCOMPANIED BY FASTER INFLATION. THE YEARLY RATE OF RISE OF THE GNP DEFLATOR AVERAGED 2.2 PERCENT FROM 1956 TO 1967, 6.4 PERCENT FROM 1968 TO 1980 AND 7.7 PERCENT FROM 1977 TO 1980. RESTORING THE GOLD CERTIFICATE RESERVE WOULD PUT A LID ON MONEY GROWTH AND THEREBY STOP INFLATION. IN TURN, STOPPING INFLATION WILL PROMOTE ECONOMIC STABILITY AND GROWTH AND FULL EMPLOYMENT.

GOLD CERTIFICATES

FOR THE RECORD, GOLD CERTIFICATES ARE ASSETS OF THE TWELVE FEDERAL RESERVE BANKS. AT THE END OF 1980, THE FEDERAL RESERVE HELD \$11.161 BILLION OF GOLD CERTIFICATES REPRESENTING TITLE TO 264.353 MILLION OUNCES OF GOLD AT THE CURRENT LEGAL OR OFFICIAL BOOKKEEPING VALUE OF \$42.22 PER OUNCE. THE CERTIFICATES WERE ACQUIRED IN THE PAST WHEN THE TREASURY SOLD GOLD TO FEDERAL RESERVE BANKS AND RECEIVED IN RETURN DEPOSITS IN FEDERAL RESERVE BANKS CREATED "BY THE FLICK OF A PEN" TO PAY FOR THE CERTIFICATES. THE GOLD REPRESENTED BY THE CERTIFICATES IS STORED IN FORT KNOX. IF THAT GOLD IS SOLD, THE FIRST \$42.22 RECEIVED FOR EACH OUNCE SOLD WOULD BE USED TO RETIRE GOLD CERTIFICATES. ANY RESIDUAL SUM WOULD ACCRUE TO THE TREASURY AS A CAPITAL GAIN.

THE PROTOTYPE PROPOSAL

THERE ARE A NUMBER OF WAYS OF RESTORING THE GOLD COVER. IN THIS SECTION, I OUTLINE A PLAN TO CONTROL ONLY CURRENCY GROWTH. LATER THE PLAN IS EXTENDED TO CONTROL THE GROWTH OF THE BASIC EXCHANGE MEDIA MEASURE OF MONEY. THE PROTOTYPE PROPOSAL WOULD REQUIRE THAT THE FEDERAL RESERVE BANKS HOLD AT LEAST 9 CENTS IN GOLD CERTIFICATES AT THEIR LEGAL VALUE BEHIND EACH DOLLAR OF THEIR NOTE LIABILITIES IN PERPETUITY.

NINE PERCENT IS THE PERCENT OF FEDERAL RESERVE NOTE LIABILITIES THAT THE FEDERAL RESERVE BANKS HELD IN LEGAL VALUE (\$42.22) GOLD CERTIFICATES AT THE END OF 1980. AT THAT TIME, THE FEDERAL RESERVE BANKS HELD IN LEGAL VALUE (\$42.22) GOLD CERTIFICATES THE AMOUNT OF \$11.161 BILLION, OR 8.98 PERCENT OF THE \$124.241 BILLION OF THEIR NOTE LIABILITIES.

LEGISLATION TO KEEP THE PERCENT OF LEGAL GOLD CERTIFICATES BEHIND FEDERAL RESERVE NOTES WHAT IT WAS AT THE END OF 1980 IN PERPETUITY WOULD PREVENT ANY FUTURE CURRENCY GROWTH. AND, UNLESS THE PUBLIC WANTED TO HOLD AN INCREASING PART OF ITS TOTAL TRANSACTIONS BALANCES (CURRENCY PLUS CHECKING DEPOSITS IN DEPOSITORY INSTITUTIONS) IN THE FORM OF CHECKING DEPOSITS, PREVENTING CURRENCY GROWTH WOULD PREVENT ANY FUTURE GROWTH IN THE TRANSACTIONS OR EXCHANGE MEDIA MEASURE OF MONEY, M1B. HOWEVER, MOST WOULD AGREE THAT SOME GROWTH IN CURRENCY SHOULD BE ALLOWED. ALLOWING AS MUCH AS 2 OR 3 PERCENT YEARLY MIGHT BE PRUDENT TO PERMIT ACCOMMODATING THE ECONOMY'S LONG-TERM REAL GROWTH POTENTIAL.

IN RECENT YEARS, TOTAL TRANSACTIONS BALANCES HAVE BEEN GROWING, ON AVERAGE, ABOUT 7-1/2 PERCENT AND THE CURRENCY COMPONENT ABOUT 9-1/2 PERCENT PER YEAR. TO ALLOW FOR, FIRST, DISINFLATIONARY AND, THEN, PRUDENT GROWTH IN FEDERAL RESERVE NOTE LIABILITIES, THE PROTOTYPE PLAN CALLS FOR THE LEGAL VALUE OF GOLD TO BE RAISED EACH MONTH IN THIS AND SUBSEQUENT YEARS AS FOLLOWS:

IN 1981 BY ONE-TWELFTH OF 7.5 PERCENT TO \$45.39 AT YEAR END,

IN 1982 BY ONE-TWELFTH OF 6.0 PERCENT TO \$48.11 AT YEAR END,

IN 1983 BY ONE-TWELFTH OF 4.5 PERCENT TO \$50.27 AT YEAR END,

IN 1984 BY ONE-TWELFTH OF 3.0 PERCENT TO \$51.78 AT YEAR END,

AND

IN 1985 AND ALL SUBSEQUENT YEARS BY ONE-TWELFTH OF 3.0 PERCENT.

ASSUMING BOTH THAT THE NUMBER OF OUNCES CERTIFIED BY THE CERTIFICATE RESERVES DOES NOT CHANGE AND THAT THE FEDERAL RESERVE BANKS FULLY USE THEIR AUTHORITY TO ISSUE NOTES, THE VALUE OF THEIR NOTE LIABILITIES WOULD GROW FROM THE \$124.241 BILLION LEVEL OF DECEMBER 1980 AS FOLLOWS:

BETWEEN DECEMBER 1980 AND DECEMBER 1981 TO \$133.559 BILLION,

BETWEEN DECEMBER 1981 AND DECEMBER 1982 TO \$141.573 BILLION,

BETWEEN DECEMBER 1982 AND DECEMBER 1983 TO \$147.943 BILLION,

AND,

BY 3 PERCENT PER YEAR THEREAFTER.

IT IS IMPORTANT TO RECOGNIZE THAT THE PLAN DOES NOT MANDATE THAT CURRENCY GROW 7.5 PERCENT IN 1981, 6 PERCENT IN 1982, ETC. THE NUMBERS ARE MAXIMUMS. THE FEDERAL RESERVE WILL NOT BE REQUIRED TO FULLY USE ITS AUTHORITY TO INCREASE CURRENCY IN ANY GIVEN YEAR. IN THE EVENT IT DOES NOT, THE LEGISLATION WILL PROVIDE THAT UNUSED AUTHORITY CANNOT BE CARRIED OVER BEYOND THE FIRST HALF OF THE FOLLOWING YEAR. FOR EXAMPLE, IF IN 1981, TOTAL NOTE ISSUES FELL SHORT OF THE SCHEDULED \$133.559 BILLION YEAR-END LEVEL, THE FEDERAL RESERVE WOULD HAVE UNTIL MID-1982 TO MAKE UP THE SHORTFALL. IF IT DIDN'T, THE PAR VALUE OF GOLD WOULD BE ADJUSTED DOWNWARD ACCORDINGLY AND THE 3 PERCENT INCREASED SCHEDULED FOR THE SECOND HALF OF 1982 WOULD PROCEED FROM THAT BASE.

THE PROTOTYPE PLAN OUTLINED ABOVE WOULD, I BELIEVE, HAVE GIVEN US A BETTER MONETARY POLICY THAN WE HAVE HAD THESE PAST 15 YEARS IF IT HAD BEEN IN EFFECT. HOWEVER, IT TOO CAN BE IMPROVED UPON.

EXTENSIONS AND REFINEMENTS

THE LEGISLATION COULD BE DRAWN TO MAKE SURE THAT THE TREASURY WILL NOT BENEFIT FROM INCREASING THE LEGAL VALUE OF GOLD, IF THAT IS DESIRED. THIS CAN BE DONE BY REQUIRING THAT THE DIFFERENCE BETWEEN THE LEGAL VALUE OF GOLD IN THE CURRENT YEAR AND THE LEGAL VALUE IN THE PREVIOUS YEAR MUST BE USED TO RETIRE TREASURY DEBT THAT IS HELD BY FEDERAL RESERVE BANKS. SINCE, AT THE MARGIN, TREASURY ALREADY RECEIVES THE INTEREST ON THAT DEBT, IT WOULD GAIN NOTHING FROM THE RISE IN THE LEGAL VALUE OF GOLD.

SECOND, THE LEGISLATION CAN BE DRAWN SO THAT BOTH THE LEGAL VALUE OF GOLD AND THE PERCENT BACKING REQUIRED RISE MORE RAPIDLY,

BUT WITHOUT AFFECTING THE MAXIMUM ALLOWABLE CURRENCY GROWTH. IN THIS WAY, THE LEGISLATION COULD BE USED AS A STEPPING STONE TO A FULL-FLEDGED GOLD STANDARD. FOR EXAMPLE, THE CERTIFICATE RESERVE REQUIREMENT COULD BE RAISED AS FOLLOWS:

TO 12 CENTS IN 1982,
TO 16 CENTS IN 1983,
TO 21.33 CENTS IN 1984,
TO 28.44 CENTS IN 1985,
TO 37.93 CENTS IN 1986,
TO 50.57 CENTS IN 1987, AND
TO 67.42 CENTS IN 1988.

UNDER THIS CERTIFICATE RESERVE SCHEDULE, AND, AS INITIALLY, LIMITING CURRENCY GROWTH TO 7.5 PERCENT IN 1981 AND 6 PERCENT IN 1982, THE LEGAL PRICE OF GOLD WOULD BE INCREASED TO \$64.15 IN 1982. THE INCREASE WOULD REFLECT THE 7.5 PERCENT RISE IN 1981 AND THE 6 PERCENT RISE IN 1982 TO ALLOW FOR DISINFLATIONARY CURRENCY GROWTH IN THOSE YEARS, PLUS A 33 PERCENT RISE TO ACCOMMODATE THE INCREASE FROM 9 CENTS TO 12 CENTS IN THE GOLD CERTIFICATE RESERVE REQUIREMENT IN 1982 ($\$64.15 = \$42.22 \times 1.075 \times 1.06 \times 12/9$). AFTER 1982, TO LIMIT CURRENCY GROWTH TO 4.5 PERCENT IN 1983 AND 3 PERCENT YEARLY THEREAFTER, AND CONTINUING TO ALLOW OFFSETTING 33 PERCENT YEARLY INCREASES IN THE PRICE OF GOLD AND THE CERTIFICATE RESERVE REQUIREMENT, THE LEGAL PRICE OF GOLD WOULD RISE AS FOLLOWS:

TO \$89.38 IN 1983,
TO \$122.74 IN 1984,
TO \$168.57 IN 1985,
TO \$231.51 IN 1986,
TO \$317.93 IN 1987, AND
TO \$436.63 IN 1988.

ASSUMING THE MARKET VALUE OF GOLD DOES NOT RISE VERY MUCH IN THE FUTURE, AND IT SHOULD NOT, GIVEN THAT CURRENCY GROWTH WILL BE CONSTRAINED, THE LEGAL VALUE OF GOLD WILL EQUAL THE MARKET VALUE AROUND 1988. WHEN THAT OCCURS, IF WE CHOOSE, WE CAN AUTHORIZE THE TREASURY TO BUY AND SELL GOLD AT SOME SUDDENLY ANNOUNCED (HOPEFULLY "EQUILIBRIUM") PRICE. BUT WE NEED NOT SO CHOOSE.

THIRD, THE LEGISLATION CAN BE EXTENDED TO PUT A CEILING ON THE GROWTH OF THE EXCHANGE MEDIA MEASURE OF MONEY -- COIN, CURRENCY AND CHECKING DEPOSITS IN DEPOSITORY INSTITUTIONS, M1B. IT IS IMPORTANT THAT THIS BE DONE TO ALLOW THE FEDERAL RESERVE TO PREVENT A MONETARY CONTRACTION FROM OCCURRING IN THE EVENT OF A CURRENCY DRAIN AND TO ASSURE THAT CURRENCY REFLOWS WILL NOT LEAD TO EXPLOSIONS OF MONEY GROWTH. IF NOT COMPENSATED FOR, CONVERSION OF CHECKING DEPOSITS INTO CURRENCY WILL DRAIN BANK RESERVES AND CAUSE MULTIPLE CONTRACTIONS OF RESERVEABLE CHECKING DEPOSITS AND THE SUM OF THOSE DEPOSITS AND CURRENCY, THAT IS, M1B, AND CURRENCY REFLOWS WOULD PRODUCE MULTIPLE INCREASES.

TO CONVERT THE PROTOTYPE PLAN INTO A LID ON MONEY GROWTH AND AT THE SAME TIME PROVIDE A SAFEGUARD AGAINST A CURRENCY DRAIN TRIGGERING A MULTIPLE CONTRACTION OF M1B, ALL THAT IS NECESSARY, IF WE IGNORE THE SMALL DIFFERENCES BETWEEN THE FEDERAL RESERVE'S NOTE LIABILITIES AND CURRENCY AND COIN, IS THAT THE SCHEDULED MAXIMUM PERCENTAGE NOTE GROWTH AND COROLLARY INCREASE IN THE PRICE OF GOLD BE INCREASED IN THE EVENT OF DECREASES IN THE RATIO OF CHECKABLE DEPOSITS TO CURRENCY, D/C, AND DECREASED IN THE EVENT OF INCREASES. THE TERM CURRENCY IS USED INTERCHANGEABLY WITH CURRENCY AND COIN, AND ALSO NOTES⁵. THE DERIVATION OF THE ADJUSTMENT FOLLOWS BELOW: (THOSE NOT INTERESTED IN THE ARITHMETIC OF THE DERIVATION CAN SKIP TO THE PARAGRAPH AFTER EQUATION (4) OR EVEN TO THE PARAGRAPH ON PAGE 10, BEGINNING "AS AN OPERATIONAL MATTER.")

BY DEFINITION,

$$1. \quad M1B = C \cdot m$$

WHERE C DENOTES CURRENCY AND m DENOTES THE M1B CURRENCY MULTIPLIER. SINCE $M1B = C + D$, WHERE D DENOTES CHECKABLE DEPOSITS IN DEPOSITORY INSTITUTIONS, WE HAVE THAT,

$$2. \quad m = 1 + D/C$$

AND THEREFORE THAT,

$$3. \quad M1B = C(1 + D/C).$$

THUS, ROUGHLY STATED,

$$4. \quad \% \text{ CHANGE IN } M1B = \% \text{ CHANGE IN } C + \% \text{ CHANGE IN } (1 + D/C).$$

THEREFORE, MAXIMUM M1B GROWTH CAN BE LIMITED LEGISLATIVELY BY SETTING THE MAXIMUM PERCENTAGE CHANGE IN NOTE LIABILITIES EQUAL TO THE DESIRED MAXIMUM PERCENTAGE CHANGE IN M1B MINUS THE OBSERVED PERCENTAGE CHANGE IN $(1 + D/C)$. THE EXACT FORMULA IS:

$$\text{MAXIMUM \% CHANGE IN C} = \frac{(1 + \text{desired \% change in M1B}/100)}{(1 + \text{observed \% change in } (1 + D/C)/100)} - 1.$$

TO ILLUSTRATE ITS IMPLEMENTATION, SUPPOSE THE DESIRED YEARLY CHANGE IN M1B IS 3 PERCENT AND THAT $(1 + D/C)$ FALLS 5.3 PERCENT, AS IT DID BETWEEN DECEMBER 1973 AND DECEMBER 1974. IN THIS CASE, MAXIMUM NOTE GROWTH IS INCREASED TO 8.765 PERCENT. THE COMPUTATION IS AS FOLLOWS:

$$.08765 = \frac{1.030}{0.947} - 1$$

WHERE $0.947 = 1 - .053$.

STILL USING 3 PERCENT AS THE DESIRED YEARLY INCREASE IN M1B, IF $(1 + D/C)$ FALLS BY 1 PERCENT, WHICH IS THE LONG-TERM TREND RATE OF CHANGE, MAXIMUM NOTE GROWTH IS INCREASED TO 4 PERCENT, WHERE $.04 = (1.03/.99) - 1$. IF $(1 + D/C)$ RISES BY 1 PERCENT, MAXIMUM NOTE GROWTH IS DECREASED TO 2 PERCENT. HERE, $(1.03/1.01) - 1 = .02$.*

* The basic idea for the adjustment procedure outlined here was suggested by Karl Brunner. Arthur Gondolfi has suggested a different procedure. His plan involves imposing differential certificate reserve requirements behind the reserves of depository institutions and currency held by the public. In some ways, it is superior to the one outlined here. But, definitely, it is more complicated.

Still another way of dealing with the problem of currency drains and reflows is to rely on the Federal Reserve to mop up excess reserves created by reflows and to give it the authority to pay interest on reserves deposited with Federal Reserve banks and permit commercial depository institutions to pay interest on demand deposits. This latter would allow depository institutions to, in effect, buy currency on the open market. By paying interest on checking and other deposits, banks and other depositories could choke off a currency drain. I believe that it would be constructive to allow the Federal Reserve to pay interest on reserve deposits and to repeal existing laws and regulations that now prevent the payment of interest on deposits of any kind, or place ceilings on it. However, these changes are not necessary for successful implementation of my gold certificate reserve plan.

AS AN OPERATIONAL MATTER, THE OFFICIAL PRICE OF GOLD MUST BE ADJUSTED COMMENSURATELY, MONTH AFTER MONTH WITH THE LATEST 12-MONTH CHANGE IN $(1 + D/C)$. FOR EXAMPLE, IF BETWEEN APRIL 1985 AND APRIL 1986, $(1 + D/C)$ FALLS BY 5.3 PERCENT AND THE OFFICIAL PRICE OF GOLD IS PROGRAMMED TO RISE IN APRIL 1986 BY 36 PERCENT OVER APRIL 1985 (33 PERCENT TO COMPENSATE FOR A 33 PERCENT RISE IN THE GOLD CERTIFICATE RESERVE REQUIREMENT AND THE BASIC 3 PERCENT TO ACCOMMODATE NORMAL GROWTH), THE SCHEDULED INCREASE IN THE PRICE OF GOLD WOULD BE RAISED TO 41.765 PERCENT. THIS WOULD ALLOW BUT NOT REQUIRE CURRENCY GROWTH OF 8.765 PERCENT (41.765 MINUS 33, THE OFFSETTING INCREASE IN THE CERTIFICATE RESERVE REQUIREMENT) AND WOULD LIMIT M1B GROWTH TO 3 PERCENT BETWEEN APRIL 1985 AND APRIL 1986. UNUSED BASIC (3 PERCENT) AUTHORITY WOULD NOT BE LOST UNTIL MID-1987. HENCE, IF CURRENCY AND M1B GROWTH FALL SHORT IN APRIL, THE SHORTFALL COULD BE MADE UP. FINALLY, THE FEDERAL RESERVE PRESUMABLY WOULD REGULATE THE FLOW OF RESERVES (OR BASE MONEY) IN THE LIGHT OF 12-MONTH M1B (OR CURRENCY) CHANGES TO KEEP M1B GROWTH UNDER THE DESIRED LIMIT AND THEREBY CURRENCY UNDER THE LEGAL LIMIT.

THAT IS THE BASIC IDEA. IF IT IS ENACTED, IT WOULD ASSURE THAT MONEY GROWTH WILL BE MODERATED GRADUALLY UNTIL IT REACHES A NONINFLATIONARY LEVEL AND KEPT FROM RISING ABOVE THAT LEVEL THEREAFTER. THE SAME RESULT COULD BE ACHIEVED DIRECTLY BY LEGISLATING A TIME TABLE FOR REDUCING M1B GROWTH TO 2 OR 3 PERCENT YEARLY AND KEEPING IT THERE AFTER REACHING THAT LEVEL. I WOULD SUPPORT YOUR RECOMMENDING SUCH LEGISLATION IF YOU DECIDE TO DO SO. HOWEVER, LINKING THE CONSTRAINT ON MONEY GROWTH TO GOLD SHOULD CHANGE EXPECTATIONS IN A WELCOME WAY. LET ME

SUGGEST THAT MY PLAN WILL DO THAT.

IN THIS REGARD, FEDERAL RESERVE BOARD CHAIRMAN WILLIAM McCHESNEY MARTIN TOLD THE SENATE BANKING COMMITTEE IN 1965,

BY RETAINING THE TRADITIONAL GOLD "BACKING" FOR FEDERAL RESERVE NOTES, THE PROPOSAL (TO REPEAL THE CERTIFICATE RESERVE FOR FEDERAL RESERVE BANK DEPOSITS) WOULD BE REASSURING TO THOSE WHO IN THEIR CONTINUING CONCERN FOR THE STABILITY OF THE DOLLAR, SEE IN A GOLD COVER REQUIREMENT AN IMPORTANT ELEMENT OF STRENGTH. THE VALUE OF ANY CURRENCY IS SO MUCH A PRODUCT OF CONFIDENCE THAT ONE SHOULD NOT DISREGARD THIS ADVANTAGE. ...

LATER IN THIS SAME HEARING, CHAIRMAN MARTIN, RESPONDING TO QUESTIONS BY SENATOR DOUGLAS, STRESSED THAT "THE GOLD COVER REQUIREMENT HAS SOME VALUABLE DISCIPLINARY EFFECT."

A FINAL QUESTION CONCERNS POSSIBLE TREASURY PURCHASES AND SALES OF GOLD. IN THIS REGARD, IF THE TREASURY PURCHASED GOLD, GREATER GROWTH OF CURRENCY WOULD BE ALLOWED THAN THE PROTOTYPE PLAN CONTEMPLATES, UNLESS THE REQUIREMENT RATIO IS ADJUSTED COMMENSURATELY. HOWEVER, AS LONG AS THE LEGAL VALUE OF GOLD IS BELOW THE MARKET VALUE, SUCH PURCHASES ARE UNLIKELY, AT LEAST ON A SCALE LARGE ENOUGH TO BE CONCERNED ABOUT. THIS IS BECAUSE TREASURY'S IMMEDIATE SPENDING POWER WOULD BE DECREASED BY SUCH PURCHASES BY AN AMOUNT EQUAL TO THE DIFFERENCE BETWEEN THE MARKET AND LEGAL VALUES OF GOLD TIMES THE NUMBER OF OUNCES PURCHASED.

GOLD SALES BY THE TREASURY ALSO ARE POSSIBLE. HOWEVER, IF THERE WERE SALES, THEY WOULD REDUCE THE ALLOWABLE GROWTH IN CURRENCY IN THE CURRENT AND ALL FUTURE YEARS. THAT PROSPECT SHOULD ACT AS A VERY STRONG DETERRENT TO FUTURE GOLD SALES. THUS, IT WOULD APPEAR REASONABLE TO ASSUME THAT THE NUMBER OF

OUNCES OF GOLD NOW CERTIFIED BY THE CERTIFICATE RESERVES WILL REMAIN VIRTUALLY THE SAME IN FUTURE YEARS, AT LEAST UNTIL THE OFFICIAL PRICE EQUALS THE MARKET PRICE. AT THAT TIME, THE ROLE PLAYED BY GOLD IN OUR DOMESTIC AND INTERNATIONAL MONETARY SYSTEMS CAN BE REVIEWED.

MONETARY STABILITY AND GOLD

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Statement to the Gold Commission
November 13, 1981

Many proposals for reintroducing a monetary role for gold have been touched on in the course of the deliberations of this Commission. I start my testimony by a brief examination of whether six of the leading proposals could be expected to enhance or undermine monetary stability.

(1) A first possibility would be to return to the classical gold standard, with gold coins circulating in the leading countries and exchange rates rigidly pegged together (except for fluctuations within the gold points) by the relative gold content of different currencies. This regime prevailed during one of the great periods of world prosperity. Nevertheless, there are two fundamental objections to returning to such a system. The first is that it precludes the use of exchange rate flexibility as a mechanism for adjusting the balance of payments, and thus throws the whole burden of adjustment on to variations in domestic income and employment. This is costly to a large country with a relatively closed economy such as the United States, especially given the absence of downward price flexibility that is a fact of contemporary life. The second objection is that it is impossible to maintain a money supply that is 100% gold or gold-backed. Bankers have a financial incentive to offer

credit money as a substitute for costly commodity money, and, so long as the gold value of the currency looks secure, the public has an incentive to accept that substitution. But once the gold value of the currency falls under suspicion, a run into gold occurs, producing monetary contraction and banking crises. This is the reason that gold convertibility at a fixed rate is an engine of monetary instability.

(2) A second possibility would be to restore the Bretton Woods system, by the United States resuming the obligation to convert dollars held by foreign monetary authorities into gold at a fixed price, combined with a return to pegged exchange rates defended by intervention in dollars by other countries. The issues involved here were fully considered during the extensive debate on international monetary reform in the 1960s, in the form of the analysis of Sir Roy Harrod's proposal to increase the price of gold with a view to giving the gold exchange standard a new lease of life. The proposal was compared with the alternative of moving toward an SDR standard - a possibility that would also need to be considered again if the world were in the mood for discussing basic international monetary reform. The judgment previously reached by most analysts was that on technical grounds an SDR standard would be preferable to a revived gold exchange standard: an annex to this paper reproduces the summary of the reasons for this judgment that I presented in my book The Failure of World Monetary Reform. One reason was that the supply of SDRs could have been managed with a view to contributing to stable growth of the world economy, whereas the supply of gold is subject to variation through the accidents of geology, the state of grain harvests in the Soviet Union, speculative sentiment, and numerous other extraneous factors. Another reason was the inflationary impact that gold revaluation would have had. My own judgment was, and remains, that the various considerations add up to a conclusive case for believing that giving a monetary role to gold would simply have prejudiced monetary stability.

(3) A third possibility would be to restore the gold certificate reserve, as proposed to this Commission by Robert E. Weintraub. Governor Wallich has already pointed out (preliminary transcript of the proceedings of the Gold Commission on October 26, 1981, p. 106) that the substance of that proposal is to instruct the Federal Reserve to restrict the note issue within the totals listed on p. 22 of Weintraub's paper (\$133.599 b. in December 1981, etc.). I am not myself persuaded of the wisdom of conducting monetary policy by pre-specifying ceilings for particular monetary aggregates, but, if it were felt that this was the best way of enforcing discipline on the Federal Reserve, it could be accomplished without the use of gold. Apparently there are those who believe that some gold cosmetics could influence the expectations of the public. My own view (reinforced by the theory of rational expectations) has long been that trying to influence expectations by cosmetics, rather than by designing institutions and practices that merit confidence, is an exercise in futility.

(4) A fourth possibility would be to make the dollar convertible into gold at a fixed price, while maintaining a floating exchange rate between the dollar and the currencies of the other major industrial countries. This proposal would subject the foreign exchange value of the dollar and the size of the US money supply to extraneous external influences. Suppose, for example, that DM holders decided they wished to shift into gold. Since the dollar price of gold could no longer adjust to help re-establish portfolio equilibrium, the whole burden of that adjustment would have to be borne by the DM-dollar rate, which would therefore be subject to even more variability than it already is. Or suppose that foreign dollar holders decided that they wished to shift into gold: then the US monetary base, and under gold standard rules the US money supply, would contract. The same thing would happen if domestic dollar

holders decided they wished to shift into gold, as analyzed under (1) above. This proposal represents a clear threat to monetary stability.

(5) A fifth possibility is that of minting US gold coins and selling them against Federal Reserve notes (to US citizens) at the market price of gold, as proposed by Mr. A.F. Costamagna. Such coins would be denominated in given weights of gold, rather than in dollars. Whether this proposal can be viewed as relevant to monetary policy would depend upon whether these gold coins would circulate as a medium of exchange. Unless the future market behavior of gold is dramatically different to its past performance, the short-run variability of goods prices in terms of gold coins would be much larger than that of goods prices in terms of dollars, which implies that significant use of gold coins as a medium of exchange would be unlikely. Accordingly, this proposal seems monetarily irrelevant, though harmless (provided gold sales were accompanied by an appropriate partial sterilization policy).

(6) A sixth possibility is that of restoring the usability of US gold reserves for transactions with foreign central banks, by negotiating an agreement with the leading central banks to accept gold at a market-related price. Such an agreement might or might not be accompanied by an attempt to stabilize the gold price by intervention. In either event, it would expose the value of international reserves to capricious variations as a result of speculative sentiment in the gold market. Without price stabilization, reserves could be increased vastly by a surge in the price of gold. With price stabilization, a run into gold would instead lead to a fall in reserves, as the central banks sold gold. The introduction of such an agreement would be highly inflationary, inasmuch as the \$400 b. odd of monetarily-held gold (at current market prices) is not currently a liquid asset, but would again become such if central banks were under an obligation to accept gold offered to them. Any inflationary

impact that might have stemmed from the SDR allocations that the Administration has been opposing would be dwarfed by that of any agreement to increase the usability of gold by central banks.

The general conclusion that emerges from the preceding examination is that re-establishment of a monetary role for gold would be at best irrelevant and at worst a dangerous threat to monetary stability. To say this is not to endorse past or present monetary arrangements or policy, but it is to recommend that the Commission condemn in no uncertain terms the intellectual escapism of searching for simple solutions offering painless cures through magical effects on expectations. Such condemnation would clear the way for a resumption of serious debate on the establishment of guides to economic policy capable of ensuring more stable policies in the future.

If the Commission does recommend rejection of any future monetary role for gold, it will be necessary to decide what action to take with respect to the stock of monetarily-redundant gold. One possibility would be for the Federal Reserve to maintain the gold in its portfolio, and even use it to settle transactions with foreign central banks when it judged this likely to be advantageous. I am not personally much enthused by this solution: there is no technical necessity for it (since there is no shortage of liquidity and many ways of creating more, should that be necessary), and it would tend to retain the stock of gold in the hands of the monetary authorities rather than make use of it. The alternative would be to take the gold out of the Fed's balance sheet, and prohibit the Federal Reserve system from entering into further gold transactions. That seems to me the logical complement to a recommendation against any future monetary role for gold.

Presumably a part of the gold would be placed in a strategic stockpile. There may also be a moral case for using a part of the gold to supplement IMF

gold in a revived Trust Fund, on the lines described below. The remainder should surely be sold to the public, at a rate calculated to maximise the net present value to the US taxpayer.

The question of disposal of the rest of the IMF's stock of gold has already been raised in the Commission. I would like to urge that the Commission ponder very carefully whether it would be proper for the United States to press for 'restitution' of IMF gold to member countries in proportion to their quotas, as was suggested. It is surely relevant to recall that in the 1960s US leaders gave repeated and bipartisan assurances of the determination of the United States to maintain the convertibility of the dollar into gold at \$35 per ounce for foreign official holders. Acting at least in part on the supposition that those commitments could be trusted, many governments, including most of those of the poorest countries on earth, heeded the pleas of US officials to avoid exposing the Bretton Woods system to additional strains by exercising their legal right to convert dollars into gold. The unilateral renunciation of the gold convertibility of the dollar by the United States on August 15, 1971, and the subsequent appreciation in the market value of gold, have exposed those countries that acted as loyal and trusting friends of the United States to enormous losses in comparison with the financial position they would have enjoyed had they demanded gold. It has been calculated ^{1/} that, if the non-oil developing countries had converted all their foreign exchange reserves (which were mostly dollars) into gold at the end of 1969, they would have been some SDR 68.6 billion (\$90 billion) better off at the end of 1979 than they actually were (even after accounting for loss of interest earnings). Since the price of gold is again about what it was at the end of 1979, this gives a rough estimate of

^{1/} D.A. Brodsky and G.P. Sampson, 'The Value of Gold as a Reserve Asset', World Development, March 1980, Table 4.

the loss that countries markedly poorer than the United States have suffered for actions that were influenced by the belief that US commitments could be trusted.

It would surely be ignoble to make no move toward compensating those who lost out, beyond the \$4.6 billion already realized through the sale of one sixth of the Fund's gold and paid into the Trust Fund. The obvious mechanism is to use more of the IMF's gold in the same way. In a more generous world than ours, one might even have expected that the United States, in association with the other major Western powers that made financial gains through the rise in the price of gold, would have been prepared to make additional donations to the Trust Fund with a view to righting the injustices that has been done. To go in the opposite direction and demand further 'restitution' would be dishonorable.

Annex

The following is an extract from J. Williamson, The Failure of World Monetary Reform, 1971-74, New York University Press, New York, 1976, pp. 33-35:

Seven considerations are generally thought to be relevant to ... a comparison [between using gold and the SDR as the basic reserve asset]. First, in an inflationary age there is no question of a once-for-all gold revaluation leading to a permanent solution of the need for steadily growing liquidity (such as can be provided through regular SDR allocations at a controlled rate). In due course gold accruals would have dried up again and the liquidity position of the United States would again have started to deteriorate, leading to a renewed desire of reserve holders to switch out of the dollar and a repetition of the whole unhappy cycle of the 1960s, no doubt at a much accelerated pace. Second, some advocates of the reinstatement of gold see this as a way of restoring financial discipline on governments. However, the willingness of governments to be disciplined was dependent on their belief that there was no alternative. One cannot recreate a myth. Once governments have learned to change the gold price whenever the discipline of gold threatens to become irksome, gold is merely another form of funny money with the capacity for provoking particularly disruptive speculative shifts in anticipation of changes in its price, and with the added complication that it has alternative uses as a commodity. Third, SDRs are cheaper to produce - not only because the mining of gold absorbs real resources, but also because the substitution of SDRs would permit existing stocks of gold to be released for useful purposes such as filling teeth or creating ornaments. This is not only an economic gain in itself, but also means that the SDR is potentially capable of paying a rate of return competitive with that on currencies, which would eliminate the economic incentive for a reserve currency system with its tendency for destabi-

lizing portfolio switches between reserve assets. Fourth, even while the primary reserve asset co-exists with reserve currencies, the restrictions embodied in the SDR agreement on the use of the SDR in portfolio switching operations reduce the confidence problem as compared to that inherent in a resurrected gold exchange standard. Fifth, the supply of SDRs can be managed with a view to contributing to stable growth of the world economy, whereas the supply of gold is subject to a mass of capricious influences. Sixth, the sudden massive increases in international liquidity that would have occurred whenever gold was revalued would have had highly inflationary effects. Finally, the distribution of the seigniorage benefits of SDR creation is at least roughly neutral, and could, with sufficiently general agreement, be varied to reflect any consensus that might be established on a desirable international redistribution of income. The distribution of the seigniorage benefits of gold revaluation would have been at best capricious and at worst perverse, with the major gold producers (South Africa and the Soviet Union) and the gold hoarders (those countries that had rocked the boat when it still appeared that an orderly reform was possible) benefitting substantially, and most of the developing countries gaining virtually nothing.

To most economists, if not to all newspaper editors, these considerations seemed to add up to an overwhelming case against trying to resurrect the gold exchange standard by a revaluation of gold. The bulk of the case was endorsed by most officials as much as by the academics. Indeed, the pride that the officials took in their role in pioneering the introduction of a new reserve asset created a willingness to entertain solutions involving the development of the SDR that was prone to be underestimated by some academics. There was also another factor, though it is difficult to say to what extent its importance was consciously appreciated by those involved. This arises from the fundamental irrelevance of restoring convertibility unless this act symbolized a commitment by the United States that in future she would accept the discipline of a

reserve constraint similar to that under which other countries operated. In the absence of such a commitment, which there is no reason whatsoever to suppose the United States would have been prepared to give, gold revaluation would merely have papered over the ambiguities of the Bretton Woods system regarding the distribution of the responsibility for initiating adjustment.