
Real Gold, Dollars, and Paper Gold

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THE FUTURE OF GOLD

REAL GOLD, DOLLARS, AND PAPER GOLD

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The alternatives implied in my title lead to different worlds and we have to decide which is better. The issues are subtle and involved and I can do no more than sketch answers to them. I shall argue that: (1) The accelerating frequency of exchange crises in the system over the past eight years is due to the undervaluation of gold. (2) The so-called U.S. "balance-of-payments deficit" is the result of the growth in world demand for reserve media which, since 1958, could only be supplied by the U.S. and is not the consequence of a faulty adjustment mechanism. (3) Elimination of the system of crises could be accomplished either by an increase in the real price of gold or by the introduction of paper gold; but the simultaneous elimination of the sequences of crises and the U.S. balance-of-payments deficit can only be resolved by the introduction of paper gold. Therefore a solution through paper gold is better than a return to real gold.

I. The Cause of Crises

The system of periodic crises that began in October, 1960, and continued through 1968 is not over. We should anticipate further major disturbances in 1969. Crises have become permanent stage props of the present system. An international crisis is one means by which a government can dramatize the need for an alteration in its policies and shift much of the blame for unpopular features of the new policy from the national government to the international community or to the evil little goblins dedicated to the lust for gold.

It would be hard for a government to create a crisis out of thin air. But if the groundwork has been properly laid, a government can create a crisis in about two months without showing unseemly haste. In the summer of 1968, for example, there was a steady outflow of capital from France stimulated by the May-June uprisings and the wage settlements. But the signal for the crisis of November was the lifting of exchange controls in early September combined with the massive credit expansion inside France. The French worker had to be punished for his bad behavior in May and June and the November crisis was the best way of making the punishment suit the crime.

I am being partly facetious, of course, about the deliberate engineering of crises. It would be, perhaps, more judicious to say that the system as a whole has become less tolerant of mistakes in policy. The power in the hands of private financiers has risen with the massive increase in international floating capital over the past few years. As long as the national reserves of each of the major countries were large relative to this private floating capital, a single country in isolation could withstand an attack. But the reserves of a large number of countries in the system are small in relation to the capital outflow pressure that can build up even in a few weeks. To keep control of the system now requires the collective reserves of the major countries. The central bankers who meet once a month in Basle have really turned themselves into something like a floating first aid station, rushing monetary supplies to the next victim of speculative

opinion. The actual international reserves held by the major countries are small now but the velocity of these reserves has been increased. We have fewer reserves in relation to the demands involved, more crises, and increased alertness in recognizing them and making them serve their social purpose.

The increasing frequency of crises is connected to the undervaluation of gold in the system; as we shall see, the simplest explanation takes us a long way. Suppose we start out with a system of currencies, goods, and gold and fix the price of gold in terms of currencies. Then allow a vast expansion of money, say, because of a war, which results in higher currency prices of all goods in the system except gold. Since gold is also a commodity, it will then be undervalued. Now take the most important of the currencies, the dollar, let all countries fix their exchange rates to the dollar, leaving the U.S. to keep the dollar convertible into gold at a given price. As long as the other central banks want to hold and accumulate both gold and dollars for use in their reserves, world inflation will have the effect of decreasing the residual supply available for central banks and thus drawing down (or preventing an increase in) the gold stocks of the U.S. more than would have been the case in the absence of world inflation. In a world where policy-makers act on slogans rather than analysis the problem will be misread as a balance-of-payments problem of the U.S. rather than as a problem of world inflation or the inadequacy of the reserve media.

To bring out the argument on a diagram let us restrict consideration to gold and three currencies: the dollar, the franc, and the mark. If the supply of currencies were in equilibrium at the existing price of gold and if exchange rates were at their equilibrium level, we could find an equilibrium price for the mark and the franc

in terms of the dollar at which there would be no excess demand for any of the currencies or gold; this point would be illustrated by *Q* in the diagram where all three curves intersect. But if currencies had been supplied to excess and world commodity prices had risen, there would be no single exchange rate for the mark relative to the dollar or the franc relative to the dollar that would clear all markets simultaneously; the original equilibrium would be a position of excess demand for gold and excess supply of each of the other currencies. In such a case, exchange rates could be found that would equilibrate the French and German balances (point *A*); the French and American balance (point *B*) and the American and German balances (point *C*) but not all three balances simultaneously. The point *Q* would indicate deficits of all three countries and disappearance of monetary gold from central bank stocks. The point *R* would reflect the situation prevailing in November, 1968, neglecting, of course, the fact that the price of gold in the free market is separated from the official price. During the November, 1968, crisis the situation was at the point *R* and the authorities had a hard time deciding which, if any, pseudoequilibrium to move toward.

The main point I want to make with this diagram, however, is that crises are likely to result again and again when there is one price relationship that is not in equilibrium and all prices except that price can be changed. If gold is underpriced while the mark is undervalued and the franc overvalued relative to the dollar, exchange rate solutions can relieve the temporary pressure on one or another of the currencies until growth and an accumulation of demand for reserves create reserve scarcities for the next country. Faced with this situation relatively small disturbances can crack the system apart.

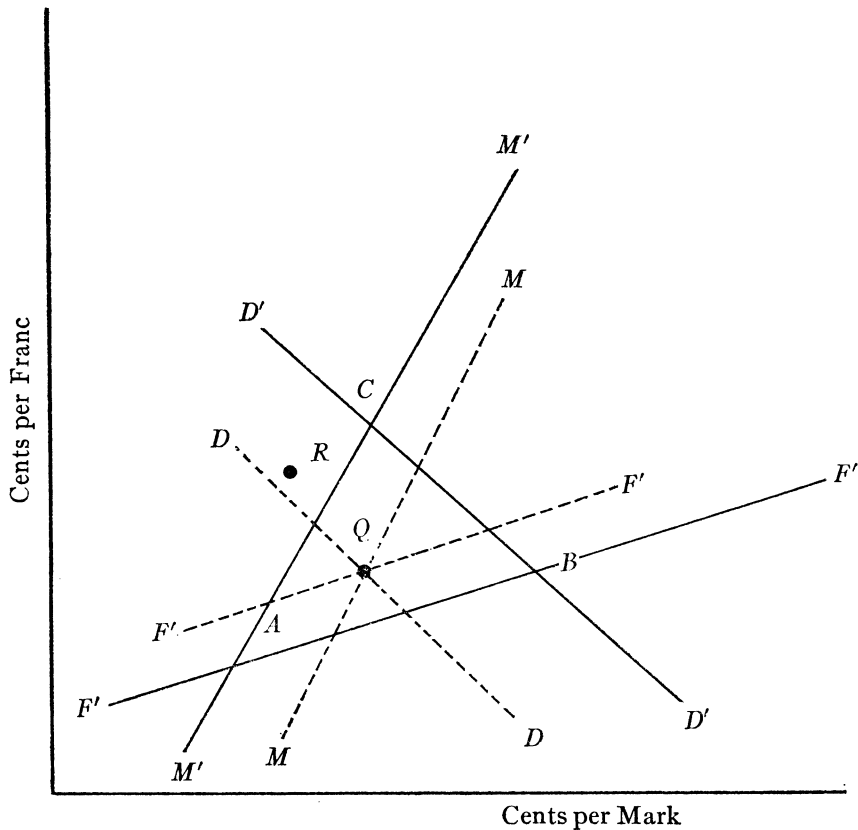


FIGURE 1

NOTE: The dashed lines, DD , MM and FF , intersecting at Q represent the initial equilibrium iso-balance-of-payments lines of the U.S., Germany, and France. Inflation with a fixed gold price has the effect of shifting these curves outward so that, at the original equilibrium Q , there would be an excess supply of all currencies and disappearance of gold into the private market. The system has no equilibrium until the real price of gold is raised either by price deflation or an increase in the currency price of gold; an alternative approach is to create a substitute, paper gold. The point R may be taken as the representative point in November, 1968.

There are two basic approaches out of the impasse. One is to raise the real price of gold; the other is to create paper gold. Now there are two ways of raising the real price of gold. The method chosen in 1930–34 was to deflate the world economy. This solution is rightly rejected universally by everyone. The other method is to raise the currency price of gold. Opinion on the merits of this solution is divided. During the November crisis a large number of economists favored a reduction

in the mark price of gold. But there is a growing sentiment for a universal reduction in the par values of all currencies. I believe, however, that this solution is not necessary and is far inferior to the managed use of paper gold in the system. But before developing this argument it will be necessary to turn to the unique role played by the U.S. in the system and the malaise that is somewhat monotonously referred to as the U.S. balance-of-payments deficit.

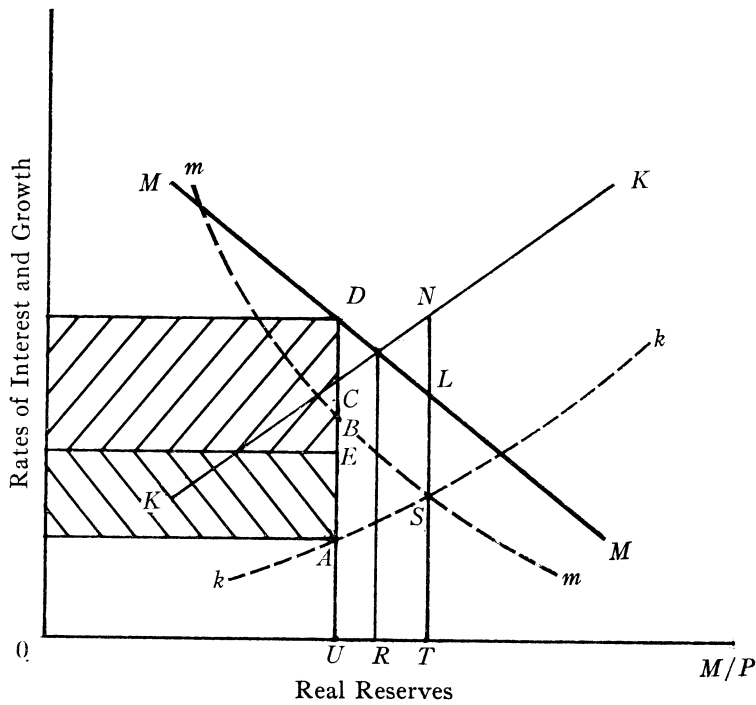


FIGURE 2

NOTE: Rates of change are plotted on the ordinate and real reserves on the abscissa. MM plots the money-balance schedule; KK the capital balance schedule. Rates of growth of money expansion are indicated by the vertical distance between mm and MM ; rates of real growth by the vertical distance between KK and kk . In the nineteenth century the rate of real growth NS exceeded the rate of growth of gold production LS and deflation at the NL ensued. Since 1958, however, rates of money growth exceeded rates of real growth CA giving rise in rates of inflation DC . Gold production DB disappeared into private usage and rate of monetary growth DA was provided almost entirely by the U.S., DE representing U.S. gold losses, and EA the increase in U.S. dollar liabilities. The shaded areas give the absolute magnitude of the U.S. deficit.

II. The U.S. Deficit

In order to focus attention on the failure of the world economy to attain balance in the context of growth, let us analyze it as we would a closed integrated monetary system. Although this requires a leap of the imagination, it is fully justified in a world of fixed exchange rates and can indeed be derived from the aggregation of conditions of balance in a model in which an arbitrary number of national monetary systems are explicitly given full consideration. Monetary equilibrium in the system

is dominated by the growth in the production of goods and services on the one hand and growth in the production of money on the other. Because it is a closed economy, there is no net lending outside the system so the excess demand for securities in it must be zero.

In Figure 2 real money balances are placed on the abscissa and various rates of change are placed on the ordinate. The curve KK shows the relation between real money balances and the real rate of interest at which the world community is will-

ing to hold the stock of capital. The curve MM gives the relation between real money balances and the money rate of interest at which the world community of central banks is satisfied with the real stock of reserves balances it actually has.

If the world economy were not growing and no new money (e.g., gold) was being produced, equilibrium would settle at the point Q where MM and KK intersect. Real and money rates of interest would be equal (at the level QR) and the stock of real international money would be OR .

We must now take into account growth. At any moment of time the stock of nominal reserves balances is given, for the world as a whole, so that movements to the right and left on the ordinate implies lower and higher price levels, respectively. At each price level there will correspond a given rate of production of money and a given rate of production of goods. Draw kk to denote the given rate of goods production expressed as a proportion of the capital stock so that the vertical gap between kk and KK will indicate the percentage rate of goods production and therefore the commodity growth of the system. Similarly, draw mm so that the vertical gap between MM and mm indicates the rate of money production as a percentage of the money stock. Then equilibrium in the system will be established at the point where kk intersects mm ; it is readily shown that S is the only position at which stocks and flows of goods and money are in equilibrium and that expected price changes are realized. At the equilibrium point S the desired and actual level of real money balances is OT ; the real rate of interest is TN ; the nominal rate of interest is LT ; the rate of monetary expansion is SL ; the rate of growth is NS ; and the excess of the real rate of interest over the nominal rate of interest, NL , is the rate of deflation in the world economy. This configuration de-

TABLE 1
RESERVE CHANGES
1958-68*

ROW	U. S. Deficit
Gold +10.5	-9.9
F.E. + 8.3	-7.2
Total +18.8	-17.1

* International Financial Statistics (Dec., 1958-June, 1968). Measure of U.S. deficit excludes swap arrangements, IMF position and foreign exchange holdings; the latter amounted to \$2.5 billion in June, 1968.

icted at S might be taken to reflect the position of the world economy in the deflationary days of the gold standard between 1875 and 1895.

But we are interested in current events, not past history. From the end of 1958 to the middle of 1968 world monetary gold stocks did not increase; virtually all new gold production went into private hands. But monetary reserves of countries outside the U.S. did increase because countries acquired dollars and gold from the U.S. which they earned by generating balance-of-payments surpluses. The rest of the world (countries outside the U.S.) bought both dollars and gold from the U.S. who became over the period the sole supplier of reserves leaving aside IMF Drawing Rights.¹ Enough reserves were bought to finance a gently rising price level throughout the world. Thus the situation characterized by the dollar standard as it operated from 1958 to 1968 can be best portrayed by a lower supply of liquidity (relative to capital, income, or

¹ The position is not altered even if IMF drawing rights are counted as part of liquidity because the important part of the increase in Fund liquidity for the rest of the world was at the expense of the decrease in the Fund position of the U.S. Normally the gold component of an increase in IMF quotas is financed by transferring U.S. gold to the gold component of the IMF; although a bookkeeping device was invented to disguise this fact in the most recent increase in quotas in 1966.

trade), higher nominal interest rates, and perhaps real interest rates that were about the same as in the last part of the nineteenth century. In the diagram we can make the following average identifications for the period 1958–68:

- $UD = i$, the nominal rate of interest
- $UC = r$, the real rate of interest
- $AC = \lambda$, the rate of growth
- $AD = \rho$, the rate of monetary expansion in the rest of the world
- $DC = \pi$, the rate of inflation

The distance DB represents both gold production and gold consumption (disappearance into the private market).

ED is the gold sales of the U.S. as a fraction of world reserves.

EA is the annual increase in dollars held by foreigners as a fraction of world reserves. The shaded areas represent the U.S. deficit, divided between its two components: gold losses and the increase in dollars held by foreigners.

Of course Figure 2 is an oversimplified presentation of the world system. What two-dimensional representation could be otherwise? Its purpose is to dramatize certain relevant features of the world system and to emphasize how inadequately founded is that view of the world system which analyzes the U.S. on the same basis as any other country. The U.S. became the world supplier of reserves over the period 1958. There is no harm, of course, in speaking of a U.S. deficit any more than it would be harmful to say that the Federal Reserve System is in perpetual deficit because it pays out more dollars than it takes in. Words are harmless; it is the action taken on misinterpretation of the meaning of concepts that do the damage.

The crucial points to be emphasized can now be summarized. Because the world economy is growing countries collectively want to accumulate reserves. In order to accumulate reserves they try to run bal-

ance-of-payments surpluses. But they need an asset in which to hold their reserves. At present they can accumulate gold or dollars or some other national currency. But at the current price of gold there are no supplies of gold available to central banks. The U.S., however, has a special responsibility in the system. If other countries want gold they can take it out of the U.S. stock. Thus the U.S. is the only source of reserves in the system providing gold and dollars. This is called the U.S. deficit.

The only way the deficit can be corrected is by making available to other central banks an asset that is not provided by the U.S. The U.S. has been up to now the only country that is willing to supply the reserves other countries want. No other country than the U.S. was willing or able to supply gold on demand for its currency; and no other currency than dollars was needed for exchange transactions. This is the reason why the U.S. has run a payments deficit from 1958–68, and why, in the absence of paper gold, it will continue to run deficits.

III. *Paper Gold*

I now turn to paper gold. The demand for additional dollar holdings will continue but only in connection with another asset in the system. Real gold is no longer adequate to assure sufficient and sustained reserve growth. A paper gold solution is the only approach that can create the conditions for rational world monetary management, end the systematic crises, and end the U.S. balance-of-payments deficit.

There are several ways of creating paper gold. One is to create a right to draw on the IMF and give liabilities incurred a gold guarantee, as was done with the Special Drawing Rights. This does not meet the basic world monetary problem; the instrument does nothing to solve the confidence problem; and the supply of

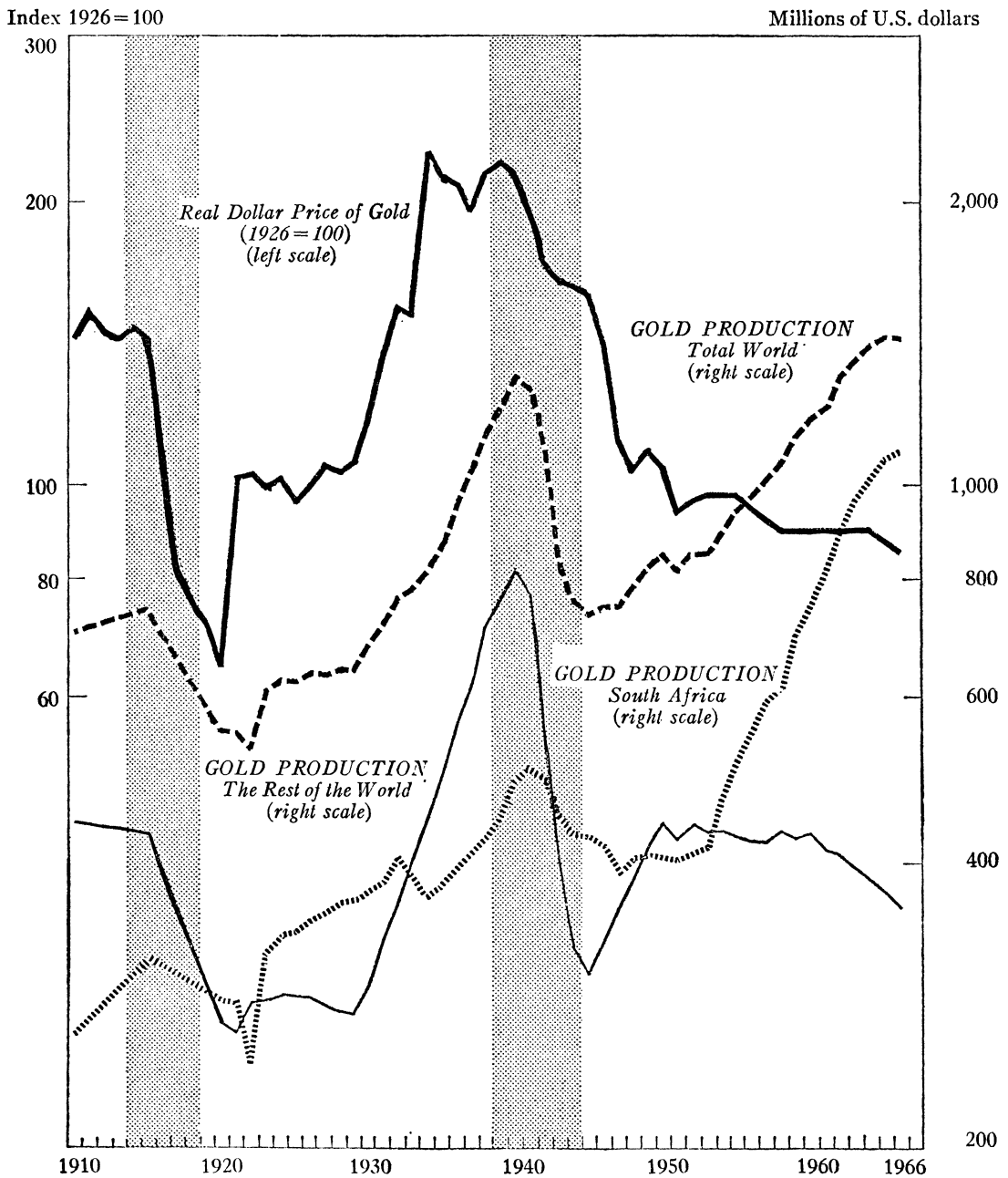


FIGURE 3

GOLD PRODUCTION AND A REAL DOLLAR PRICE, 1910-66

Source: Fred Hirsch, "Influences on Gold Production," *IMF Staff Papers* (Nov., 1968).

SDR's that will be created will be inadequate. Over the next ten or fifteen years the world will need perhaps \$50 to \$80 billions of new reserves but my prediction is that the nations will not be willing to create even half of that amount of SDR's.

The best solution, in my opinion, is to create paper gold by centralizing reserve assets. A number of plans for centralizing reserves have been discussed; most have parents in one of Keynes's or Triffin's plans. My own preference is to put all reserves in an international monetary pool (IMP) and use the certificates members get in exchange (intors) as world money. Since the March communique they could use a shadow price of gold as a new instrument. Suppose, for example, the countries contributed to the pool the following reserves: gold, 1 billion ounces; foreign exchange, \$25 billion; other, \$5 billion. The IMP would then have to decide how to value gold. Since the official market has been separated from the private market one could make a virtue of this separation and use the official price of gold as a regulator. Let us suppose that initially gold is valued at \$35 an ounce. The initial balance sheet of the pool would be as follows:

The IMP			
Assets		Liabilities	
Gold	\$35 b.	Intors	\$65 b.
Other	\$30 b.		
	\$65 b.		\$65 b.

Now suppose the members decided to increase the supply of intors by \$3 billion a year for the next five years. They could acquire more gold, foreign exchange or SDR's, creating intors in exchange. But

this is no longer necessary. They have the other alternative of changing the value they place on the million ounces of gold. If they did not acquire any additional dollars or new physical gold stocks, the additional intors could be created through an increase of \$3.00 an ounce in the gold price resulting in, at the end of the next year, the following balance sheet:

The IMP			
Gold	\$38 b.	Intors	\$68 b.
Other	\$30 b.		
	\$68 b.		\$68 b.

Eventually, gold would be worth more as money than as a commodity and thus establish the two-price system on a basis consistent with Gresham's Law. The free market price of gold could be dominated by the gold policy of the IMP. The major intervention currency, the U.S. dollar, would cease dealing in gold and deal only in intors to which the dollar would be fixed in value, and the exchange rate system would continue as before.

The essential point to notice, however, is that it is not tonnage that is required to make new international money. Paper gold is better than real gold.

Conclusion

I have now argued (1) that increasing crises occur in the system because of the undervaluation of gold, (2) that the elasticity of the gold exchange standard based on the U.S. balance of payments has enabled the system to operate successfully in the past decade, and (3) that the use of paper gold is the only device on which a lasting world monetary system can be based.