

PRINCETON STUDIES IN INTERNATIONAL FINANCE NO. 13

**The Management of the Dollar
in International Finance**

Robert Z. Aliber

**INTERNATIONAL FINANCE SECTION
DEPARTMENT OF ECONOMICS
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The author, Robert Z. Aliber, is a member of the research staff of the Committee for Economic Development. The views in this essay are not necessarily those of the CED or any of its subcommittees.

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THE MANAGEMENT OF THE DOLLAR IN INTERNATIONAL FINANCE

I. INTRODUCTION

The need to reduce the large persistent deficit in U.S. international payments since 1958 has limited the choice of measures to secure both domestic and foreign economic objectives. If U.S. international reserves, primarily gold, had not been extremely large in 1958, the United States would have had to take much more rigorous measures to reduce the payments deficit, and the conflict between these various policy objectives and the need to secure a satisfactory payments balance would have been more intense.

This study is concerned primarily with measures and institutional innovations which could permit the United States to finance its international payments deficits with smaller gold losses. Such measures and innovations are not addressed primarily to the problem of selecting the most appropriate policies for *reducing* the U.S. payments deficit. Rather they are intended to increase the ability of the United States to *finance* its payments deficits, both by reducing the foreign official demand for gold from the U.S. Treasury and by increasing the amount of gold available to foreign official institutions from other sources. More time would then be available for the United States to achieve a satisfactory international payments balance, and the policy conflict would be less severe.

Numerous proposals have been advanced to strengthen or restructure international financial institutions, so that the supply of international reserves and international credit would grow more rapidly.¹ The pressures on particular countries to eliminate payments deficits might then be less intense because reserves would be larger, and they would have more time to achieve a satisfactory payments balance. Restructuring international financial institutions requires extensive negotiations and involves constitution-writing for new institutions.

I have received many helpful comments on previous drafts of this study, and feel especially indebted to Charles A. Cooper, Peter Fousek, Charles P. Kindleberger, Loughlin F. McHugh, Eli Shapiro, and Herbert Stein.

¹ These plans are discussed in Fritz Machlup, *Plans for Reform of the International Monetary System* (Princeton: International Finance Section, Princeton University, revised edition 1964).

This paper, in contrast, focuses on measures which the United States can adopt on its own, on a bilateral basis, or on an informal, multi-lateral basis to protect its international reserve position. This approach also involves international cooperation, but the scope of cooperation generally is less extensive and less permanent than under the first group of proposals.

Section II considers the roles of the dollar and gold in international settlements and international reserves, and the special role of the U.S. Treasury as the residual international buyer and seller of gold. Section III considers measures which can protect U.S. gold reserves by reducing the private demand for gold. Section IV discusses measures which can enable the U.S. authorities to manage shifts of short-term funds in response to either interest-rate differentials or currency speculation so that these shifts are less disruptive to the U.S. reserve position. Section V considers measures which can reduce the demand of foreign official institutions for gold by providing alternative assets which might better meet their reserve needs than the dollar assets already available. (Some of these measures have been adopted in the recent years; their impact is also discussed.)

Active management of the dollar in international finance can extend the ability of U.S. reserves to *finance* the U.S. payments deficit, thus providing a partial substitute for larger international reserves, and reducing the constraint on the choice of domestic and foreign economic policies resulting from the need to *reduce* the U.S. payments deficit. Even if the U.S. balance-of-payments position is fundamentally strong, the United States may be subject to large, disruptive reserve losses from an adverse turn of the leads and lags and from outflows of funds in covered and uncovered interest arbitrage. More dramatically, a loss of reserves due to these short-term factors may occur together with reserve drains attributable to other factors and thus greatly reduce the freedom of the U.S. authorities to adopt measures appropriate for objectives other than protecting U.S. international reserves.

Measures to reduce the shifts of interest-sensitive private funds, to reduce gold and currency speculation, and to reduce the foreign official demand for gold will not correct fundamental international payments imbalances; nor is this their purpose. Their role is to increase the time available for the correction of these imbalances and thereby widen the range of choice of domestic and of foreign economic policies. Such measures will be useful, and perhaps necessary, even if international financial institutions are restructured to provide for more rapid growth in the supply of international reserves and international credit.

II. THE DOLLAR AND GOLD IN INTERNATIONAL FINANCE

The United States, both by legal obligation and customary practice, is committed to exchange-rate stability and unrestricted payments freedom. To maintain these commitments, U.S. authorities must be prepared to buy excess dollars held by foreigners and to finance these purchases with assets that foreigners are willing to accept. The U.S. authorities must manage the flow of dollars into foreign ownership within the limits set by the willingness of foreigners to hold more dollar assets, and the ability of the U.S. authorities to repurchase their excess dollar holdings.

Current international financial arrangements are based upon the fixed U.S. gold parity of \$35.00 per fine troy ounce, and the willingness of the U.S. Treasury to sell gold and to buy gold in transactions with foreign official institutions at this price.² These arrangements permit only very limited changes in the price of gold and of foreign currencies in terms of the dollar. Consequently changes in the dollar price of these assets in response to changes in demand afford relatively little protection to the U.S. reserve position, and so the U.S. authorities must use other measures to limit the excess flow of dollars to foreigners.

Acceptance of membership in the International Monetary Fund provides the legal basis for exchange-rate stability. The Fund's Articles of Agreement require that member countries take the appropriate measures so that spot transactions within their own territories which involve the exchange of their currencies against that of other members will be made at rates not more than one percent away from their parities. Thus, as long as the exchange parities have remained unchanged, and other members have adhered to their Fund commitment, the price of foreign currencies in terms of the dollar has remained within a narrow range.³

² The U.S. gold price of \$35.00 per fine ounce initially was fixed by Presidential Proclamation on January 31, 1934. Under 1933 legislation, the President was empowered to reduce the gold content of the dollar by 50 percent from the \$20.67 parity. The adoption of the \$35.00 parity represented a reduction in the gold content of the dollar to 59.06 percent of its former parity; the President retained the power to reduce the gold content by 9.06 percent. However, the Bretton Woods Agreements Act of July 31, 1944, in addition to authorizing the President to accept U.S. membership in the International Monetary Fund, also provided that only Congress could change the gold parity of the dollar.

³ The Fund Agreement permits a member country to change the par value

When the U.S. gold price of \$35.00 an ounce was first established, the Secretary of the Treasury announced that he would sell gold at \$35.0875 and buy gold at \$34.9125, that is, at margins 0.25 percent either side of the U.S. gold parity.⁴ The spread between the U.S. gold points influences the range of movement of the price of gold in markets abroad, the private demand for gold, and the pattern of international gold shipments and the distribution of the new gold supply.⁵ Partly because of this spread between the U.S. gold points, other countries maintain a spread between the rates at which they buy and sell their currencies in the exchange market against the dollar.

The commitment of Fund members to prevent their currencies from deviating from their official parities by more than 1 percent requires that they sell gold or foreign exchange if their currencies begin to fall more than 1 percent below parity, and that they buy gold or foreign exchange if their currencies begin to climb more than 1 percent above parity. Most foreign countries, especially those in Western Europe, have supported their currencies at 0.75 percent either side of parity, chiefly through purchases or sales of U.S. dollars.⁶

As long as the outflow of gold from the United States was not a problem, it was not necessary for the U.S. authorities to engage in foreign-exchange operations to support the dollar. Until 1961 the U.S. Treasury relied exclusively on gold transactions to maintain the price of the dollar in terms of other currencies. If foreign monetary authori-

of its currency only to correct a fundamental disequilibrium in its international payments. If a proposed change in a parity, together with all previous changes, is less than 10 percent of the initial parity, the Fund cannot object to this change. The Fund may object to a larger change in a country's parity only if it believes that this change is not necessary to correct a fundamental disequilibrium in this country's international payments. If the parity is changed despite this objection, the country is ineligible to use the resources of the Fund—unless the Fund determines otherwise—and the country can be forced to withdraw from the Fund.

⁴ The Gold Reserve Act of 1934 authorized the Secretary of the Treasury to buy or sell gold at such prices and under such terms and conditions as he deemed most advantageous to the public interest. Although domestic legislation keeps the authority to change the gold parity of the dollar in the hands of Congress, the Secretary of the Treasury can decide not to buy or not to sell gold at this price.

⁵ Initially the Fund prohibited members from buying gold more than 0.25 percent above their parities and selling gold more than 0.25 percent below their parities. In October 1954 these limits were increased to 1 percent from parity.

⁶ Most member countries of the European Monetary Agreement have declared support limits of about 0.75 percent either side of parity. There are several exceptions—Switzerland has support limits about 1.7 percent either side of parity, and Portugal, 1.2 percent.

ties felt that their dollar holdings were becoming too large, perhaps because of a U.S. payments deficit, the U.S. Treasury was ready to sell gold to them at \$35.0875. If foreign monetary authorities wished to acquire dollars to purchase U.S. financial assets or to pay debts, the U.S. Treasury was ready to buy gold from them at \$34.9125. The Treasury was ready to buy or sell gold, apparently in unlimited amounts, in transactions for legitimate monetary purposes with foreign official institutions.

Whether the U.S. Treasury was a buyer or a seller of gold at any time largely depended on two factors: changes in the official reserves of the relatively few foreign countries which have held large amounts of gold in their international reserves, and changes in the private demand for gold.

The supply of new gold available to meet official and private demands in the West has been about \$1.5 billion in recent years; although it was unusually large in 1963. The supply from production in Western countries has been steadily increasing, from \$800 million in 1948 to \$1.3 billion in 1963. Soviet gold sales in the West, which had averaged about \$200 million before 1963, with yearly variations from \$70 million to \$250 million, increased to \$500 in 1963.

Seven countries—Great Britain, Germany, France, Switzerland, Italy, Belgium, and the Netherlands—hold about 65 percent of the official gold stocks of the free world outside the United States. Their share of total monetary gold holdings is large both because they hold about 50 percent of the international reserves of the free world outside of the United States and because they hold a high percentage of their international reserves in gold.⁷

These countries generally support their currencies in the exchange market through purchases and sales of U.S. dollars. If their reserves are increasing, a large proportion of their dollar accruals are used to finance the purchase of gold; if their reserves are declining, they may sell gold to obtain dollars to support their currencies in the foreign exchange market. Whether these countries are buying or selling gold depends on whether they have international payments surpluses or deficits, and the extent to which these surpluses and deficits are

⁷ Even among these countries, there are sizeable differences in gold preferences. The Netherlands, for example, holds 85 to 90 percent of its international reserves in gold, while Germany holds 55 percent. Moreover, the gold-reserve ratios of these countries change over time; for the most part they have increased as their total reserves have increased.

settled by changes in official reserves, and in non-official foreign exchange holdings.⁸

The private demand for gold is of two types. There is a rather steady demand for jewelry, industrial, and dental and similar purposes, estimated in the range of \$200-\$300 million annually; and there is a volatile speculative demand, based on the expectation of a possible increase in the price of gold in terms of some or all currencies. "The line of distinction between industrial and artistic consumption on the one hand and hoarding on the other is one which is not very clearly defined since increased demand for gold jewelry can, varying from one country to another, be either a disguised form of hoarding or a normal concomitant of inflation or just a result of a rising standard of living."⁹ In some years the private demand has been estimated at about \$300 million; in several recent years it has exceeded \$1.3 billion. Consequently, the annual increase in total reported official gold holdings has ranged from a high of \$750 million in 1959 to a low of \$300 million in 1960.

Whenever the new gold supply has exceeded net demands of foreign official institutions and private parties, the U.S. Treasury has bought gold at its standing bid of \$34.9125 per ounce; the U.S. Treasury provides the residual international demand for gold. Whenever net demands have exceeded the new gold supply, the Treasury has sold gold at its standing offer of \$35.0875; the Treasury provides the residual supply of gold. The gold producers are at one end of the pattern of international gold distribution and the U.S. Treasury is at the other end; foreign official institutions and private parties are between the two.

The London gold market, reopened in March 1954 after having been closed at the outset of World War II, plays a central role in the distribution of the new gold supply.¹⁰ Sterling-area countries produce

⁸ The United States may acquire gold even if it has a payments deficit, if the large gold-holding countries in Western Europe are in payments deficit while the countries in surplus hold most of their reserves in dollars. The United States might also acquire gold if countries in Western Europe have small payments surpluses, so that their gold acquisitions are smaller than the amount of gold currently becoming available for additions to official monetary stocks. U.S. gold holdings increased in 1951, 1952, and 1956, although the United States had a payments deficit in each of these years.

⁹ *Quarterly Bulletin*, Bank of England, Vol. IV, March 1964, p. 18.

¹⁰ There are three major types of gold markets. In one, gold transactions are legal and gold imports are permitted, as in London; the price differentials

two-thirds of the free-world output of gold and sell most of it in London, using the Bank of England as their agent.¹¹ And a large part of Soviet gold has been sold in London.

The London gold market, despite its location, is primarily a dollar market. The gold buyers pay in dollars, or in external sterling which is convertible into dollars. Although the price of gold is frequently stated in terms of sterling, the sterling price is computed from the dollar price at the current sterling-dollar exchange rate. If sterling were devalued by 10 percent relative to the dollar, the sterling price of gold would increase by 10 percent.

The London gold market provides foreign monetary authorities with the opportunity to buy and sell gold at prices which may at times be more favorable than the fixed buying and selling prices of the U.S. Treasury. If the price of gold in London exceeds \$34.9125, it is more worthwhile to sell gold in London than in New York, provided sellers hold gold under earmark in London.¹² If the London price is below \$35.0875, it is more attractive to buy gold in London, provided the buyers are willing to hold gold in London or in nearby centers. As long as the gold price in London remains within the U.S. gold points, the U.S. Treasury's gold transactions are likely to be small.¹³

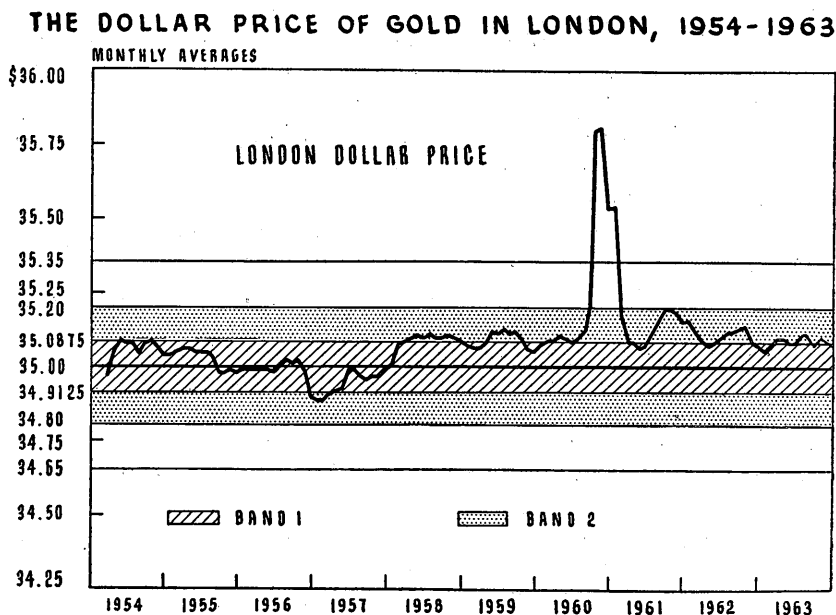
among the various international financial centers in this group primarily reflect the costs of arbitraging. In the second, gold is legally traded against the local currency but gold imports are prohibited. Gold may not be imported legally into France by private parties—but the French can buy gold legally in Paris. One result of the import prohibition is that the gold price in Paris is less closely tied to the London gold price than is the gold price in Zurich, Beirut, and other centers where gold can be legally imported. In the third type of gold market, private gold transactions are illegal.

¹¹ The Bank of England also buys and sells gold in London for its own account to settle the payments surpluses and deficits of the sterling area with the rest of the world, and to influence the sterling-dollar exchange rate; it also operates for the South African Reserve Bank, other central banks, and for the recently formed international gold pool.

¹² The point at which it becomes cheaper for a foreign official institution to buy or to sell gold in New York rather than in London depends on where it wishes to effect a change in its gold holdings. It may be completely indifferent about holding gold under earmark in New York or in London, or in its own vaults. If it is not—if it wishes to build up its London holdings—it will pay more for gold in London than in New York.

¹³ Foreign monetary authorities buy and sell gold in New York with each other at prices inside the range of the fixed selling and buying prices of the U.S. Treasury, generally at the U.S. parity of \$35.00 an ounce. These transactions have been arranged directly by the buying and selling parties or through the Bank for International Settlements or the International Monetary Fund. From time to time in the last several years, there have been rumors, but not official

The U.S. buying and selling prices form boundaries for the London gold price—at least for the gold transactions of foreign official institutions. If these institutions are indifferent about the relative size of their gold holdings in New York and elsewhere, which can be construed as the condition for costless arbitrage, the price of gold in London will not move beyond the U.S. Treasury's gold points. The U.S. Treasury's gold points form Band 1 in Chart 1.¹⁴ A price within Band 1 suggests



that it is not profitable for a foreign official institution to sell gold in London and build up its gold holdings in New York, while a price above the upper edge of Band 1 suggests that it is profitable for a foreign official institution to sell gold in London and buy gold in New York.

The cost of shipping gold between New York and London is estimated at \$.08-.10 cents per ounce. When the demand for gold is weak

announcements, indicating that the U.S. authorities have bought and sold gold to selected foreign official institutions at prices within the U.S. gold points.

¹⁴ If the gold price is measured in terms of sterling rather than in terms of the dollar, the height of the Band 1 shifts as the sterling-dollar exchange rate shifts.

in London, the price of gold in London can fall to nearly \$34.80 before it becomes profitable to ship gold from London to New York. When the demand is strong in London the price of gold in London can rise to nearly \$35.20 before it becomes profitable to ship gold from New York to London. These shipment costs form the segments on both sides of Band 1, labelled Band 2. A foreign official institution might pay more than \$35.20 for gold in London but only if it wished to avoid buying gold in New York.

One reason why foreign official institutions may pay more than \$35.0875 for gold in London is that they may wish to diversify their holdings geographically. Another reason is that they may believe that the London price is apt to exceed \$34.9125 when they are likely to sell the gold. If this expectation proves wrong—if the gold price in London is more than \$.175 per ounce below the purchase price at a time when it is necessary to sell gold to finance a payments deficit, the foreign official institution can sell gold from its stocks held in New York.¹⁵

There are in effect two gold markets in London, even though there is only one price for gold in London at any time. Foreign official institutions which have the alternative of buying gold from the United States comprise one market; private parties, who cannot buy gold from the U.S. Treasury, comprise the second.

Foreign official institutions prefer to buy gold in the center with the lower price. Normally, an increase in the private demand for gold in London will induce foreign official institutions to shift more of their gold purchases to the U.S. Treasury and will increase U.S. gold sales. The smaller the amount of gold that foreign official institutions buy in London the larger the amount they will buy in New York. In this sense, foreign official institutions provide the residual demand for gold in London; they purchase that part of the available supply not bought by private parties. At prices of \$35.20 and higher, nearly all of the gold sold in London is likely to be purchased by private parties; the foreign official demand for gold will either be diverted to New

¹⁵ In most postwar years foreign-owned gold held under earmark in the United States increased more rapidly than the U.S. Treasury's sales of gold to foreign official institutions. The United States then was a net importer of gold. In 1961 U.S. gold exports exceeded U.S. gold sales. This change may reflect partly increasing attention to geographic diversification of gold holdings by foreign official institutions, and partly larger U.S. sales to meet the private demand abroad.

York,¹⁶ or foreign official institutions will delay their intended purchases until the London price declines.

Generally, foreign official institutions will take a loss on their purchase and sale of one ounce of gold, since the price at which they buy gold is likely to be higher than the price at which they sell gold. However, the losses on their gold transactions are apt to be offset by a profit on the purchase and sale of their own currency. Foreign official institutions generally sell their own currencies at a price above parity, perhaps at or near the upper support limits, and buy their own currency at a price below parity, perhaps at or near the lower support limits (the difference between the prices at which foreign official institutions sell and buy their own currency is the exchange agio).

The combination of a purchase and sale of gold in New York, and a sale and purchase of their own currency at the support limits, is likely to result in a small profit for foreign official institutions; the loss on the gold transactions will be more than offset by the profit on the currency transactions. For example, if the British authorities sell sterling for dollars at \$2.82 and then buy sterling with dollars at \$2.78, they will earn an exchange agio of \$.04 on the purchase and sale of £1; the exchange agio on the purchase and sale of \$1.00 is \$.0143. With \$1.00 the British authorities can buy 1/35 of an ounce of gold. The loss on the purchase and sale of 1/35 of an ounce of gold with the U.S. Treasury is \$.005, or slightly more than 1/70 of the exchange agio.

Foreign official institutions do not tailor their exchange-market transactions—the prices at which they intervene in the exchange markets as buyers and sellers of their own currency—to achieve profits. Many intervene within their support limits; a few only at the support limits. Nevertheless the ability to secure a profit, or avoid a loss, from the combination of a gold transaction and an exchange transaction is a basic feature of current international financial arrangements. The U.S. Treasury earns a slight profit on its gold transactions, and foreign official institutions earn a slight profit on their exchange transactions, which is apt to exceed the possible loss in buying and then selling gold.

The U.S. Treasury's gold points play an important role in current international financial arrangements. They impose a cost, much like

¹⁶ Several foreign central banks formerly bought gold in London at prices above \$35.20, in the belief that purchases in London rather than New York would ease the pressure on the U.S. Treasury.