

PRINCETON STUDIES IN INTERNATIONAL FINANCE NO. 12

The Evolution of the International
Monetary System:
Historical Reappraisal and
Future Perspectives

Robert Triffin

INTERNATIONAL FINANCE SECTION
DEPARTMENT OF ECONOMICS
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The author, Robert Triffin, is Pelatiah Perit Professor of Political Science in the Department of Economics at Yale University. His contributions to the discussion of international monetary problems are numerous. Best known among them are his books, *Europe and the Money Muddle*, and *Gold and the Dollar Crisis*.

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Fritz Machlup
Director

Princeton University
June 1964

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THE EVOLUTION OF THE INTERNATIONAL
MONETARY SYSTEM:
HISTORICAL REAPPRAISAL AND FUTURE PERSPECTIVES

The debate on international reform has, at long last, spread from academic to official circles. Two parallel investigations were launched a few months ago, at the October 1963 Annual Meeting of the International Monetary Fund, and are now in process: one by the Fund itself, and another by the Ministers of Finance and Governors of Central Banks of ten major industrialized countries (The United States, the United Kingdom, the Netherlands, France, Germany, Italy, Belgium, Sweden, Canada, and Japan).

This should not absolve the academic economists from their responsibility to the international community in which they live. They should, on the contrary, provide whatever assistance they can by stressing the broad and long-term theoretical and historical perspectives which official negotiators may be all too inclined to neglect, because of their legitimate concern with narrower national interests and shorter-term problems.

The present study will first concentrate attention on the broad features of the nineteenth century experience which explain the successful maintenance of currency convertibility—over a large part of the world—for the longest period in recorded history, but which are often misread and misunderstood in current academic literature. It will then summarize, more cursorily, the vast changes in the economic and political environment which led to the collapse of the system in the interwar period and to the dangers which today threaten the stability of the new convertibility experiment launched, little more than five years ago, without any of the safeguards for which I vainly argued at the time.¹ These theoretical and historical considerations will serve as a background for the suggestions that follow regarding the long-term evolution of our present international monetary system. Finally, I shall attempt to sketch the compromises and transitory solutions which are most likely to prove negotiable in the short run, distinguishing between those that may open the door to further evolutionary progress and those that might, on the contrary, be the harbingers of future crises and setbacks in the slow and painful adjustment of our outworn national institutions to the inescapable interdependence of all men in the atomic age.

¹ See particularly *Europe and the Money Muddle* (Yale University Press, 1957), pp. 269-304.

I. THE MYTH AND REALITIES OF THE SO-CALLED GOLD STANDARD

The monetary traditions and institutions of the nineteenth century provided a remarkably efficient mechanism of mutual adjustment of national monetary and credit policies to one another, essential to the long-term maintenance of exchange-rate stability between national currencies.

The reasons for this success, and for the breakdown of the system after the first world war, are very imperfectly reflected in most of our textbooks. Most of all, however, overconcentration on the mechanism of *intercountry* adjustments fails to bring out the broader forces influencing the *overall pace* of monetary expansion on which individual countries were forced to align themselves.

A. THE MECHANISM OF ADJUSTMENT AMONG COUNTRIES

Textbook Abstract

Starting from an initial position of balance-of-payments equilibrium, the emergence of a fundamental deficit is generally described in terms of divergent movements of exports—downward—and imports—upward—in the deficit countries, with opposite, and equally divergent, movements in the surplus countries.

The money flows associated with the international settlement of such imbalances, if not offset by domestic “neutralization” policies, should then tend to prompt downward price readjustments in the deficit countries, and upward readjustments in the surplus countries. This would restore a competitive price and cost pattern among them, and bring their balances of payments back into equilibrium.

These “automatic” adjustment forces were strengthened and speeded up by central banks through the so-called “rules of the game.” Discount-rate policy and open-market interventions would raise interest rates and tighten credit in the deficit countries, while lowering interest rates and expanding credit in the surplus countries. This would both (1) cushion balance-of-payments and monetary transfers in the short term, by stimulating compensatory capital movements from the surplus to the deficit countries, and (2) accelerate the desirable downward readjustment of prices and costs in the latter countries and their upward readjustment in the first.

The “rules of the game” were widely violated after the first world war. The surplus countries adopted “neutralization” policies which increasingly concentrated upon the deficit countries the burdens of

adjustment previously distributed between surplus and deficit countries alike. At the same time, the development of stronger resistance to downward price and wage adaptations—particularly as a result of the growing strength of the trade unions—blocked the price-adjustment mechanism in the deficit countries, transferring its impact to fluctuations in economic activity and employment. The resulting social and political strains gradually became unbearable, particularly during the world depression of the 1930's, and induced governments to abandon the harsh gold-standard disciplines in favor of fluctuating exchange rates and/or trade and exchange restrictions.

Historical Abstract

This highly simplified digest of the theory of international adjustment under the actual gold standard certainly meets the first test of an economic theory, i.e. the test of logical consistency. Does it meet equally well the second test by which a theory should be judged, i.e. its conformity to the major facts calling for explanation?

It undoubtedly fits *some* of the facts. Comparative price—or exchange-rate—movements obviously play a role in the fluctuations of balances of payments on current account, and are themselves influenced by the tightening or expansion of money flows arising both from international settlements and from domestic policies or lack of policies.

Other facts, however, must also be taken into account if we are to develop a general and politically meaningful theory of balance-of-payments adjustments.

1. First of all, the most cursory look at international trade statistics reveals an enormous degree of parallelism—rather than divergent movements—between export and import fluctuations *for any one country*, and in the general trend of foreign-trade movements *for the various trading countries*. Over the eighty years from 1880 to 1960, all significant increases or decreases in the exports of Western Europe were marked by *parallel* increases, or decreases, *for the eleven major trading countries of the world* in 91 per cent of the cases, and by *simultaneous* increases, or decreases, of *exports and imports for each country*, taken separately, in 88 per cent of the cases. These proportions fall to 77 and 73 per cent, respectively, for fluctuations of one year only, but rise to 95 and 92 per cent for fluctuations of more than a year's duration, and to 98 and 100 per cent for movements extending over more than four years.²

² The above percentages are derived from 287 observations of national increases or decreases for eleven countries (the United States, the United Kingdom, France, Germany, Italy, Belgium, the Netherlands, Switzerland, Sweden, Austria and

2. Equally impressive is the overall parallelism—rather than divergence—of price movements, expressed in the same unit of measurement, between the various trading countries maintaining a minimum degree of freedom of trade and exchange in their international transactions. In spite of wide differences and fluctuations in the composition of each country's exports, the indices of export unit values—measured in current dollars—for the same eleven countries over the period 1870-1960 moved in the same direction in 89 per cent of the observed fluctuations, and in opposite direction in only 11 per cent of the cases.³

This solidarity of national price movements—when measured in a common unit of account—is not incompatible, of course, with sharp divergences in national price levels, offset by opposite divergences in exchange-rate fluctuations. One does find indeed that any large variations in the evolution of national prices are invariably offset, more or less rapidly, by exchange-rate fluctuations, and vice versa. Such variations were, however, eschewed—except in wartime—by most industrial countries in the nineteenth century, but were relatively frequent in the countries of the so-called “periphery,” and particularly in Latin America.

3. Thirdly, downward wage adjustments rarely reached any sizable amplitude, even in the nineteenth century, among the countries which maintained exchange-rate stability, and it may be doubted whether they would have proved much more acceptable at that time, economically, politically, and socially, than they are today. Wherever substantial inflation had been allowed to develop, international cost competitiveness was nearly invariably restored through devaluation rather than through downward price and wage adjustments.

Standard statistical series for the United States, the United Kingdom, France, and Germany show only four or five instances of actual declines in any broad-based indices of money wages during the fifty years preceding the first world war. Such declines were, moreover, usually confined to one or a few percentage points only. They were far exceeded, in post-gold-standard days, by the much sharper wage drops of the 1920-1922 recession—37 per cent in the United Kingdom—and of the first years of the great depression—22 per cent in the United States and Germany.⁴

Canada), in the course of seventeen upward or downward movements of more than one per cent in Western European exports, in the period 1880-1960. The estimates used in these calculations are those of Angus Maddison in “Growth and Fluctuations in the World Economy,” *Banca Nazionale del Lavoro Quarterly Review*, June 1962, pp. 179-181.

³ Based on estimates from the same source, pp. 189-190.

⁴ See, for instance, *Historical Statistics of the United States* (Bureau of the

4. The "neutralization" policies stigmatized by Ragnar Nurkse as another major cause—alongside of increasing price and wage rigidity—of the downfall of the gold standard⁵ were by no means a postwar innovation. Using exactly the same techniques of measurement as Nurkse, Arthur I. Bloomfield found that "central banks in general played the rules of the game just as badly before 1914 as they did thereafter!"⁶ It might be noted in passing, however, that Nurkse's method defines as neutralization the cases where fluctuations in a central bank's domestic portfolio offset only a fraction—no matter how small—of the changes in its international assets. In many cases, however, there remained a *positive* correlation between the latter and changes in the central bank's sight liabilities. The impact of the latter changes upon the country's money supply would most often be magnified, in turn, several times by the operation of the private banking system under customary cash and liquidity requirements. Nurkse's "neutralization" policies, therefore, could still permit a *multiple* impact of international gold—or foreign-exchange—movements upon money supply, as contrasted with the mere 1 to 1 impact which would have resulted under the pure gold-coin system of monetary circulation assumed in the most abstract formulations of gold-standard theory.⁷

5. The impact of discount rates on *cushioning* capital movements and on *corrective* changes in cost competitiveness was also far less general and uniform than is usually assumed.

The first seems indeed to have been particularly effective for the well-developed money and capital markets of the major creditor countries and financial centers, and most of all in the case of the United Kingdom. Discount and interest-rate changes could accelerate, or slow down, the normal, or average, pace of capital exports, and had to be resorted to frequently by the Bank of England to defend its very slender gold reserves. The much higher reserve levels of the Bank of France enabled it, on the other hand, to cushion temporary deficits out

Census, Washington, 1960) pp. 90-92; B. R. Mitchell, *Abstract of the British Historical Statistics* (Cambridge, 1962), pp. 343-345; and France's *Annuaire Statistique—1938* (Paris, 1939) pp. 443-444.

⁵ See R. Nurkse, *International Currency Experience* (League of Nations, 1944), pp. 66-88.

⁶ Arthur I. Bloomfield, *Monetary Policy under the International Gold Standard: 1880-1914* (Federal Reserve Bank of New York, 1959), p. 50. The evidence of neutralization, measured by Nurkse's formula, was present in 60 per cent of total observations, in the period 1880-1913, coinciding exactly with Nurkse's results for the 1922-1938 period.

⁷ See R. Triffin, "National Central Banking and the International Economy," in *International Monetary Policies* (Postwar Economic Studies, No. 7, Board of Governors of the Federal Reserve System, Washington, 1947), pp. 52-53.

of its own reserves, with much rarer recourse to discount-rate changes. Most of all, however, capital-importing countries were far less able to influence in the same way the pace of their capital imports, these being primarily determined by the ease or stringency prevailing in the major financial centers.

The impact of Britain's international surpluses and deficits on British bank reserves was cushioned, moreover, by the ample use of sterling balances as cash reserves by overseas banks, particularly throughout the British Empire. Surpluses and deficits between Britain and its Empire—and even, to some extent, with other countries—merely led to a reshuffling of British bank deposits, rather than to an overall expansion or contraction in their amount and to correlative gold inflows or outflows.

Finally, the enormous role played by the London discount market in the financing of the food and raw-materials exports of the less-developed countries probably imparted to the Bank of England's discount-rate policy an influence on British terms of trade—and balance of payments—which has escaped the attention of economic theorists. Increases in discount rates did, indeed,—as is usually pointed out—tend to reduce British prices and costs, improving the competitiveness of British exports in world markets and of home-made import-substitute goods on the domestic market. What is forgotten, however, is that the tightening of the London discount market also affected, most directly and overwhelmingly, the ease with which inventories of staple foods and raw materials could be financed, thus forcing also a quicker liquidation and attendant price declines in Britain's chief import goods. Such declines could be expected to be far larger than those in the less sensitive and volatile prices of British industrial exports. Thus, the favorable impact of discount-rate increases on British competitiveness (lowering British prices in relation to foreign prices in competing industrial nations) would be reinforced in its balance-of-payments effects by a simultaneous improvement of Britain's terms of trade (i.e., by decreases in the prices of foreign suppliers of complementary goods to Britain, larger than the decreases in British export prices to them).⁸

6. The importance of international capital movements, and of their fluctuations, is often obscured by the disproportionate emphasis often placed on comparative price and cost fluctuations as the major factor in balance-of-payments disequilibria and their correction. Attention is thereby centered on the current-account items of the balance of payments, and tends to suggest that most disturbances arose

⁸ See R. Triffin, "National Central Banking and the International Economy," pp. 60-63; and Peter B. Kenen, *British Monetary Policy and the Balance of Payments* (Harvard University Press, 1960), pp. 59-62, and especially the Chart on p. 60.

in this area and had to be corrected promptly by the restoration of equilibrium between receipts and expenditures on current—or even merely merchandise—account.

In fact, however, international capital movements often did cushion—and even stimulate—vast and enduring deficits, or surpluses, on current account without calling for any correction whatsoever, except in an extremely long run indeed. Developing countries, such as the United States, Canada, Argentina, Australia, etc., could maintain, over an average of years, large and persistent deficits on current account, financed by correspondingly large, persistent, and growing capital imports from the more advanced countries of Western Europe. Rough estimates, compiled by the United Nations,⁹ place at about \$40.5 billion, on the eve of the first world war, the gross long-term foreign investments of the principal creditor countries of Western Europe, and at \$3.5 billion those of the United States. Of this \$44 billion total, \$12 billion had been invested in Europe itself, \$6.8 billion in the United States—which was still a net debtor country at the time—\$8.5 billion in Latin America, \$6.0 billion in Asia, \$4.7 billion in Africa, \$3.7 billion in Canada, and \$2.3 billion in Australia and New Zealand.

The lion's share of these investments was that of the United Kingdom (\$18 billion), followed by France (\$9 billion), and Germany (\$5.8 billion). The United Kingdom had indeed been running persistent and growing surpluses on current account for more than a century, without any tendency whatsoever toward equilibrium. On the contrary, these surpluses rose continually from about \$35 million a year, on the average, over the years 1816-1855 to more than \$870 million a year in the last years before the first world war (1906-1913). Nobody could ever dream of explaining this favorable balance—and its fluctuations—in terms of the cost-competitiveness adjustment mechanism depicted in the textbooks, since it arose primarily from Britain's earnings on its swelling foreign-investment portfolio, and coincided with large and increasing *deficits* on merchandise account—close to \$670 million a year over the period 1906-1913—offset themselves, for the most part, by net receipts on services and remittances account.

These current-account surpluses were nearly fully absorbed by Britain's investments abroad, which rose over the same period from an average of less than \$30 million a year in 1816-1855 to more than \$850 million a year in 1906-1913, and indeed more than a billion dollars a year in the last three prewar years, i.e. about a third of the British export level at the time, and 10 per cent of net national income.¹⁰

⁹ *International Capital Movements during the Inter-War Period* (New York, 1949), p. 2.

¹⁰ The above estimates are derived from Albert H. Imlah, *Economic Elements in the Pax Britannica* (Harvard University Press, 1958), Table 4, pp. 70-75.

Foreign investments on such a scale undoubtedly accelerated economic development and helped at times relieve balance-of-payments pressures in the recipient countries. In the case of the United States, for instance, net capital inflows from Europe—primarily Britain—financed large and growing deficits on current account throughout most of the nineteenth century. They reached a peak of close to \$300 million in 1888, tapering off afterwards, and shifting to net capital exports around the turn of the century, as the United States finally turned from chronic deficits to equally chronic surpluses on current account.¹¹

7. The cyclical pattern of international capital movements, however, had a very different impact upon the capital-exporting and the capital-importing countries.

A mere slowdown of capital exports could help relieve, in the first countries, any pressures on central-bank—and private-bank—reserves arising from unfavorable developments in other balance-of-payments transactions. In the British case, for instance, capital exports dropped year after year, from their 1872 peak of roughly \$480 million to \$60 million in 1877, recovered again to \$480 million in 1890, and declined once more in the following years to \$110 million in 1898, rising nearly uninterruptedly afterwards to \$250 million in 1904, and booming to \$400 million in 1905, \$570 million in 1906, to reach finally close to \$1,100 million in 1913.¹²

The borrowing countries, on the other hand, were far less able to control the rate of their capital imports which tended, on the whole, to swell in boom times and dry up in hard times, contributing further to the economic instability associated with their frequent dependence on one or a few items of raw material or foodstuff exports, themselves subject to wide quantity and/or price fluctuations. All in all, therefore, the balance of payments of the countries of the so-called “periphery” would be assisted, over the long run by the large capital imports available to them from the financial markets of industrial Europe, but these countries would pay for this dependence through perverse fluctuations in the availability of such capital and in their terms of trade over the cycle. The exchange-rate instability of most underdeveloped countries—other than those of colonial or semi-colonial areas tightly linked to their metropolitan country’s currency and banking system—finds here one of its many explanations.¹³

8. Another important qualification of the traditional theory of

¹¹ See *Historical Statistics of the United States*, pp. 562-566.

¹² See Albert H. Imlah, *Economic Elements in the Pax Britannica*, pp. 73-75.

¹³ Another, closely connected with the main topic of this study, lies in the retention of a silver standard long after the effective abandonment of silver or bimetallic standards in Europe and the United States.

balance-of-payments adjustments relates to the international timing of reserve movements and discount-rate changes. The textbook explanation suggests that rate increases were undertaken by the deficit countries in order to relieve a drain of their reserves to the surplus countries. As noted by Bloomfield, however, "the annual averages of the discount rates of twelve central banks [England, Germany, France, Sweden, Finland, Norway, Denmark, Belgium, Switzerland, the Netherlands, Russia, and Austria-Hungary] reveal the . . . interesting fact that, in their larger movements at least, the discount rates of virtually all the banks tended to rise and fall together. . . . To some degree, and certainly for many of the banks, this broad similarity reflected competitive or 'defensive' discount rate changes. . . . But a more important explanation lies in the fact that discount rates in most . . . of the individual countries tended . . . to show a positive correlation, though generally not a very marked one, with domestic business cycle fluctuations. Since, as is well known, major cyclical fluctuations tended to be broadly synchronous in all countries, discount rate movements thus generally tended to exhibit a broad parallelism over the course of the world cycle—although there were, of course, many dissimilarities with respect to short-term movements in the various countries."¹⁴

This importance of parallel movements, associated with the international business cycle—as against divergent movements between surplus and deficit countries—brings us back to the first two points made above (pp. 3-4) and to the comparative neglect of this parallelism in textbook discussions centered nearly exclusively on intercountry balance-of-payments adjustments.

Reinterpretation and Conclusions

1. The nineteenth-century monetary mechanism succeeded, to a unique degree, in preserving exchange-rate stability—and freedom from quantitative trade and exchange restrictions—over a large part of the world.

2. This success, however, was limited to the more advanced countries which formed the core of the system, and to those closely linked to them by political, as well as economic and financial ties. The exchange rates of other currencies—particularly in Latin America—fluctuated widely, and depreciated enormously, over the period. This contrast between the "core" countries and those of the "periphery" can be largely explained by the cyclical pattern of capital movements and terms of trade, which contributed to stability in the first group, and to instability in the second.

¹⁴ *Monetary Policy under the International Gold Standard: 1880-1914* (Federal Reserve Bank of New York, 1959), pp. 35-37.