

## Germany's Persistent Balance-of-Payments Disequilibrium Revisited\*

### I

From the publication of the Department of Commerce's *The United States in the World Economy* (written by Hal B. Lary in 1943) until about 1957, when Donald MacDougall's *The World Dollar Problem* appeared, there was continuous discussion of the United States balance-of-payments surplus, known popularly as the "dollar shortage." Many found the term offensive. I was told, for example, that if I had entitled my book on the subject "Persistent Disequilibrium in the United States Balance of Payments" instead of *The Dollar Shortage*, it would have received a friendlier reception. Perhaps, but the early 1950's were a period when most economists believed in automatic equilibrating mechanisms in economics, in contrast to the present when disequilibrium is known to exist, possibly even to persist, and is thought worthy of study. Once stung, twice shy, however, and I entitle this paper in the more mouthfilling fashion rather than call it "D-mark Shortage," despite my view that the positive disequilibria which persisted in the foreign-exchange markets for the dollar then and the D-mark now have strong points of resemblance. Nor am I prepared to abandon the position with respect to the dollar which I took twenty-seven years ago in *The Dollar Shortage*, despite the fact that time eroded it — perhaps more quickly than I anticipated, though it was never suggested that the dollar shortage was permanent.

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This is not my first essay on the balance-of-payments surplus of Germany. More than 10 years ago I wrote "Germany's Persistent Balance-of-Payments Disequilibrium" (note the title already changed from the earlier level of rhetoric) in the *Festschrift* to honor Gottfried Haberler (R. E. Baldwin et al., *Trade, Growth and the Balance of Payments*, Chicago, Rand, McNally & Co., 1965).

As should be clear from the title, the main emphasis is on the German persistent disequilibrium. Section II on the United States balance of payments is relatively short and is not subdivided into sections. Section III on Germany is divided among "structural aspects", "absorption", "the level of domestic investment", and "policy", with a digression on stock-adjustment and flow models of international capital movements coming ahead of the section on policy. A not-surprising conclusion, reached in other papers on other aspects of the international monetary system, is that absorption dominates the current-account balance, and that what is needed is well-functioning capital markets to fund the savings or borrowings which spill abroad, plus international coordination of monetary policy.

### II

In a hesitant, but oft-quoted statement, Keynes in his reparation-transfer debate with Ohlin stated:

"Historically, the volume of foreign investment has tended, I think, to adjust itself — at least to a certain extent — to the balance of trade, rather than the other way round, the former being the sensitive and the latter the insensitive factor. In the case of German Reparations, on the other hand, we are trying to fix the volume of foreign remittance and compel the balance of trade to adjust itself thereto. Those who see no difficulty in this — like those who see no difficulty in Great Britain's return to the gold standard — are applying the theory of liquids to what is, if not a solid, at least a sticky mass with strong internal resistances."<sup>1</sup>

Keynes' view that the capital account should adjust to the current account rather than vice-versa, has by no means been accepted. Such equilibrium economists as Jacob Viner and Fritz Machlup, for example, hailed the rapid build-up of an export surplus from Ger-

<sup>1</sup> J. M. KEYNES, "The German Transfer Problem," *Economic Journal*, XXXIX, 1 (March 1929) pp. 1-7, reprinted in American Economic Association, *Readings in the Theory of International Trade*, Philadelphia, Blakiston, 1949, p. 167.

many in the years after 1929 when German borrowing came to a halt as proof that the current account could easily adjust to the capital flow.<sup>2</sup> The passage in Viner shows some hesitation; that from Machlup does not, despite his later willingness to regard deflation in times of serious unemployment as "politically impractical," describing those who recommend it as failing to understand some of the unalterable facts of life.<sup>3</sup> Unemployment in Germany rose from 355,000 in the summer of 1927 to 4.4 million by 1931, or 15 percent of the labor force.

I hope I may be forgiven if I do not go back and read what I wrote in *The Dollar Shortage* but rather summarize from memory. Its theme, if memory serves, was that the United States had certain related propensities to develop a current-account surplus, and that the capital account failed to adjust to them except when the U.S. government undertook massive assistance. The forces working on the current account were 1) a propensity to innovate, producing new goods of wide consumer and producer appeal, and new cheaper ways of producing old goods; and 2) a relative propensity to secular stagnation. New goods and new techniques of producing old goods stimulated exports and economized on imports, as consumers and producers abroad diverted existing spending to American exports and lost markets for their own goods in the United States. This dynamic explanation of comparative advantage, of course, had its origin in J.H. Williams' "The Theory of International Trade Reconsidered."<sup>4</sup> It was the core of theories by Geoffry Crowther,

<sup>2</sup> See JACOB VINER, "German Reparations Once More," *Foreign Affairs*, XXI (July 1943, reprinted in *International Economics, Studies by Jacob Viner*, Glencoe, Ill., The Free Press) p. 182: "In 1930 and 1931 Germany did make and transfer fairly substantial payments of reparations... converting a deficit of \$750,000,000 in 1928 to an export surplus of approximately \$230,000,000 in 1930 and \$715,000,000 in 1931. This, if anything, is evidence indicating that the transfer problem, whatever its degree of reality, was not an insuperable barrier to real reparation payments" and FRITZ MACHLUP, "The Transfer Problem: Theme and Four Variations," in *International Payments, Debts and Gold* (New York, Charles Scribner's Sons, 1964) p. 385-86: "It is hard to understand why some economists in the late 1920's made such a fuss about the supposed severity of the German transfer problem. The remarkable speed with which the German trade balance adjusted itself to the termination of the capital inflows and to the net payments of reparations... represents so perfectly the kind of adjustment depicted in the theoretical model that one is tempted to think the figures are "assumed" instead of taken from statistical records."

<sup>3</sup> FRITZ MACHLUP, "Exchange Rate Flexibility," in this *Review*, No. 106 (September 1973), p. 189.

<sup>4</sup> *Economic Journal*, XXXIX, 2 (June 1929) p. 195-209, reprinted in American Economic Association, *Readings*, op. cit. pp. 253-71.

Erik Hoffmeyer and played a strong role in Lary's work. In current analysis it is related to Raymond Vernon's product cycle on the one hand, and on the other to the penetrating new article by Richard T. Rapp who argues that modern international trade theory is not very helpful as an analytical framework for dealing with trade rivalry.<sup>5</sup> In the Heckscher-Ohlin-Samuelson model, equilibrium dominates. In the more dynamic world of new products and processes, and imitation by overtaking economies, disequilibrium in the market for new goods and in balances of payments is more nearly the rule. Or dynamic equilibrium can be achieved, according to Williams, with new comparative advantages being gained in new goods and new techniques, while old advantages are being lost through imitation. An eloquent statement against the application of the Heckscher-Ohlin-Samuelson theory to trade in manufactured goods was Staffan Burenstam Linder's *An Essay on Trade and Transformation*, which stressed the widely-observed phenomenon that countries with comparative advantages in manufacturing goods trade largely with each other, despite the similarity of their factor endowments. In the period of the 1940's, 1950's and early to middle-1960's, the current account of the United States was continuously in surplus with new goods — airplanes, computers, heavy construction equipment and certain branches of electronics, plus traditional agricultural products produced by new methods. This maintained an export surplus which would otherwise have been lost, as foreign imitation and cost reduction through lower factor prices abroad overtook this country and eroded old comparative advantages in automobiles, textiles, shoes, housewares and all minerals save molybdenum and coal.

Related to these real or micro-economic changes are macroeconomic factors, affecting particularly the relation between saving and investment on the one hand, and the readiness to invest abroad on the other. Immediately after the war, as most economists remember or have heard, there was widespread feeling that the United States would fall into depression. Alvin Hansen, the interpreter of Keynes to the United States, had propounded a theory of secular stagnation for the United States, with a rise in savings from expanding income

<sup>5</sup> RICHARD T. RAPP, "The Unmaking of the Mediterranean Trade Hegemony: International Trade Rivalry and the Commercial Revolution," *Journal of European Economic History*, XXXV, 3 (September 1975), p. 514.

and declining opportunities for investment with the filling up of the limits of American space and a fall in population growth. He could hardly have been more wrong. Other Keynesian analysts expected a sharp decline in income in the short run from the cessation of government armament expenditures. They in turn underestimated the resilience of consumption and business investment, both loaded with liquidity from the forced savings of the war, and with a large backlog of postponed purchases to rebuild depleted inventories and delayed expenditures for fixed capital. *The Dollar Shortage* did not embrace the concept of absolute secular stagnation in the United States, but that of a relative one. Compared with other countries it was thought that the United States would have more savings — from higher incomes — and less investment, because of an absence of war damage, and a lower level of cumulative inventory depletion and capital depreciation than other leading countries. As for the developing countries, called underdeveloped in those days, their savings were meager and investment requirements virtually unlimited. If the United States were absolutely expansionary, they could be expected to be more so; if the United States were deflationary, they would be less so. Relative secular stagnation thus implied that the current account of the balance of payments of the United States would be in surplus.

According to most definitions, however, the balance of payments is not in disequilibrium solely because of the surplus in the current account. If the surplus is appropriately funded through long-term capital investments, payments are in "basic balance", as it came to be called in the 1950's, sometimes known as "overall balance."<sup>6</sup> The dollar-shortage position of 1949 was founded on the forecast that the United States would have a surplus on goods and services — which was the case from 1919 to 1971, except for three small deficits aggregating less than \$500 million in 1935, 1936, and 1937, and that the capital markets of the country would not fund these surpluses as long-term investment. This latter belief was widespread after the war, as a consequence of the collapse of international capital markets in the 1930's, and it was true until about 1960.

<sup>6</sup> For a discussion of balance-of-payments concepts, and their criticism, see my "Measuring Equilibrium in the Balance of Payments," *Journal of Political Economy*, LXXVII, 6 (November/December 1969), pp. 873-91. The term "overall balance" is used by the Department of Commerce and the Council of Economic Advisers.

The continued current-account surplus through 1970 and the quiescence of United States long-term private lending until the late 1950's and early 1960's were not taken by analysts to imply a persistent positive surplus on two scores. In the first place, as early as 1950, Fritz Machlup made the point that there was a fundamental ambiguity between what should be regarded as "autonomous" and what "compensatory" items in the balance of payments.<sup>7</sup> Foreign aid and other government transfers in particular should not be regarded, he thought, as financing the balance-of-payments surplus of the United States, as would be the case if they were compensatory, but as causes of it. It was not exports which required foreign aid so much as foreign aid which gave rise to exports. In due course, the Department of Commerce made a distinction between the balance of payments on goods and services and the balance of payments on current account which included "remittances, pensions and other unilateral transactions," i.e. transfers. This change in the accounting concept gave the United States a deficit on current account for the first time in the post-war period in 1950, with subsequent sizable deficits in 1953 and 1959.

In the second place, about the middle of the 1950's, the Department of Commerce noted that some of the foreign aid received overseas was used not to buy goods and services from the United States but to enhance reserve positions of the countries concerned. These authorities expressed concern that foreign liquid claims on the country were building up. United States short-term claims on abroad they regarded as illiquid; foreign short-term claims on the United States were liquid. In due course they revised the definition of balance-of-payments equilibrium to the so-called "liquidity basis," under which the balance of payments on current account should be sufficiently positive to offset both long-term capital outflow and the outflow of United States short-term capital so as to forestall a loss of gold or an increase in foreign short-term claims on their country. The new definition removed all trace of a positive surplus in the balance of payments and left deficits in every year from 1950 on except 1957. In most years from 1950 through 1968 deficits ran about \$3 billion or slightly under. There was a positive surplus

<sup>7</sup> See his "Three Concepts of the Balance of Payments and the So-called Dollar Shortage," *Economic Journal*, LX, 1 (March 1950), pp. 46-68, reprinted in *International Payments, Debts and Gold*, op. cit., pp. 69-92.

on goods and services every year but transfers and foreign lending exceeded it by about \$3 billion until this "deficit" ran rapidly up in 1969.

Foreign aid declined after the end of the Marshall Plan in the fiscal year 1952, despite Point 4 and aid to developing countries under it and successor programs. By the end of the 1950's, however, United States private capital exports which had been less than \$1 billion in each of the years from 1947 to 1950 started slowly to rise. From \$1.5 billion in 1955, they climbed to \$3.6 billion in 1957, \$4.2 billion in 1961 and \$6.5 billion in 1964, despite restrictions and constraints on private foreign lending initiated with the Interest Equalization Tax in July 1963.

"The establishment of convertibility and the growing confidence in the continued freedom of international payments have led to a substantially greater international mobility of capital and a related tendency toward increased integration of international financial markets... Our highly efficient, relatively low-cost, and readily accessible long-term borrowing facilities have undoubtedly tended to add to the drain on our balance of payments. At the same time, the emergence of a highly developed international money market has greatly increased the volatility of interest-sensitive funds."<sup>8</sup>

This is not the place to argue, as I have done elsewhere, against the liquidity definition of balance-of-payments disequilibrium, nor in favor of a definition appropriate to a financial center which would call for a persistent deficit (on the liquidity definition) of enough to add the liquidity sought by the world each year.<sup>9</sup> Given our interest in the German balance-of-payments surplus, moreover, there is no time to debate whether the dollar was overvalued from the re-establishment of convertibility in 1958, as some would claim, or to examine in detail the factors contributing to the sudden worsening of both the current account and the capital flows beginning in 1970. I have argued widely that the balance of payments on goods and services turned adverse because the United States slowed down in its rate of innovation, while other countries, notably Japan and

<sup>8</sup> *Annual Report of the Council of Economic Advisers*, January 1965, Washington, D.C., U.S. Government Printing Office, 1965, pp. 75-76.

<sup>9</sup> See E. DESPRES, C. P. KINDLEBERGER and W. S. SALANT, "The Dollar and World Liquidity, A Minority View," *The Economist*, CCXVIII, 6389 (February 5, 1966) and C. P. KINDLEBERGER, "Balance-of-Payments Deficits and the International Market for Liquidity," *Essays in International Finance*, No. 46, Princeton, N.J., May 1965.

Germany, maintained or accelerated their rates of catching up with what had been new products and processes introduced by this country. By failing to run as fast, the United States fell behind. Secondly, the short-term capital accounts showed an increasingly erratic quality after 1969 because monetary authorities on both sides of the Atlantic failed to realize that with joined financial markets it was necessary to coordinate monetary policies and market interest rates. Divergent policies led to enormous capital flows as speculators and investors reordered their portfolios. It is a matter of some surprise that this sloshing about of liquid funds continued after the fixed-exchange-rate system of Bretton Woods had been dismantled and floating exchange rates had been adopted for the purpose of restoring monetary autonomy to separate nations.

Let me summarize then what went wrong with the discussion of the persistent positive surplus in the balance of payments of the United States.

1) It was not wrong to believe in the existence of such a surplus in the 1950's. In the early years, the surplus on goods and services was largely offset by government transfers which were endogenous.

2) It was a mistake not to foresee the slow build-up of United States capital outflows through direct investment and accumulations of portfolio securities. The excesses of 1928 could be forgotten thirty years later. The market developed appropriate institutions.

3) It was a mistake of balance-of-payments analysts to believe in basic balance, or liquidity balance, as a criterion for equilibrium. It is not two markets that have to clear, those for real goods and bonds, but at least three, for real goods, bonds and money. When New York was the world's leading financial center, it was normal that countries abroad would wish to borrow by selling bonds not only for acquisition of real assets, but also to acquire liquidity. Extension of international financial intermediation between bonds and money to that between direct investments and money is readily achieved.<sup>10</sup>

<sup>10</sup> See WALTER S. SALANT, "Capital Markets and the Balance of Payments of a Financial Center," in William Fellner, Fritz Machlup and Eleven Others, *Maintaining and Restoring Balance in International Payments*, Princeton University Press, 1966, pp. 177-96.

4) The collapse of the current-account surplus of the United States after 1969 with a possible decline in innovative capacity and a clear reduction in popular propensities to save and to spend, reducing the former and increasing the latter, wiped out the current-account surplus of the fifty-year period. Devaluation, recession and harvest failures abroad brought it back in 1975. Equilibrium economists would pay more attention to the devaluation; others to the recession and harvest failures operating on oil imports and grain exports.

5) Whether or not an economist could have been expected to forecast the collapse of the current-account in 1970 from twenty years earlier,<sup>11</sup> one who had not forecast the revival of long-term capital lending was in no position to contemplate its continuation after the current account turned adverse, nor the rapid build-up of short-term capital movements to and from national capital markets and the European currency market suspended among them.

### III

In the paper on "Germany's Persistent Balance-of-Payments Disequilibrium" written in 1964, I adduced nine possible reasons for the surplus, and succeeded in eliminating only one. The nine were

1. Inflation abroad
2. Beggar-thy-neighbor policies by Germany
3. The structure of German trade
4. The German propensity to export
5. The docility of German labor
6. Competition in German markets
7. The German propensity to save, or not to absorb
8. Deficiencies of the German capital market
9. German innovation and technical progress

<sup>11</sup> As an illustration of the difficulty of forecasting balances of payments, see the Brookings study by W. S. SALANT *et. al.*, *The United States Balance of Payments in 1968*, Washington, D.C., The Brookings Institution, 1963.

The hypothesis eliminated was the second, "beggar-thy-neighbor policies." The others were taken to fit into an overall picture in which 1, 3, 4, 5, 6, 7 and 9 produced a surplus on current account, which deficiencies of the capital market (8) failed to fund through a long-term capital outflow. The article excused the German authorities from mistakes of policy, suggesting that the disequilibrium was in the nature of things, rather than in faulty policy responses to economic phenomena. Today I am less sure on this last score.

In extending the record from 1964 to 1975, and subjecting it to new analysis, it is well to reorder the earlier extensive approach. In what follows we deal with the surplus under four headings: structural, macro-economic, institutional, and policy. The structural heading covers micro-economic aspects such as the composition of German trade, the propensity to export, labor docility, competition and the capacity of German industry to innovate. Today's list would be longer and have to include the success of OPEC in raising the price of oil fourfold in October 1973. Macro-economic phenomena relate to inflation abroad, relative deflation in Germany, the German propensity to save, and the like. Between them structural and the macro-economic explain the persistent surplus in the balance of payments on current account. Institutional aspects cover the deficiencies of the German capital market in the earlier list, which explains why the current-account surplus was not financed by long-term capital outflows. Policy, of course, covers the actions of the monetary and fiscal authorities on both micro-economic and macro-economic fronts — lowering tariffs (in 1956), altering the value-added tax in foreign trade, revaluing the mark in 1961, 1969 and 1971 and letting it float from 1973, as well as macro-economic monetary and fiscal policies.

German authorities approach the balance-of-payments question indirectly. To them, it is an issue of whether or not to permit imported inflation. A valuable detailed account of the balance-of-payments struggle is entitled "The German Struggle Against Imported Inflation."<sup>12</sup> Certainly the historical experience of Germany with inflation, and that of Britain with unemployment, go far to

<sup>12</sup> Chapter 24, of LELAND B. YEAGER, *International Monetary Relations: Theory, History and Policy*, 2nd ed., New York, Harper and Row, 1975. See also the sub-title of PATRICK M. BOARMAN'S, *Germany's Economic Dilemma, Inflation and the Balance of Payments*, New Haven, Yale University Press, 1964.

explain why both sets of authorities would choose different positions on the Phillips curve if the countries happened to have the same one. The problem goes deeper, however. If two countries inflate at different rates, it should be possible by adjusting the exchange rate between them to keep the balance of payments in order. In the case of Germany, its prices have risen not much less than those of the United States; the D-mark has been revalued from less than 25 to approximately 40 cents, or from 4.2 to the dollar, to the vicinity of 2.5 without producing an import surplus on current account. It is insufficient to focus on inflation alone.

### *Structural aspects*

As in the case of dollar shortage, structural and macro-economic propensities which produce a persistent tendency to current-account surplus are related. Both the goods market and the income market have to clear. If goods are sold abroad in excess of those bought, spending must be less than income. We now know that it is fruitless to argue whether the elasticities approach dealing with goods markets dominates the absorption approach relating income and spending, except insofar as one market leads and the other follows. The structural reasons for the German export surplus — the large proportion of capital goods in strong demand in the postwar period, drive of German industry to export after the Hitler years of autarky, efficiency of German industry in producing goods to specification and getting them delivered on time (in contrast to say British firms), even “dumping” in foreign goods markets, i.e. price discrimination, largely unwillingness to raise prices when the exchange rate is appreciated for fear of losing market position<sup>13</sup> — are all associated with a high propensity to save, both average and marginal. There is this difference: if emphasis is put on goods markets, there is the strong implication that exchange-rate changes will induce substantial changes in the trade balance or the current account, implying that the elasticities are high; if, on the other hand, emphasis runs to the absorption approach, it is implied that elasticities are low, and that

<sup>13</sup> See for example, SIR ARTHUR LEWIS', LSE Oration, “Socialism and Growth,” 3 December, 1970, (separately printed), pp. 7-8: “If a country has rich natural resources, or the propensity for continuous technical change, or the drive to export — like Germany — its exports may continuously outrun its imports. Or if, like Britain, it is deficient in these respects, economic growth will tend to push up imports faster than exports.”

exchange-rate adjustment is not likely to be effective in altering the trade balance. To emphasize structural features making for a trade surplus similarly implies low elasticities, without necessarily indicating whether the forces involved are micro- or macro-economic in nature.<sup>14</sup>

This paper does not undertake econometric calculations of the price elasticities of exports and imports in German trade, but it seems evident that they are low. Hoener observes that the revaluation of 1961 did nothing to reduce exports, as the price elasticity abroad was overwhelmed by the high foreign income elasticity of demand for German exports.<sup>15</sup> On the import side, the path of income also dominated, with the 1965 virtual balance brought about by boom and rapidly undone by the recession of 1966-67 (see Table 1). Moreover, the trade surplus expanded each year from 1970 to 1974. While the exchange rate was going from 4 to the dollar to 2.5 — less on a trade-weighted basis to be sure — the trade surplus rose from DM 15 billion to DM 50 billion. The increase in the price of petroleum which threw many large importers' balances of payments into deficit seemed after a very brief interval to enlarge the German surplus as OPEC country imports from Germany — the country able to deliver — rose fastest to close the oil gap in 1975.

The failure of the exchange-rate change to curb exports and to stimulate imports more (less the untoward oil amounts which are universally agreed to be inelastic in the short- and intermediate run) surprised most observers. Almost two-thirds of German exports are finished goods, but these enjoy low price elasticity because of superior quality and prompt delivery. Less than one-third of German imports are finished goods; other items of raw materials, intermediate goods and primary finished goods, typically have low price elasticity. To be sure the bulk of the trade surplus in 1973 and 1974 has been registered against industrial countries — DM 28 billion out of DM 33 billion in 1973 and DM 44 billion out of DM 51 billion in 1974 — and this mostly in Europe — DM 8 billion for

<sup>14</sup> There is of course a third approach to the balance of payments, i.e. the monetary, which emphasizes that at least three markets must clear, for goods, income and money. Or “money” can be thought of as “financial assets” and divided into money and bonds. We come to these questions presently.

<sup>15</sup> HANS WILHELM HOENER, *Bestimmungsgründe für die Entwicklung der Zahlungsbilanz der Bundesrepublik Deutschland seit der Aufwertung im Jahr 1961 bis 1957* (Kiel Studien 107), Tübingen, J. C. B. Mohr (Paul Siebeck), 1970, pp. 44 ff.

the Common Market and DM 15 billion for EFTA countries in 1973, and DM 17 billion against the EEC and DM 19 billion against EFTA in 1974. Appreciation of the DM against the dollar overstates the trade-weighted average in Europe inasmuch as, for example, the DM appreciated from the end of 1972 to August 1975 by 15 percent against EEC member countries and 25 percent against the dollar. It is further clear from the rapid decline in 1975 in the German surplus against Europe, and reduction in the deficit against OPEC in the same year, that price elasticities do not dominate the balance of payments.

Special attention should perhaps be paid to the limited expenditure by German consumers on imported finished goods. This reached DM 57 billion in 1974 out of a total import bill of DM 180 billion, rising almost three fold from 1965 while total imports were rising somewhat less, i.e. from DM 70 billion to DM 180 billion. This reveals income-elasticity greater than 1, to be sure, but in most countries in periods of full employment, income-elasticities run much higher, to values like 3 or 5. Higher incomes in Germany plus tight supply conditions until 1973 and current appreciation might therefore have been expected to raise consumption expenditures on foreign goods by much more. It seems likely that most of the currency appreciation was offset by foreign relative inflation, thus depriving the appreciation of real effect.

Foreign inflation exceeding the degree of foreign-currency depreciation, which would have left the *Deutchemärk* undervalued, would of course explain the continued and even expanding export surplus. In this instance, however, the question is raised why it is always Germany that enjoys the relative deflation, and the rest of the world which goes in for relative inflation. We are led thus from the structural to the macro-economic approach.

### Absorption

The absorption approach to the current account of the balance of payments runs in terms of broad aggregates which state that the surplus or deficit must represent the difference between output and spending (or absorption). In Alexander's notation

$$\begin{aligned} X - M &= Y - (C + I + G) \text{ or} \\ B &= Y - A. \end{aligned}$$

If the balance of payments (B) is positive, absorption (A) must be less than output (Y). The question is what governs the rate of absorption.

The original equations can be set out in net form:

$$X - M = S - I_a$$

where S equals savings and  $I_a$  is domestic investment. If we disaggregate savings into those of corporations ( $S_c$ ), households ( $S_p$ ) and government ( $S_g$ ), we get

$$X - M = S_p + S_g + (S_c - I_a)$$

which states that the export surplus is equal to the savings of households plus the government surplus (or minus the government deficit) and, as a rule, minus the excess of domestic investment by the corporate sector over retained profits.

Subtracting foreign investment from both sides of the equation gives us basic balance in the balance of payments on the left-hand side

$$X - M - LTC = S_p + S_g + (S_c - I_a) - LTC$$

with LTC representing a capital outflow (and having an implicit negative sign when it is an inflow). LTC on the right-hand side can be broken down further into industrial-corporate and non-industrial corporate flows, as in the following equation:

$$X - M - LTC = S_p + S_g - LTC_p + (S_c - LTC_c - I_a)$$

If corporations are borrowing abroad for investment needs in Germany, as often occurred in the last years, the expression in parentheses in the last equation is not likely to be highly negative, and may even be positive, providing an inadequate offset to domestic savings of households and of government. In this case, with  $S_p$  large, there must be a substantial capital outflow on non-industrial-corporation account, i.e. by banks and households, to prevent  $X - M - LTC$  — the left-hand side of the equation — from being a sizeable positive number or a large surplus.

This was the position of the United States up to 1958 when the export surplus exceeded the long-term capital outflow, and personal savings and the government surplus (which was exiguous) exceeded

the net borrowings of corporations. In that case, it called for and was met by a pickup in the capital outflow, and ultimately by a decline in the rate of personal saving. The German case differs sharply, first in that the rate of savings has kept rising through 1975, reaching its all-time high as a percentage of disposable income in that year, and second, in how the institutions of the capital market have failed to develop a mechanism for transferring excess savings abroad as a regular matter.

German saving experience presents a puzzle. In the article for the Haberler *Festschrift*, it was pointed out first that the initial surplus represented government savings in Finance Minister Fritz Schaeffer's so-called "Julius-turm," named after the tower in Potsdam in which some of the gold from the Franco-Prussian indemnity was sequestered and kept out of circulation in the early 1870's. In Schaeffer's case, the technique was more abstract: raising taxes in advance of expenditure but treating them on the books as spent when collected, thus disguising a surplus. When this practice was uncovered and corrected, however, personal savings rose to take the place of the government surplus. When  $X - M = S_p + S_g$ , and both sides of the equation are positive, the export surplus is safeguarded if  $S_p$  rises as  $S_g$  falls.

Secondly, it was noted that Germany was an exception to Mundell's law that as the share of national income going to labor rises, the balance of payments turns adverse. Mundell's law is based on the generally-accepted view of the world that the rate of saving is higher among receivers of income from property than among wage earners. In consequence as income is shifted from owners of property to wage earners, the rate of savings falls. The point is made more formally by Alexander in suggesting that changes in income distribution arising from exchange-rate changes can alter the balance of trade and found to apply in Argentina by Diaz-Alejandro, even though Alexander thought the possibility slight.<sup>16</sup> In Germany, however, such has not been the case, whether because unincorporated enterprises with low rates of savings are included among property owners, or, more likely, because of the high average and marginal propensity to save of wage earners.

<sup>16</sup> See S. S. ALEXANDER, "Effects of a Devaluation on a Trade Balance," *IMF Staff Papers*, Vol. II (April 1952), p. 273; and CARLOS J. DIAZ-ALEJANDRO, *Exchange-Rate Devaluation in a Semi-Industrialized Country, The Experience of Argentina, 1955-1961*, Cambridge, Mass.: M.I.T. Press, 1965.

In the United States, personal saving as a percentage of disposable income ran about 7 percent in the 1950's, 6 percent in the 1960's, with some years down to 4.9 percent, and then rose to close to 8 percent in the 1970's.<sup>17</sup> The German figures are altogether different. In the period 1954-56 total saving out of disposable income amounted to 12.5 percent, fluctuated sideways to the mid-1960's, and then went steadily up from 11.5 in 1966 to 17 percent in the second quarter of 1975.<sup>18</sup> Such behavior fits none of the more sophisticated consumption or savings functions, which call for savings based on permanent income, or steady in the longer run albeit positively sloped in the short, as consumption adjusts to higher income after a lag in the manner described by Duesenberry. It was thought for a time that German households were target savers, saving a very heavy proportion of total income in the early period after the war to restore the desired ratio of wealth to income, and then settling back to some steady long-run relationship. The decline from 12.5 percent in the middle 1950's to 11.5 in the middle 1960's suggests something of this effect, but cannot account for the continued high level of savings, or the increase in the 1970's.

To speak first to the level, Strumpel ascribes it to the institutional practice of German households of accumulating savings in liquid form prior to buying durable consumer goods, rather than running up installment debt and paying it off afterward, as in the United States. The increase in consumer debt ran 7.8 percent of disposable income in the United States in 1973 compared with 0.7 percent in Germany.<sup>19</sup> As is apparent from the diagram, the difference in practice affects savings only in a growing economy. In the steady state, the same amount is being saved and spent on durable consumer goods in each time period; with growth in income the country that buys on installments is continuously running up installment debt and is dissaving, while the country that saves first and buys later is continuously accumulating. In the diagram, United States consumption runs continuously ahead of United States saving (and

<sup>17</sup> See *Annual Report of the Council of Economic Advisers*, February 1975, Washington, D.C., USGPO, 1975, Table C-17, p. 268.

<sup>18</sup> See BURKHARD STRUMPEL, "Saving Behavior in Western Germany and the United States," *American Economic Review, Papers and Proceedings*, LXV, 2 (May 1975), p. 211, and *Statistische Beihefte zu den Monatsberichten der Deutschen Bundesbank*, Reihe 4 (Oktober 1975), Tabel 3.

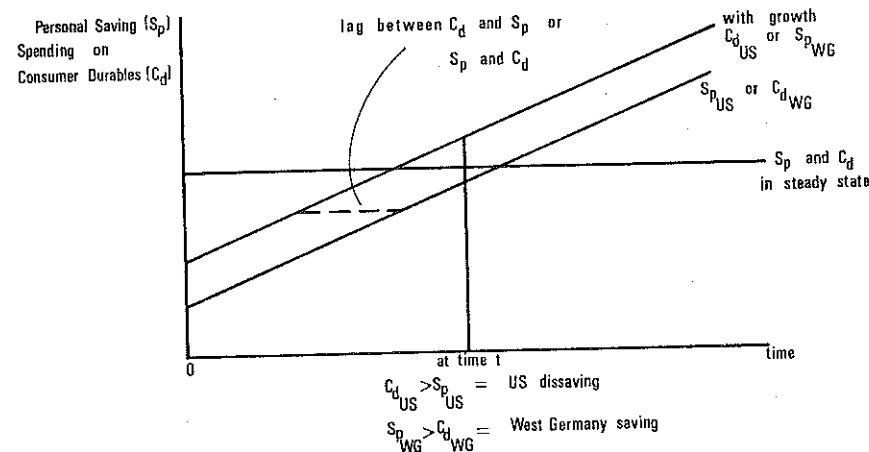
<sup>19</sup> STRUMPEL, *op. cit.*



accumulated installment debt is high in relation to national income) whereas in Germany savings precede spending, installment credit is limited, and cash savings grow. The same is true, of course, in housing finance, with the added difference that Germans both make

FIGURE 1

THE EFFECTS OF POSITIVE OR NEGATIVE LAG BETWEEN SAVING AND SPENDING FOR CONSUMER DURABLE GOODS UNDER GROWTH AND IN THE STEADY STATE



a larger downpayment as a percentage of the value of a house, and borrow smaller proportions on mortgages, but also buy houses which are larger in relation to income than do householders in the United States. This is a function of the scarcity of land in Germany relative to the United States, and perhaps of the fact that building is undertaken for greater permanence. A German economist informs me that in contrast with the rule of thumb that advises American households to spend  $2\frac{1}{2}$  to 3 times annual income for a house, the ratio in Germany is 6:1 or even as high as 8:1.

With limited borrowing for purchases of consumer durables, the capital market for household loans is underdeveloped, as we shall later suggest is true of the capital market in general. Whether the causation runs from little demand for consumer credit to the underdeveloped market for household finance, or the other way around is an interesting subject, but one we lack the time or knowledge to discuss.

The increase in savings in Germany in 1975, called a "craze"

and "excessive" in the press,<sup>20</sup> was matched by a similar increase at a lower level in the United States and seems to have been due to uncertainty. The prospect of unemployment in severe recession encouraged households to cut back on spending and build liquid reserves. This heightened the recession of 1974-75 and led to still higher balance-of-payments surplus. The problem seems to have been that basic equilibrium in the balance of payments was not achieved because the savings in excess of domestic investment, i.e.,  $S_p + S_g$  (a deficit) — [ $I_d - S_c - LTC_c$  (a capital inflow)] could not be funded properly in long-term capital outflows. This leads up in due course to the discussion of institutions and policy. First, however, we must tackle the question of domestic investment and then digress to the question whether capital flows are best handled as portfolio problems, in which a given stock of wealth is invested at home and abroad in accordance with an optimizing strategy for maximizing income subject to minimization of risk, or as a flow which balances an excess of savings over investment opportunities in one country with the excess of investment opportunities over savings in another.

#### The Level of Domestic Investment

It is, of course, not enough to discuss  $S_p$ ,  $S_g$ ,  $S_c$ . We must deal with the relatively depressed level of  $I_d$  (net of that amount of foreign direct investment in Germany financed by capital inflows, since they provide no offset to savings helpful to the balance of payments). In a Keynesian model  $I_d$  is taken to be autonomous, determined by population growth, technological opportunities, to some extent by income, and only to a small extent by the rate of interest. With a heavy commitment to exporting, industrial investment depends heavily on income abroad, and is probably little affected by the interest rate. Similarly the high rate of saving out of disposable income reduces opportunities to serve the domestic market, except perhaps to the extent that saving is undertaken for housing.

I have not tested the interrelationship between construction, capital equipment or housing on the one hand and the rate of interest

<sup>20</sup> ERNST WILLENBROCK, "Excessive Savings Hit Economic Hopes," *Deutsche Allgemeine Sonntagsblatt*, 8 June 1975, reproduced in *The German Tribune*, No. 689 (26 June 1975). p. 71.

on the other, but a casual inspection of data in tables and charts indicates that the I-S curve is not very flat, implying no great sensitivity of investment to the rate of interest. In 1973, tightness in the money and capital markets brought the boom in construction to a peak and turned it around. A rapid reduction of interest rates, however, did not prevent the rate of construction from continuing to decline into 1975. While some economists may object to the conclusion, I believe it is safe to say that rising savings in Germany find an outlet more readily in foreign than in domestic investment, which latter moves sluggishly in response to interest-rate changes and had its own rhythm, largely exogenous to the capital market.

*A Digression on Stock-Adjustment Models of International Capital Movements, and Flow Models*

An issue in the literature on international capital movements is whether it is better to work with models of stock adjustments of portfolio capital, or to deal with flows.<sup>21</sup> In large part the issue turns on which is easier to handle in econometric analysis. In a stock-adjustment model, financial actors adjust their portfolios in response to changes in interest rates, exchange rates, expectations and other variables. In a flow model, annual savings are directed to investment outlets at home and abroad in response to investment opportunities. The two approaches are of course readily reconciled. In stock-adjustment models, savings add to wealth which poses a new problem of portfolio adjustment on a continuous basis. And with flow models a perturbation which disturbs the steady state requires portfolio holders to make adjustments. There are a few differences in the first naive conclusions which may be drawn from the analysis. A flow model presupposes, as a first approximation, a steady movement of capital from countries or locations where it is abundant and cheap to countries or locations where it is scarce and dear. With perfect markets, this flow will equalize rates of return. Under stock models emphasizing portfolio management, one expects movements in both directions as diversification of risk

<sup>21</sup> For a relatively early discussion, see WILLIAM H. BRANSON, *Financial Flows in the U.S. Balance of Payments*, Amsterdam, North-Holland Publishing Company, 1968. See also ZORAN HODJERA, "International Short-term Capital Movements, A Survey of Theory and Empirical Analysis," *Staff Papers*, XX (1973), pp. 699 ff.

is a primary motive. But these initial differences can be reconciled on deeper analysis.

There is something to be said for the view that the long-term capital account may be expected to conform more nearly to the flow analysis and the short-term to portfolio adjustment. With savings at 17 percent of disposable income in 1975 (more nearly 14 percent long run), there are substantial additions to wealth which present a continuous portfolio-adjustment problem at the margin, which may well be thought of as a question of dividing the flow of savings between home and abroad. Short-term capital, however, builds up only slowly and must be continuously adjusted in response to changes in exchange rates, monetary policies, exports and imports, and the like. While the differences in the two sorts of analysis are ultimately zero, the expectation is that long-term investments build up over a long period, while short-term capital moves in and out of a country rapidly.

In point of fact, however, there is a vast difference in the present behavior of United States and German long-term capital accounts. United States direct investment, private holdings of foreign securities, "other claims," and even private non-liquid claims build up continuously, as appropriate for a flow model, as by and large do United States long-term liabilities to foreigners.<sup>22</sup> In the German balance of payments on the other hand, long-term capital items for the most part bounce around from plus to minus like short-term capital, even within the gross items. Direct investment outward and inward are both positive, though the net changes sign from time to time as first the inward, then the outward, then the inward movement exceeds the other as shown for the conveniently available period from 1965 to 1974 (see Table 2). Other items of long-term private investment, Portfolio Investment and Long-term Advances and Loans moved widely back and forth and up and down, like short-term capital, to resemble discontinuous stock adjustments or short-term capital movements — also shown in Table 2 — more than they resemble the accumulation of one-directional flows. With two-way movements of capital — both into and out of Germany — one is already far from the flow model which moves in one direction for the most part, albeit at varying rates. Within the movement of

<sup>22</sup> See Table C-95 of the *Annual Report of the Council of Economic Advisers*, *op. cit.*, p. 357.

German capital abroad and foreign capital into Germany in portfolio investment and in advances and loans, there are surges forth and back which bespeak portfolio adjustment under conditions of rapid change in returns, policy and in expectations. Long-term capital, except perhaps for German portfolio investment in shares which is outward in all but 1973 when the inward movement is a mere DM 119 million, bounces around as if it were short-term speculation on foreign-exchange rate changes.

The fact of the matter is that the German institutions to support a steady flow of capital are rudimentary. Part of the problem is the domination of the internal capital market by banks; part is the determination of the public to keep its assets in liquid claims on banks and savings and loan associations, exhibiting high liquidity preference. The public does not invest in foreign bonds, nor do the banks which rather buy and sell claims on the Euro-currency market, often for more than a year which makes them long term. Moreover, firms in Germany have learned to undertake long-term borrowing and lending abroad, producing a movement of long-term capital partly through direct investment, though these amounts tend to be small, and largely shifting sources of medium-term finance back and forth between Germany and the Euro-currency market.

There is a model of adjustment through long-term lending in James Ingram's study of balance-of-payments adjustment in Puerto Rico.<sup>23</sup> This operates through banks' secondary reserves of U.S. Government securities which rise and fall almost exactly as would Treasury bills or Federal Reserve balances. Puerto Rico, however, is a special case. To get the same result between Germany and the outside world under a well-functioning system, there would have to be internationally acceptable long-term securities which fitted into the secondary-reserve portfolios both of German and of foreign banks. No such securities exist. The sloshing back and forth of long-term capital flows between Germany and the outside world is a pathological condition, not a method of adjustment. It comes about from the attempt of German monetary authorities to run an independent monetary policy when a sufficient number of institutions in the German capital market have access to foreign sources of and outlets for credit. Porter points out that an independent

<sup>23</sup> See his "State and Regional Payments Mechanism," *Quarterly Journal of Economics*, LXXIII, 4 (November 1959), pp. 619-32.

monetary policy will be frustrated if a significant number of corporate and individual borrowers inside a market can borrow and lend outside it.<sup>24</sup>

The other capital-rich countries of the world, Britain, France, and the United States, broke into steady-state foreign lending through a market success in the issuance of foreign securities. The success of Barings in discounting French bills in the payment of the French indemnity of 1819 to Britain encouraged the wholesale entry of British capital into foreign lending in the 1820's. Similarly in France, although there has been sporadic flows of capital abroad in the 1830's, and 1850's, the high profits in floating the Thiers *rente* in 1871 and 1872 started the large-scale outflow of French capital into foreign loans — unhappily largely Czarist bonds — which lasted from the 1870's to 1913. United States capital moved sporadically abroad in the early 1920's until the eleven-fold oversubscription of the Dawes loan in June 1924, making large profits for the underwriters and encouraging large-scale entry into foreign lending. No similar striking event touched off the post-World War II outflow from the United States in direct investment and long-term securities at the end of the 1950's, but I would argue that the Rome Treaty of the European Economic Community widened the horizons of American direct and portfolio investors by drawing their attention to rapid rates of growth in Europe (and Japan) that had gone relatively unnoticed in the immediate period of postwar industrial reconstruction. Direct investment, for example, went above \$1 billion for the first time in 1956 and then leapt to \$2.4 billion in 1957, remaining thereafter between \$1 and \$2 billion until 1965 and 1966, when it reached \$2.4 billion again and then \$3.4 billion. The long-term portfolio securities outflow held below \$500 million until it reached \$600 million in 1956, \$900 million in 1957 and \$1.4 billion in 1958. The Rome treaty and the restoration of convertibility in 1958 produced a discontinuous increase in U.S. foreign lending. No similar event or series of events stimulated the entry of German investors into foreign investment, apart from the expectation of appreciation of the mark which seems to have had similar effects on German direct investment (see Table 2A).

The fact is that German capital market institutions are rudi-

<sup>24</sup> MICHAEL G. PORTER, "Capital Flows as an Offset to Monetary Policy: The German Experience," *Staff Papers*, XIX (1972), pp. 395-424.

mentary. D-mark Euro-bonds are bought and sold by savers outside the *Bundesrepublik*. The German investor confines his savings largely to housing, savings deposits and deposits in savings and loan associations. Investment outlets are dominated by the big banks, and these do not steadily build portfolios of foreign bonds. Individual investors save largely through time and savings deposits in banks, along with building and loan associations. In 1974, which is not an atypical year, savings deposits rose DM 30 million, building and loan association assets DM 7 billions, non-bank acquisitions of securities by domestic buyers DM 14 billion (while foreign buyers sold DM 3 billion, after having bought DM 6 billion the previous year), while the total assets of life insurance companies rose by DM 9 billion.<sup>25</sup> The limited interest in life insurance is doubtless a reflection of the inflation of 1923 and the monetary reform of June 1948 which twice virtually wiped out saving in insurance form. Fear of inflation tends to dispose a society to strong liquidity preference. It is illogical for the German public to have a paranoid fear of inflation and at the same time be reluctant to go into debt and accumulate cash balances, but despite the force of *a priori* reasoning in economics, illogical behavior has strong survival value in many societies.

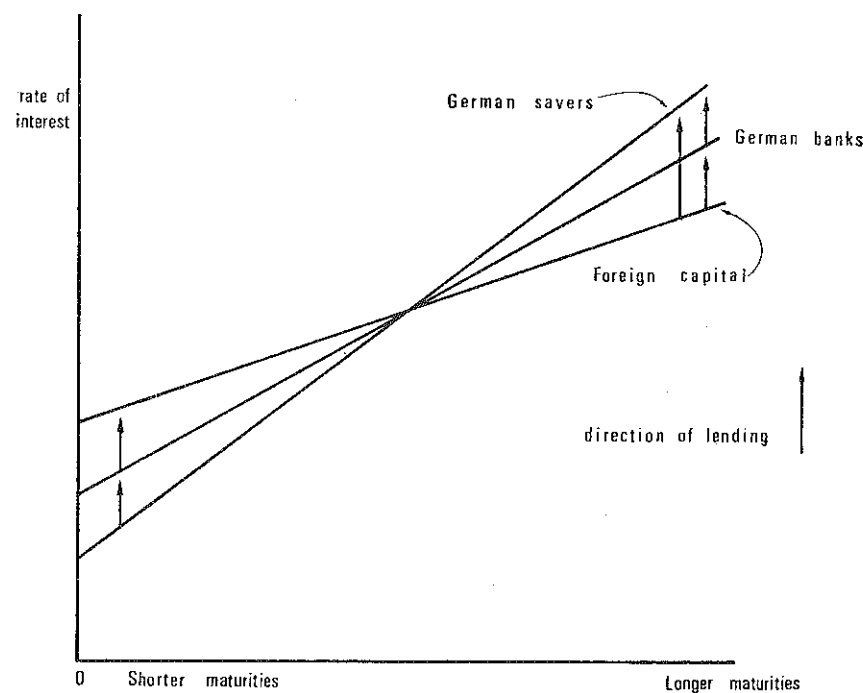
In a well-functioning capital market, strong liquidity preference on the part of savers is likely to lead to financial intermediation which can take one of several forms. In a closed economy, short-term rates should decline relative to long-term rates until domestic intermediaries, typically the banking system, lend long and borrow short. In an open economy, the banking system and foreign banks and non-banks may compete in intermediating. If the banks share the strong feeling for liquidity, they may hold the counterpart of savers' deposits in liquid claims abroad on, say, the Euro-currency market, and permit a long-term capital inflow which will add to the amount of foreign assets which the banks and the *Bundesbank* have to hold. Or the banking system may undertake to lend long abroad and at home, intermediating in both directions, while some foreign lending also takes place. The banks, that is, can have a liquidity-preference schedule midway between the foreign capital market and domestic non-banks, or may ap-

<sup>25</sup> See *Monthly Report of the Bundesbank*, Vol. 27, No. 9 (September 1975), pp. 36\*, 37\*, 38\* and 52\*.

proach one or the other limit, as shown in diagram 2, which sketches the rate of interest on the vertical axis and the length of maturity of capital-market obligations on the horizontal. The steeper the curve of a given country in isolation, the higher the liquidity preference. The diagram shows foreign capital with much lower liquidity preference than German savers, and German banks in between. German savers lend to German banks which lend in foreign capital markets, while foreigners lend both to German banks and to German corporations. The German savers are divided between corporate and household to make the point that households do very little lending directly abroad whereas the corporate sector both lends and borrows abroad when that is distinctly cheaper than the cost and return on credit in the domestic sector. On the shorter maturities in the diagram, for example, the German savers are shown as lending to the banks, i.e. accumulating deposits, rather

FIGURE 2

VARYING LIQUIDITY PREFERENCES OF GERMAN SAVERS, GERMAN BANKS, AND FOREIGN CAPITAL



than undertaking deposits directly abroad. The latter would be undertaken by German corporations, which have learned over time to borrow and lend in both markets, thereby joining them together. The foreign capital loaned directly to savers at the long-term end of the market represents foreign loans to German corporate entities shown, for example, in Table 2C under Private Long-Term Loans and Advances, the last column representing foreign lenders and non-bank borrowers.

The high liquidity preference of German savers and the dominance of the German capital market by banks make the prospect of a steady flow of long-term capital abroad to finance the current-account export surplus dubious at best. In the event, however, the chaotic character of German long-term capital movements has been the result of policies directed at preventing inflation, rather than stabilizing the balance of payments, and of the resultant frequent changes of expectations about the stability of the exchange rate.

### Policy

In the 1964 paper, I made the point that the persistent surplus in the German balance of payments seemed to me to be less the result of policy than of the nature of things. When in fact policy was undertaken to reduce the current-account surplus as in the unilateral tariff reductions of 1956, or the appreciation of the D-mark in 1961, the results were usually negative, as deflation at home, or inflation abroad — in any event, relative deflation — proceeded to wipe out the partial-equilibrium results of the action on the balance of payments. The D-mark appreciations of 1969, 1971 and 1973, ending in generalized floating, can also be seen to have reflected the powerlessness of direct measures to alter the balance-of-payments disequilibrium. If the current-account surplus is inherent in the nature of the structural and macro-economic variables dominating the economy, the object of the exercise should have been to adjust the capital-account items to the current account rather than to attack the current account without altering the fundamental forces which underlay it.

Moreover, the policy of the *Bundesbank* was always to resist inflation, especially imported inflation. Inflation abroad relative to inflation at home — or deflation at home relative to deflation

abroad, had deflation characterized the world economy, as it did not — will always produce an export surplus in the home country. The achievement of equilibrium requires financing it, building the long-term institutions needed to canalize a long-run capital outflow. This would require developing a taste among German savers for securities, for one thing, and breaking up the monopoly of the German banks over the management of individual savings. Instead of so doing, the authorities in fact supported the banking monopoly by refusing permission to such a firm as Merrill Lynch, Pierce, Fenner and Smith, that wanted to establish agencies in Germany to sell securities directly to the public and to underwrite new foreign and domestic issues. Some amount of governmental capital was funneled abroad through the *Kreditanstalt fuer Wiederaufbau* (Reconstruction Finance Corporation), a major foreign-aid agency, but the amounts fell far short of the balance-of-payments requirements.

Some cosmetic operations were undertaken in swapping forward against spot exchange to encourage the banks to divert funds from the domestic to the foreign market with the protection of officially-provided forward cover. This was undertaken on at least three occasions in August 1960, March 1964, and September 1968.<sup>26</sup> Its purpose on each occasion was to tighten the domestic market and achieve a capital outflow at the same time. On each occasion, however, the tightening of the domestic money market attracted more funds from abroad as foreigners bought D-marks, domestic corporations borrowed abroad to pay down domestic loans, and the like. The major failure of understanding was the belief that it was possible to isolate the German capital market from world influences, when it was fully joined to the Euro-currency market which was joined to the New York money market. Abetted by a similar misapprehension in the Federal Reserve System which regarded it as possible for the United States to have an independent monetary policy, the *Bundesbank* sought to run a monetary policy for avoiding external inflation and succeeded mainly in attracting short and long-term capital over time which nothing superficial like swaps could deter. In the long run, moreover, no far-reaching steps of foreign-exchange control to prevent outflows from the United States, nor inflows into Germany, proved to work. Special

<sup>26</sup> See YEAGER, *op. cit.*, pp. 497, 504, 507.

reserves against foreign deposits, the *Bardepot* against foreign borrowing, restrictions on security inflows were as fruitless as the American Interest Equalization Tax, Voluntary Credit Restraint Program, Gore amendment, Mandatory Control Program etc. etc. In the end the attempt was made to achieve monetary autonomy through flexible exchange rates, and that, in its turn, proved ineffective.

Two policy devices are worth analytical attention. In June 1971 it was agreed among central banks that for central banks acquiring Euro-dollars or dollars in general to redeposit them in the Euro-dollar market was dysfunctional, since it enabled the Euro-dollar banks to multiply their outstanding liabilities on the basis of a fractional reserve. The policy went back to an analytical issue over whether the Euro-dollar market could create money or not: those who claimed it could held that the banking mechanism was exactly analogous to that in a domestic money market, where redeposit of loans provides a basis for further lending; the contrary insisted that the Euro-dollar market was like U.S. savings and loan associations which have a very much lower multiple-expansion ratio because such a small proportion of their loans are redeposited in the savings-and-loan system. Whether the *Bundesbank* did or did not redeposit dollars in the Euro-dollar market was thought to determine the capacity of the market to expand its loans and liabilities to a multiple of primary claims on dollars in New York.

By June 1971, however, the argument was academic because the multiple-expansion school had won decisively. Nor did it make a difference any longer where the recipients of Euro-dollar loans were spent and ultimately held, since New York and the Euro-dollar market had become sensitively joined. If the *Bundesbank* deposited in New York dollars borrowed by German corporations in the Euro-dollar market, say in London, this would make no difference since the integration between New York and London would funnel them back as New York interest rates declined slightly and London rates firmed.

The second policy idea — which was not adopted, and of which I have seen no discussion — would have been to adopt the device of an Exchange Equalization Account (EEA) as the British did in 1932 when they sought to sterilize the capital inflow. As it happened, the *Bundesbank* would respond to the capital inflows by raising reserve requirements. It lacked a sufficient portfolio of

Federal Republic obligations to enable it to undertake open-market operations in the requisite direction, calling for sales of bills, notes and bonds to mop up bank reserves. (The swaps mentioned earlier were an alternative to domestic open-market operations with the added attractive feature that they absorb, temporarily, *Bundesbank's* dollar reserves.) Raising reserve requirements is a wide-ranging action, affecting all banks, and not those concentrating in international operations. Open-market operations, swaps, and/or operations like those of the EEA would have affected primarily the money-market banks and only indirectly those on the periphery engaged mainly in relations with non-banks.

An EEA would have required the Federal Republic to give the *Bundesbank* or a separate entity authority to issue Federal obligations — bills, notes, or bonds as sought by the market — so as to prevent the inflow of capital from increasing claims on the *Bundesbank* when dollars were sold to the entity, and holding down the supply of high-powered money. The entity would need a source of income, as it would have to pay out the difference between the domestic rate of interest earned by the holders of newly-issued bills and the foreign rate it earned on its foreign exchange. In addition it would run exchange risk. These costs would be incurred for the benefit of insulating the domestic money market from that abroad, assuming this could be done. The English EEA in the years from 1932 to 1939 held most of its assets in barren gold, and so incurred sizeable charges as it swapped British bills against gold with French capitalists, and back again when the capitalists were ready to take their funds home. It was thought worth it.<sup>27</sup>

An exchange equalization account, however, would have failed to achieve the desired result for the same reason that the swaps, and the June 1971 decision to cycle funds away from the Euro-dollar market, were inadequate: the integration of world money and capital markets. In the 1930's, when Britain established the EEA, French and British capital markets were not unified. French capital sought a haven in London from loss through inflation, taxation and exchange depreciation, and was not guided by interest-rate differentials. In the 1960's and 1970's, interest returns counted for much more. The device of issuing new obligations in Germany

<sup>27</sup> There is no postwar treatment of the EEA. For an early analysis, see N. F. HALL, *The Exchange Equalization Account*, London, Macmillan & Co., 1937.

against dollars sold to the authorities and held in New York or in the Euro-dollar market would have left interest rates unchanged and the stimulus for the inflow unaltered. Presumably after time the availability of funds to move from London to Frankfurt, or New York to Frankfurt via London, would dry up, although the amounts that proved available for movement in 1972 were enormous. Like swaps and open-market operations, the EEA might have been a more delicate instrument of monetary policy than raising reserve requirements, but like all of them, it would not have succeeded in separating markets which are linked together by broad flows of capital.

In short, the policy error of the German monetary authorities was in trying to separate capital markets that could not be separated, and running an independent monetary policy under conditions that made it impossible. It was impossible to prevent imported inflation so long as money markets were joined, and it proved impossible to separate money markets even with floating exchange rates. (The last result was contrary to all expectations.) Fine-tuning in monetary policy and a series of expedients on the balance of payments were all footless. The only possibly feasible policy was to try to work out joint monetary policy with the United States — though that, too, might have been impossible — and to seek to build institutions to channel more private capital into foreign lending. The last suggestion would have required tackling the monopolistic power of the banks and may have been wide of the range of feasible solutions.

I thus continue to believe in persistent disequilibrium of balances of payments, though when this is positive, I now hesitate to call it a world shortage of the currency in question.

Cambridge

CHARLES P. KINDLEBERGER

TABLE I  
BALANCE OF PAYMENTS OF THE FEDERAL REPUBLIC OF GERMANY (IN BILLIONS OF DM)

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962
<b>Current account:</b>													
Exports . . . . .	8.4	14.6	16.9	18.5	21.9	25.6	30.7	35.8	36.8	41.0	47.8	50.9	58.3
Imports . . . . .	-10.7	-13.1	-14.7	-14.8	-18.0	-22.3	-25.1	-28.5	-29.4	-33.1	-39.6	-41.2	-48.9
Net transactions in goods . . . . .	-2.3	+1.5	+2.2	+3.7	+3.9	+3.2	+5.7	+7.4	+7.5	+7.8	+8.6	+9.8	+6.4
Net services . . . . .	-0.2	-0.7	+0.2	+0.5	+0.1	-0.3	-0.1	+0.3	+0.4	-0.4	-0.6	-2.6	-3.5
Net transfers . . . . .	+2.1	+1.5	+0.2	-0.5	-0.5	-0.8	-1.2	-1.9	-1.9	-3.2	-3.4	-4.4	-5.1
Net balance on current account . . . . .	-0.4	+2.3	+2.5	+3.8	+3.6	+2.1	+4.4	+5.8	+6.0	+4.1	+4.6	+2.8	-2.2
<b>Capital account:</b>													
German investment abroad . . . . .	-0.1	+0.1	-1.7	...	-0.2	-0.3	-0.6	-1.0	-1.7	-4.9	-2.4	-3.0	-2.5
Foreign investment in F.R.G. . . . .	+0.5	-0.2	-0.2	-0.4	-0.4	-0.1	...	+0.4	+0.1	-0.6	+2.1	-1.3	+2.3
Net long term capital . . . . .	+0.5	-0.1	-1.8	-0.4	-0.5	-0.4	-0.6	-0.6	-1.6	-5.4	-0.2	-4.3	-0.1
Net short-term capital . . . . .	-0.3	+0.2	+1.8	+0.4	+0.1	-0.1	+0.6	-1.8	-0.8	-0.8	+2.0	-0.9	+0.9
Net balance on capital account . . . . .	+0.2	+0.1	...	+0.1	-0.4	-0.5	+0.1	-2.4	-2.4	-6.2	+1.7	-5.1	+0.7
Private . . . . .	(-0.3)	(+0.2)	(+0.5)	(+0.3)	(...)	(...)	(+1.0)	(+0.2)	(-1.3)	(-2.3)	(+3.9)	(+1.2)	(+1.3)
Official . . . . .	(+0.5)	(-0.1)	(-0.5)	(-0.3)	(-0.4)	(-0.5)	(-1.0)	(-2.7)	(-1.1)	(-3.9)	(-2.2)	(-6.3)	(-0.6)
Net movement of gold and exchange . . . . .	+0.6	-2.0	-2.8	-3.6	-2.8	-1.9	-5.0	-5.1	-3.2	+2.2	-8.0	+1.9	+0.6
Net errors and omissions . . . . .	-0.4	-0.4	+0.3	-0.2	-0.4	+0.2	+0.6	+1.8	-4.0	-1.0	+1.7	+0.4	+0.9

... = less than DM 50 million.

SOURCE: Monthly Report of the Deutsche Bundesbank.

TABLE I (continued)  
BALANCE OF PAYMENTS OF THE FEDERAL REPUBLIC OF GERMANY (IN BILLIONS OF DM)

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
Current account:												
Exports . . . . .	58.3	64.9	71.7	80.6	87.0	100.0	113.6	125.3	135.0	149.0	178.4	230.6
Imports . . . . .	-48.9	58.8	70.4	72.7	70.2	81.2	98.0	109.6	120.1	126.7	145.4	179.7
Net transactions in goods . . . . .	+9.4	+5.4	+0.8	+7.5	+16.7	+17.9	+15.3	+15.3	+16.2	+19.7	+32.7	+50.0
Net services . . . . .	-3.6	-0.8	-0.7	-0.2	+1.2	+0.8	-1.4	-1.6	-1.6	-3.2	-5.3	-8.4
Net transfers . . . . .	-5.0	-5.3	-6.4	-6.3	-6.4	-7.3	-8.8	-9.8	-11.5	-14.6	-15.8	-16.7
Net balance on current account . . . . .	+0.9	+0.5	-6.2	+0.5	+10.0	+11.9	+7.5	+3.2	+3.1	+2.5	+11.5	+24.9
Capital account:												
German investment abroad . . . . .	-2.2	-2.1	-2.2	-2.8	-3.7	-12.1	-22.7	-8.6	-4.0	+0.3	-0.7	-9.4
Foreign investment in F.R.G. . . . .	+4.2	+2.4	+4.6	+5.0	+2.2	+2.4	+1.5	+10.1	+12.5	+16.7	+15.4	+4.0
Net long-term capital . . . . .	+2.0	-0.9	+1.1	-0.3	-2.9	-11.2	-23.0	-0.9	+6.3	+15.5	+12.2	-6.3
Net short-term capital . . . . .	+0.3	-0.4	+1.0	-0.3	-8.9	+5.1	+4.4	+16.0	+4.2	-3.5	+0.3	-19.1
Net balance on capital account . . . . .	+2.2	-1.3	+2.1	-0.6	-11.8	-6.1	-18.7	+15.6	+10.6	+12.0	+12.7	-25.3
Private* . . . . .	(+3.9)	(+0.6)	(+2.6)	(+3.1)	(-7.1)	(-7.1)	(-7.1)	(-7.1)	(-7.1)	(-1.4)	(-2.2)	
Official* . . . . .	(-1.6)	(-2.8)	(-0.5)	(-3.1)	(-2.2)	(...)	(...)	(...)	(...)	(...)	(...)	
Net movement of gold and exchange . . . . .	-2.6	+0.4	-1.3	+2.0	-0.4	+7.0	-10.3	+22.0	+16.4	+15.7	+26.4	-1.9
Net errors and omissions . . . . .	-0.5	+1.2	+2.8	+2.1	+1.7	+1.3	+0.9	+3.6	+2.7	+1.2	+2.2	-1.4

\* Breakdown between private and official not readily available after 1968.

... = less than DM 50 million.

SOURCE: Monthly Report of the Deutsche Bundesbank.

TABLE 2A  
GERMAN PRIVATE INTERNATIONAL CAPITAL INVESTMENT  
Direct Investment (billions of DM)

Period	Total (Net)	German investment abroad (increase: -)				Foreign investment in Germany (increase: +)			
		Total	Shares	Other Capital Interests	Advances and Loans	Total	Shares	Other Capital Interests	Advances and Loans
1965 . . . . .	+2.4	-1.2	-0.6	-0.7	-	+3.7	+0.8	+2.1	+0.7
1966 . . . . .	+2.6	-1.4	-0.6	-0.7	-0.1	+4.1	+1.1	+1.9	+1.0
1967 . . . . .	+2.0	-1.3	-0.5	-0.7	-0.1	+3.4	+0.5	+2.1	+0.7
1968 . . . . .	+0.2	-2.0	-1.3	-0.6	-0.1	+2.2	+0.7	+1.5	-0.1
1969 . . . . .	-0.7	-2.8	-1.6	-1.1	-	+2.1	+0.4	+1.9	+0.5
1970 . . . . .	-1.0	-3.2	-1.7	-1.3	-0.2	+2.2	-0.3	+1.9	+0.5
1971 . . . . .	+0.2	-3.7	-1.6	-1.6	-0.5	+3.9	+0.7	+1.7	+1.5
1972 . . . . .	+1.2	-5.0	-2.6	-1.8	-0.6	+6.2	+1.5	+4.2	+0.5
1973 . . . . .	+0.9	-4.4	-2.1	-2.2	-0.1	+5.3	+1.0	+4.9	-0.5
1974 . . . . .	+1.7	-4.9	-2.3	-2.3	-0.3	+6.6	+1.7	+4.8	-

Private Portfolio Investment (billions of DM) TABLE 2B

Period	Total (Net)	German investment in foreign securities (increase: -)				Foreign investment in German securities (increase: +)				
		Total (Net)	Shares	Investment Fund Units	Fixed Interest Securities	Total (Net)	Shares & Investment Fund Units	Fixed Interest Securities		
								Total (Net)	Gov't & Municipal Bond Issues	Other Bond Issues
1965 . . . . .	-0.4	-0.5	-	-0.1	-0.4	+0.1	-	+0.1	+0.1	-
1966 . . . . .	-1.2	-0.8	-0.1	-0.2	-0.6	-0.3	-0.2	-0.1	-0.2	+0.1
1967 . . . . .	-2.0	-1.4	-0.6	-0.3	-0.5	-0.6	+0.2	-0.8	-0.5	-0.3
1968 . . . . .	-5.6	-5.6	-0.6	-0.9	-4.1	-	+0.2	-0.2	-0.1	-0.1
1969 . . . . .	-10.7	-9.5	-2.0	-2.1	-5.4	-1.2	-0.3	-1.0	-0.6	-0.4
1970 . . . . .	-0.7	-2.0	-1.0	-	-1.0	+1.3	+0.5	+0.8	+0.1	+0.7
1971 . . . . .	+2.5	+0.5	-0.9	+0.3	+1.2	+2.0	+0.4	+1.6	+0.7	+0.9
1972 . . . . .	+14.7	+4.0	-0.6	+0.3	+4.3	+10.7	+3.0	+7.7	+2.4	+5.4
1973 . . . . .	+6.9	+0.4	+0.1	-	+0.2	+6.0	-0.2	+6.2	+1.1	+5.1
1974 . . . . .	-4.1	-1.1	-0.4	-	-0.7	-3.0	-	-3.0	-0.6	-2.5



TABLE 2C

## Private Long-term Advances and Loans (Excluding Direct Investment) (billions of DM)

Period	Total (Net)	German lending to foreigners (increase: —)			Foreign lending to residents (increase: +)		
		Total	Banks	Enterprises and Individuals	Borrowers		
					Total	Banks	Enterprises and Individuals
1965 . . . . .	+0.7	-0.3	-0.2	-0.1	+1.0	+0.8	+0.2
1966 . . . . .	+1.0	-0.4	-0.4	—	+1.4	+0.7	+0.7
1967 . . . . .	-1.1	-0.8	-0.4	-0.4	-0.4	-0.5	+0.1
1968 . . . . .	-4.1	-4.4	-3.9	-0.5	+0.3	+0.6	-0.3
1969 . . . . .	-9.3	-10.0	-9.4	-0.6	+0.7	+0.3	+0.4
1970 . . . . .	+3.7	-3.0	-2.4	-0.6	+6.7	+3.0	+3.8
1971 . . . . .	+6.3	-0.3	+0.2	-0.5	+6.7	+2.6	+4.1
1972 . . . . .	+2.1	+2.1	+2.1	—	—	-0.2	+0.1
1973 . . . . .	+8.0	+4.1	+3.7	+0.4	+3.9	+0.6	+3.3
1974 . . . . .	-2.4	-2.8	-2.6	-0.2	+0.4	+1.3	-0.9

TABLE 2D

## Short-term Capital Transactions (billions of DM) (export of capital: —)

Period	Total (Net)	Private							Official Total
		Total	Banks			Enterprises and Individuals			
			Total	Assets	Liabil- ities	Total	Assets	Liabil- ities	
1965. . . . .	+1.0	—	-0.5	-0.6	+0.1	+0.4	-2.2	+2.7	+1.1
1966. . . . .	-0.3	-0.6	-0.6	-0.2	-0.4	—	-1.8	+1.8	+0.3
1967. . . . .	-8.9	-8.6	-4.8	-6.0	+1.2	-3.7	-3.6	-0.2	-0.4
1968. . . . .	+5.1	+3.9	+2.5	-3.5	+6.0	+1.4	-0.7	+2.1	+1.2
1969. . . . .	+4.4	+4.4	+4.3	-2.4	+7.0	+0.1	-3.0	+3.1	—
1970. . . . .	+16.0	+16.3	+7.9	+0.4	+7.8	+8.4	-1.8	+10.2	-0.3
1971. . . . .	-4.3	+3.2	+1.2	+0.1	+1.1	+2.0	—	+2.0	+1.1
1972. . . . .	-3.5	-4.0	-0.4	-1.6	+1.2	-3.6	-0.9	-2.6	+0.5
1973. . . . .	+0.3	—	-5.1	-7.9	+2.8	+5.2	-3.0	+8.2	+0.3
1974. . . . .	-19.1	-19.0	-9.7	-1.2	+2.3	-9.3	-20.2	+10.9	—