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GERMAN REPARATIONS AND BRAZILIAN DEBT:
A COMPARATIVE STUDY

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INTERNATIONAL FINANCE SECTION

DEPARTMENT OF ECONOMICS
PRINCETON UNIVERSITY
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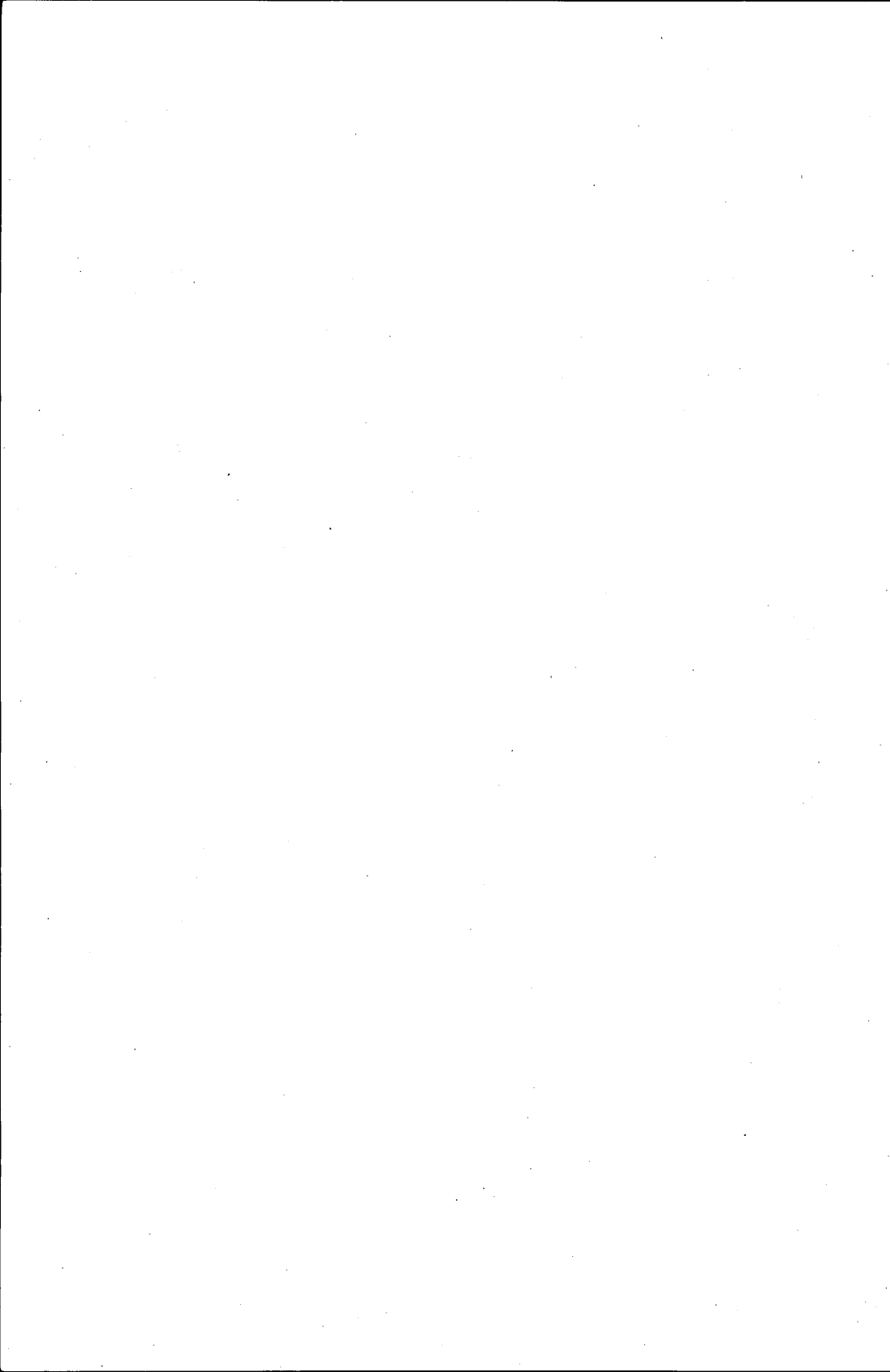
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CONTENTS

1	INTRODUCTION	1
2	A REVIEW OF THE GERMAN EXPERIENCE, 1919-31	2
3	A REVIEW OF THE BRAZILIAN EXPERIENCE, 1973-82	11
4	GERMANY AND BRAZIL COMPARED	19
	Size and Nature of the External Shocks	19
	Short-Run Adjustment	21
	The Paths toward Collapse	22
5	OVERBORROWING AND OVERLENDING	23
	The Behavior of Borrowers	23
	The Behavior of Lenders	24
6	CONCLUDING REMARKS	27
	REFERENCES	28



GERMAN REPARATIONS AND BRAZILIAN DEBT: A COMPARATIVE STUDY

The net results of the process . . . have been: (1) a constant increase, rather than decrease, of international indebtedness; (2) a steady growth in the volume of annual foreign payments to be made by this country and the other net debtor countries; and (3) a continuous disguising of the difficulties inherent in the situation by new international loans.

Moulton and Pasvolsky (1932, p. 301).

1 Introduction

Although the passage quoted above was written in 1932 about Germany and the interwar debt problem, it seems to apply just as well to the current Brazilian situation. In 1931, U.S. President Herbert Hoover declared a moratorium on war debts and reparations, including almost all German payments. At the end of 1982, when Germany would still have been paying reparations, Brazil was rescued from a balance-of-payments crisis by a package that once again included the U.S. government, this time together with the International Monetary Fund, private banks, and other institutions. This essay compares the two crises, seemingly different in origin and separated by fifty-one years, and shows that they teach the same basic lesson.

I have chosen to approach this problem using the method of historical economics, the term Kindleberger (1978, p. 7) uses to distinguish it from conventional economic history. Historical economics is concerned with the analysis of economic processes and structures rather than the pursuit of new factual detail. I examine the two debt crises in the light of old and new theories of balance-of-payments adjustment, and of theories of optimal borrowing. Instead of performing formal statistical tests, I discuss each case closely. While such an exercise in small-sample analysis necessarily calls for many judgments and qualifiers, allowing much room for "dangerous" rhetorical argument, I hope that readers will find the comparison fruitful and the conclusions persuasive. I hope, too, that some will be challenged to apply the approach to other cases.

Sections 2 and 3 briefly review the German and Brazilian experiences, focusing mainly on the interaction of external shocks, domestic policies, and foreign lending. Section 4 compares the impact on Germany of the payment of reparations with the impact on Brazil of higher oil prices. Section 5 looks

This essay is a revised version of the third chapter of my dissertation. I am grateful to William Branson, my thesis supervisor, and a referee.

critically at the behavior of countries as borrowers and of banks as lenders. The last section draws the basic lesson for borrowers and lenders.

2 A Review of the German Experience, 1919-31¹

The end of World War I marked the beginning of one of the most complex periods in German history, running from the Treaty of Versailles to the Nazi seizure of power. Germany provided the stage for events rich in opportunities for scholarly research of every sort. In the economic sphere, reparations, budget deficits, and other developments led to large internal and external imbalances. What follows is a brief review of the main economic events of the Weimar period, focusing primarily on the relationship between external and domestic developments.

The Treaty of Versailles, signed on June 28, 1919, sealed the destiny of Germany for some time. It was required to pay for a large share of the war burden, though an exact amount was not specified at that time; as Angell (1932, p. 11) put it, a "vast blank check" was signed. A Reparations Commission was created to study the problem, and it took almost two years to determine the size of the payment. In the interim, the issue was debated heatedly. In a famous speech, Sir Eric Geddes supported the extraction of a large indemnity: "I have personally no doubt we will get everything out of her that you can squeeze out of a lemon and a bit more" (quoted in Mayer, 1967, p. 157). Keynes was the main figure on the other side. Having dropped out of the British delegation at Versailles when he decided that events were moving toward disaster, he quickly wrote *The Economic Consequences of the Peace*, which argued forcefully that the reparations payments discussed initially at Versailles were far too high and that the peace was to be Carthaginian. He accused Clemenceau of trying to "weaken and destroy Germany in every possible way" (1919, p. 150). Postwar prosperity, he argued, would require not only a lower level of reparations but also a cancellation of inter-Ally indebtedness incurred during the war (p. 270).

The final figure of 132 billion gold marks (more than two years' GNP at that point) was reached in April 1921 and adopted officially at the London conference in early May. The "London Schedule of Payments" called for annual payments of 2 billion gold marks plus 26 percent of the value of Germany's exports. This second requirement provided some flexibility by tying payments to revenues, but it was not flexible enough. After numerous delays in German payments, the Reparations Commission agreed on August 31, 1922, to a six-month moratorium on all German obligations. But before it had ex-

¹ The main sources for the discussion that follows are Moulton and Pasvolsky (1932), *The Economist* (1932), Aldcroft (1977), Angell (1932), and Harris (1935).

pired, and despite British opposition, for political reasons Germany was declared to be in default. French and Belgian troops marched into the Ruhr in January 1923.

The following months rank among the most intensively studied periods in economics literature. Germany responded to the invasion by a sort of fiscal passive resistance. The invasion took away many revenue sources, but the Weimar government did not raise other taxes. Furthermore, expenditures on subsidies and unemployment compensation rose, so Germany ran very large fiscal deficits. The stage was set for the hyperinflation and depreciation of the mark that have been the subject of many studies. This is not the place to join the controversy over whether the inflation and deflation were caused primarily by the budget deficit or by the balance-of-payments problem. It suffices for my purposes to quote from W. Arthur Lewis (1949, pp. 23-24):

A runaway inflation may derive from three sources. First it may be due to upward adjustments of wages, e.g. under trade union pressure. As wages rise, prices rise. The advantage of the increased money wage is thus largely offset, and a further wage increase is demanded. This leads to a further rise in prices, and the cycle may continue unchecked. Secondly, it may be set in motion by the depreciation of the foreign exchange value of the currency, e.g. because of an adverse balance of payments. This raises the cost of imports, and therefore the cost of living. Wages then rise, if linked to the cost of living, prices rise further, and the foreign exchange value falls still more, setting the cycle in motion. Thirdly it may be due to a budget deficit financed by increasing the amount of money in circulation. If money increases faster than the volume of goods (and this is inevitable after full employment is reached), prices rise. This makes the government need more money, the issue of which causes prices to rise still more. It also causes trade unions to press for higher wages, and the foreign exchange value of the currency to fall, each of which enforces the inflationary trend.

The German inflation had some of all these elements.

It had indeed!

On October 15, 1923, a new currency, the Rentenmark, was introduced, along with fiscal reforms, and soon the inflation ended. The spectacular success of the disinflation plan has generally been credited to the fiscal reforms and their impact on the public's confidence in the new currency. A more efficient system of taxation banished the fear of budget deficits and the monetary expansion needed to accommodate them, and this change in expectations explains the relatively low cost of the stabilization.² Shortly thereafter, the government implemented a comprehensive plan to complete the stabilization of the German economy and revive the flow of reparations.

The Dawes Plan, made public in April 1924, was part of an effort whose "essential aim was to restore confidence in Germany and permit the rehabil-

² Bresciani-Turroni (1937) and, more recently, Sargent (1983) are the chief proponents of this view.

itation of her currency while at the same time securing reparation for her creditors" (*The Economist*, 1932, p. 2). The Plan recognized the need for a second moratorium on reparations and arranged for Germany to borrow 800 million Reichsmark in foreign capital markets. (The Reichsmark was the currency that came with the final reform, replacing the Rentenmark; 4.2 Reichsmarks were equivalent to 1 dollar.) The foreign-currency proceeds of this loan were to be deposited at the newly created Reichsbank to provide the necessary backing for the new currency. As Kindleberger (1984, p. 303) points out, the Dawes loan was not intended to "recycle the entirety of German reparation, as the French sought, but merely to prime the pump." As we shall see, it did elicit a substantial inflow of foreign funds.

The Plan made an explicit distinction between the collection of reparation payments within Germany and their transfer to foreign creditors.

Table 1 shows the schedule for the first step, the collection of funds to be deposited in a reparations account with the Reichsbank. The first two years were the "budget moratorium period," when no budget surplus was required. The next two years were the "transition period," when the budget was to show a surplus and other payments would also increase. The final year was the "standard year," representing the expected steady state.

The second step in the payment of reparations, the transfer to foreigners, was to be controlled by a transfer committee with the cooperation of the German authorities. Except for an agreement to be "cooperative," Germany's responsibility ended with the deposits in Reichsmark shown in Table 1. There was to be no fixed schedule for their conversion and transfer to the Allies, because it was believed that Germany's export surplus was unpredictable and

TABLE 1
THE DAWES PLAN: SCHEDULE OF SUMS TO BE RAISED WITHIN GERMANY
(in millions of RM)

Source	Budget Moratorium		Transition		Standard Year
	1924-25	1925-26	1926-27	1927-28	1928-29
Budget surplus	None	None	110	500	1,250
Transport tax ^a	None	250	290	290	290
Railroad securities ^b	200	845	550	660	660
Industrial bonds ^b	None	125	250	300	300
Total	1,000 ^c	1,220	1,200	1,750	2,500

^a An off-budget item.

^b Interest and amortization payments on these bonds and securities were to be earmarked for payment of reparations.

^c Includes the Reichsmark counterpart of the Dawes loan.

SOURCE: Moulton and Pasvolsky (1932, p. 163).

that payments should be made only when conditions were favorable in the foreign-exchange market. If the amount in the domestic reparations account came to exceed RM2 billion owing to transfer difficulties, the transfer committee was to invest the excess funds in Germany. If the amount in the account topped RM5 billion, further contributions were to be reduced until the foreign-exchange situation improved. Arrangements were also made to correct for fluctuations in the price of gold and to increase payments in periods of prosperity. Following the spirit of classical transfer theory, no specific measures were contemplated to promote trade surpluses. This was never a problem, however, because capital inflows more than covered the payment of reparations and the trade deficit.

The first five years of the Dawes Plan marked a period of spectacular recovery for Germany. Industrial production more than doubled between January 1924 and March 1928, and the balance of payments was in surplus in every year except 1927 (see Table 2). There was no transfer problem; on the contrary, Germany ran trade deficits in every year except 1926. In effect, net transfers were being made *toward* Germany, as many authors have pointed out.

These net transfers were made possible by the massive capital inflows triggered by the Dawes loan. The capital flows took two main forms: long-term bonds sold to the public in many countries, but mainly in the United States, and short-term bank credits, including acceptances and cash advances (see Table 2). This injection of resources was crucial:

Industry was short of capital, the financial markets were disorganized, the savings of countless Germans had been obliterated during the hyperinflation, [and] there was a chronic balance-of-payments [trade balance] deficit at any level of economic activity short of a depression. (Falkus, 1975, p. 452.)

A combination of tight domestic monetary policy (with some fine tuning) and a high level of demand for working capital led to high interest rates. This helps explain the inflow of capital that took place between 1924 and 1928 in spite of warnings by Keynes (1919), Moulton (1924), and others that Germany would have trouble repaying its debts and reparations. Throughout the 1924-28 period, capital flows played the important double role of providing the impetus for recovery and financing trade deficits as they arose.

By the first half of 1928, the Dawes Plan had apparently succeeded: the recovery was strong and reparations were being paid on schedule. As was shortly discovered, however, this impression was misleading in more than one respect.

First, even though the Dawes Plan transfers were being made, the internal collection of funds was lagging behind. As Table 3 shows, Germany ran budget deficits in every year between 1924 and 1930 except the first, in which it was expected to run a deficit. Furthermore, the figures for the federal def-

TABLE 2
GERMANY'S BALANCE OF PAYMENTS
(in millions of RM)

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
Exports	7,810	9,546	10,677	11,118	12,627	113,632	12,175	9,733	5,834	4,957
Imports	-9,626	-11,990	-9,884	-14,078	-13,938	-13,676	-10,617	6,955	-4,782	-4,288
Trade balance	-1,816	-2,444	793	-2,960	-1,311	-44	1,558	2,778	1,052	669
Reparations	-281	-1,057	-1,191	-1,584	-1,990	-2,337	-1,716	-988	-160	-149
Interest payments	159	-6	-173	-345	-563	-800	-1,000	-1,200	-900	-700
Other services	274	462	532	645	672	712	538	450	265	232
Current account	-1,664	-3,045	-39	-4,244	-3,192	-2,469	-620	-1,040	257	52
Long-term loans	1,000	1,124	1,376	1,765	1,698	414	805	-85	14	-50
Short-term loans	1,506	307	147	1,717	1,425	1,011	431	772	-763	-447
Indefinable	413	1,704	-916	310	1,000	879	-746	-3,350	236	-79
Capital account	2,919	3,135	607	3,792	4,123	2,304	490	-2,693	-513	-576
Change in gold and foreign-exchange reserves	1,255	90	568	-452	931	-165	-130	-1,653	-256	-524

SOURCE: Harris (1935).

TABLE 3
ECONOMIC INDICATORS FOR GERMANY

	Industrial Production (1913-100)	Wholesale Prices (1913-100)	Real Wages ^a (1913-100)	Budget Deficit ^b (RM billion)	Gross Fixed Investment (RM billion)	National Income (RM billion)
1924	77	136	70	-0.5	n.a.	n.a.
1925	92	139	87	0.1	10.3	57
1926	87	129	90	0.8	10.7	n.a.
1927	110	135	97	0.3	13.0	n.a.
1928	113	136	108	1.2	13.8	n.a.
1929	114	131	110	0.9	12.8	71
1930	99	114	105	0.9	10.4	n.a.
1931	82	98	100	n.a.	6.5	n.a.
1932	66	86	94	n.a.	4.2	41

^a Weekly earnings, twelve or more industries.

^b Federal government only. Surplus = (-). Fiscal year ending in March of the following year.

SOURCE: Bry (1960, pp. 326, 327, 362), Moulton and Pasvolsky (1932, p. 281), Balderston (1983, p. 401), and Machlup (1964, p. 383).

icits underestimate the overall public-sector deficit. The German public debt, federal and local, totaled RM24.2 billion on March 31, 1931, of which 18.2 billion was contracted between 1924 and 1931 (Moulton and Pasvolsky, 1932, p. 283). We can thus safely say that the planned Dawes Plan surpluses never materialized and the classical transfer process that was supposed to implement the Plan never had a chance to operate because the budget never exerted deflationary pressure.

Real wages rose by more than 50 percent between 1924 and 1928 (see Table 3). This was a consequence of standard business-cycle factors and of the 1918 Stinnes-Legien Agreement, which increased the power of labor unions, in the social-democratic spirit of the Weimar Republic. This also interfered with the standard transfer theory, which calls for belt-tightening by way of reductions in real wages.

Prospects for the German economy were clouded by low levels of capital formation. Germany was borrowing but not investing. Some loans were obtained to provide working capital, and many were used for public amenities. As Dr. Schacht, the President of the Reichsbank, pointed out at the time,

The expenditure upon the construction of stadia, swimming baths . . . , planetaria, aerodromes, theatres, and museums, upon credit concessions to, and participation in, private business, amounts to a total sum not much below the total foreign loans raised by the cities. (Cited by Harris, 1935, p. 2.)

Finally, Germany's foreign accounts were becoming increasingly fragile as

foreign liabilities accumulated. The growth of short-term debt made the situation particularly delicate. Most of this debt took the form of interbank credits, which could be withdrawn suddenly. Some of the money obtained in this way was used appropriately to finance trade, but some was used to build up working capital and finance budget deficits:

The German banks, their ledgers swelled with foreign balances, financed their various public and private undertakings freely with little thought for the morrow. Beguiled by a deceptive appearance of prosperity they borrowed short and lent long; for though their lending was in the form of short-term loans, the purposes to which many of the loans were devoted were not appropriate for this type of financing, and as the event proved they rapidly became "frozen." (Harris, 1935, p. 6.)

Summing up, between 1924 and 1928 Germany was able to stage an externally financed recovery. It maintained high rates of growth at the cost of increasing its vulnerability to further shocks. Already faced with the need to pay reparations and repay a growing debt, Germany would also have to deal with higher wages, budget deficits, and a large volume of short-term foreign liabilities. Although all reparations payments were made on schedule up to 1929, the standard year of the Dawes Plan, there was talk about new reparations arrangements as early as June 1928 (Kindleberger, 1984, p. 304). Economic activity had begun to show signs of cooling in mid-1927, and the turning point came in the summer of 1928:

From July 1928 the flow of foreign capital, even at higher interest rates, dropped markedly. By the early autumn the Disconto-Gesellschaft was attributing the credit shortage and stagnation in economic activity to the reduced flow of foreign funds. In May and June some RM700 million had been raised abroad; in July, August and September, only some RM30 million. (Falkus, 1975, p. 461.)

In early 1929, a committee of experts led by O. D. Young met in Paris to work on a new schedule of German reparation payments. By that time, the flow of credits from the United States had fallen sharply. American investors had started to place their funds at home in the booming stock market, and German prospects seemed uncertain at best. As uncertainty regarding the results of the Paris conference increased, the Reichsmark was driven to the gold-export point, and the Reichsbank was forced to raise its discount rate from 6.5 to 7.5 percent and to impose rigorous credit restrictions. The Young Plan was finally put into effect in April 1930, but by that time the American stock market had collapsed and the world economy was on its way to the Depression.

The Young Plan was basically a rescheduling plan. It reduced the size of Germany's annual payments and provided a new loan of approximately RM1.2 billion (\$300 million). Unlike the reschedulings of the 1980s, however, it reduced the current discounted value of the stream of reparation payments, which fell from the RM132 billion set by the Reparations Commission

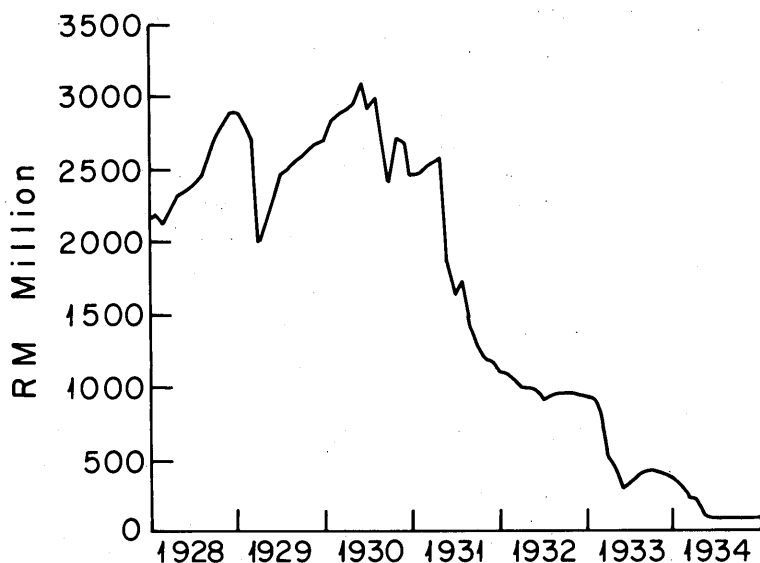
to about RM37 billion. The "transfer protection" system of the Dawes Plan was eliminated; Germany was made responsible for external payments as well as internal collections, and the payments had to be made in foreign exchange or gold, not in Reichsmarks. Nevertheless, the annual payments were divided into unconditional and conditional parts: the former could not be postponed, but the latter could be postponed for up to two years. The internal collection mechanisms of the Dawes Plan were abolished, apart from a special contribution to be made by the German Railway Company, amounting to RM660 million and corresponding to the unconditional annual payment. Finally, the Bank for International Settlements was created to facilitate and supervise the payment of reparations and war debts and to float the Young loan.

In 1930 Germany's industrial production declined for the first time since 1926, and real wages also fell (Table 3). A trade surplus emerged in spite of a drop in exports, thanks to a drastic restriction of imports and an improvement in the terms of trade, but it was barely large enough to cover reparations, let alone interest and amortization on Germany's loans and bonds. The annual figures still showed a net capital inflow, owing mainly to a long-term inflow in the first half of the year, which included the Young loan. In the second half of 1930, Germany was unable to float any more long-term bonds, and short-term funds began to leave the country. Germany was able to balance its payments only by short-term borrowing, and it suffered a small loss of reserves for the second year in a row (see Table 2).

In the September 1930 elections, Hitler's National Socialist Party made its presence felt, increasing the fears of potential creditors and leading to further capital flight and the withdrawal of foreign funds. Domestic finances were also getting out of control, undermining confidence in the Reichsmark. By early 1931, with domestic budget difficulties continuing and the withdrawal of foreign funds speeding up, foreign loans were virtually unobtainable (Moulton and Pasvolsky, 1932, p. 308).

In March 1931, Germany suddenly announced a customs union with Austria, generating an international political crisis that turned into a financial collapse. The collapse came first in Austria with a run on the Creditanstalt Bank in May. It spread to Germany when a run on the Reichsbank began in early June. Between May 30 and June 6, the Reichsbank's reserves declined by \$38 million (see Figure 1). On June 5, the German government issued a manifesto assessing the situation and calling for a further reduction of the reparations burden. This made the financial markets even more nervous and led to a faster withdrawal of foreign funds. In the next week, reserves declined by an additional \$130 million to \$445 million. It was clear to all that the collapse would come very soon. But the Young Plan required ninety days' notice before any suspension of reparation payments, so the June 15 payment was duly made.

FIGURE 1
GOLD AND FOREIGN-EXCHANGE RESERVES, REICHSBANK, 1928-35



SOURCE: Harris (1935, p. 115).

On June 18, Keynes, then in the United States and sensing the urgency of the situation, sent a cable to Hubert Henderson:

Probable American banks continue gradually withdraw funds. Position many banks here so weak they will run no risks merely to help general situation. Moratorium or other suspension not fully discounted by banks, and announcement may make matters worse. (Keynes, 1978, pp. 354-355.)

Two days later, President Hoover announced a one-year moratorium on all war debts and reparations. But the withdrawal of foreign money from Germany continued in spite of sharp increases in the Reichsbank's discount rate. On July 13, German banks were closed for two days and foreign-exchange controls were imposed, acknowledging the final collapse. At the end of July, after a reserve loss of about RM3 million, reflecting withdrawals of foreign funds and capital flight, German short-term liabilities still totaled almost RM12 million,³ representing about half of Germany's total indebtedness. A year later, in 1932, war debts and reparations were all but canceled in the

³ *The Economist* (1932, p. 11). This indicates that the figures in Table 2 probably underestimate the accumulation of short-term debt.

Lausanne Settlement, but the rest of Germany's debt was serviced until 1934, when Hitler repudiated it and ended the story.

3 A Review of the Brazilian Experience, 1973-82⁴

Brazilian growth was rapid in the period that preceded the external shock in December 1973. That year marked the end of the period that became known as the "Brazilian Miracle." Between 1968 and 1973, Brazil's GDP grew at an average rate of 11 percent per year. The annual rate of inflation averaged 20 percent, but it declined over the period. Gross fixed capital formation rose from 19 to 22.4 percent of GDP, and the balance of payments seemed to pose no problem. Both exports and imports rose from around \$1.9 billion in 1968 to \$6.2 billion in 1973 as Brazil promoted its exports in an environment of booming world trade, creating room for the induced growth in imports. Foreign capital was plentiful, and Brazil ran balance-of-payments surpluses in every year during the period. Foreign-exchange reserves increased from \$199 million at the end of 1967 to over \$66 billion at the end of 1973. As Bacha and Malan (1983, p. 10) point out, foreign borrowing was a viable option because the absence of a foreign-exchange constraint allowed for high rates of investment and growth.

In addition to favorable international conditions, Brazil also benefited from high excess capacity in the early stages of the boom and from expansionary monetary and fiscal policies. Consumer and housing loans rose, and an ambitious program of public investments was launched. In 1973, the monetary base rose 47 percent, thanks to an expansion in the loans of the Banco do Brasil and to the gain in reserves. As the economy approached full capacity, however, inflationary pressures had to be repressed through price controls to meet the 12 percent inflation target.

The outlook for the Brazilian economy seemed very promising, calling for little more than some short-run fine tuning with respect to inflation and monetary expansion. Under the assumption made in early 1974 by the Second National Development Plan that the world economy would continue to boom, its optimistic targets did not seem impossible. But the world economy did not continue to boom. In December 1973, it was hit by the shock of a fivefold increase in the price of oil.

At the start of 1974, the trade balance deteriorated quickly and the money supply ran out of control. The Geisel government took office in March knowing that some adjustment would be necessary. As Mario H. Simonsen (1980, pp. 10-11), Minister of Finance under Geisel, later related,

⁴ This section draws heavily on the work of Malan and Bonelli (1983), Bacha and Malan (1983), and Diaz-Alejandro (1983).