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THE INTERWAR DEBT CRISIS AND ITS AFTERMATH

Barry Eichengreen
Richard Portes

This article analyzes the sovereign defaults of the 1930s and reports nine major findings. (1) There is little evidence that financial markets of the 1930s were unsophisticated or that banks have a comparative advantage over the bond market in processing information. (2) Debt default in the 1930s depended on a combination of factors, including the magnitude of the external shock, the level of debt, and the economic policy response, as well as on a range of non-economic considerations. (3) Countries that interrupted service recovered more quickly from the Great Depression than did countries that resisted default. (4) There is little evidence that countries that defaulted in the 1930s later suffered inferior access to the capital market. (5) The readjustment of defaulted debts was protracted: the analogy with corporate bankruptcy proceedings is not applicable. (6) Although default led in some cases to a substantial reduction of transfers from debtors to creditors, on balance returns on sovereign loans compared favorably with returns on domestic investments. (7) Creditor governments in the 1930s did act to accelerate the settlement process. (8) Global schemes analogous to the Baker plan were widely proposed but never implemented. (9) In contrast, debt buybacks played a useful role in the resolution of the crisis.

The history of foreign lending in the nineteenth and twentieth centuries offers a rich lode of evidence on the operation of international capital markets. For the historian, that experience provides an exceptional opportunity to study the long-term evolution of international markets and their adaptation to repeated shocks. For the economist, it provides an opportunity

to reflect on how the current debt crisis may be resolved. It is not possible to extrapolate directly from historical experience, since institutional aspects of the lending process, including the relative importance of bank and bond finance, the rise of supranational agencies such as the World Bank and the International Monetary Fund, and the role of creditor governments in rescheduling, have changed fundamentally over the past century. But even though the extent of institutional variation makes it difficult to draw simple lessons from the past, history still offers the only evidence we have on the efficiency and distributional effects of different methods of organizing international lending and readjusting existing debts.

In a series of papers, we have examined the lending of the 1920s, the defaults of the 1930s, and the debt readjustments of the 1940s and 1950s (see Eichengreen 1989a, 1989b; Eichengreen and Portes 1986, 1987, 1988, 1989a, 1989b, 1989c). This paper summarizes and extends the main conclusions of that research. The discussion is organized around nine findings.

1. Investors in the 1920s exhibited sophistication and foresight at the lending stage. Our analysis suggests that a country's repayment record, its political circumstances, and its economic policies all figured in determining the risk premiums on foreign bonds. There is little evidence that capital markets have grown more sophisticated over time or that banks have a comparative advantage in processing the relevant information.
2. No single economic variable—nor, for that matter, group of economic variables—adequately explains the incidence and extent of default. Although Diaz-Alejandro (1983) and Fishlow (1985) have pointed rightly to the magnitude of the external shock of the 1930s (proxied typically by the extent of deterioration in the terms of trade) as a leading indicator of default, our work reveals the importance of other economic variables, including the burden of the debt and the nature of the domestic policy response, as well as noneconomic variables, such as political links.
3. The implications of different debt management strategies for macroeconomic performance are difficult to isolate. In the 1930s, efforts to maintain debt service tended to be associated with fiscal austerity, import compression, and export subsidies, whereas the decision to suspend payments was often accompanied by fiscal expansion, monetary reflation, and import-substituting industrialization. This wholesale reorientation of a country's macroeconomic stance makes it difficult to pick out the effects of external debt management from the entire constellation of policies. Evidence points nonetheless to the conclusion that countries that interrupted service on their external debts recovered more quickly from the Great Depression than countries that resisted default.
4. There is little evidence that countries that defaulted in the 1930s incurred a cost in terms of inferior access to the capital market after World War II. Following negotiated settlements with the creditors, countries that previously had suspended interest payments and amorti-

zation were offered access to the capital market virtually identical to that of countries that had maintained debt service without interruption. This is not to suggest that default was without costs in relation to market access, only that those costs were not borne differentially by countries that interrupted their debt service. Many of the costs were external to the defaulting countries: neither defaulting nor nondefaulting debtors had significant access to portfolio capital in the decades following World War II.

5. The readjustment of defaulted debts entailed a protracted process of negotiation. The analogy with corporate bankruptcy proceedings, in which default and readjustment permit a clean break with the past, is not applicable. Default on sovereign debt has not been feasible in practice. Although governments have from time to time suspended payment, in many cases the interruption was only temporary, and uncertainty over transfers lingered for decades.
6. Although default in some cases led to a substantial reduction of transfers from debtors to creditors, what we might call selective debt relief permitted a reasonable overall rate of return. The risk premiums charged sufficed to elevate the average rate of return on central government loans above the yields on British and U.S. treasury bonds. Losses to creditors on provincial, municipal, and corporate loans were more extensive, but risk premiums were still sufficient to yield positive returns to British investors.
7. Creditor governments often were intimately involved in debt negotiations. In recent years creditor governments have exerted continuous pressure on the debtors to maintain service on their external debts. In the 1930s and 1940s creditor governments pressured debtors and creditors alike.
8. Global schemes to short-circuit the protracted process of bilateral negotiation proved fruitless in the 1930s. Nearly every element of the global plans currently under consideration—a special international lending facility, matching injections of private and public funds, conversion of existing assets into new ones featuring different contingencies—was first suggested in the 1930s. Ultimately, those global schemes foundered on the question of who should fund and control them.
9. Market-based debt reduction made a useful contribution to resolving the debt crisis of the 1930s by reducing the debt overhang and eliminating marginal creditors. There is little evidence that debt buybacks raised the market price of remaining debt sufficiently to leave the market value of the debt burden unchanged. Rather, prices in the secondary market seem to have been governed primarily by changes in the prospects for a negotiated settlement. In contrast to public statements of disapproval, creditor organizations were willing in private to entertain buybacks out of reserves as part of the readjustment process.

The Lending Stage

International capital markets of the 1920s have been accused of all manner of excess. Issuers pushed questionable obligations on hesitant borrowers and questionable bonds on otherwise cautious investors (Skiles 1988, Darity and Horn 1988). New entrants into the market—large New York banks that “fore-saw a series of lean years in wholesale and industrial banking, and jumped on the new bandwagon of retail banking”—were particularly guilty (de Cecco 1985, p. 57). But they were not alone. Private investors failed to discriminate between good and bad credit risks (U.S. Congress 1932). Governments failed to monitor the industry adequately and to discourage dubious activities, even erring in the other direction as when, for example, they encouraged the flotation and purchase of German bonds (Schuker 1988).

So it is alleged. Unfortunately, most of these assertions are difficult to test. It is tempting to cite the poor performance of these loans as proof of the validity of the interpretation. There are obvious dangers, however, in drawing conclusions on the basis of 20/20 hindsight. There was no reason for investors in the 1920s to anticipate a macroeconomic crisis on the scale of the Great Depression. That their loans performed poorly given the exceptionally poor state of the global economy does not suffice to impugn the lending process.

It is more informative to consider the market's *ex ante* assessment of the risks of foreign lending. Such assessment should be reflected in larger projected yields at purchase for higher-risk loans, which are reflected in spreads, that is, in the difference between the yields for high-risk and risk-free loans. We calculated spreads by comparing yields on two samples of foreign bonds floated in London and New York in the 1920s with yields on contemporaneous U.K. and U.S. government securities (consols and Treasury bonds, respectively).¹ Then, to determine if these spreads reflected consideration of the likely indicators of risk of default, their level was related to country characteristics, current economic policies, and capital market conditions. This method parallels that adopted by Edwards (1986), who sought to address Guttentag and Herring's (1985) contention that the rates banks charged foreign borrowers on bank loans could not have incorporated adequate country risk premiums because they varied so little across loans. Edwards attempted to test this hypothesis for the 1970s and 1980s for both bank loans and bonds by regressing spreads on indicators for country risk such as the magnitude of the debt burden, the level of investment, the policy stance of the debtor government, and other characteristics of the borrower and the loan. He found for the bond market that the spread rose with the ratio of debt to gross national product (GNP) and fell with the ratio of investment to GNP. Although this is consistent with the hypothesis that lenders distinguished among good and bad credit risks, his other coefficients were insignificant, suggesting that investors paid little attention to other indicators of country risk.²

We seek to replicate this analysis for the 1920s. In our regressions (reported in appendix table 1) the spread on each loan is related to the debt-to-export ratio, to the category of borrower (national governments or others), to the year in which the loan was issued, and to the geographic location of the borrower. We also include two measures of economic policies and conditions in the borrowing country: the trade balance and the budget balance. For the 1920s it is not possible to construct a measure of the investment share of GNP like that used by Edwards for the 1970s and 1980s. But neither were investment statistics available to prospective bondholders. Instead, contemporary investment manuals urged investors to focus on the trade and budget balances as the two most important indicators of a country's capacity to generate and mobilize the foreign exchange required to service its external debt (Madden and Nadler 1929).

Our analysis shows that the spread barely changed over time, after controlling for other characteristics of the loan, which is contrary to what one would expect to find had foreign lending tended to come into or fall out of fashion.³ Compared with loans to national governments, higher spreads were charged on loans to states, municipalities, corporations, and banks. This is consistent with evidence, presented in the following, that loans to national governments outperformed these other loans.⁴ In the case of sterling loans there is similar evidence of informed behavior: higher risk premiums were charged on loans to local governments than to central governments and on politically unrelated foreign issues than on issues on behalf of members of the British Commonwealth of Nations, or the Dominions.

The results for dollar bonds suggest, not surprisingly, that Canada, Central America, and Western Europe enjoyed the best reputations. Canada and Western Europe had virtually unblemished records of servicing their foreign debts, whereas the small Central American republics economically or politically dependent on the United States had little choice in the matter.⁵ Conversely, the nations of Eastern Europe were charged the highest risk premiums. These geographical variations suggest bondholder sophistication, since the pattern of realized returns indicates that loans to Eastern Europe were relatively risky and those to Western Europe and Central America were relatively safe. With hindsight, only the risk premium attached to German loans is anomalous. The spreads on loans to Germany, the leading borrower of American funds, were smaller on average than those on loans not only to Eastern Europe and South America but also to Australia and Japan. This is consistent with the warning by the U.S. State and Commerce departments, voiced as early as 1925, that American investors underestimated the risks associated with investing in German bonds (Eichengreen 1989a).

The results for sterling bonds are basically consistent with the hypothesis that bondholders were relatively knowledgeable. The average spread is smaller (1.8 percentage points, compared with 2.6 for the United States), perhaps reflecting the perception that British loans were less risky given their rather different geographical destination. High risk premiums were charged on loans to

the Eastern European countries; Latin America, Greece, and Germany stood in the middle; and the Dominions and Japan enjoyed the lowest costs of borrowing.

In a well-functioning market, investors should take into account current economic policies as well as reputation. It is logical, therefore, that we find for both sterling and dollar bonds some tendency for trade and budget surpluses to have reduced the cost of borrowing. Note, however, that only budget surpluses in the equation for dollar bonds differ significantly from zero at standard confidence levels.

Although absolute statements about the efficiency of a market are always problematic, comparative evaluations are more straightforward. In this case there is no compelling evidence that investors were less discriminating in the 1920s than in the 1970s. Nor is there compelling evidence that either banks or the bond market possess a comparative advantage in the pricing of foreign loans.

Causes of Default

The debt crisis of the 1930s unfolded in three stages (Eichengreen and Portes 1987). The first, spanning calendar 1931, was dominated by Latin American defaults. Interest and amortization payments were at least partially suspended by every South American country except Argentina. During the second stage, from 1932 to the middle of 1933, default spread to Southern and Eastern Europe. The precise amount by which payments were reduced varied across countries, but most countries were affected to some extent. The third stage, which coincided with the Monetary and Economic Conference of 1933, was dominated by Germany's default.

The debt crisis did not have a single cause. Liberal foreign borrowing in the 1920s had increased the debtor countries' vulnerability to external shocks. By 1928 central government debt-to-export ratios in many Latin American countries were over 100 percent, and interest and amortization on this component of the debt alone could require 10 percent of total export receipts (see table 1). Although central government debt-to-export ratios are not representative of the level of total debt, they are the only debt indicators available for a wide range of countries. Where state and local government debts were substantial, the total government debt-to-export ratio could be much higher (Schuker 1988, p. 65). Germany, the largest single foreign borrower, owed reparations as well as commercial debts; in 1928 these two categories required nearly 25 percent of gross export receipts (Harris 1935).

The debtor countries were battered by a series of external shocks that increased their transfer burden and reduced their debt servicing capacity. First was the sudden decline in lending by the United States and other creditor nations. The mounting boom on Wall Street diverted American funds from for-

Table 1. Defaulters' Central Government Debt-to-Export Ratios, for Selected Years, 1929–35
(percent)

Country	1929	1931	1933	1935
<i>Heavy defaulters</i>				
Brazil	153	163	215	127
Bulgaria	263	288	—	416
Chile	102	327	842	573
Colombia	58	101	123	67
Costa Rica	96	130	174	158
El Salvador	106	153	183	157
Germany	7	34	62	42
Greece	415	750	633	474
Guatemala	65	97	162	123
Hungary	124	251	347	256
Poland	135	212	472	355
Uruguay	147	185	212	148
Unweighted average	139	224	311	241
<i>Light defaulters</i>				
Argentina	49	73	113	81
Australia	162	684	621	585
Austria	78	157	310	274
Belgium	87	111	190	240
Canada	44	82	98	107
Czechoslovakia	26	48	119	98
Denmark	45	56	57	54
Finland	52	128	74	51
France	—	—	22	18
Italy	12	17	28	30
Japan	69	132	76	57
New Zealand	278	454	400	350
Nicaragua	30	42	53	46
Norway	107	165	133	118
Spain	43	95	137	157
Venezuela	5	1	1	1
Unweighted average	72	150	152	142

— = not available.

Note: War debts and reparations are excluded for France. Figures for Australia from 1931 include state debts assumed by the federal authorities. Those for Brazil and Chile include selected state and local debts assumed by the federal authorities.

Source: League of Nations (various years).

eign to domestic uses and like a powerful suction pump siphoned off liquidity from the rest of the world. At the beginning of 1928 approximately \$800 million was required to meet foreign debt service payments on dollar debts. Net short- and long-term foreign lending by the United States had exceeded \$1,000 million in 1927 and reached nearly \$700 million in 1928. Thus, despite

the collapse of new lending in the summer of 1928, the funds provided between January and June nearly sufficed to finance that year's dollar debt service costs. In 1929 net short- and long-term lending by the United States turned negative, and the \$800 million bill came due.

There could have been no less opportune time for the collapse of global commodity markets. Exporters of primary commodities had already come under strain. Their terms of trade had been deteriorating steadily throughout the 1920s and plunged with the onset of the Depression. Lewis (1949) provides the sad litany. "From 1929 to 1930 the average price of wheat fell by 19 per cent, cotton 27 per cent, wool 46 per cent, silk 30 per cent, rubber 42 per cent, sugar 20 per cent, coffee 43 per cent, copper 26 per cent, tin 29 per cent; the index of prices of commodities entering world trade fell from 1929 to 1932 by 56 per cent for raw materials, 48 per cent for foodstuffs, and 37 per cent for manufactures" (p. 56). It is these developments that Diaz-Alejandro (1983) and Fishlow (1985) stress as determinants of default. They suggest that the collapse of real export revenues was so severe that countries could avoid default only through the most decisive, concerted action. They argue that the magnitude of the decline in the terms of trade determined whether the necessary steps were still feasible. Argentina and Australia continued to service their debts, for example, because as wheat exporters they were less affected than countries such as Brazil, which exported coffee, or Bolivia, which exported tin.

The effect of the collapse of export prices was reinforced by the contraction of the volume of exports. Between 1929 and 1932, world trade in foodstuffs fell 11 percent, and trade in raw materials dropped 19 percent (Lewis 1949, p. 58).

Analysis of the incidence and extent of default suggests, however, that the "commodity lottery" (Diaz-Alejandro's phrase) was only one of several determining factors. Eichengreen and Portes (1986) report a regression analysis relating the percentage of government and government-guaranteed debt in default (for all levels of government) in the 1930s to a set of country characteristics. These results confirm that sharp declines in commodity prices increased the incidence and extent of default. But in addition, two other sets of variables conditioned debt management strategy. First, the domestic response played an important role. Countries that reined in government budget deficits, through either increased taxes or reduced public spending, were less likely to default. To put it another way, the governments least willing or able to retrench fiscally were least able to avoid default. Second, political aspects of the decision not to suspend debt service payments appear to retain a role, even allowing for economic circumstances. For example, our equation significantly underpredicts Australia's level of debt service. That Australia avoided default on even a portion of its external debt we attribute to its political ties to Great Britain, to which the vast majority of the debt was owed.

This analysis provides a more nuanced picture of the debt servicing decisions of borrowing countries, in which the severity of the external shock, the

vulnerability of the economy, the domestic policy response, and a broader range of political factors combined to influence the decision.

Macroeconomic Repercussions of Default

Efforts to maintain external debt service payments required the compression of imports and current expenditures. A surplus on the noninterest current account of the public authorities was needed to mobilize funds for service of government and government-guaranteed debt. The drop in export revenues and international reserves forced officials to adopt increasingly stringent monetary measures to strengthen the balance of payments. In combination, these policies depressed domestic demand in general and investment demand in particular. In contrast, governments willing to suspend interest payments were better able to adopt monetary and fiscal policies conducive to recovery.

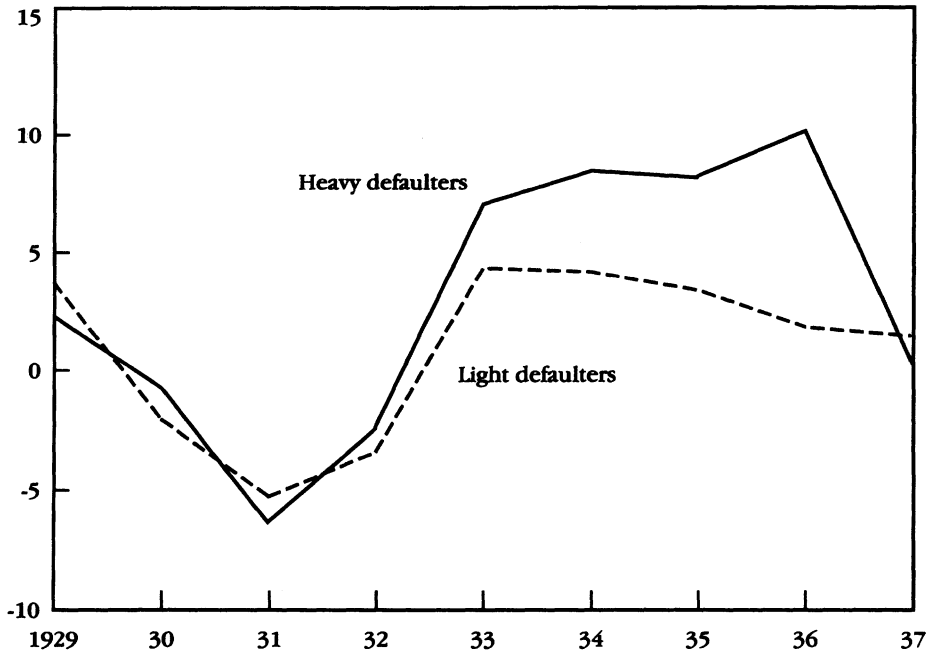
For the 1930s, it is possible to compare the economic performance of countries that adopted very different policies toward external debts (see figures 1 and 2). Both GNP and industrial production appear to have expanded more quickly after 1931 in those countries that were heavy defaulters. This comparison suggests that countries that opted for default recovered more successfully from the ravages of the Great Depression.

There are several reasons to treat the comparison with caution. First, policies influencing growth may have differed across countries in ways that are not directly attributable to different strategies for managing debts. There is also the possibility that because production declined more dramatically before 1931 in defaulting countries, higher levels of unemployment and excess capacity may have offered more scope for output to snap back. Finally, declines in the terms of trade were more severe for the heavy defaulters. Thus any subsequent rebound in the terms of trade also could have induced a more favorable growth performance after default. As shown in figure 3, however, the terms of trade of the heavy defaulters actually recovered less fully than did those of the light defaulters, and except for a short period around 1934, their (lower) terms of trade then generally moved in parallel with those of the light defaulters.

We used regression analysis to control for other factors likely to have affected the growth of industrial production in the 1930s (the analyses are reported in full in Eichengreen and Portes 1989b). For example, we added movements in the terms of trade as an additional determinant of growth performance. In general it appears that countries that suffered more severe external shocks, as measured by movements in their terms of trade, grew more slowly, as one would expect. Countries with larger shares of debt in default still appear to have recovered more quickly in the 1930s even after controlling for this additional determinant of growth.

Of course, there is the possibility that causality ran in the other direction: that growth performance determined the extent of default rather than the other

Figure 1. Rates of Growth of Real National Income, 1929-37
(percent)



Note: Unweighted averages of country data are used. Heavy defaulters: Brazil, Bulgaria, Chile, Colombia, El Salvador, Germany, Greece, Guatemala, Hungary, Poland, and Yugoslavia. Light defaulters: Argentina, Australia, Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Italy, Japan, New Zealand, Nicaragua, Norway, and Spain.

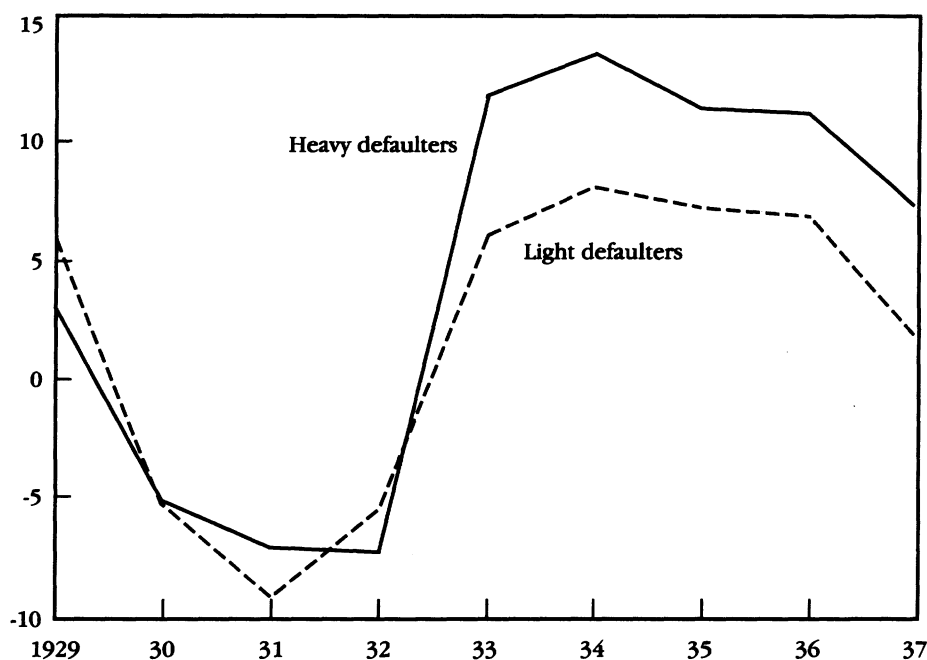
Source: Eichengreen and Portes 1986, pp. 636-37.

way around. But this should only reinforce the conclusions drawn from the analysis. If rapid growth in output makes default less likely, this reduces the probability that we will observe more rapid growth in countries that did default, as in figures 1 and 2. Two-stage least squares regressions intended to control for feedback from growth to default are consistent with the hypothesis that continued debt service led to slower economic growth.

To test the “rubber band effect” (that all we are observing is that countries that suffered the largest declines in output in the early stages of the Depression had the greatest scope for recovery), we related the rate of growth of production over the recovery period (1931–36) to the percentage of debt in default, the percentage change in the terms of trade, and the percentage change in production in the preceding period (1929–31). Although we found evidence of the rubber band effect, it remained true that the rate of growth in the recovery period was positively associated with the percentage of debt in default.

The decision to continue external debt service was only one of a number of policy responses in the 1930s. There was little conscious manipulation of bud-

Figure 2. Rates of Growth of Industrial Production, 1929-37
(percent)

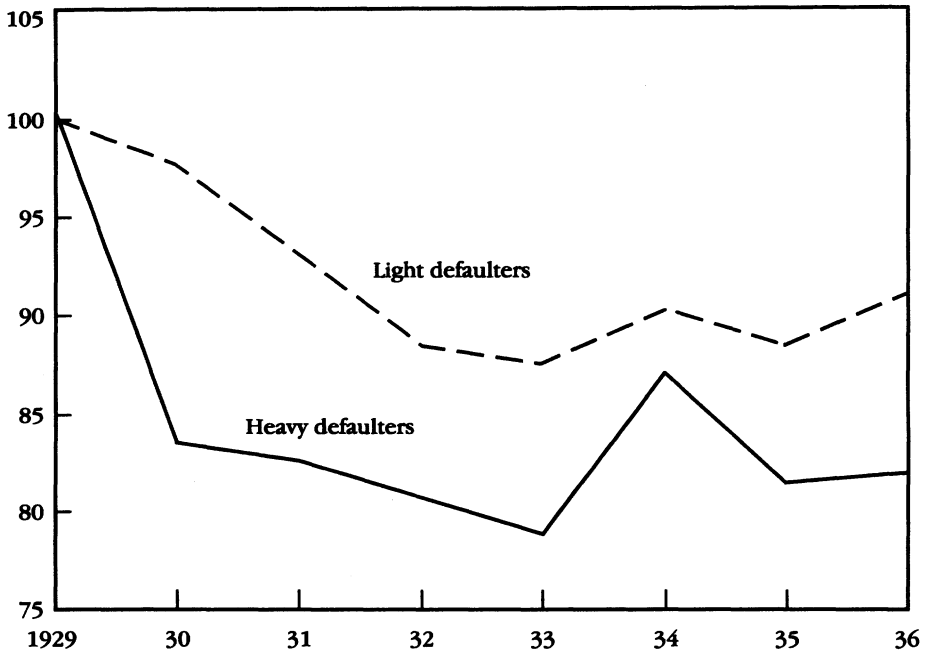


Note: Unweighted averages of country data are used. Heavy defaulters: Brazil, Bulgaria, Chile, Colombia, El Salvador, Germany, Greece, Guatemala, Hungary, Poland, and Yugoslavia. Light defaulters: Argentina, Australia, Austria, Belgium, Czechoslovakia, Denmark, Finland, France, Italy, Japan, New Zealand, Nicaragua, Norway, and Spain.

Source: Eichengreen and Portes 1986, pp. 636-37.

getary instruments, although there were independent expenditure programs that had fiscal effects, such as schemes to stabilize commodity prices and programs of public assistance. Monetary policy was more widely used, although monetary authorities were constrained by fears of inflation, by the desire to defend the gold standard, and by doubts about the effectiveness of monetary reflation. The most widely adopted measures were those referred to as import substitution policies (see Fishlow 1972, Thorp 1984). With the collapse of export markets after 1929, governments adopted policies designed in varying degrees to reduce their dependence on exports and to shift resources to industries that could produce substitutes for imports. To raise the price of exports, exchange rates were devalued, first in Australia and Latin America and subsequently in other parts of the world. Tariffs and quotas, often supplemented by exchange controls, were used to limit imports. In some countries government credit was made available on favorable terms to manufacturers of products that competed with imports. The use of such policies may well have

Figure 3. Index of International Terms of Trade, 1929-36
(1929 = 100)



Note: Heavy defaulters: Brazil, Bulgaria, Chile, Colombia, El Salvador, Germany, Greece, Guatemala, Hungary, Poland, and Yugoslavia. Light defaulters: Argentina, Australia, Belgium, Czechoslovakia, Denmark, Finland, France, Italy, Japan, New Zealand, Nicaragua, Norway, and Spain.

Source: Eichengreen and Portes 1986, pp. 636-37.

been related to the choice of debt management strategy. Countries such as Argentina which continued to service their debts did so by retaining resources in the export sector and by relying on imports for other goods. Other countries, such as Brazil, which reduced or suspended debt service payments, had neither as urgent a need to generate foreign exchange receipts nor as favorable access to certain creditor country markets, and had reason to shift resources to domestic producers.

In an attempt to capture the effects of this range of trade policies, we added to our regressions the import share of GNP as a determinant of the growth rates of income and industrial production. The variable is positively associated with the rate of economic growth, suggesting that countries that most rapidly raised their capacity to import recovered most quickly from the Great Depression. The coefficient on percentage of debt in default continues to indicate that heavy defaulters recovered more quickly from the Depression.

Default and Access to the Capital Market

The immediate way for creditors to retaliate against defaulters was to exclude the debtors from the capital market. From 1825, the London Stock Exchange refused to list new loans of governments in default on outstanding obligations and in extreme instances refused to quote all loans of the offending government. Although New York had no comparable arrangement, it was still possible for individual creditors to refuse to accommodate borrowers in default.

That the capital markets reacted strongly to the defaults of the 1930s is beyond question. For years—in fact decades—the volume of portfolio lending remained depressed. Only in the late 1960s and early 1970s did portfolio capital flows recover as a result of the entry of money center banks into international retail banking. A generation of American and European investors had concluded that purchases of foreign bonds were to be avoided. An official of the U.S. National Association of Manufacturers said in 1949, “After the experience of the thirties and the serious balance of payment difficulties now plaguing most of the world, the superiority of equity over loan financing has, we believe, a universal appeal” (Eichengreen 1989a, p. 137). Few deceived themselves into believing that the risk of nationalization was negligible; that it was thought to be significantly less than the danger of default on foreign portfolio investments is an indication of the scars left by the experience of the 1930s.

But there is scant evidence that defaulting debtors were differentially affected. On the basis of a study of six large Latin American debtors, Jorgensen and Sachs (1989) find no observable capital market penalty in the period 1950–64 for defaults in the 1930s. Lindert and Morton (1989, pp. 63–65) conclude from their study of more than a century of international lending experience that defaulting governments were seldom punished with direct sanctions or discriminatory denial of credit. Eichengreen (1989a) analyzes borrowing by a cross section of thirty-two countries in the first postwar decade, relating foreign borrowing to both demand-side variables (as proxied by country characteristics such as openness, export variability, and inherited debt) and supply-side variables, notably past performance in servicing debt. The results show no apparent relationship between the severity of default and the ability to borrow immediately after World War II.

This is not to deny that lenders were aware of defaults. But the reaction against portfolio investment abroad was general rather than selective. “A general sigh of resolve was to be heard over the United States,” Herbert Feis wrote. “Never again should we lend or invest our money in foreign lands” (Feis 1950, p. 1). American investors, having been rudely reminded of the special risks of foreign loans, revised their assessment of the desirability of lending abroad. The British and others reacted similarly, and they were significantly constrained by controls on capital movements until the end of the 1950s. Hence the market for portfolio investments remained becalmed for more than a third

of a century. Sovereign default may have had costs in the form of disrupting access to capital markets. But many of these costs were external to the defaulting countries and affected the market access of defaulters and nondefaulters alike.

Two caveats to this conclusion are in order. First, the reaction of the capital markets may have been a function of the fact that default was so widespread in the thirties. It therefore led to a comprehensive reassessment of the risks of international lending. Even countries that had kept their debt service up to date suffered loss of access to capital markets. In contrast, in such periods as the 1920s, when the only countries in serious default were Ecuador, Mexico, and the USSR, the market may have been more inclined to focus on the creditworthiness of particular countries and less inclined to reassess the entire enterprise.

Second, the market's tendency to discriminate among countries according to their past record on servicing debt may differ during periods of stagnation and buoyancy. Ozler (1988) suggests that during the boom in bank finance in the 1970s, larger spreads over the risk-free rate were demanded of countries that had defaulted on loans. Still, there is little evidence that defaulters were kept out of the market.

The Settlement Process

Observers of the current debt crisis deplore its protracted nature. Investment and growth remain low, while uncertainty about the resolution of the crisis continues to depress bank share prices and to increase the vulnerability of the money center banks to destabilizing shocks. Often a contrast is drawn with the era of bond finance, when debtors were able to make a clean break with past problems and divert scarce resources to productive domestic uses and creditors were able to get on with their business.

In fact, even in the era of bond finance the readjustment of defaulted debts often entailed protracted renegotiation. Service might be suspended in part or in full, restarted for some years, suspended again, and so forth. Negotiations with the creditors were frequently on-again, off-again, and required as much as a quarter of a century to complete. Bolivia, the first country to default, in 1931, was also the last major debtor to settle, in 1955.

Brazil's experience is illustrative (Abreu 1978, Cardoso and Dornbusch 1989, Eichengreen and Portes 1989c). In October 1931 Brazil suspended interest payments on most of its external debts. In March 1932 the government announced that it would issue twenty- and forty-year bonds to capitalize interest arrears and would resume normal interest payments no later than 1934. But in 1934, on the advice of British financial experts, Brazil announced a plan to readjust the debt. The Aranha Plan, designed to run through 1937, limited debt service to roughly half of Brazil's net export receipts. Bonds were divided into seven

grades, with funding loans and other select obligations to receive full interest, other federal, state, and local loans partial interest (17.5 to 50 percent of contractual levels), and certain state and municipal loans no interest. At the end of 1937, with the external situation little improved, debt service payments were suspended again. In 1940, following sporadic negotiations with its creditors, Brazil announced another temporary, four-year settlement that lowered the interest rates on the seven categories of bonds. Finally, in 1943 Brazil negotiated a permanent agreement with its creditors, giving bondholders the option of choosing between two plans. Under the first, interest rates would be cut by 30 to 70 percent, and under the second, the creditors would surrender 20 to 50 percent of the bond's capital in exchange for a cash payment of 6 to 60 percent of par value and somewhat higher interest rates on the remainder.

Thus, although there may be some truth to the notion that in the era of bond finance debtors were better able to jettison their debts and redirect resources to domestic uses, the extent of the difference should not be exaggerated. The effects of the debt overhang were substantial. Even when payments were in suspension, there was often a real possibility that they would be restarted. Investors in debtor countries had reason to be wary about committing funds to domestic investment on the grounds that officials might tax the returns and devote them to debt service.

The central difficulty for negotiators was the problem created by the existence of a multitude of bondholders. It was even harder than in the era of syndicated bank lending to solicit the opinions of the creditors on a settlement proposal. Yet the British and, after 1933, the Americans came up with a remarkably efficient solution. Committees were appointed to negotiate with the debtor. Bondholders sometimes were asked to lodge their bonds with the committee, other times simply to register as interested investors. Readjustment plans were signaled by the publication of an offer or simply by an announcement that bond covenants were henceforth modified. If the plan was judged to be fair or at least to be the best that could be expected, the committee would recommend its acceptance by the bondholders. The latter signified their approval by cashing a coupon or, when requested, by exchanging the old certificate for a new one. The only option available to dissident bondholders was to hold out for better terms.

The recommendation of a reputable bondholders' committee was the seal of approval on an offer. In Britain, where the Corporation of Foreign Bondholders had been in existence since 1868 and was universally acknowledged to represent the creditors, that recommendation carried considerable weight. When the corporation recommended that an offer be accepted, any stock exchange sanctions could be expected to be withdrawn, and dissident bondholders had little hope of obtaining better terms. In the United States, a comparable organization, the Foreign Bondholders Protective Council, came into operation only in 1934. Before that time, bondholders relied on ad hoc committees created to deal with individual defaults. The ad hoc nature of such committees

tended to inflate administrative expenses, and the existence of rival committees, as well as committees of dubious reputation, made it difficult for both debtors and creditors to determine who best represented the interests of the bondholders.

Terms of Settlement

In some cases default led to a substantial reduction in net resource transfers from debtors to creditors (Lindert and Morton 1989, Jorgensen and Sachs 1989, and Eichengreen and Portes 1986, 1989a). Based on two large samples of foreign bonds issued between 1920 and 1929, Eichengreen and Portes (1989a) calculated the nominal own-currency internal rate of return on more than 300 issues (see table 2). For dollar bonds, at one extreme the return marginally exceeded the contractual rate—as in the cases of Norway and Canada—because of early debt retirement. At the other extreme, the internal rate of return reached levels as low as -7.4 percent for Brazil, -9.8 percent for Bolivia, and -14.8 percent for Hungary, indicating that not just interest but a substantial fraction of the principal had been written off by the creditors.

On average, however, both British and American investors recovered their principal. For creditors with diversified foreign bond portfolios who were willing to hold out for final settlement, the defaults of the 1930s were not as disastrous as typically portrayed. The average nominal internal rate of return (weighted by issue value) was roughly 4 percent on dollar bonds and about

Table 2. Rates of Return on Overseas Bonds Issued in the 1920s, by Region
(percent)

<i>Location of borrower</i>	<i>Dollar bonds</i>	<i>Sterling bonds</i>
Central America	1.46	—
South America	3.50	1.44
Germany	1.12	3.61
Other Western Europe	4.83	4.81
Eastern Europe	2.04	1.45
Canada	5.08	5.18
Australia	5.97	5.26
Japan	6.20	5.30
Other Asia	—	5.92
Africa	—	5.62

— = not available.

Note: Rates of return on sterling bonds are calculated on the assumption that repurchases occurred at market prices. Returns on dollar bonds use market price or par retirements as specified in the bond covenants.

Source: Based on samples of 207 dollar bonds and 125 sterling bonds issued between 1920 and 1929 (Eichengreen and Portes 1989a).

5 percent for sterling issues. Although dollar bondholders settled for approximately half of the contractual interest and sterling bondholders settled for only slightly more, on balance the former did only slightly worse than if they had held U.S. Treasury bonds, and the latter did slightly better. Thus risk premiums were nearly sufficient to compensate American bondholders for the risks of foreign lending, and for British bondholders they more than sufficed.

Three factors contributed to the rather different experiences of investors in dollar and sterling bonds. First, loans to different categories of debtors fared very differently in the 1930s and 1940s. For both sterling and dollar issues, loans to national governments yielded higher returns than loans to states and municipalities; returns on loans to states and municipalities in turn were higher than those on loans to foreign corporations. And American investors purchased a disproportionate share of the speculative bonds issued on behalf of foreign municipalities and corporations. Second, London and New York channeled funds in different geographical directions. London specialized in new overseas issues on behalf of the Commonwealth, and it devoted a smaller share of capital to loans to Latin America and Central Europe. It is difficult to assess the extent to which London's behavior is attributable to the sophistication of a more experienced market, to longstanding political and financial ties with the Commonwealth, to preferential British tax treatment of colonial issues, or to the Bank of England's intermittent embargoes on foreign issues. But the combined result of these factors was a significantly lower incidence of default on sterling than on dollar issues.

This difference, however, does not by itself account for international differences in rates of return. British creditors also recovered from defaults more successfully. For the bonds in our sample, the average default on a dollar issue cost the creditors more than four percentage points on the rate of return, whereas the average default on sterling issues cost them only about two percentage points. Part of the difference may be attributable to the greater effectiveness of the British Corporation of Foreign Bondholders; part may also be attributable to the different positions taken by the British and American governments (see Eichengreen and Portes 1989a).

Government Intervention

One might think that in the 1930s and 1940s, when banks held only a small share of their portfolios in foreign bonds and hence were not at risk in the event of foreign default, creditor governments might have felt less compulsion to intervene (Eichengreen and Portes 1987, pp. 23–24). This view is supported by the tendency of British officials between the wars to cite the remarks of their well-known nineteenth-century predecessors to the effect that the British government was not a debt collector. American officials also argued that the higher returns on foreign loans represented an implicit acknowledgment of and

compensation for the special risks of lending abroad, and that investors had no justification for seeking assistance.

Governments were in fact intimately involved in debt readjustments in the 1930s, though the British were more willing to intervene than the Americans. The British used the Ottawa Agreements of 1932, which provided preferential British market access to the Commonwealth and Empire at the expense of foreign exporters, to secure favorable treatment of Argentina's sterling debts, in return for tariff preferences under the provisions of the 1933 Roca-Runciman Treaty (see Abreu 1984). The Americans were more reluctant to link trade and debt, especially once President Franklin D. Roosevelt was converted to the arguments of Secretary of State Cordell Hull, and the United States began to move toward freer trade with the adoption of the Reciprocal Trade Agreements Act in 1934. The links between U.S. Export-Import Bank loans and commercial debts varied over time. On some occasions the United States extended Eximbank loans despite the existence of unsettled defaults; on others officials made it clear that Eximbank decisions might be torpedoed by Congress unless progress was made on the debt. Britain and several European governments, however, threatened to block Germany's foreign exchange earnings after its default in 1933, prompting Germany to resume partial or full debt service on its European bonds. The United States declined to adopt a similar stance, and no significant interest was paid to Germany's American creditors for the remainder of the decade. Until the outbreak of World War II, government intervention in trade and finance was limited largely to instances in which public officials had actively promoted the original issues (as in the case of Germany's Dawes and Young Plan loans) or in which the debtor discriminated against one class of national creditors in favor of others.

With the approach of the war, pressure was applied to creditors as well as debtors; governments sometimes intervened directly in negotiations if they felt that progress was inadequate. A favorable settlement for the creditors was not viewed as a high priority relative to international trade concessions and international security agreements. Creditors were urged to settle, in no uncertain terms, if their obstinacy stood in the way of these goals.

Global Plans

In addition to bilateral negotiations, officials in the 1930s suggested calling on the newly established Bank for International Settlements (BIS) to readjust defaulted debts. Other observers advocated an independent facility under the control of private creditors or proposed converting existing debts into new obligations, not unlike the debt-equity swaps and seniority provisions so fashionable today. Still others emphasized the need to index payments to export revenues or to service the debt in local currency (compare Dornbusch 1988).

Four global initiatives can be distinguished (Eichengreen 1989b). The first proposed to endow the BIS with the resources needed to resolve the crisis. The BIS had been established in 1930 as part of the Young Plan rescheduling of German reparations; it was logical to propose that it might also take charge of other debt problems. Hubert Henderson, a highly placed British government economic adviser, suggested that the BIS issue unbacked International Certificates to exporting countries to finance debt service payments and other economic needs.

The second scheme, the 1931 Kindersley-Norman Plan, named after two officials of the Bank of England, proposed establishing a new international facility to make loans to countries and corporations unable to obtain them through normal channels. This new international entity was to be capitalized by the leading creditor governments and further financed through the sale of bonds to private investors. The agency would extend new loans to indebted countries unable to obtain them in the market, "reestablishing the credit of the foreign Governments, corporations, etc., to whom the money is lent . . . improving the price of their securities . . . and the purchasing power of their nationals" (Eichengreen 1989b). Like a mutual fund, it would in effect resell packages of these claims to private investors in the creditor countries.

A third scheme, the Beyen and Crena de Jongh plans, offered by two Dutch bankers at the Standstill Conference in 1931–32, addressed the problem of short-term debt. Beyen proposed that short-term debts frozen by debtor governments be converted into long-term obligations repayable in installments over as long as twenty years. Debtors without enough foreign exchange to meet their current obligations might be permitted to make payments in local currency and to extend preferential treatment to creditor countries that were their best export customers. Crena de Jongh took the idea of payments in domestic currency a step further. He proposed a central administrator to issue foreign currency-denominated bonds; the administrator would accept repayment of short-term obligations in domestic currency, invest the currency at home, and pay the creditors out of the proceeds.

Finally, a variety of proposals were mooted during the preparatory meetings that preceded the World Economic Conference of 1933. In a series of meetings with U.S. officials, Britain proposed a \$2,000 million "normalization fund" provided by creditor governments to channel capital to countries that needed foreign funds for debt service and other purposes. Representatives of the debtor countries endorsed variants of the plan.

It is a pessimistic commentary on the global plans under consideration in the 1980s that none of their predecessors bore fruit. Implementing those schemes would have required a serious commitment on the part of the creditor governments. But at each juncture domestic problems diverted their attention from the international debt crisis. In 1931 Britain was battling increasingly intense balance of payments difficulties, which ultimately forced it to abandon the gold standard in September of that year. In 1933 the Roosevelt

administration devalued the dollar and rejected international policy coordination precisely when the World Economic Conference was poised to take up the debt problem. As a result, that conference limited its efforts to addressing the increasingly turbulent exchange rate situation.

Even when governments and banks were willing to entertain the possibility of an international debt facility, there remained insoluble problems of finance and control. Under the provisions of the Kindersley-Norman Plan, for example, the bulk of new finance was supposed to come from private investors. But large investors such as J. P. Morgan and Co. were unwilling to contribute unless control of the new organization was in private hands. For their part, governments insisted that control be allocated according to the nationality of the finance. In 1931, for example, the Bank of France insisted that it should have control on the grounds that Paris was the largest single contributor to the fund.

Finally, there were debilitating disputes over what countries and what obligations to include. At the World Economic Conference, Washington declared all discussion of war debts off limits. The realization that war debt relief was unlikely to be forthcoming weakened the resolve of the Europeans, who would have preferred to discuss the whole interlocking set of debts.

Market Solutions

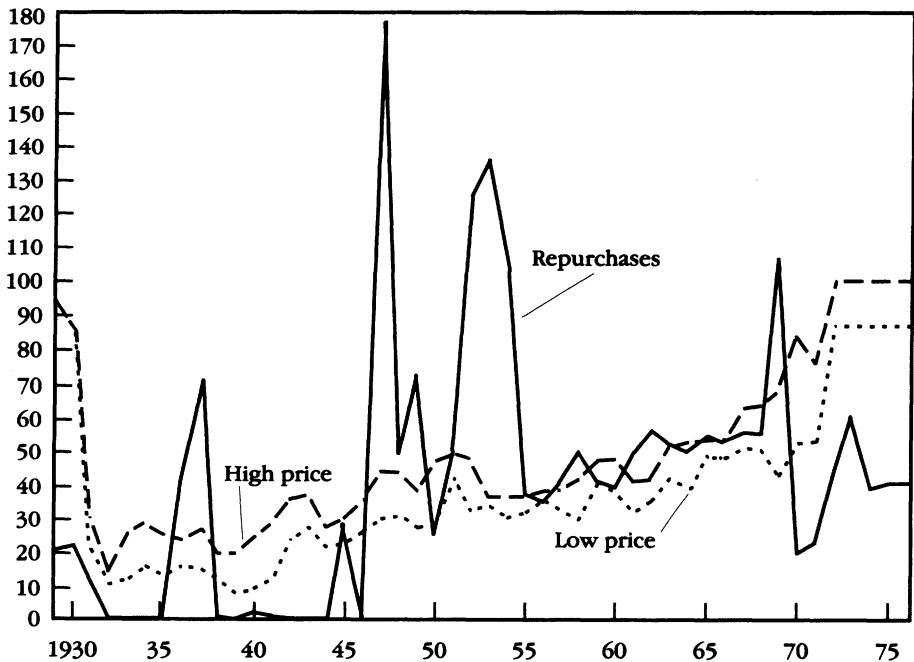
In contrast to global plans, repurchases by the issuer of bonds on the market, often at prices substantially below par, made a useful contribution to the resolution of the debt crisis. Critics argue that buybacks out of reserves may leave the debtor worse off: when bonds are repurchased, the price of the remaining debt may rise if the country's overall debt servicing capacity is unchanged. Thus the overall value of debt may be unchanged, whereas reserves have been depleted. This position is difficult to reconcile with the preference of debtor governments, many of which opted for bond repurchases. In 1939 the Foreign Bondholders Protective Council estimated that twelve countries in default had repatriated between 15 and 50 percent of their bonds since the beginning of the decade. Jorgensen and Sachs (1989) estimate that Bolivia repurchased 5 percent of its defaulted debt at an average price of 16 cents on the dollar, Chile retired 18 percent at 59, Colombia 22 percent at 22, and Peru 31 percent at 21.

Buybacks were controversial. Dornbusch (1988) points to creditors' opposition, while Skiles (1988) notes that "because creditors objected so strenuously to the practice, most of these bond repurchases were carried out through intermediaries" (p. 33). Another interpretation of the use of intermediaries is that debtors wished to avoid driving up bond prices by signaling their policy through a first-person appearance in the market. But the time-series behavior of bond prices suggests little systematic reaction to repurchases of securities in default. There is scant evidence that debtors sought to depress prices immedi-

ately before repurchases, or that buybacks had a major impact on price trends. Figure 4, for example, shows high and low market prices for a sterling loan issued by the Chilean government in the 1920s, along with estimates of the volume of repurchases of bonds (valued at face value). The data for a variety of other bonds are similar. The Chilean example is interesting since the country was one of the first to engage in extensive buybacks and was heavily criticized by creditors. Buybacks in the late 1930s, late 1940s, and early 1950s were not preceded by unusual declines in bond prices, nor did they result in major price increases, although in the 1930s and 1940s there was some upward movement in prices.

The private attitude of the bondholders' committees toward repurchases differed significantly from their public position on the question (Eichengreen and Portes 1989c). In public they complained that any available foreign exchange should be allocated to the resumption of debt service and repayment of principal rather than to repurchases of defaulted bonds at a discount. They objected to the potential for debtors to manipulate bond prices by declaring their

Figure 4. Repurchases and Market Prices for a Sterling Bond Issued by Chile in the 1920s, 1929-75
(thousands of pounds sterling)



Note: Repurchases are quantity times face value. Calculations on the quantity of buybacks are based on figures in Council of the Corporation of Foreign Bondholders (various years) on the face value of issues still outstanding.

inability to service their debts and then to turn around and retire the debt as soon as the prices fell. In private, though, the committees were much more receptive to repurchases, especially if they were accompanied by the resumption of at least partial debt service payments and when it was apparent that the creditors were unlikely to receive a better offer.

Numerous examples can be cited. In December 1936, following Chile's decision to limit repayments and interest, representatives of U.S. bondholders refused to accept the reduced interest payments that had been deposited in New York. Chile then borrowed from Schroeders in London on this security in order to purchase bonds in the market. The Council of the Corporation of Foreign Bondholders (various years; dates of minutes serve to locate references) did not object; its minutes for December 17, 1936, note that "the Finance Minister so far has obtained and used \$4 million for purchases." As part of the 1940 temporary settlement recommended by the council, the minutes of March 14, 1940, report that the Brazilian authorities devoted "at least \$400,000 in each of four years" to purchases in the English market. In the 1941 Colombian negotiations, the council was asked to agree that all the sterling debt be repurchased in the market. Although it objected to the "disastrous precedent" that might be set, its members admitted on December 14 that "we have long become acclimatized to the idea of a debtor being allowed to devote some sums to amortization, provided that he is paying an agreed percentage on the principal of his debt." Typically, the bondholders argued that purchases below par should take place only if at least partial service was being paid. Thus on May 31, 1944, the council decided "to refuse to consider a settlement of the Ecuadorean debt by means of a purchase offer at below par" unless at the same time the bondholders were offered an option of partial service on the debt.

Perhaps the most revealing exchange surrounded the 1937 hearings of the U.S. Securities and Exchange Commission investigation into defaulted bonds (U.S. Securities and Exchange Commission 1937). The commission had recommended that in order to curb the repatriation of bonds by defaulters, measures be introduced to restrain bankers and brokers from dealing on behalf of governments in default. The Council of the Corporation of Foreign Bondholders, meeting on May 31, 1937, noted that such restraints on repurchases would be met with "strong and . . . effective criticism on the ground that, by limiting the market in such bonds, it would act detrimentally to the bondholders."

Conclusion

The debt crisis of the 1930s sheds light on a number of aspects of the current debt situation. It highlights the advantage, from the viewpoint of financial sta-

bility, of dispersing foreign obligations across large numbers of private investors rather than concentrating them in the hands of financially vulnerable commercial banks. While reminding us of the sophistication of the bond market, it shows that bondholders historically have been no more adept than banks in avoiding loans to countries with a repeated tendency to default. It alerts us to the central role creditor governments can play in promoting or impeding a negotiated resolution of the crisis. Finally, it reminds us of the serious obstacles to the implementation of any global plan for resolving the debt crisis and underscores the useful contribution to resolution offered by market-based debt reduction schemes.

Notes

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1. For Britain we constructed estimates for all 125 overseas bonds offered for subscription and listed by the *Stock Exchange Yearbook*, whereas for the United States we drew a stratified sample of 250 foreign bonds from the list of more than 1,400 such bonds published in U.S. Department of Commerce (various years). After adjusting for the actual price paid by the purchaser, we then tracked interest and amortization payments until the bond issue was extinguished and calculated the nominal own-currency internal rate of return (see Eichengreen and Portes 1988). The number of bonds included in the regression analysis was limited by the availability of explanatory variables.

2. Edwards's results for bank loans also are basically consistent with these results. In addition, see Ozler (1988), who finds evidence that spreads decline with the amount of time the borrower has been in the market.

3. In an analysis using different data (see Eichengreen 1989a) there was some apparent tendency of the spread to rise over the course of the 1920s, suggesting that investors recognized the increasingly risky nature of foreign loans.

4. Only the coefficient on loans to corporations differs significantly from that on national government loans, however.

5. Under the provisions of the Hay-Bunau Varilla Treaty of 1904, the U.S. government was permitted to supervise the expenditure of Panamanian government loans placed in the United States. The Platt Amendment gave Washington the right to object to "improvident or otherwise objectionable fiscal policy" in Cuba. The Dominican Republic was under U.S. military administration until 1924, and after that the United States retained the right to object to changes in tariffs and public debt. Haiti was under U.S. martial law from 1916 to 1931 (Angell 1933, pp. 8–27).

Appendix Table 1. Relation of Loan Spreads to Loan Characteristics, 1921–29

Category	Dollar bonds coefficient		Sterling bonds coefficient	
<i>Economic indicator</i>				
Debt-to-export ratio	-0.07	(0.24)	0.0007	(0.0007)
Trade surplus	-0.20	(0.25)	-0.56	(0.40)
Budget surplus	-0.80	(0.40)	-0.12	(0.41)
<i>Kind of borrower</i>				
Municipal	0.11	(0.18)	n.a.	n.a.
State	0.07	(0.17)	n.a.	n.a.
Corporate	0.76	(0.16)	n.a.	n.a.
National bank	0.04	(0.34)	n.a.	n.a.
Other bank	0.14	(0.28)	n.a.	n.a.
Dominion central government ^a	n.a.	n.a.	-1.52	(0.38)
Dominion local government ^a	n.a.	n.a.	-1.25	(0.69)
Foreign corporate stocks	n.a.	n.a.	-0.45	(0.25)
<i>Year of issue</i>				
1921	-0.12	(0.26)	n.a.	n.a.
1922	0.04	(0.25)	n.a.	n.a.
1923	-0.01	(0.36)	n.a.	n.a.
1924	0.17	(0.29)	0.18	(0.48)
1925	0.19	(0.27)	0.39	(0.52)
1926	0.40	(0.26)	0.09	(0.44)
1927	0.38	(0.26)	-0.01	(0.45)
1928	0.07	(0.27)	0.22	(0.45)
1929	0.06	(0.28)	0.20	(0.48)
<i>Location of borrower</i>				
Western Europe	-0.73	(0.18)	0.33	(0.26)
Eastern Europe	1.21	(0.26)	1.15	(0.33)
Canada	-1.38	(0.19)	-0.69	(0.85)
Central America	-0.79	(0.29)	n.a.	n.a.
South America	0.50	(0.21)	0.38	(0.67)
Japan	0.05	(0.36)	-0.03	(0.38)
Australia	-0.91	(0.45)	-0.29	(0.67)
Econometric constant	2.61	(0.31)	1.97	(0.46)

n.a. = not applicable.

Note: A spread is the difference between the projected yields of a bond or loan at time of purchase and the projected yield of a risk-free loan. Figures in parentheses are standard errors of the estimates. Dependent variable is spread. For dollar bonds 1920 is the omitted year; for sterling bonds 1923 is omitted. The omitted country is Germany; the omitted category of borrower is national government. For dollar bonds, the R-squared is 0.69, the standard error of regression is 0.00654, and the number of observations is 207. For sterling bonds, the R-squared is 0.91, the standard error of regression is 0.3876, and the number of observations is 43.

a. Dominion borrowers are self-governing member countries of the British Commonwealth of Nations.
Source: Authors.

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