Sovereign Defaults and Debt Restructurings: Historical Overview

Debt crises and defaults by sovereigns—city-states, kingdoms, and empires—are as old as sovereign borrowing itself. The first recorded default goes back at least to the fourth century B.C., when ten out of thirteen Greek municipalities in the Attic Maritime Association defaulted on loans from the Delos Temple (Winkler 1933). Most fiscal crises of European antiquity, however, seem to have been resolved through "currency debasement"—namely, inflations or devaluations—rather than debt restructurings. Defaults cum debt restructurings picked up in the modern era, beginning with defaults in France, Spain, and Portugal in the mid-sixteenth centuries. Other European states followed in the seventeenth century, including Prussia in 1683, though France and Spain remained the leading defaulters, with a total of eight defaults and six defaults, respectively, between the sixteenth and the end of the eighteenth centuries (Reinhart, Rogoff, and Savastano 2003).

Only in the nineteenth century, however, did debt crises, defaults, and debt restructurings—defined as changes in the originally envisaged debt service payments, either after a default or under the threat of default—explode in terms of both numbers and geographical incidence. This was the by-product of increasing cross-border debt flows, newly independent governments, and the development of modern financial markets. In what follows, we begin with an overview of the main default and debt restructuring episodes of the last two hundred years. We next turn to the history of how debt crises were resolved. We end with a brief review of the creditor experience with sovereign debt since the 1850s.

Boom-Bust Cycles, Defaults, and Reschedulings, 1820–2003

There have been hundreds of defaults and debt restructurings involving privately held sovereign debt since the early nineteenth century.²

In some cases, these were a reflection of the tumultuous political history of the period: the by-product of wars, revolutions, or civil conflicts that made debtor governments unwilling or unable to pay. For example, Turkey, Bulgaria, and Austria-Hungary suspended debt payments to enemy country creditors at the beginning of World War I; Italy, Turkey, and Japan did the same at the beginning of World War II. Mexico (1914), Russia (1917), China (1949), Czechoslovakia (1952), and Cuba (1960) repudiated their debts after revolutions or communist takeovers.³ Some countries, such as Austria (1802, 1868) and Russia (1839), defaulted after losing wars; others, such as Spain (1831) and China (1921), defaulted after enduring major civil wars. In some of these cases—particularly revolutions and civil wars—economic causes may well have played an important role in triggering the political events that in turn led to a default. However, the defaults or repudiations were sideshows compared with the political and social upheavals with which they were associated, and any economic causes were largely domestic in origin.

As it turns out, the majority of defaults and debt restructurings involving private debtors that have occurred since the early nineteenth century—including almost all that were experienced since the late 1970s—do *not*, in fact, belong to this category, but reflect more subtle interactions between domestic economic policies and shocks to the economy, including changes in the external environment and sometimes, though not always, political shocks. In the remainder of the chapter, we concentrate on this class.

The striking fact about these defaults is that they are bunched in temporal and sometimes regional clusters, which correspond to boombust cycles in international capital flows. Based on Lindert and Morton (1989), Marichal (1989), and Suter (1989, 1992), one can distinguish eight lending booms since the early nineteenth century: (1) in the early 1820s, to the newly independent Latin American countries and some European countries; (2) in the 1830s, to the United States, Spain, and Portugal; (3) from the 1860s to the mid-1870s, to Latin America, the United States, European countries, the Ottoman Empire, and Egypt; (4) in the mid- to late 1880s, to the United States, Australia, and Latin America; (5) in the decade prior to World War I, to Canada, Australia, South Africa, Russia, the Ottoman Empire, the Balkan countries, and some Latin American countries; (6) in the 1920s, to Germany, Japan, Australia, Canada, Argentina, Brazil, and Cuba; (7) in the 1970s, to Latin America, Spain, Yugoslavia, Romania, Poland, Turkey, Egypt,

and Indonesia, as well as some African countries; (8) in the 1990s, to Latin America, emerging Asia, and former Communist countries in eastern Europe. The main sources of these capital flows were the United Kingdom and France in the nineteenth century; the United Kingdom, France, Germany, the Netherlands, and the United States in the early twentieth century; the United States and the United Kingdom in the interwar period; the United States and some western European countries in the 1970s; and the United States, western Europe, and Japan in the 1990s.

The origins of these lending booms varied. Several were initiated by political change that created a demand for capital or opened new investment opportunities. For example, the 1820s boom was triggered by the end of the Napoleonic wars in Europe and the emergence of the newly independent countries of Latin America; the 1920s boom was triggered by the end of World War I and the financing of German reparations; flows to Africa in the 1960s and 1970s were triggered by African decolonization and independence; and a portion of the 1990s boom was triggered by the collapse of Communism. On other occasions, new lending booms were driven by economic changes in the debtor countries—sometimes resulting from technical progress, sometimes from reform or stabilization policies, and sometimes from improvements in the terms of trade. For example, the lending booms of the nineteenth century were largely directed to infrastructure investments, particularly railway construction, and they often accompanied booms in commodity exports. The boom of the 1990s was in some part a reaction to economic reforms in debtor countries that appeared to usher in a new era of growth. In such cases, new booms set in soon after the defaults that had accompanied the preceding bust had been cleared up.

Cycles in economic growth and private savings, and changes in the financial systems and lender liquidity in *creditor* countries also played an important role. For example, the 1970s boom in bank lending to developing countries originated in the 1960s, when U.S. banks lost a portion of their domestic business to corporate debt markets and began to look for lending alternatives abroad. This incipient boom received a boost after the oil price shocks of 1973–1974 led to high oil earnings in search of investments (Beim and Calomiris 2001). Easy monetary conditions in the United States and Europe contributed to the latest boom in emerging market lending that began in the second half of 2003 (IMF 2005d).

All lending booms so far have ended in busts in which some of the beneficiaries of the preceding debt inflows defaulted or rescheduled their debts. Busts were usually triggered by at least one of the following factors: (1) a deterioration of the terms of trade of debtor countries; (2) a recession in the core countries that were the providers of capital; (3) a rise in international borrowing costs driven by events in creditor countries, such as tighter monetary policy; and (4) a crisis in a major debtor country, transmitted internationally through financial and trade linkages. For example, the 1830s boom ended after a collapse in cotton prices that decimated the export earnings of southern U.S. states and tighter credit in England, which led to an outflow of gold, a fall in the price level, and higher real debt levels (English 1996). Terms of trade deteriorations also played an important role on several other occasions in the nineteenth century (e.g., the collapse of guano prices due to the rise of artificial fertilizers in the 1870s) as well as the 1930s, when commodity prices fell across the board, and the 1990s, when sharply lower oil prices contributed to debt servicing difficulties in Russia. The 1890s bust was triggered when mounting doubts about Argentina's macroeconomic sustainability led to the collapse of Baring Brothers, a London bank that had underwritten an Argentine bond that the market was unwilling to absorb; this was followed by a sudden stop in lending to Latin America (Fishlow 1985, 1989). The main cause of the 1930s bust was the collapse of commodity prices in the late 1920s and the Great Depression in the United States (Kindleberger 1973). Following a period of overlending to developing countries in the 1970s, the 1980s debt crisis was triggered by sharply higher interest rates in the United States and the ensuing 1980-1984 U.S. recession (Sachs 1989; Cline 1995; Easterly 2001). Finally, the 1990s bust was a result of contagion from the 1998 Russian default, which led to a sharp increase in emerging markets borrowing costs.

As table 1.1 shows, each bust was associated with a cluster of default cases: in the late 1820s, the 1870s, the 1890s, just before and during World War I, the 1930s, the 1980s, and 1998–2004. (The only boom phase whose default counterpart is not recorded in the table is the 1830s boom, which led to defaults only at the U.S. state level. See English 1996.) Of the default clusters shown, the 1980s default wave affected bank loans, while all others involved mainly sovereign bonds. Obviously, only a subset of the countries that had borrowed during a preceding lending boom defaulted during each bust, depending on their overall indebtedness, the uses of the debt during the preceding

Table 1.1Selected government defaults and restructurings of privately held bonds and loans, 1820–2004

| | Default or restructuring clusters | | | | | | | |
|-----------------------|-----------------------------------|---------------|---------------|-------------------|--------------------|---------------|---------------|--|
| | 1824- 1834 | 1867– 1882 | 1890- 1900 | 1911- 1921 | 1931- 1940 | 1976– 1989 | 1998- 2004 | |
| Europe | | | | | | | | |
| Austria | | 1868 | | 1914 | 1932 | | | |
| Bulgaria | | | | 1915 | 1932 | | | |
| Greece | 1824 | | 1893 | | | | | |
| Germany | | | | | 1932 | | | |
| Hungary | | | | | 1931 | | | |
| Italy | | | | | 1940 | | | |
| Moldova | | | | | | | 2002 | |
| Poland | | | | | 1936 | 1981 | | |
| Portugal | 1834 | | 1892 | | | | | |
| Romania | | | | 1915 | 1933 | 1981 | | |
| Russiaa | | | | 1917 | | | 1998 | |
| Serbia/ Yugoslavia | | | 1895 | | 1933 | 1983 | | |
| Spain ^a | 1831 | 1867, 1882 | | | | | | |
| Turkey | | 1876 | | 1915 | 1940 | 1978 | | |
| Ukraine | | | | | | | 1998, 2000 | |
| Latin America and | l Caribbear | 1 | | | | | | |
| Argentina | 1830 | | 1890 | 1915 ^b | 1930s ^b | 1982 | 2001 | |
| Bolivia | | 1874 | | | 1931 | 1980 | | |
| Brazil | 1826 | | 1898 | 1914 | 1931 | 1983 | | |
| Chile | 1826 | 1880 | | | 1931 | 1983 | | |
| Colombia | 1826 | 1879 | 1900 | | 1932 | | | |
| Costa Rica | 1827 | 1874 | 1895 | | 1937 | 1983 | | |
| Cuba | | | | | 1933 | 1982 | | |
| Dominica | | | | | | | 2003 | |
| Dominican Republic | | 1869 | 1899 | | 1931 | 1982 | | |
| Ecuador | 1832 | 1868 | | 1911, 1914 | 1931 | 1982 | 1999 | |
| El Salvador | 1827 | | | 1921 | 1931 | | | |
| Grenada | | | | | | | 2004 | |
| Guatemala | 1828 | 1876 | 1894 | | 1933 | | | |

Table 1.1 (continued)

| | Default or restructuring clusters | | | | | | | |
|---------------------|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| | 1824– 1834 | 1867- 1882 | 1890- 1900 | 1911– 1921 | 1931- 1940 | 1976– 1989 | 1998– 2004 | |
| Honduras | 1827 | 1873 | | 1914 | | 1981 | | |
| Mexico ^a | 1827 | 1867 | | 1914 | | 1982 | | |
| Nicaragua | 1828 | | 1894 | 1911 | 1932 | 1980 | | |
| Panama | | | | | 1932 | 1982 | | |
| Paraguay | 1827 | 1874 | 1892 | 1920 | 1932 | 1986 | 2003 | |
| Peru | 1826 | 1876 | | | 1931 | 1978, 1983 | | |
| Uruguay | | 1876 | 1891 | 1915 | 1933 | 1983 | 2003 | |
| Venezuelaª | 1832 | 1878 | 1892, 1898 | | | 1982 | | |
| Africa | | | | | | | | |
| Angola | | | | | | 1988 | | |
| Cameroon | | | | | | 1989 | | |
| Congo | | | | | | 1986 | | |
| Côte d'Ivoire | | | | | | 1984 | 2001 | |
| Egypt | | 1876 | | | | 1984 | | |
| Gabon | | | | | | 1986 | 1999, 2002 | |
| Gambia | | | | | | 1986 | | |
| Liberia | | 1874 | | 1912 | | 1980 | | |
| Madagascar | | | | | | 1981 | | |
| Malawi | | | | | | 1982 | | |
| Morocco | | | | | | 1983 | | |
| Mozambique | | | | | | 1984 | | |
| Niger | | | | | | 1983 | | |
| Nigeria | | | | | | 1983 | | |
| Senegal | | | | | | 1981 | | |
| Seychelles | | | | | | | 2002 | |
| Sierra Leone | | | | | | 1977 | | |
| South Africa | | | | | | 1985 | | |
| Sudan | | | | | | 1979 | | |
| Tanzania | | | | | | 1984 | | |
| Togo | | | | | | 1979 | | |
| Uganda | | | | | | 1981 | | |
| Zaire | | | | | | 1976 | | |
| Zambia | | | | | | 1983 | | |

Table 1.1 (continued)

| | Default or restructuring clusters | | | | | | | |
|----------------|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|--|
| | 1824- 1834 | 1867– 1882 | 1890– 1900 | 1911– 1921 | 1931– 1940 | 1976– 1989 | 1998– 2004 | |
| Asia and Middl | e East | | | | | | | |
| Indonesia | | | | | | | 1999 | |
| Jordan | | | | | | 1989 | | |
| Philippines | | | | | | 1983 | | |
| Pakistan | | | | | | 1981 | 1999 | |
| Vietnam | | | | | | 1985 | | |

Sources: Lindert and Morton (1989), Beim and Calomiris (2001), and Standard & Poor; news reports.

Notes: Cases shown are defaults and/or debt restructurings (including reschedulings) in distressed circumstances, involving external creditors. Defaults triggered by wars, revolutions, occupations, and state disintegrations are generally excluded, except when they coincide with a default cluster. Payment delays and other technical defaults that eventually resulted in full repayment are also generally excluded. Unless otherwise noted, all restructurings and defaults refer to federal or central government obligations; in particular, defaults of U.S. states in the 1840s are not shown. In the event of a sequence of debt reschedulings, the year listed refers to the initial rescheduling.

boom period, political and fiscal institutions, the magnitude of the shocks suffered, and so on. The defaults in the nineteenth century were concentrated mainly in Latin America as well as a handful of countries in the European periphery, those in the 1930s in Europe and Latin America, and those in the 1980s in Latin America and Africa.

Several interesting facts emerge from the table. First, many countries and regions—even some that received substantial debt inflows—never defaulted. This includes the United States at the federal level, Canada, Australia, South Africa (except for an episode related to sanctions in 1985), most Asian countries, and most Arab countries. Second, most Latin American countries defaulted repeatedly, and Latin America as a region is represented in all default waves since the 1820s. Third, some countries appear to "graduate" from repeated defaults. No western European country has defaulted since the interwar period. Among the Latin American countries, Argentina, Ecuador, and Uruguay defaulted in the most recent wave as well as most previous waves (though Argentina is notable for not defaulting in the 1930s, at least at the federal level). Most Latin American countries, however, defaulted

^a Russia also defaulted in 1839, Spain in 1820 and 1851, Venezuela in 1847 and 1864, and Mexico in 1859.

^bDefault at provincial/state level only.

for the last time in the 1980s, and some, notably Colombia, have not defaulted since the 1930s. Fourth, among the seven default clusters shown in the table, two—the 1930–1940s, and particularly the 1980s—are outliers in the sense that many more countries defaulted than in the other clusters. The 1930s prove to be a testimony to the depth and reach of the Great Depression, the worst global financial crisis in history. The debt crisis of the 1980s, in turn, affected many more countries than previous crises because debt had been flowing to so many new countries in the preceding boom period, including to dozens of newly independent countries in Africa.

In contrast, the latest default cycle (1998–2004) appears to have been about in line with the default clusters of the nineteenth century in terms of the number of sovereign defaults and restructurings. Following the spectacular debt crisis of the 1980s, many developing countries—particularly in Africa, and some Latin American countries, such as Bolivia—lost access to international capital markets altogether. Hence, far fewer developing countries were exposed to significant levels of privately held debt than at the beginning of the 1980s. In addition, compared with the 1970s, a much higher share of lending to emerging markets, particularly in the Asian countries, was absorbed directly by the private sector, namely, it did not directly give rise to sovereign debt. When the lending boom to these countries ended in 1997, the result was a private debt crisis that led to thousands of corporate defaults and debt restructurings in the Asian crisis countries but not to sovereign debt restructuring (except for a comparatively marginal commercial bank debt rescheduling episode involving Indonesia). Since these private sector defaults—which are without counterpart in most previous periods—are not reflected in table 1.1, the table understates the comparative gravity of the last bust phase. Finally, international official creditors, led by the International Monetary Fund (IMF), played a more aggressive role in preventing debt restructurings in the 1990s than in the 1980s, through large lending packages to countries such as Mexico, Brazil, and Turkey. Without these lending packages and the fiscal adjustment programs that they supported, these countries probably would have had to restructure their public debts in the late 1990s.

Resolving Debt Crises

The great majority of defaults in the nineteenth and twentieth centuries eventually led to some form of settlement between creditors and the debtor country. In the following, we summarize how the resolution of debt crises evolved in history, along three dimensions: (1) the negotiation process—in particular, the way creditor coordination was achieved; (2) the content of the settlement; and (3) the involvement, if any, of an official third party—either creditor country governments or international institutions—in the negotiation process.

Creditor Coordination

Between the 1820s and 1870, negotiations between debtors and creditors proceeded through ad hoc creditor committees. Negotiations under this model appear to have been inefficient, at least from a creditor perspective, for several reasons: lack of specialization and experience; weak coordination across creditors; and sometimes competing creditor committees (Suter 1992; Eichengreen and Portes 1986, 1989). According to Suter, one indication of the inefficiency of the process was the long average duration (fourteen years) of settlements prior to 1870.

This changed after 1868 when the British Corporation of Foreign Bondholders (CFB), the most institutionalized, powerful, and celebrated creditor association in history was established (Wright 2002a; Mauro and Yafeh 2003; Mauro, Sussman, and Yafeh 2006, chap. 7). After its reconstitution in 1898 through an act of parliament, the council (board) of the CFB consisted of twenty-one members, six of them appointed by the British Bankers' Association, six appointed by the London Chamber of Commerce, and nine miscellaneous members of which at least six were to be substantial bondholders; thus, it represented the entire British financial sector as well as the bondholders.⁵ The corporation had two functions: (1) information provision on debtor countries, and (2) creditor coordination and negotiation of settlements. The latter was achieved through committees specific to particular debtor countries, which negotiated an agreement that was presented to a general meeting of bondholders for approval or rejection. Although the agreement was not legally binding on individual bondholders, "holdouts" generally did not pose a problem, in part, because the chances of successful legal action against sovereigns were much lower than they are today.6 As a result, the corporation effectively had control over the sovereign debtor's access to the London market. Following a practice adopted in 1827, the London stock exchange would refuse to list new bonds by creditors that were in default, but it relied on the CFB to determine who should be considered in default and who should not.

Based on this power—and rare interventions by the British government—the CFB was able to negotiate settlements with all major problem debtors, including Spain, Portugal, Greece, Turkey, Peru, Mexico, Brazil, and Argentina. By 1906, the volume of loans in default had declined from about 300 million pound sterling in the late 1870s to less than 25 million (Mauro, Sussman, and Yafeh 2006). The corporation was unsuccessful only with regard to a few Central American countries and a small group of U.S. states, to which the London capital market and trade relations with Britain were less important (Kelly 1998). Coordination with U.S. creditors would have been critical here, but was lacking, in part, because U.S. creditors had an incentive to exploit their regional power to obtain better terms (Mauro, Sussman, and Yafeh 2006). The average duration of defaults between 1870 and the default wave of the 1930s fell to about six years, though other factors, including more assertiveness on the side of creditor country governments, also may have contributed to this outcome. CFB-type organizations were eventually set up in France and Belgium (1898), Switzerland (1912), Germany (1927), and the United States (1933) (Esteves 2004). The CFB and its counterpart organizations in other countries remained active until the 1950s, when the last defaults of the 1930s (except those of some Soviet bloc countries that had repudiated their prewar debts) were settled.

Creditor representation and debt renegotiation did not return as an issue until the 1970s. By then, the structure of international private capital flows had changed radically, from bonds dispersed among thousands of holders in a handful of creditor countries to loans by a few hundred commercial banks. By the mid-1970s, most bank lending was channeled through syndicates involving groups of typically ten to twenty banks. In the late 1970s, when several developing country debtors—Zaïre, Peru, Turkey, Sudan, and Poland—began to experience debt servicing difficulties, a coordinated negotiating procedure for the restructuring of commercial bank debt began to emerge: the "Bank Advisory Committee" (BAC) process, also referred to as the "London Club."

BACs consisted of a group of banks, rarely more than fifteen, which represented bank creditors—usually several hundred—in debt restructuring negotiations (see Rieffel 2003 for a detailed account). Like the CFB, a BAC did not have the legal authority to agree to a debt restructuring that would bind all creditors. Rather, it would negotiate a deal, initially in the form of a "term sheet," followed by a documentation

package that became legally binding for each individual creditor only after that creditor's signature. Institutionally, however, BACs differed significantly from the bondholder organizations of the nineteenth and early twentieth centuries. First, BACs were international and universal, representing all commercial bank creditors rather than just creditors residing in a particular country. Also, unlike bondholder corporations, the BACs had no charter, no secretariat, and no physical infrastructure. Moreover, they had no information provision function outside a specific debt restructuring. (In 1983, the banks created a parallel institution, the Washington-based Institute of International Finance, specifically to provide regular information about borrowing countries to its members.) BACs were formed ad hoc, usually chaired by a senior official of the creditor bank with the largest exposure, and with subcommittees drawn from the staff of the major banks on the BAC.

The debt restructuring agreements that began to be negotiated by BACs in the early 1980s required unanimity for changes to the payment terms negotiated under the agreement. This created problems in subsequent debt restructurings, as initial acceptance typically fell short of unanimity. As the debt crisis progressed, the share of dissenters increased, and the period between the date on which the agreement was opened for signature and the date on which "the last straggler signed up" widened (Buchheit 1991, 1998c). Ultimately, however, holdouts were dealt with through a mix of pressure from officials in creditor countries, debt buy backs, buyouts or, in rare cases when the amounts involved were very small, full repayment. Cases of holdout litigation against the debtors were very rare (see chapter 3).

As in the case of the CFB, the power of the London Club vis-à-vis debtors derived from the fact that it blocked new lending from its members prior to agreement on a debt restructuring deal. Unlike the CFB, however, this effect was not achieved through a formal mechanism but merely through informal adherence to the "cartel." Compared with earlier debt restructurings involving bonds, the BAC process tended to be very efficient; debt rescheduling deals in the early 1980s were often concluded in months, while the more comprehensive Brady deals of the late 1980s and early 1990s, in which creditors accepted large losses, generally took one or two years. This said, the final resolution of the 1980s debt crises, from the initial declaration of debt servicing difficulties to the final Brady deals, took longer than the average CFB restructuring; for example, it took about eight years for Mexico and eleven years for Argentina. However, these long time periods had

less to do with the negotiation process per se than with overly optimistic assumptions about the solvency of the debtors, regulatory incentives faced by banks, and perhaps the presence of the official sector as an implicit "third party" in the negotiations.

The London Club continues to play a role today. Two of the debt crises covered in detail in this book, Russia and Pakistan, involved agreements with BACs. However, most debt crises and restructurings between 1998 and 2005 focused on sovereign bonds held by a heterogeneous group of creditors which were mostly nonbanks. As far as the negotiation process is concerned, the striking difference between this most recent set of crises and earlier default waves between the 1860s and the 1930s is the lack of representation of bondholders by a formal committee such as the CFB. Bondholder representation in the 1998-2005 restructurings was, at best, ad hoc, resembling the practice from 1820 to the 1860s more than any other period. An Emerging Markets Creditors Association (EMCA), based in New York, was founded in 2000, but did not serve as a negotiating body. The Argentine debt crisis led to the creation of a Global Committee of Argentina Bondholders in January 2004, which claimed to represent investors holding about 45 percent of Argentina's total defaulted bonds (about twothirds of the bonds held outside Argentina). However, the Argentine government avoided formal negotiations with this committee, and Argentina's 2005 exchange offer achieved an acceptance rate of 76 percent in spite of the fact that the committee urged bondholders to reject the offer (see chapter 8).

Given the lack of formal creditor coordination, it is perhaps surprising that the 1998–2005 debt restructurings were undertaken relatively quickly. Most of them were undertaken in a matter of months (only Argentina's most recent debt restructuring, which lasted for about four-and-a-half years from default until settlement, took more than two years). This was achieved through a novel approach, namely, take-it-or-leave-it offers to exchange the existing bonds for new ones with payment streams of lower present value. The offers were preceded by informal discussions with creditors, but rarely formal negotiations. This worked well as long as the terms of the exchange offer—usually designed with the help of an investment bank as financial advisor—were sufficiently attractive enough to invite wide participation, given the alternatives faced by creditors (i.e., uncertain litigation or sale at depressed prices).

A powerful device to minimize the coordination problem was to make these offers contingent on their acceptance by a supermajority of creditors (80–90 percent). Only Argentina's most recent restructuring lacked such a threshold. While not removing the temptation of holdouts to free ride at the expense of a majority of creditors (see chapter 3), this removed the risk of being stuck with a debt deal that had been rejected by most other creditors, and hence might not result in a sustainable debt burden. Participation thresholds therefore allowed creditors to evaluate the quality of an offer on the assumption that the country's debt burden would indeed be reduced by a large amount, with a corresponding improvement in debt service capacity. Other devices that helped achieve high participation rates included the use of majority amendment clauses in Ukraine's debt exchange, and changes in the *nonpayment* terms of the old bond contracts in Ecuador and Uruguay (see chapter 3).

The Content of Debt Restructuring Agreements

During the first long era of bond finance, from the 1820s until the postwar settlements of defaults in the 1930s, settlements generally took the form of an agreement on (1) the capitalization of interest arrears (which could be extensive, given average default periods of ten years or more); (2) a payments moratorium or maturity extension; and (3) in some cases, a reduction of interest payment and/or principal. The latter (face value reductions) was rare in the first half of the nineteenth century, but became more prevalent in the second half, particularly as transfers of property or revenue streams to the creditors became more common as components of a settlement. Eichengreen and Portes (1989) report that as a matter of principle, bondholder committees tried to avoid forgiving interest arrears and writing down principal on the grounds that "these obligations had been incurred prior to any renegotiation of the bond covenants." However, they cite several examples from settlement negotiations of the 1930s defaults where the CFB ultimately agreed to principal write downs and even to reductions in interest arrears.

In some cases, banks participating in the negotiations (usually the issuing banks) extended new loans to provide liquidity for continuing interest payments. For example, the March 1891 settlement with Argentina initially involved a £15 million loan to enable the government

to continue servicing its debt and appreciate the currency; in view of continuing payments difficulties, this was replaced in 1893 by a new restructuring arrangement envisaging a reduction in interest payments by 30 percent over five years and a suspension of amortization payments until 1901. After Brazil experienced payment difficulties in 1898, a settlement was negotiated that envisaged a "funding loan" of £8 million to cover continue interest expenses, and a suspension of amortization payments for thirteen years (Fishlow 1989). While settlements were mostly negotiated only after the country had defaulted in the sense that debt service payments had been missed, there were also a few occasions, including the Brazilian funding loan in 1898, when a debt restructuring agreement was concluded ahead of a default.

A substantial subset of settlements between the midnineteenth century and World War I—seventeen out of a total of about fifty-seven settlements, according to Suter (1992)—included the transfer of property or income streams, such as tax or customs revenues to the creditors. This included the transfer of land or railway concessions, in return for a cancellation of principal and/or interest arrears. For example, in the Peruvian debt settlement of 1889, \$30 million in outstanding debt and \$23 million in interest arrears were canceled in return for the right to operate the state railways for sixty-six years, two million tons of guano, and the concession for the operation of steamboats on Lake Titicaca (Suter 1992). Similar settlements involving either railways or land took place in Colombia (1861 and 1873), Costa Rica (1885), the Dominican Republic (1893), Ecuador (1895), El Salvador (1899), and Paraguay (1855).

Control over specific revenue streams accompanied settlements with Tunisia (1869–1870), Egypt (1876), Turkey (1881), Serbia (1895), Greece (1898), Morocco (1903), the Dominican Republic (1904 and 1931), and Liberia (1912). The assigned revenues were typically collected by a "debt administration council" composed of creditor and debtor government representatives. In some cases, such as Turkey, the power of these councils and of creditor representatives within the councils was very strong (Flandreau 2003; Mauro, Sussman, and Yafeh 2006). In a few instances, including Egypt and Liberia, creditors essentially took over the management of the public finances of the country. Creditor attempts to gain direct revenue control in debtor countries disappeared after World War II; however, the idea of exchanging debt for nondebt claims had a comeback in the form of the "debt-equity swaps" of the 1980s.

Unlike the classical bond finance period, most major debtors that began to experience debt servicing difficulties in the late 1970s and early 1980s avoided "outright" default by renegotiating their debts with creditor banks before missing debt service payments. The content of settlements in this period evolved in several phases. During the first negotiations in the late 1970s, banks tried to rely entirely on refinancing: providing new loans to the debtors that enabled them to continue servicing the old loans, without formal debt restructuring. There were two reasons for this strategy. First, there was a belief that the debt crisis that began in the late 1970s was fundamentally one of liquidity rather than solvency. With an improvement in the external environment and some internal adjustment, developing countries were expected to be in a position to repay (Cline 1995). Second, regulatory incentives played a role. By maintaining debt service financed by new lending, banks could avoid classifying loans as impaired, which would have forced them to allocate income to provision against expected losses (Rieffel 2003).

After large debtors, such as Poland (1981) and Mexico (1982), began to renegotiate their debts, settlements typically involved a mix of new financing to enable countries to stay current on interest payments and rescheduling of principal. As it became clear that the debt crisis was not as transitory as had been initially expected, these annual rescheduling deals were replaced by "multiyear rescheduling agreements" (MYRAs). For example, Mexico's September 1984 MYRA rescheduled principal payments over a six-year period, extending from 1984 to 1989. Some MYRAs also contained new features such as debt-to-equity conversion options, and some lowered the interest rate spread over the London Interbank offer rate (LIBOR) in which coupon payments where expressed (Chuhan and Sturzenegger 2005; Rieffel 2003).

With continuing stagnant growth, it became clear that the net present value (NPV) debt reduction embodied in MYRAs was far too small to put an end to the continuing debt servicing difficulties of developing countries. A final initiative to avoid major write downs, the 1985 "Baker Plan" to stimulate growth in the debtor countries by combining structural reforms with new financing, failed by about 1987, when unilateral debt service moratoria were imposed by Peru and Brazil. Bank creditors began to view debt forgiveness as inevitable and began to provision for future losses. Provisioning was also a response to the development of a secondary market for defaulted debt that began in 1986. The existence of market prices for the unpaid loans entailed the

risk that regulators might force banks to mark these loans to market, with a large potential negative impact on the balance sheet. One way to cover this risk was by provisioning the loans or by accepting a workable debt deal.

As a result, during 1987–1988, Mexico, Argentina, Brazil, and Chile negotiated debt restructuring agreements which included exchanging bank debt for "exit bonds" with lower face value, and debt buy backs at lower market prices. But with the exception of the Chilean buy back, even these deals proved insufficient to achieve a sustainable debt burden. Beginning in 1989, they were superseded by the United States and IFI-sponsored "Brady Plan," which combined IMF-monitored adjustment programs, significant NPV debt reduction, and official "enhancements" which were supposed to protect creditors from a new default round. The basic idea was to make debt relief acceptable to commercial bank creditors by offering a smaller but much safer payment stream in exchange for the original claim that clearly could not be serviced in full. "Enhancements" took the form of full collateralization of principal using U.S. Treasury zero-coupon bonds, which countries bought using reserves and financing by international financial institutions (IFIs); in addition, reserves were placed in escrow to cover an interruption in interest payments of up to one year.

In the next eight years—from Mexico in 1989–1990 to Côte d'Ivoire and Vietnam in 1997—BACs negotiated Brady deals with seventeen debtor countries. In all cases, creditor banks were presented with a "menu"—a choice of new claims—which typically included "par bonds" of same face value as the outstanding loan but a low fixed interest, "discount bonds" with a market interest expressed as a markup over LIBOR but a reduction in face value; a debt-equity option yielding a local currency claim that could be exchanged for shares of government enterprises being privatized, and a cash buyback option where banks could sell the loans back to the debtor country at a substantial discount. Par and discount bonds were thirty year bonds which included the enhancements described above, but the menus typically also contained shorter-dated bonds, such as "PDI (part due interest) bonds" issued in exchange for past due interest, without these enhancements.

The bond restructurings of 1998–2005 have generally followed the example of the Brady deals in offering investors a "menu" (though this was often limited to two options) and reducing the debt burden through a mixture of interest reduction, principal reduction, and matu-

rity extension. Debt-equity conversions did not feature in these restructurings. In four out of the six bond exchanges affecting externally issued bonds—namely, Pakistan (1999), Ukraine (2000), Argentina (2001), and Uruguay (2003)—the existing debt was serviced up to the time of the exchange offer. In the cases of Russia (1998–2000), Ecuador (1999–2000), and Argentina (2002–2005), governments defaulted first and announced a debt exchange offer later.

The Role of the Official Sector

Creditor country government intervention in disputes between sovereign debtors and private creditors has been the exception rather than the rule. Lipson (1989) and Mauro, Sussman, and Yafeh (2006) report for the 1870–1914 period that the British government was usually reluctant to intervene on behalf of investors who had sought higher returns abroad and generally regarded defaults as the consequence of imprudent investment. Eichengreen and Portes (1989) characterize the interwar period in a similar way. However, British diplomats did provide the CFB with some degree of practical and administrative support, by receiving payments on behalf of the CFB or collecting securities for the CFB. In addition, creditor countries intervened more actively in support of private bondholders on a number of occasions and through several means, ranging from diplomatic suasion, to withholding of official credits to countries in default, to threat of trade sanctions and, in rare cases, armed intervention.

According to Mauro, Sussman, and Yafeh, diplomatic pressure was applied on several Central American countries in the 1870s. In 1875, Honduras was the subject of a parliamentary examination. In 1903, the CFB asked the British government not to recognize the new Republic of Panama. In 1913, the continued default of Guatemala was finally resolved as a result of diplomatic pressure. In a handful of famous cases, official intervention went beyond diplomatic pressure or threat of sanctions (Lipson 1985, 1989; Suter 1992; Suter and Stamm 1992; Mitchener and Weidenmier 2005). In 1863, France, initially supported by Spain and Britain, invaded Mexico after the republican regime of Benito Juarez refused to honor Mexico's debt service obligations, briefly installing the Austrian archduke Maximilian as emperor. (Maximilian was dethroned and executed in 1867, after which Mexico repudiated for good.) In 1882, Britain invaded Egypt, which had defaulted in 1876 and whose public finances were already under the control of a

Franco-British debt administration council. Venezuela suffered a maritime blockade by Germany, Britain, and Italy in 1902–1903 after Venezuela did not resume debt service payments after the end of its civil war. Finally, U.S. Marines were sent to the Dominican Republic (1905) and Nicaragua (1911) to take over customs revenues following attempted defaults.

While these episodes provide illustrations of official intervention benefiting private bondholders, enforcing debt repayments was often not the main motive for many of these interventions (Tomz 2006). Colonial or imperial ambitions played an obvious role in the French and British invasions of Mexico and Egypt, respectively, and the blockade of Venezuelan ports was partly the result of a border dispute between Venezuela and British Guyana as well as tort claims associated with the Venezuelan civil war (Kelly 1998; Tomz 2006). Hence, the defaults that preceded these interventions may only have been a pretext for legitimizing these interventions, rather than their main cause. Nevertheless, armed intervention may still have deterred defaulters to the extent that providing the major powers with such a pretext made an intervention more likely. Whether this was the case as an empirical matter is controversial (see Mitchener and Weidenmier 2005, for arguments in favor of, and Tomz 2006, for arguments against this view).

During the 1930s, the British and U.S. governments supported creditors through a combination of "diplomatic representations," the principle that the British Treasury would generally not lend to countries that had defaulted on British creditors, and threats of trade-related sanctions, including through the suspension of trade credits granted by government controlled institutions and the creation of "clearing arrangements" that would sequester a portion of payments of creditor country importers to debtor country exporters for the purpose of repaying creditor country bondholders (Eichengreen and Portes 1989, 19-23). Under the threat of such an arrangement, backed by a 1934 Act of Parliament creating a clearing office to regulate British trade with Germany, Germany agreed to continue servicing Dawes and Young Plan bonds held by British citizens, while U.S. bondholders, which lacked a corresponding threat, received only partial interest from June 1934 forward. However, just like military intervention prior to World War II, the threat of trade-related sanctions in the 1930s was the exception rather than the rule. Moreover, government pressure could go both ways. In some cases when government interests conflicted with bondholder interests, bondholder committees were pressured to accept a settlement, as occurred on the eve of World War II with respect to some debtor countries, such as Egypt and Greece, with which Britain was trying to conclude treaties.

After World War II, the role of the official sector in debt disputes changed in two respects. First, with very few exceptions such as U.S. sanctions against Cuba, which were imposed for much broader reasons than just Cuba's 1960 default, there have been no direct sanctions and certainly no military interventions against defaulting governments. Second, creditor governments have influenced debt restructuring agreements through several channels that did not exist or were less common prior to the war, including regulatory pressure or forbearance with respect to creditor banks, legal channels, which became viable after the narrowing of the concept of sovereign immunity, and multilateral organizations (see Buchheit 1990 for an overview of the roles of the U.S. government played in sovereign debt negotiations in the 1980s). An example for the legal channel is the "Allied Bank" case, in which a legal opinion issued by the U.S. Department of Justice was pivotal in the 1984 reversal of a lower court ruling that had sided with a defaulting debtor (Costa Rica) against a U.S. creditor bank (see chapter 3). Government agencies in creditor countries have also played the role of mediators or hosts during debtor-creditor negotiations, such as the U.S. Treasury and Federal Reserve during Mexico's 1989 Brady plan negotiations and the Bank of England during the 1976 negotiations between creditor banks and Zaïre (Rieffel 2003). Finally, international financial institutions, particularly the IMF, have had an important influence on settlements between creditors and debtors. However, the IMF's role has been more nuanced than simply helping creditors get their money back, and it has evolved over time.

The stated objective of the IMF has been to make the international financial system more efficient by preventing disruptive debt crises and accelerating debt settlements. To do so, it has used two main instruments. First, the IMF provided crisis lending to countries that required temporary financing, which allowed them to adjust in order to be able to repay their debts. This role is not new, though the actors, motives, and terms of crisis lending have evolved over time (see Bordo and Schwartz 1999 for a survey). During the nineteenth century and the interwar period crisis lending was undertaken by private investment banks on commercial terms, and on some occasions by the central banks of England and France; in the 1930s, by the Bank for International Settlements (Fishlow 1985; Eichengreen and Portes 1986, 1989;

Flandreau 2003). During the 1980s renegotiations of commercial bank loans, this role was shared by the IMF and bank syndicates providing "new money" loans. The main difference between the IMF and private crisis lenders is that IMF lending has always been conditional on policy adjustments, and has generally taken place at lower interest rates (Haldane 1999; Higginbotham and Schuler 2002; Zettelmeyer and Joshi 2005).

Second, IMF-supported programs with countries with debt servicing difficulties have served as commitment devices for debtors to undertake steps to restore solvency, lowering the uncertainty associated with debt settlement negotiations, and implicitly helping to define the resource envelope available for a settlement. Rieffel (2003) reports that IMF staff was regularly present during BAC negotiations with creditors in the 1980s, presenting their medium term projections of a debtor country's balance of payments as a starting point from which creditors could form their own views on the country's capacity to repay.

Armed with these instruments, the IMF was a critical presence during the early stages of the 1980s debt crisis, when it helped define and execute the initial crisis resolution strategy by which countries would seek to regain their debt service capacity through a mix of IMF-supported adjustment and fresh financing. "As a referee for the extension of new credit," the IMF was "especially important for creating a cooperative environment for avoiding outright default" (Jorgensen and Sachs 1989, 48). The IMF was also part of the Brady Plan that ultimately ended the crisis, both by negotiating adjustment programs with debtor countries that accompanied their agreements with the banks and by financing some of the Brady bond "enhancements" (Boughton 2001; Rieffel 2003).

However, the IMF's role during the debt crisis has also been criticized. First, the IMF and, more generally, the official sector have been accused of contributing to the long delay in the resolution of the crisis, both by "producing short-run cosmetic agreements with little clear resolution of the underlying disagreement over resource transfer" in the early and mid 1980s, and by implicitly holding out the prospect of a public sector bailout (Lindert and Morton 1989, 78; Bulow and Rogoff 1988). Partly in reaction to this criticism, the IMF has generally become more reluctant to rescue countries with debt servicing difficulties, in some cases refusing to lend to countries unless they sought a debt restructuring with their creditors at the same time. While the fundamental rule under which the IMF lends—namely, only to countries

which are solvent, or at least conditionally solvent after appropriate policy adjustments—remained unchanged, judgments on what should be regarded as solvent became more conservative in the 1990s, after several crisis countries of the 1980s had accumulated arrears to the IMF.

Second, the IMF was accused of playing the role of a "bill collector for the banks" in the 1980s, that is, of a bias in favor of the creditor side. The basis for this criticism was the IMF's longstanding policy of not lending to countries that were in arrears with the creditors, hence strengthening the creditors' capacity to exclude recalcitrant debtors from access to credit, and thus their bargaining power during debt settlement negotiations. In response to this criticism, the IMF changed its policy in 1989, to one that allows it to lend to debtors in arrears so long as they are engaged in "good faith negotiations" with their creditors. However, what constitutes "good faith" is debatable. In recent years, the IMF has been accused of overshooting in the direction of harming creditor interests—and by extension, those of the sovereign bond market—by encouraging unilateral debt exchange offers, and lending even to countries with a defiant stance vis-à-vis their creditors (Cline 2001; Rieffel 2003, EMCA 2004). In response, the IMF has argued that its support of debtor countries benefits both sides by improving the debtors' debt servicing ability, and that it always encourages countries to service their debts in line with this ability.

How Investors Fared

A central question—perhaps *the* question—in the study of sovereign defaults is how defaults and the subsequent settlement affect the parties involved. The economic literature on sovereign debt generally assumes that defaults have benefits and costs for the debtor, and that the decision to default is based on a comparison of these. In contrast, a default always harms the creditor, but for sovereign debt to exist, this harm must be made up by positive returns in normal times. In the following we briefly summarize the evidence on the losses that defaults have inflicted on creditors, as well as the overall average returns earned by investors holding risky sovereign debt. The question of how defaults impacted debtor countries is taken up in the next chapter.

To summarize the losses suffered by creditors as a result of specific debt restructurings, one would ideally like to compare the (remaining) payment stream that was originally promised to investors with the payment stream associated with the restructured instruments, both discounted at a common interest rate (see Sturzenegger and Zettelmeyer 2005 and pages 88–90, this volume). Unfortunately, there is no study that compares all debt settlements since the 1820s using such a summary measure. Instead, several authors have compared debt restructurings in various aspects, such as the face value reductions suffered, the average reduction in interest payments, and so forth, that contribute to the overall reduction in the investors' claim.

In an extensive historical study of debt and defaults since the 1820s, Suter (1992) compares debt restructurings during 1820–1870, 1871– 1925, and 1926–1975, in terms of (1) the extent to which interest arrears were repaid; (2) reduction in interest rates; and (3) reduction in face value. He finds that, by these measures, debt settlements seem to have become tougher for investors over time. In the first period, there were hardly any face value reductions, interest rates were typically reduced by about 15 percent, and 81 percent of the outstanding arrears were capitalized into new bonds (this ignores compound interest on arrears). In the second period, the rate of capitalization of arrears was only 72 percent, interest rates were reduced by about 16 percent, and face value by 23 percent. However, the latter is, in part, a reflection of the increasing use of land and railway concessions to "repay" investors in this period. Finally, the interwar defaults led to much larger investor losses: only 35 percent of interest arrears were recognized on average; interest payments suffered an average haircut of 34 percent; and face value was reduced by 23 percent, without any offsetting assignment of nondebt assets.

Jorgenson and Sachs (1989) compute investor losses for four major Latin American default cases in the 1930s—Bolivia, Chile, Colombia, and Peru—by comparing the present value of the principal outstanding at default to the present value of actual repayment after default, both discounted back to the default year using a risk-free international interest rate. Using this methodology, Jorgenson and Sachs show that the 1930s defaults and restructurings resulted in very large present value losses: 37 percent for Colombia, 61 percent for Peru, 69 percent for Chile, and a staggering 92 percent for Bolivia.

Rieffel (2003, 171, based on World Bank data) summarizes the terms of the Brady deals by averaging the face value reduction suffered by investors choosing discount bonds (namely, bonds with the same coupon as outstanding bank loans, but smaller face value) and the discounts reflected in the buyback component (the difference between the

face value and the market price at which bonds were bought back). The average discounts range from about 35 percent for Mexico (1990) to 76 percent for Côte d'Ivoire. Importantly, these discounts significantly understate the present value discount suffered by investors, because they do not take into account the much longer maturity (thirty years) of the new Brady bonds relative to the previous bank loans, which for the most part had already come due and were being rolled over.⁸

Finally, Sturzenegger and Zettelmeyer (2005) calculate the present value losses attributable to the bond exchanges and restructurings of 1998–2005. To do so, they compare the present value of the originally promised payment stream, including both remaining interest payments and principal outstanding, to the expected present value of payments promised at the time of a debt restructuring; as this is unobservable, the post-restructuring interest rate (which prices in any expected future losses) is used to discount both streams. Out of the six major debt restructurings of externally issued debt in this period, investors suffered face value reductions in four cases (Russia 2000 Prins and IANs exchange, Ukraine 2000, Ecuador 2000, and Argentina 2005), while the remainder (Pakistan 1999 and Uruguay 2003) involved mainly extensions in maturity and to a lesser extent interest rate reductions.9 Present value "haircuts," ranged from just 5–20 percent for Uruguay (2003) to over 50 percent for Russia (2000) and over 70 percent for Argentina (2005), with the remaining exchanges falling mostly in the 20–40 percent range.

One interesting implication of these results is that with the exception of Argentina (2005), investors suffered smaller losses as a consequence of the supposedly creditor-unfriendly unilateral exchange offers than the negotiated settlement with Russia, which was conducted by a BAC. Based on Rieffel's computations, it also seems that most Brady deal restructurings negotiated between banks and debtor countries involved significantly larger present value losses. Of course, it is possible that these different outcomes reflect different initial conditions, including a bigger debt overhang in the 1980s. In the absence of a systematic study that controls for initial conditions, what can be said at this point is only that unilateral debt exchanges, perhaps surprisingly, do not appear to have been associated with larger investor losses than negotiated debt restructurings.

The main limitation of "haircut" calculations of this kind is that they say nothing about how investors fared in the longer run, namely,

whether defaults, as well as capital losses in crisis times in countries that did not end up defaulting, were ultimately offset by high returns in good times. To answer this question, one needs to compute investor returns over longer horizons. Several papers tackle this issue: Eichengreen and Portes (1986, 1989) track a large sample of bonds issued on behalf of overseas borrowers in the United States and the United Kingdom in the 1920s; Lindert and Morton (1989) track over 1,500 bonds issued by ten borrowing countries between 1850 and 1983 (including bonds outstanding in 1850); and Klingen, Weder, and Zettelmeyer (2004) compute returns on public and publicly guaranteed bank loans and bond flows to about two dozen emerging markets in the 1970–2000 period, using aggregate data at the debtor country level compiled by the World Bank.

The results are remarkably consistent across time periods and methodologies. The upshot of the three studies is that while investors both incurred significant losses and made large profits in specific episodes and for specific countries, the long-run average premium of emerging market debt relative to sovereign debt in the traditional creditor countries, such as the United Kingdom and the United States, has generally been positive, but small (150 basis points or less). According to Lindert and Morton (1989), the portfolio of 1,522 bonds issued by overseas borrowers over the course of one hundred and fifty years would have narrowly "beaten" a portfolio of creditor country sovereign bonds absorbing the same flows, by 42 basis points on average per annum. For bonds issued prior to 1914, they find a virtual tie of -14 basis points, while bonds issued between 1914 and 1945, the "generation" that suffered from the defaults of the 1930s, did slightly better with 113 basis points. Eichengreen and Portes (1986) find that foreign government bonds issued in the United States in the 1920s did slightly worse than their U.S. government counterparts, while Sterling bonds did slightly better (on the order of 100 basis points). For the 1970–2000 period and a sample of both bank and bond lending to twenty-two emerging markets countries, Klingen, Weder, and Zettelmeyer (2004) find a long-run premium of -17 to 46 basis points, depending on the methodology applied. This reflects the combined effect of negative ex post (realized) spreads during the boom-bust cycle from 1970 to the late 1980s (reflecting the debt crisis of the 1980s) and sharply positive ex post spreads, on average, since then.

Table 1.2 shows some results for specific countries, based on Lindert and Morton (1989), and Klingen, Weder, and Zettelmeyer (2004). For

Table 1.2 Emerging markets: Realized excess returns on sovereign debt, 1850–2000 (in percentage points)

| | Bonds ^a | | | Bonds and long-term bank loans ^b | | | |
|-----------|--------------------|---------------|---------------|---|---------------|---------------|---------------|
| | 1850– 1914 | 1915– 1945 | 1946– 1983 | 1850– 1983 | 1970– 1992 | 1992– 2001 | 1970- 2001 |
| Argentina | 1.71 | 1.95 | 4.70 | 1.96 | -2.09 | -17.01 | -6.82 |
| Brazil | 0.89 | 0.70 | | 0.83 | -3.42 | 16.23 | -0.51 |
| Chile | 1.48 | -1.90 | | -0.22 | -0.17 | 3.51 | 0.06 |
| Mexico | -2.72 | | 2.31 | -1.92 | -0.51 | 5.96 | 0.64 |
| Australia | 1.01 | 1.21 | 0.72 | 1.03 | | | |
| Canada | 1.27 | 0.65 | 2.25 | 1.56 | | | |
| Egypt | 2.92 | -0.73 | | 2.53 | | | |
| Japan | 1.25 | 2.26 | 2.25 | 1.58 | | | |
| Russia | -1.63 | | | -1.63 | | | |
| Turkey | -1.56 | -0.88 | -0.34 | -1.29 | 0.89 | 0.44 | 0.58 |

Note: Difference between the realized return on sovereign debt of the respective periphery country and the return on sovereign debt of the investor's home country (for bond returns 1850–1983) or the United States (for all private external lending, 1970–2001).

the long pre–World War I period, one important result is that investors earned positive average spreads in most debtor countries, including Argentina, Brazil, and Chile, which all defaulted at least once in this period. Thus, the defaults of these countries were more than offset by debt service in normal times. This was not the case for Russia, Turkey, and particularly Mexico. In all three of these cases, what made the difference was political upheaval, war, or revolution. Mexico repudiated completely on two occasions: after deposing the Emperor Maximilian in 1867, who had been installed by France three years earlier, and after the 1911 revolution. Russia did the same after the 1917 revolution, and Turkey did so after World War I, when the new nationalist government refused to repay prewar Ottoman debts. At the other extreme, Egypt's creditors earned exceptionally high returns because of the combination of a high ex ante spread with full repayment after the attempted default of 1876 led to the 1882 British invasion and loss of sovereignty. In short, both the negative spreads for Mexico, Russia, and Turkey, and the high positive spread for Egypt reflect forecast errors, while the moderate positive spreads for the remainder reflect

^a From Lindert and Morton (1989). Dates refer to issue dates.

^b Adapted from Klingen, Weder, and Zettelmeyer (2004); uses their "indirect approach."

repayment performance that was about in line with expectations. In the case of Argentina, Brazil, and Chile, ex ante spreads were comparatively high (Lindert and Morton 1989, Table 2.2), which was validated by a default some time in the late nineteenth century. In the cases of Australia, Canada, and Japan, ex ante spreads were lower, validated by full repayment.

It is also interesting to interpret Lindert and Morton's post–World War I returns. First, note the missing values for Mexico (1915–1945) and Russia (1915–1983). This reflects extended absences of these countries following their revolutions and repudiations in the early twentieth century. The worst return in the interwar period was that of Chile, consistent with the exceptionally large write-down associated with its interwar default (69 percent, according to Jorgenson and Sachs's methodology). High returns, both for bonds issued in the interwar period, and after World War II prior to the 1980s debt crisis, were earned by Argentina's creditors, as Argentina was the only major Latin American borrower to avoid default in the interwar period. The same was true for Japan, which repaid faithfully until the attack on Pearl Harbor and again after the war.

The right columns of the table, which are based on data and calculations by Klingen, Weder, and Zettelmeyer (2004), consider the postwar experience for the Latin American countries and Turkey. In contrast with its good repayment performance during the first half of the century, the main defaulter is now Argentina. It was the only major borrower to undergo large debt write-offs both after the 1980s debt crisis and after the boom-bust cycle of the 1990s, hence its large negative spread. Like Argentina, Brazil, Mexico, and Chile went through two major boom-bust cycles, but, unlike Argentina, only the first of these cycles ended in a default. As a result, the overall realized spread from 1970–2001 is about zero, reflecting the offsetting effects of poor returns until the resolution of the 1980s debt crisis and high returns since then.

Finally, Turkey's postwar experience was unusual. It is the only country in the group that does not exhibit negative spreads for the period 1970–1992. This reflects the absence of a large debt write-off during or after the 1980s debt crisis. After devaluing in 1979, Turkey restructured "convertible Turkish lira deposits," foreign commercial bank deposits in Turkish banks with an exchange rate guarantee from the central bank, but left medium term sovereign loans untouched (Rieffel 2003, 307–311), and managed to avoid further debt restructuring during the 1980s or 1990s. But neither does Turkey exhibit large

realized spreads between the early 1990s and 2001, unlike Brazil, Chile, or Mexico. This is a result of the 2000–2001 financial crisis, which led to a limited commercial bank debt restructuring in early 2001 and depressed sovereign bond prices, which enter in the calculations underlying the returns for the period ending at end-2001. Thus, while Turkey's average result for the entire 1970–2001 period is very similar to that of Mexico, its composition is very different.

The unusually high returns during the 1990s provide clues for evaluating the behavior of international financial markets during the last decade. They signal both unusually high ex ante creditor demands, possibly due to the negative returns obtained during the 1980s, and better-than-expected outcomes.