foreign exchange reserves and safeguard domestic employment. Faced with a massive

breakdown of the world market system, industrial and developing countries alike allowed

their governments to assume increasingly direct roles in employment and production.

Often, governments reorganized labor markets, established stricter control over financial

markets, controlled prices, and nationalized key industries. The trend toward government

control of the economy proved much more persistent in developing countries, however,

where political institutions allowed those with vested financial interests in the status quo

to perpetuate it.

Cut off from traditional suppliers of manufactures during World War II, developing

countries encouraged new manufacturing industries of their own. Political pressure to

protect these industries was one factor behind the popularity of import-substituting

industrialization in the first postwar decades. In addition, colonial areas that gained

independence after the war believed they could attain the income levels of their former

rulers only through rapid, government-directed industrialization and urbanization.

Finally, developing-country leaders feared that their efforts to escape poverty would be

doomed if they continued to specialize in primary-commodity exports such as coffee,

copper, and wheat. In the 1950s, some influential economists argued that developing

countries would suffer continually declining terms of trade unless they used commer-

cial policy to move resources out of primary exports and into import substitutes. These

forecasts turned out to be wrong, but they did influence developing countries' policies

in the first postwar decades.

Developing-Country Borrowing and Debt

One further feature of developing countries is crucial to understanding their macroeco-

nomic problems: Many rely heavily on financial inflows from abroad to finance domestic

investment. Before World War I and in the period up to the Great Depression, developing

countries (including the United States for much of the 19th century) received large finan-

cial inflows from richer lands. In the decades after World War II, developing economies

again tapped the savings of richer countries and built up a substantial debt to the rest of the

world (around $5 trillion in gross terms at the end of 2010). That debt was at the center of

several international lending crises that preoccupied economic policy makers throughout

the world in the last two decades of the 20th century.

The Economics of Financial Inflows to Developing Countries

As stated above, many developing countries have received extensive financial inflows

from abroad and now carry substantial debts to foreigners. Table 22-3 shows the recent

pattern of borrowing by non–oil developing countries (see the second column of data).

What factors lie behind financial inflows to the developing world?

Recall the identity (analyzed in Chapter 13) that links national saving, S, domestic

investment, I, and the current account balance, CA

S-I = CA. If national saving falls

short of domestic investment, the difference equals the current account deficit. Because

of poverty and poor financial institutions, national saving often is low in developing

countries. Because these same countries are relatively poor in capital, however, the

opportunities for profitably introducing or expanding plant and equipment can be

abundant. Such opportunities justify a high level of investment. By running a deficit in

its current account, a country can obtain resources from abroad to invest even if its

domestic saving level is low. However, a deficit in the current account implies that the

country is borrowing abroad. In return for being able to import more foreign goods

today than its current exports can pay for, the country must promise to repay in the

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Cumulative Current Account Balances of Major Oil Exporters, Other Developing

Countries, and Advanced Countries, 1973–2009 (billions of dollars)

	Major Oil Exporters	Other Developing Countries	Advanced Countries
1973–1981	363.8	–410.0	7.3
1982–1989	–135.3	–159.2	–361.1
1990–1998	–106.1	–684.2	51.1
1999–2009	2,647.9	984.7	–3,134.7

Source: International Monetary Fund, World Economic Outlook, various issues and online database. Global current accounts generally do not sum to zero because of errors, omissions, and the exclusion of some countries. Numbers for 1999–2009 are authors' estimates based on the preceding sources.

future either the interest and principal on loans or the dividends on shares in firms sold

to foreigners.

Thus, much developing-country borrowing could potentially be explained by the incentives for intertemporal trade examined in Chapter 6. Low-income countries generate too little saving of their own to take advantage of all their profitable investment opportunities, so they must borrow abroad. In capital-rich countries, on the other hand, many productive investment opportunities have been exploited already but saving levels are relatively high. Savers in developed countries can earn higher rates of return, however, by lending to finance investments in the developing world.

Notice that when developing countries borrow to undertake productive investments that they would not otherwise be able to carry out, both they and the lenders reap gains from trade. Borrowers gain because they can build up their capital stocks despite limited national savings. Lenders simultaneously gain because they earn higher returns to their savings than they could earn at home.

While the reasoning above provides a rationale for developing countries' external deficits and debt, it does not imply that all loans from developed to developing countries

are justified. Loans that finance unprofitable investments—for example, huge shopping

malls that are never occupied—or imports of consumption goods may result in debts that

borrowers cannot repay. In addition, faulty government policies that artificially depress

national saving rates may lead to excessive foreign borrowing. The 1982–1989 fall in

developing-country borrowing evident in Table 22-3 is associated with difficulties that

some poorer countries had in keeping up their payments to creditors.

A surprising development starting in the early 2000s was that developing countries ran

surpluses, a counterpart of richer countries' deficits (mainly that of the United States). We

discussed this pattern of global imbalances in Chapter 19 (pages 538–544). One reason for

these surpluses was developing countries' strong desire to accumulate international

reserves, as we discuss in the box on page 637.

The Problem of Default

Potential gains from international borrowing and lending will not be realized unless

lenders are confident they will be repaid. A loan is said to be in default when the bor-

rower, without the agreement of the lender, fails to repay on schedule according to the loan

contract. Both social and political instability in developing countries, as well as the fre-

quent weaknesses in their public finances and financial institutions, make it much more

risky to lend to developing than to industrial countries. And indeed, the history of financial

flows to developing countries is strewn with the wreckage of financial crises and defaulted

loan contracts:

1. In the early 19th century, a number of American states defaulted on the European

loans they had taken out to finance the building of canals.

2. Throughout the 19th century, Latin American countries ran into repayment problems.

This was particularly true of Argentina, which sparked a global financial crisis in 1890

(the Baring Crisis) when it proved unable to meet its obligations.

3. In 1917, the new communist government of Russia repudiated the foreign debts that

had been incurred by previous rulers. The communists closed the Soviet economy to

the rest of the world and embarked on a program of centrally planned economic devel-

opment that was often ruthlessly enforced.

4. During the Great Depression of the 1930s, world economic activity collapsed and

developing countries found themselves shut out of industrial-country export markets by

a wall of protection (recall Chapter 19). Nearly every developing country defaulted on

its external debts as a result, and private financial flows to developing countries dried up

for four decades. Even some industrial countries, such as Nazi Germany, defaulted.

5. A number of developing countries have defaulted in recent decades. For example, in

2005, after lengthy negotiations, most of Argentina's private creditors agreed to settle

for only about a third of the contractual values of their claims on the country.

Sharp contractions in a country's output and employment invariably occur after a

sudden stop in which the country suddenly loses access to all foreign sources of funds

(recall Chapter 19). At a very basic level, the necessity for such contractions can be seen

from the current account identity, S -I = CA. Imagine that a country is running a cur-

rent account deficit that is 5 percent of its initial GNP, when suddenly foreign lenders

become fearful of default and cut off all new loans. Since this action forces the current

account balance to be at least zero 1CA Ú 02, the identity S-I = CA. tells us that

through some combination of a fall in investment or a rise in saving, S-I must immedi-

ately rise by at least 5 percent. The required sharp fall in aggregate demand necessarily

depresses the country's output dramatically. Even if the country were not on the verge of

default initially—imagine that foreign lenders were originally seized by a sudden irra-

tional panic—the harsh contraction in output that the country would suffer would make

default a real possibility.

Indeed, matters are likely to be even worse for the country than the preceding example

suggests. Foreign lenders will not only withhold new loans if they fear default, they will nat-

urally also try to get as much money out of the country as possible by demanding the full

repayment on any loans for which principal can be demanded on short notice (for example,

liquid short-term bank deposits). When the developing country repays the principal on debt,

it is increasing its net foreign wealth. To generate the corresponding positive current account

item (see Chapter 13), the country must somehow raise its net exports. Thus, in a sudden stop crisis, the country will not only have to run a current account of zero, it will also actually be called upon to run a surplus (CA 7 0), The bigger the country's short-term foreign debt—debt whose principal can be demanded by creditors—the larger the rise in saving or compression of investment that will be needed to avoid a default. You already may have noticed that developing-country sudden stops and default crises can be driven by a self-fulfilling mechanism analogous to the ones behind self-fulfilling balance of payments crises (Chapter 18) and bank runs (Chapter 21). Indeed, the underlying logic is the same.

Furthermore, default crises in developing countries are likely to be accompanied by balance of payments crises (when the exchange rate is pegged) and bank runs. A balance of payments crisis results because the country's official foreign exchange reserves may be the only ready means it has to pay off foreign short-term debts. By running down its official reserves, the government can cushion aggregate demand by reducing the size of the current account

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surplus needed to meet creditors' demands for repayment. But the loss of its reserves leaves the government unable to peg the exchange rate any longer. At the same time, the banks get in trouble as domestic and foreign depositors, fearing currency depreciation and the consequences of default, withdraw funds and purchase foreign reserves in the hope of repaying foreign-currency debts or sending wealth safely abroad. Since the banks are often weak to begin with, the large-scale withdrawals quickly push them to the brink of failure.

Because each of these crisis "triplets" reinforces the others, a developing country's financial crisis is likely to be severe, to have widespread negative effects on the economy, and to snowball very quickly. The immediate origin of such a pervasive economic collapse can be in the financial account (as in a sudden stop), in the foreign exchange market, or in the banking system, depending on the situation of the particular country.

When a government defaults on its obligations, the event is called a sovereign default. A conceptually different situation occurs when a large number of private domestic borrowers cannot pay their debts to foreigners. In practice in developing countries, however, the two types of default go together. The government may bail out the private sector by taking on its foreign debts, thus hoping to avoid widespread economic collapse. In addi-

tion, a government in trouble may provoke private defaults by limiting domestic residents' access to its dwindling foreign exchange reserves. That action makes it much harder to pay foreign currency debts. In either case, the government becomes closely involved in the subsequent negotiations with foreign creditors.

> Default crises were rare in the first three decades after World War II: Debt issue by developing countries was limited, and the lenders typically were governments or official international agencies such as the International Monetary Fund (IMF) and World Bank. As the free flow of private global capital expanded after the early 1970s, however, major default crises occurred repeatedly (as we shall see), leading many to question the stability of the world capital market.

Alternative Forms of Financial Inflow

When a developing country has a current account deficit, it is selling assets to foreigners to finance the difference between its spending and its income. Although we have lumped these asset sales together under the catchall term borrowing, the financial inflows that finance developing countries' deficits (and, indeed, any country's deficit) can take several

forms. Different types of financial inflows have predominated in different historical peri-

ods. Because different obligations to foreign lenders result, an understanding of the

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Make certain you understand why this is so. If necessary, review the open-economy accounting concepts from

Chapter 13. For a statistical analysis of the relationship between currency crises and banking crises, see Graciela

L. Kaminsky and Carmen M. Reinhart, "The Twin Crises: The Causes of Banking and Balance of Payments

Problems," American Economic Review 89 (June 1999), pp. 473–500.

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On the history of default through the mid-1980s, see Peter H. Lindert and Peter J. Morton, "How Sovereign Debt

Has Worked," in Jeffrey D. Sachs, ed., Developing Country Debt and Economic Performance, Vol. 1 (Chicago:

University of Chicago Press, 1989). A good overview of private capital inflows to developing countries over the

same period is given by Eliana A. Cardoso and Rudiger Dornbusch, "Foreign Private Capital Inflows," in Hollis

Chenery and T. N. Srinivasan, eds., Handbook of Development Economics, Vol. 2 (Amsterdam: Elsevier Science

Publishers, 1989). A more recent overview of default crises is in Atish Ghosh et al., IMF-Supported Programs in

Capital Account Crises, Occasional Paper 210 (Washington, D.C.: International Monetary Fund, 2002). For a

comprehensive historical survey, see Carmen Reinhart and Kenneth Rogoff, This Time Is Different: Eight Centuries

of Financial Folly (Princeton, NJ: Princeton University Press, 2009). Reinhart and Rogoff document that for devel-

oping countries, default crises can occur at comparatively low levels of external debt relative to output.

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macroeconomic scene in developing countries requires a careful analysis of the five major

channels through which these countries have financed their external deficits.

1. Bond finance. Developing countries have sometimes sold bonds to private for-

eign citizens to finance their deficits. Bond finance was dominant in the period up to

1914 and in the interwar years (1918–1939). It regained popularity after 1990 as many

developing countries tried to liberalize and modernize their financial markets.

2. Bank finance. Between the early 1970s and late 1980s, developing countries bor-

rowed extensively from commercial banks in the advanced economies. In 1970,

roughly a quarter of developing-country external finance was provided by banks. In

1981, banks provided an amount of finance roughly equal to the non–oil developing

countries' aggregate current account deficit for that year. Banks still lend directly to

developing countries, but in the 1990s the importance of bank lending shrank.

3. Official lending. Developing countries sometimes borrow from official foreign

agencies such as the World Bank or the Inter-American Development Bank. Such

loans can be made on a "concessional" basis, that is, at interest rates below market lev-

els, or on a market basis, which allows the lender to earn the market rate of return.

Over the post-World War II period, official lending flows to developing nations have

shrunk relative to total flows but remain dominant for some countries, for example,

most of those in sub-Saharan Africa.

4. Foreign direct investment. In foreign direct investment, a firm largely owned by

foreign residents acquires or expands a subsidiary firm or factory located in the host

developing country (Chapter 8). A loan from IBM to its assembly plant in Mexico, for

example, would be a direct investment by the United States in Mexico. The transaction

would enter Mexico's balance of payments accounts as a financial asset sale (and the

U.S. balance of payments accounts as an equal financial asset acquisition). Since

World War II, foreign direct investment has been a consistently important source of

developing-country capital.

5. Portfolio investment in ownership of firms. Since the early 1990s, investors in

developed countries have shown an increased appetite for purchasing shares of stock

in developing countries' firms. The trend has been reinforced by many developing

countries' efforts at privatization—that is, selling to private owners large state-owned

enterprises in key areas such as electricity, telecommunications, and petroleum. In the

United States, numerous investment companies offer mutual funds specializing in

emerging market shares.

The five types of finance just described can be classified into two categories: debt

finance and equity finance (Chapter 21). Bond, bank, and official finance are all forms of

debt finance. In this case, the debtor must repay the face value of the loan, plus interest,

regardless of its own economic circumstances. Direct investment and portfolio purchases of stock shares are, on the other hand, forms of equity finance. Foreign owners of a direct investment, for example, have a claim to a share of the investment's net return, not a claim to a fixed stream of money payments. Adverse economic events in the host country thus result in an automatic fall in the earnings of direct investments and in the dividends paid to foreigners.

The distinction between debt and equity finance is useful in analyzing how developing-country payments to foreigners adjust to unforeseen events such as recessions or terms of trade changes. When a country's liabilities are in the form of debt, its scheduled payments to creditors do not fall even if its real income falls. It may then become very painful for the country to continue honoring its foreign obligations—painful enough to cause the country to default. Life often is easier, however, with equity finance. In the case of equity, a fall in

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domestic income automatically reduces the earnings of foreign shareholders without vio-

lating any loan agreement. By acquiring equity, foreigners have effectively agreed to share in both the bad and the good times of the economy. Equity rather than debt financing of its investments therefore leaves a developing country much less vulnerable to the risk of a foreign lending crisis.

The Problem of "Original Sin"

When developing countries incur debts to foreigners, those debts are overwhelmingly denominated in terms of a major foreign currency—the U.S. dollar, the euro, or the yen.

This practice is not a matter of choice. In general, lenders from richer countries, fearing the extreme devaluation and inflation that have occurred so often in the past, insist that poorer countries promise to repay them in the lenders' own currencies.

In contrast, richer countries typically can borrow in terms of their own currencies.

Thus, the United States borrows dollars from foreigners, Britain borrows pounds sterling, Japan borrows yen, and Switzerland borrows Swiss francs.

For these richer countries, the ability to denominate their foreign debts in their own cur-

rencies, while holding foreign assets denominated in foreign currencies, is a considerable advantage. For example, suppose a fall in world demand for U.S. products leads to a dollar depreciation. We saw in Chapter 19 how such a depreciation can cushion output and employment in the United States. The U.S. portfolio of foreign assets and liabilities, in fact, yields a further cushioning advantage: Because U.S. assets are mostly denominated in foreign currencies, the dollar value of those assets rises when the dollar depreciates against foreign currencies. At the same time, because U.S. foreign liabilities are predominantly (about 95 percent) in dollars, their dollar value rises very little. So a fall in world demand for U.S. goods leads to a substantial wealth transfer from foreigners to the United States—a kind of international insurance payment.

> For poor countries that must borrow in a major foreign currency, a fall in export

demand has the opposite effect. Because poorer countries tend to be net debtors in the major foreign currencies, a depreciation of domestic currency causes a transfer of wealth to foreigners by raising the domestic currency value of the net foreign debt. This amounts to negative insurance!

> A country that can borrow abroad in its own currency can reduce the real resources it

owes to foreigners, without triggering a default, simply by depreciating its currency. A devel-

oping country forced to borrow in foreign currency lacks this option, and can reduce what it

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owes to foreigners only through some form of default.

Economists Barry Eichengreen of the University of California–Berkeley and Ricardo

Hausmann of Harvard University coined the phrase original sin to describe developing

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countries' inability to borrow in their own currencies. In these economists' view, that

inability of poor countries is a structural problem caused primarily by features of the

global capital market—such as the limited additional diversification potential that a small

country's currency provides to creditors from rich countries, who already hold all the

major currencies in their portfolios. Other economists believe that the "sin" of developing

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The financial crisis of 2007–2009 raised the prospect that even some high-income countries, Greece being the

leading possibility, could default on foreign debts. (Recall our discussion in Chapter 20 of the euro zone debt cri-

sis of 2010.) Euro zone countries face a unique constraint compared to other high-income countries, however.

Because monetary policy is controlled by the ECB, a single euro zone government cannot choose to devalue its

debts legally through depreciation of the domestic currency.

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See their paper “Exchange Rates and Financial Fragility” in New Challenges for Monetary Policy (Kansas City,

MO: Federal Reserve Bank of Kansas City, 1999), pp. 329–368.

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countries is not particularly “original” but instead derives from their own histories of ill-

advised economic policies. The debate is far from settled, but whatever the truth, it is clear

that because of original sin, debt finance in international markets is more problematic for

developing than for developed economies.

A related but distinct phenomenon is the large scale of private, internal borrowing in

dollars or other major foreign currencies in many developing countries. As a result, for-

eign currency debtors may find themselves in considerable difficulty when the domestic

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currency depreciates.

The Debt Crisis of the 1980s

In 1981–1983, the world economy suffered a steep recession. Just as the Great Depression made it hard for developing countries to make payments on their foreign loans—quickly causing an almost universal default—the great recession of the early 1980s also sparked a crisis over developing-country debt.

Chapter 19 described how the U.S. Federal Reserve in 1979 adopted a tough anti-inflation policy that raised dollar interest rates and helped push the world economy into recession by 1981. The fall in industrial countries' aggregate demand had a direct negative impact on the developing countries, of course, but three other mechanisms were also important. Because the developing world had extensive adjustable-rate dollar-denominated debts (original sin in action), there was an immediate and spectacular rise in the interest burden that debtor countries had to carry. The problem was magnified by the dollar's sharp appreciation in the foreign exchange market, which raised the real value of the dollar debt burden substantially. Finally, primary commodity prices collapsed, depressing the terms of trade of many poor economies.

The crisis began in August 1982 when Mexico announced that its central bank had run out of foreign reserves and that it could no longer meet payments on its foreign debt.

Seeing potential similarities between Mexico and other large Latin American debtors such as Argentina, Brazil, and Chile, banks in the industrial countries—the largest private lenders to Latin America at the time—scrambled to reduce their risks by cutting off new credits and demanding repayment on earlier loans.

The results were a widespread inability of developing countries to meet prior debt obligations and a rapid move to the edge of a generalized default. Latin America was perhaps hardest hit, but also hit were Soviet bloc countries like Poland that had borrowed from European banks. African countries, most of whose debts were to official agencies such as the IMF and World Bank, also fell behind on their debts. Most countries in East Asia were able to maintain economic growth and avoid rescheduling their debt (that is, stretching out repayments by promising to pay additional interest in the future). Nonetheless, by the end of 1986 more than 40 countries had encountered severe external financing problems.

Growth had slowed sharply (or gone into reverse) in much of the developing world, and developing-country borrowing slowed dramatically. Initially, industrial countries, with heavy involvement by the International Monetary Fund, attempted to persuade the large

banks to continue lending, arguing that a coordinated lending response was the best assur-

ance that earlier debts would be repaid. Policy makers in the industrialized countries

feared that banking giants like Citicorp and Bank of America, which had significant loans

in Latin America, would fail in the event of a generalized default, thus dragging down the

world financial system with them. (As you can see, there was more than one near miss on

the road to the 2007–2009 financial meltdown!) But the crisis didn't end until 1989 when

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For insight into the reasons for foreign currency liability denomination, see the item by Rajan and Tokatlidis in

Further Readings.