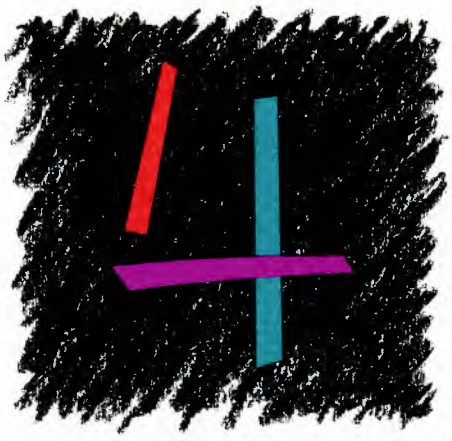

**Annual Report 1987**

# *Federal Reserve Bank of Cleveland*

*The Federal Reserve Bank of Cleveland is one of 12 regional Reserve Banks in the United States which, together with the Board of Governors in Washington, D.C., comprise the nation's central bank.*

*Created by an Act of Congress in 1913, the Federal Reserve System is responsible for formulating and implementing U.S. monetary policy. It also supervises banks and bank holding companies, and provides financial services to depository institutions and the federal government.*

*The Federal Reserve Bank of Cleveland, its two branches in Cincinnati and Pittsburgh, and its Regional Check Processing Center in Columbus serve the Fourth Federal Reserve District.*

*The Fourth District includes Ohio, western Pennsylvania, the northern panhandle of West Virginia, and eastern Kentucky.*

## The President's Foreword

The past year was especially eventful for the world economy, for the Fourth District, and for the Federal Reserve Bank of Cleveland. Events illustrated the sensitivity and resilience of financial markets and reminded us of the importance of consistent economic policy for the continuation of our economic prosperity.

Financial markets were more unsettled last year than at any other time during the current expansion. Stock prices experienced their largest one-day decline in history, and the U.S. dollar continued its record depreciation as market participants began to question the compatibility of world economic policies and the intentions of policymakers.

Despite the turmoil in financial markets and the uncertainty it created, the economic expansion continued last year and, at long last, became firmly entrenched in the Fourth District. With the decline in the dollar, and following several years of restructuring, the manufacturing sector seems poised to recover and to recapture its share of world markets.

We anticipate sustained real economic growth in 1988, and we believe that the trade sector will be an important source for that growth. Narrowing the trade deficit will require many adjustments, most notably a continued shift from consumption toward investment and exports.

Ultimately, this shift must be quite large in order to reduce the deficit in our trade accounts. Although it carries with it the risk of accelerated inflation, the pace of inflation can remain relatively moderate if economic policy is appropriate.

Of the many economic developments of 1987, the milestones we passed in the continuing evolution of the developing-country debt situation will have far-reaching implications.

Since the onset of the developing-country debt problem in late 1982, the heavily indebted countries have undertaken a series of painful economic adjustments that many hoped would enable debtors to fully service their international debts. Despite these adjustments, the burden of debt for many developing countries has continued to grow in absolute terms and relative to the debtors' capacity to service the debt. The ability and willingness of many debtor countries to undertake further economic adjustments has begun to erode.

At year's end, we were not much closer to achieving the resource adjustments necessary to service the debt than was the case in 1982, when the debt problem began to unfold.

Major U.S. creditors began to take actions in 1987 that reflected this lack of progress. Banks added substantially to reserves against developing-country debt. Many increased reserves to levels consistent with the secondary market's assessment of the prospect for full debt service. Although these adjustments have been difficult for banks, equity markets have rewarded the institutions that have reserved relative to those that have not.

Achieving a long-term solution to the developing-country debt problem is important for world economic growth and for financial

Chairman of the Board Charles W. Parry and President W. Lee Hoskins

stability. As recent developments suggest, a more market-oriented approach now seems to offer us greater hope of attaining that goal. Market discipline of both creditors and debtors seems likely to become the deciding factor that will resolve these difficult issues in the decade of the nineties.

**S**olutions are unlikely to come from bold new government financing programs. Rather, governments need to provide a regulatory environment in which individual creditors and debtors can adjust the terms, maturities, and principals of the debts, taking into account the debtor's ability to make the necessary resource adjustments.

**R**esource adjustments must involve both creditors and debtors. Creditors must provide debtor countries with increased access to their goods markets. Debtors must continue to pursue the regulatory and structural changes in their economies that will attract foreign investments and that will encourage export-oriented growth. Viable growth and debt service require renewed access to world capital markets.

**T**he essay in this year's annual report discusses the evolution of our developing-country debt problem, focusing on the important relationship between real economic adjustment and the financial solutions adopted between creditors and debtors.

**W**e show that a close correspondence exists between the net transmission of financial capital and the net flows of goods and services,

and we illustrate that, in an increasingly interdependent world, the adjustment burden and the responsibilities for achieving it fall on both the debtor and the creditor countries. In the process, we explore how private markets have assessed the prospects for debt service and have reflected this assessment in their valuation of debt and of the banks that own that debt.

Developing-country debt will continue to be a major policy issue for the banking system as a whole and the Federal Reserve System in particular. I am fortunate to be following Karen Horn as this Bank's president. In her five years as president, Mrs. Horn made significant contributions to the operations of the Bank, to the smooth functioning of the Fourth District financial community, and to monetary policy formulation. We deeply appreciate her efforts and achievements.

The Federal Reserve Bank of Cleveland is guided in its efforts by our directors, to whom we extend our deepest appreciation. We are grateful for the leadership of E. Mandell de Windt (retired chairman of the board of Eaton Corporation), who retired from our Board of Directors after serving as a member since 1981 and as deputy chairman since 1984.

Special thanks go to the directors of our Cleveland Board who have completed their terms of service: Raymond D. Campbell (chairman, president, and chief executive officer of Independent State Bank of Ohio) and Richard D. Hannan (chairman of the board and president of Mercury Instruments, Inc.), both of whom have served since 1982.

We are also grateful for the contributions of Dr. Sherrill Cleland (president of Marietta College) and Don Ross (owner of Dunreath Farm), who have served on our Cincinnati Board since 1982; and Charles L. Fuellgraf, Jr. (chief executive officer of Fuellgraf Electric Company) and James S. Pasman, Jr. (former vice chairman of Aluminum Company of America), who have served on our Pittsburgh Board since 1985 and 1982, respectively.

Thomas H. O'Brien (president and chief executive officer of PNC Financial Corp) has resigned from our Pittsburgh Board, and represents the Fourth District as a member of the Federal Advisory Council, replacing Julien McCall (retired chairman and chief executive officer of National City Corporation). The valuable contributions of both individuals, as well as the dedicated service of the members of the 1987 Small Bank and Small Business Advisory Councils, are appreciated.

Finally, I wish to extend my personal gratitude to all of the employees of the Bank for their dedicated service during the past year. With their assistance, I look forward to the challenges of serving the Fourth Federal Reserve District.

Sincerely,

W. Lee Hoskins
President
March 10, 1988

## Developing-Country Debt

Last year marked a difficult period in the evolution of the developing-country debt situation for borrowers and lenders alike.

Some large debtors faltered in their progress toward making the necessary resource adjustments to service their foreign debts. The reversals in the adjustment process caused repercussions in financial markets throughout the year.

Early in the year, Brazil announced a suspension of debt service to banks. In March, Citicorp announced the creation of special loan loss reserves equal to about 25 percent of its credit exposure to Brazil and selected other developing countries. Subsequently, 43 of the 50 largest U.S. bank holding companies created similar reserves, principally to cover developing-country credit exposures.

In mid-December, several large regional banks in the United States announced further substantial additions to their loan-loss reserves against their developing-country debts.

Finally, at year-end 1987, the government of Mexico announced a proposal that would reduce both the cost of debt service and the value of the outstanding debt.

The overwhelming significance of these events was that major U.S. bank creditors were taking steps consistent with the growing prospect that some heavily indebted countries would not sustain the full servicing of their debts.

### Belief In Full Repayment

Prior to 1987, U.S. banks and policymakers embraced approaches to the international-debt situation that implied confidence that full servicing of outstanding debts would eventually be achieved.

The initial step following the unfolding of the developing-country debt problem in 1982 was to reschedule loan repayments and to maintain debt service by providing new funds, through both official channels and commercial banks. The second step was to institute economic adjustment programs in the debtor country, usually under the auspices of the International Monetary Fund (IMF).

The Baker Plan, initially offered in late 1985, essentially took a similar approach. Introduced by U.S. Treasury Secretary James Baker, the plan proposed additional funding for the most heavily indebted countries and sought more involvement on the part of the World Bank, the Inter-American Development Bank, and the IMF. In addition, it placed more emphasis on basic structural changes in debtor economies as part of the necessary adjustments.

Throughout this period, creditors seemed to view the debt situation primarily as a liquidity crisis, which would be solved by time, economic growth in creditor countries, and resource adjustment in the debtor countries.

### Resource Adjustments

This annual report essay examines the real economic adjustments of debtor countries and shows how the success or failure of these resource adjustments dictates the feasible financial solutions to the problem.

The central issue is economic growth and the transfer of resources between debtor and creditor countries. The prosperity of nations engaged in international commerce is dependent upon the transfer of real resources. The transfer of financial claims, for the most part, follows real resource flows.

Consequently, the nature and


*A one-to-one correspondence*

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the costs of the economic adjustments that enable real resources to be exchanged in response to any financial transaction, such as the extension of international loans or the servicing of debt, are the crucial areas for economic inquiry.

In the following sections, the events leading up to the 1982 international debt problem are described. Particular attention is given to the adjustments that heavily indebted countries subsequently undertook in an attempt to meet their obligations and to the growing recognition by financial markets that the necessary shifts in real resources may not be achieved.

This essay focuses on the common characteristics and collective evolution of 15 heavily indebted countries.[1] The situation, of course, varies greatly among individual countries within this group and among individual developing countries in general. ●

## The Debtors' Perspective

External financing is vital to the economic growth of most developing economies. The important economic question is, to what extent can a country supplement domestic savings with foreign borrowing to accommodate a higher level of investment and consumption over time?

### The Debt Cycle

A country is constrained in its borrowing mainly by its ability to service debt over time. In the early stages of a debt cycle, a developing country will receive a capital inflow and will generate a trade deficit as it imports capital goods to develop its industrial base.

In time, as development proceeds, the country builds up its capital base, services its debts, and generates a trade surplus. Eventually the country could repay its debt completely and could even export capital.

While the idea of a debt cycle is attractive, many developing countries have not escaped their dependence on foreign capital. In itself, this does not imply an unsustainable situation. A nation can continue to import capital almost indefinitely, provided that the costs of servicing that debt do not grow faster than its ability to pay.

The ability to pay is usually measured in terms of exports, since they provide the chief means of earning the foreign exchange with which to service the debt. As long as the costs of servicing debt remain a manageable, nonincreasing proportion of exports, a debtor country can sustain the pace at which it borrows abroad.

### Debt Repayment Problems

A debt repayment problem arises when external or internal events push debtor countries off their expected growth paths, leaving debtors with obligations to service debts that exceed their ability to make the necessary real resource transfers.

History indicates that such occasions have not been uncommon. Wars, recessions, political change, and inappropriate domestic policy, at one time or another, have caused difficulties for many countries, including the United States, the United Kingdom, France, Italy, and Germany, in the servicing of their international debts.

When events seriously disrupt a nation's ability to service its debts, the financial adjustments that it adopts depend ultimately on the real economic adjustments the debtor country can and is willing to undertake. A one-to-one correspondence necessarily exists between the net international transmission of financial funds and the net international flows of goods and services among countries.

For a debtor country to service or repay its debt to the United States, the debtor country first must acquire dollars. In the short run, it might do this through the sale of assets, including its official international reserve holdings. However, countries usually hold only a small amount of international reserves and do not like to deplete them.

Eventually more basic adjustments must be made. The debtor country can acquire the necessary dollars only by running an export surplus. Consequently, a country that must make a large, sustained net remittance of financial capital also must experience a commensurate net outflow of goods and services via a trade surplus.[2] In a fully equivalent sense, a creditor country can receive a net inflow of financial capital only through a trade deficit.

### Trade Flows vs. Financial Flows

This direct correspondence between financial flows and flows of goods and services presents an important, and most difficult, challenge with respect to the international-debt problem. Trade flows typically do not adjust rapidly to changes in financial flows.

John Maynard Keynes argued that those who expect a rapid adjustment " ... are applying the theory of liquids to what is, if not a solid, at least a sticky mass with strong internal resistances."[3] The adjustment process requires changes in relative prices and income levels that are difficult to accomplish and that may impose severe social and economic costs on the debtor countries. The adjustment also requires corresponding shifts in trade by the creditor countries.

To ease the adjustment burden, debtor countries also can seek to reschedule their debt obligations. Virtually all of the important debtor countries involved in the current international-debt situation have negotiated debt-restructuring agreements. When accompanied by new lending, rescheduling sustains a capital inflow to the debtor country. It allows a debtor country time to make the economic adjustments necessary for raising the level of exports to service the international debt.

Rescheduling debts and providing additional loans to debtor countries have helped to reduce strains in the banking sectors of creditor countries. Although the international debts are concentrated among the largest banks, interbank relations are such that the failure of large banks could have repercussions on others and on the entire financial network.

Rescheduling buys time for adjustment, but when the level of debt servicing becomes unachievable or unsustainable in relation to the debtor country's potential for exports, the debtor country will be unable to fully service its international obligations.

History indicates that changes in the terms of indebtedness and protracted delays in repayment have not been uncommon in the process of adjustment. ●

## The Debt Buildup

The 1970s witnessed a rapid growth in the external indebtedness of developing countries. To a large extent, the increased debt reflected specific developments in individual borrowing countries, but certain, more general economic developments also played a role.

### Oil Price Shocks

The sharp rise in the price of oil was one important factor underlying the buildup of developing-country debt. Many oil-importing, developing countries initially borrowed to finance their higher oil-import bills. Borrowing enabled these countries to mitigate the immediate impacts of the oil shocks on their standards of living and presumably provided them with time for adopting long-term adjustment policies. The sharp increase in oil prices also encouraged many oil-producing countries to borrow against future oil revenues for the purposes of developing their oil-production capacity and of diversifying their industrial bases.

The oil price shocks of the 1970s, however, did not create an unmanageable debt situation. As a group, the developing countries demonstrated excellent real growth, outpacing growth in the developed countries. The 15 heavily indebted countries, for example, experienced real economic growth at an average annual rate of 6.1 percent during the 1970s.

In comparison, the seven largest industrial countries experienced real economic growth of only 3.4 percent per year over the same period.[4]

Moreover, not all developing countries experienced continuous or excessive trade deficits. Argentina and Venezuela, for example, usually ran trade surpluses, while Brazil and Mexico had trade deficits that seemed consistent with the growth in debt service capabilities.

### Financing Growth

The apparently excellent growth potential of the developing countries, and the relatively high returns on capital that this growth implied, attracted foreign capital. In addition, throughout much of the 1970s, real interest rates (nominal rates adjusted for expected inflation) remained low and often were negative. Low real interest rates reduced the real burden of debt servicing.

The indebtedness of developing countries increased sharply between 1975 and 1982, both in absolute terms and in relation to the countries' ability to service it. As World Bank data indicate, the ratio of debt to exports for all developing countries rose from 73.5 percent in 1975 to 103.1 percent in 1982, and the ratio of debt service to exports rose from 8.5 percent in 1975 to 16.4 percent in 1982.[5]

Although large, the magnitude of the capital flows into the developing countries during the 1970s was not unprecedented. What was unprecedented, however, was that an increasing proportion of the inflow represented debt, rather than equity capital, and that a growing share was in the form of commercial bank loans, rather than official loans or bond issues.

Many regional and small banks entered the international lending market in the 1970s, but international lending remained the domain of the large money-center banks with expertise in the area. According to data on

the exposure of U.S. banks by country, the nine largest reporting banks held 62 percent of the total claims on developing countries at the end of 1982 — an amount equivalent to 222 percent of their total capital and substantially more than the 163 percent of total capital reported in 1977.

The growing reliance on commercial-bank debt made both developing countries and U.S. banks more vulnerable to worldwide financial developments, as subsequent events soon proved.[6]

## A Changing World Economy

By the late 1970s and early 1980s, rising real interest rates and a worldwide recession left the indebted countries in a position of having to make much-larger-than-expected net payments to their creditors abroad.

As inflation accelerated, the Federal Reserve and other central banks adopted disinflationary monetary policies. Both nominal and real interest rates rose sharply. The London Interbank Offer Rate (LIBOR), to which interest rates on developing-country debts usually are tied, nearly doubled, from 10.7 percent in June 1979 to 19.2 percent in March 1981.

Since most international lending agreements were generally structured to permit frequent adjustments of interest payments to changes in rates, the sharp rise in interest rates in the late 1970s and early 1980s rapidly translated into higher debt-servicing costs for debtor countries.

Soon after the rise in interest rates, world economic activity began to slow. Economic growth in the largest industrialized countries was very sluggish in 1980 and 1981, and output fell 0.6 percent in 1982.

The industrialized countries constitute the major market for developing-country exports. As the economic growth of the major industrialized countries slowed, the exports and income growth in developing countries also slowed.

In 1981 and 1982, the worldwide pace of inflation began to moderate, causing commodity prices to fall sharply. The decline in commodity prices further eroded the ability of developing countries to meet the rising service charges on their debts.

### Internal Policies

Important as world economic developments were in precipitating the international-debt problems of the early 1980s, world events were only part of the problem. Some countries, like Korea, quickly resolved their debt problems, while others, like the 15 heavily indebted countries, could not. The ability of debtor countries to avoid or to resolve quickly their debt-servicing problems largely depended on their economic capabilities and internal policies.

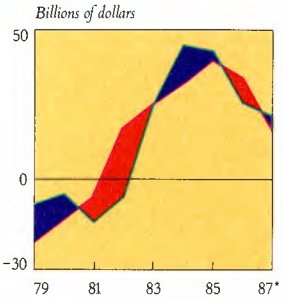
Many countries persistently ran large government budget deficits that reduced the amount of domestic savings available to finance domestic investment. Foreign capital became a substitute, rather than a supplement, for private savings. In some cases, it did not find its way into productive investments that would generate a return to help service the debt. Instead, it often financed capital flight from the debtor countries.

Often the developing countries manipulated exchange rates and prices in ways that distorted relative-price signals and favored an inefficient allocation of resources. Overvalued

- *Trade balance*
- *Net capital flow*
- *Reserve gain*
- *Reserve loss*

**Net Capital and Trade Flows**
*Fifteen heavily indebted countries*

Chart 1

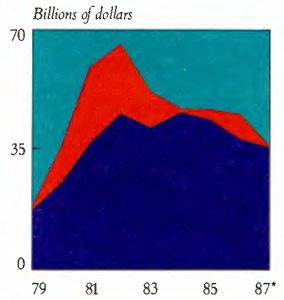



*Note: Positive (negative) values indicate a capital outflow (inflow) and trade surplus (deficit).*

- *Other*
- *Net interest*

**Capital Outflows**
*Fifteen heavily indebted countries*

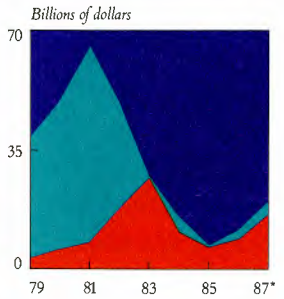
Chart 2




- *Other*
- *Official capital*

**Capital Inflows**
*Fifteen heavily indebted countries*

Chart 3




**1987 = IMF projection*
*Source: IMF World Economic Outlook, April 1987*

exchange rates also increased the expected return from investing abroad and frequently encouraged capital flight.

Price controls, subsidies, and tariffs encouraged investment in inefficient industries. Often, these government policies favored import-competing industries over export-oriented industries and, therefore, ignored the developing countries' most important comparative advantages. Countries with inappropriate economic policies found it especially difficult to make the resource adjustments necessary to fully service their mounting international debts.[7]

## Changing Capital Inflows

The economic events of the early 1980s were reflected in the balance-of-payments accounts of the heavily indebted countries. At this time, the financial position of the heavily indebted nations changed abruptly from that of a recipient of net capital inflows to that of a net remitter of capital (chart 1).[8]

Underlying this transformation was a sharp increase in the interest charges on developing-country debt, resulting from the run-up in world interest rates. Net interest payments more than doubled in two years, from $17.1 billion in 1979 to $37 billion in 1981, and rose to $46 billion in 1984 (chart 2).[9]

Other factors contributed to the swing in net capital flows. As the economic prospects of the debtor countries became more uncertain, capital flight out of these countries to "safe havens" accelerated. This is evidenced in a sharp rise in the "errors and omissions" component of the balance of payments from these countries, particularly in the years 1980 through 1983.

In addition, with banks and other lenders becoming increasingly reluctant to make new loans, inflows of private capital, especially long-term credits, dried up after 1982 and frequently reversed themselves, as did miscellaneous sources of funds tied to the financing of exports and direct foreign investments (chart 3). Even official sources of credit slowed somewhat after 1983.

As the debtor countries' net inflow of capital rapidly shrank from 1980 to 1981, their collective trade deficit expanded. A change in official reserves balanced the international accounts.

The further deterioration in the trade deficit reflected the slowdown in worldwide economic activity. The volume of goods exported, which grew annually at an average of 2.8 percent between 1969 and 1978, slowed in 1980 and actually declined in 1981. Import volumes began to slow in 1981, but did not contract until 1982.

## Trade Adjustments

As they drew down reserves and rescheduled loans, the heavily indebted countries began taking steps to generate trade surpluses. To create a surplus, the countries attempted to increase private savings (reduce private consumption) relative to private investment, and to lower government budget deficits. Often, developing countries negotiated such adjustment policies under the auspices of the IMF as part of a rescheduling agreement.

How the adjustments are achieved, especially the portion that falls on investment, can have a significant effect on future economic growth. Most data suggest that the adjustment has fallen predominantly on investment spending in heavily indebted countries.[10]

As the governments of debtor countries took over — or guaranteed — most of their countries' debts, their international-debt problems also became budget problems. Despite government expenditure cuts and tax increases, government deficits have continued to rise in the heavily indebted countries.

Consumption fell sharply in 1983 and has remained below earlier levels in many debtor countries. With budget deficits rising and further cuts in consumption politically infeasible, more and more of the adjustment burden shifted onto investment. The decline in investment spending in the developing countries suggests that their potential for economic growth and development will slow — possibly long into the future.

In part because of austerity measures and in part because of the feedback effects from the worldwide recession, real economic activity in the heavily indebted countries fell in 1982 and 1983. Because of the slower pace of economic activity in debtor countries, and because of various trade restraints, import volumes also fell sharply in 1981 and 1982, and to a lesser extent in 1983.

The trade balance did shift to a surplus in 1983, as was necessary to effect the net transfer of funds. In view of the adverse world economic conditions at the time, the adjustment in the heavily indebted countries' trade balance was unexpectedly rapid.

### Terms of Trade

A change in the terms of trade accompanied the adjustment process in the heavily indebted countries. The terms of trade measures the units of imports that one unit of export buys. This can be calculated as the ratio of export prices to import prices, expressed in a common currency. After rising throughout the 1970s and in 1980, the relative price of most developing countries' exports — their terms of trade — declined in 1981, 1982, and 1983.

This fall in the terms of trade partially reflected a decline in world economic activity and, hence, demand for developing-country exports. It also reflected debtor-country policies, such as exchange-rate devaluations, designed to encourage exports and to discourage imports. In some unfortunate cases, however, the decline in the terms of trade of developing countries was a necessary offset to protectionist policies elsewhere in world markets.

A decline in a debtor country's terms of trade can help improve a country's trade balance, depending on how sensitive trade flows are to changes in relative prices. Primary commodities, which are the chief exports of most heavily indebted countries, are likely to be less sensitive to relative price changes than manufactured goods are.

The trade improvements resulting from the decline in the terms of trade come at a cost. If a debtor's exports are cheaper in world markets, it must export more real economic resources to service its debts.

*The growing reliance on commercial-bank debt made both developing countries and U.S. banks more vulnerable to worldwide financial developments, as subsequent events soon proved.*

### Temporary Recovery

Rescheduling and economic adjustments helped the heavily indebted countries generate an export surplus sufficient to match their net transfer of financial capital by 1983. In 1982 and 1983, sharp increases in official capital inflows, much of which was related to rescheduling efforts, helped to finance interest payments and capital flight.

Interest payments leveled off after 1982 and capital flight seemed to decline. By 1984 the situation improved further. Worldwide economic activity continued to accelerate, enabling the trade accounts of the debtor nations to improve more from expanding exports than from contracting imports. The 15 heavily indebted countries experienced slower outflows of capital and slower inflows of official funds. Their trade surplus continued to grow, and they added to reserves.

The international-debt situation continued to improve in 1985 in the sense that, with the rescheduling of debt, heavily indebted countries were increasingly able to generate a large enough surplus to effect their interest payments. World interest rates had declined, although real interest rates often seemed high from a historical perspective. Capital flight also seemed to taper off. •

## The Creditors' Perspective

Thus far, the adjustment burden of heavily indebted countries has been discussed. But the international-debt situation requires adjustments on the part of creditor countries as well.

In the absence of continued rescheduling of debt and new lending, the heavily indebted countries must generate a trade surplus if they are to service their debts. Correspondingly, creditor countries must develop a trade deficit in relation to the debtor countries.

To a limited extent, debtors have been able to improve their trade balances by reducing their imports. But developing countries require a minimum amount of imports to secure vital consumption goods not produced there, to continue necessary investments, and to maintain growth.

Consequently, much of the adjustment to a trade surplus must come from increased exports to creditor countries. This can require some adjustments on the part of creditor countries.

### Competition In World Markets

The need to increase debtor-country exports increases the worldwide competition between debtor countries and creditor countries. This is especially true in cases where debtor countries have experienced declines in their terms of trade. Declines in the terms of trade imply that debtors must export a larger volume of goods to earn a given amount of export revenue. In addition, the shift in the terms of trade can give a debtor country a competitive advantage in the world market as compared with a creditor nation.

The reduction in developing-country imports and the increase in developing-country exports could

lower employment in the industries of creditor countries that compete closely with the export industries of the debtor countries. This does not necessarily imply a net loss for the creditor country, since the remaining sectors of a creditor country benefit from the inflow of capital and from improved terms of trade in relation to a debtor country.

Nevertheless, the adjustment can be difficult for those economic sectors of creditor countries that compete most directly with the industries in developing countries. As a result, the adjustment process can contribute to protectionist policies.

### Outlook for Resolution

The success of the debtor countries in handling their debt burdens depends upon the forces that determine worldwide economic conditions. For instance, if a creditor country has a rapidly growing economy, it can absorb a higher level of debtor-country exports. In the early stages of the current debt situation, a number of projections suggested that growth by the major industrial countries of approximately 2.5 percent to 3.0 percent annually would be necessary to absorb debtor-country exports.[11]

The economic performance of the heavily indebted countries deteriorated in 1986 and, although actual data are not yet available, another deterioration is estimated for 1987. Interest payments and other capital outflows have continued to slow, but the heavily indebted countries were unable to generate a large enough trade surplus. Consequently, the heavily indebted countries lost reserves in 1986.

Debtor-country export volumes declined sharply in 1985 and 1986, largely reflecting a slowing in the pace of real economic activity among industrialized countries. At the same time, the terms of trade declined further. Much of this recent decline seems to reflect oil prices and might not adversely affect non-oil primary commodity exporters. In addition to the deterioration in the external environment, the debtor countries were unable or unwilling to continue with necessary resource adjustments.

### Financial Market Adjustments

The recent worsening in the economic prospects of the heavily indebted countries has resulted in increased financial market tensions surrounding the international-debt situation. This was dramatically illustrated when Brazil unilaterally suspended interest payments on its bank loans early in 1987.

In the past two years, financial markets increasingly have questioned the feasibility of continuing to reschedule debts in their entirety and of offering new funds. These approaches alone have expanded the outstanding indebtedness relative to the debtors' capacity to service the debt.

Despite economic austerity, rescheduling, and additional funding, the total external debt of heavily indebted countries rose to an estimated $485 billion in 1987 from $350 billion in 1981, according to World Bank data.[12] Debt burdens remain well above the capacity of heavily indebted countries to service them completely.

*In an increasingly interdependent world, the adjustment burden and the responsibilities for achieving it fall on both the debtor and the creditor countries.*

The ratio of outstanding public and publicly guaranteed debt to exports rose from 101.5 percent in 1981 to 267.9 percent in 1986. The ratio of debt service to exports rose from 20.0 percent to 29.0 percent over the same period. The World Bank does not expect a significant improvement, if any, in these ratios for developing countries for 1987.

The secondary market reflects this concern about repayment in its valuation of developing-country debt. According to a weighted-average value index, outstanding bank debt traded at 77 percent of its book value in January 1986. The index has since fallen to 47 percent of face value, as debt burdens have grown and as the capacity of debtor countries to service their debt has eroded.[13]

The U.S. banking system has reduced its exposure to developing-country debt significantly. By June 1987, the exposure of U.S. banks to the 15 heavily indebted countries had fallen to $84.4 billion from $90.2 billion in mid-1982, according to a survey of bank exposure.

Furthermore, the banks have made large additions to their capital over these years, and foreign debt exposure of the banks surveyed declined from 136 percent to 68 percent of total capital. The debt exposure continues to be highly concentrated at the largest money-center banks. The nine largest banks accounted for 66 percent of total U.S. bank claims on heavily indebted countries in June 1987, up from 60 percent in June 1982. Although exposure of these banks has declined relative to capital, it remains high, generally exceeding capital.

These developments influenced financial events last year. In March 1987, Citicorp announced intentions to create up to $3 billion of loan loss reserves for developing-country debt, about 25 percent of Citicorp's current developing-country debt exposure. As many as 43 of the 50 largest bank holding companies in the United States followed Citicorp's lead.

In December, the large regional banks also made further substantial additions to reserves, raising reserves to — and in many cases beyond — 50 percent of exposure, more or less in line with current secondary market prices of developing-country debt. One regional bank announced the first actual charge-off against a portion of the developing-country debt in its portfolio.

The degree to which banks have reduced exposure is reflected in how banks are valued in the marketplace. The stocks of large money-center banks with sizable developing-country loans tend to trade well below their book value, as they have since the onset of the debt problem in the early 1980s. However, the market-to-book ratio for banks that have reduced exposure to half of outstanding debt through loan-loss reserves has risen sharply since 1982.

At year-end 1987, the government of Mexico and the Morgan Guaranty Trust Company announced a proposal to exchange up to $10 billion

of new, 20-year, interest-bearing Mexican bonds for up to $20 billion of outstanding Mexican loans owed to the banks participating in the arrangement. The exchange will be made at auction-determined prices that presumably will reflect market valuation of the debts.

Mexico proposed to use up to $2 billion of its $11 billion of foreign-currency reserves to purchase a new issue of 20-year, zero-coupon U.S. Treasury bonds with a value at maturity equal to the principal value of the Mexican bonds. Mexico will place the U.S. Treasury bonds in escrow inside the United States to secure the Mexican bonds, assuring investors of repayment of principal at maturity.

Investors remain at some risk with respect to payment of interest on the bonds. Nevertheless, the Mexican bond proposal represents another important step in the evolution toward a market-oriented solution to the international debt situation. •

## The Financial Market Perspective

This report has focused on the real economic adjustment that debtor countries must achieve to sustain the net outflow of capital required to service their international obligations.

Despite five years of adjustments, the outstanding obligations of the heavily indebted countries have continued to grow, both in absolute terms and relative to their capacity to service the debts.

Moreover, the capacity of the heavily indebted countries to make further domestic economic adjustments seems limited. The recent slowing in worldwide economic growth, together with persistently strong protectionist measures, has further intensified the tensions between debtor and creditor countries.

The underlying economic realities of the adjustment problems have become increasingly apparent in recent years. Financial markets have repriced the debt accordingly and banks have made further additions to loan-loss reserves.

The financial markets have forced the issue to the forefront and have become the vehicle by which the problem will eventually be resolved. For the first time since the beginning of the debt situation, the actions being taken by both creditors and debtors seem consistent with the market's assessment of the ability of debtor countries to service their debts.

As this report implies, if creditor countries continue to seek a net outflow of financial capital from the heavily indebted countries, they must absorb the exports of the heavily indebted countries. The close correspondence between net trade and net financial flows ultimately must guide the resolution of the international-debt situation. •

## Footnotes

1. The IMF's classification of 15 heavily indebted countries includes: Argentina, Bolivia, Brazil, Chile, Colombia, Cote d'Ivoire, Ecuador, Mexico, Morocco, Nigeria, Peru, Philippines, Uruguay, Venezuela, Yugoslavia.

2. We ignore here the reporting, measurement, and timing problems that necessitate an "errors and omissions" account.

3. John Maynard Keynes, "The German Transfer Problem," *Economic Journal*, vol. 39 (March 1929); reprinted in Howard S. Ellis and Lloyd A. Metzler (eds.) *Readings in the Theory of International Trade* (Richard D. Irwin, 1950), p. 167.

4. The seven large industrialized countries are Canada, France, Italy, Japan, the United Kingdom, the United States, and West Germany.

5. These data refer to public and publicly guaranteed long-term debt outstanding. World Bank, *World Debt Tables*, 1987-88 Edition, vol. 1 (1988), p. 5.

6. World Bank, *World Development Report, 1985* (Oxford University Press, 1985), chap. 1 and 2.

7. Ibid., chap. 4 and 5.

8. To distinguish more clearly between financial transactions and flows of goods and services, charts 1, 2, and 3 classify certain transactions differently than typical balance-of-payments accounts do. The charts include interest payments in the capital-account transactions. Usually interest receipts and payments appear among the current-account items as a service. The charts also treat "errors and omissions" as unrecorded capital flows.

9. Charts 1, 2, and 3 present *ex post* transactions, which reflect adjustments because of the inability of debtor countries to finance *ex ante* transactions.

10. The arguments presented in this section are discussed and developed in International Monetary Fund, *World Economic Outlook*, 1986, pp. 78-89.

11. Michael Dooley and others, "An Analysis of External Debt Positions of Eight Developing Countries through 1990," International Finance Discussion Papers 227 (Board of Governors of the Federal Reserve System, August 1983).

12. World Bank, *World Debt Tables*, 1987-88 Edition, vol. 1 (1988), pp. viii-ix, Box I, p. xiv and pp. 30-33.

13. Index compiled by Shearson Lehman Brothers, Inc.

## Comparative Financial Statement

*For years ended December 31*

### Statement of Condition

| | 1987 | 1986 |
|---|---|---|
| **Assets** | | |
| Gold certificate account | $ 664,000,000 | $ 650,000,000 |
| Special drawing rights certificate account | 314,000,000 | 314,000,000 |
| Coin | 27,530,552 | 33,248,199 |
| Loans and securities: | | |
| Loans to depository institutions | 63,475,000 | 205,960,000 |
| Federal agency obligations bought outright | 453,028,595 | 459,763,588 |
| U.S. government securities | | |
| Bills | 6,459,213,325 | 6,094,013,060 |
| Notes | 4,976,685,879 | 4,000,564,839 |
| Bonds | 1,693,907,233 | 1,510,589,056 |
| Total U.S. government securities | 13,129,806,437 | 11,605,166,955 |
| Total loans and securities | 13,646,310,032 | 12,270,890,543 |
| Cash items in process of collection | 293,797,319 | 375,305,015 |
| Bank premises | 32,265,020 | 31,540,886 |
| Other assets | 750,233,144 | 771,968,876 |
| Interdistrict settlement account | 135,947,039 | 247,216,013 |
| *Total Assets* | $15,864,083,106 | $14,694,169,532 |
| **Liabilities** | | |
| Federal Reserve notes | $12,987,455,204 | $12,482,060,679 |
| Deposits: | | |
| Depository institutions | 2,123,425,856 | 1,527,564,394 |
| Foreign | 9,000,000 | 9,000,000 |
| Other deposits | 42,239,230 | 26,903,549 |
| Total deposits | 2,174,665,086 | 1,563,467,943 |
| Deferred availability cash items | 317,030,608 | 297,722,195 |
| Other liabilities | 159,545,408 | 128,290,115 |
| *Total Liabilities* | $15,638,696,306 | $14,471,540,932 |
| **Capital accounts** | | |
| Capital paid in | $ 112,693,400 | $ 111,314,300 |
| Surplus | 112,693,400 | 111,314,300 |
| *Total Capital Accounts* | $ 225,386,800 | $ 222,628,600 |
| *Total Liabilities and Capital Accounts* | $15,864,083,106 | $14,694,169,532 |

## Income and Expenses

| | 1987 | 1986 |
|---|---|---|
| **Current income** | | |
| Interest on loans | $ 555,846 | $ 674,180 |
| Interest on government securities | 965,834,554 | 941,194,643 |
| Earnings on foreign currency | 20,633,487 | 23,594,141 |
| Income from services | 39,224,730 | 38,173,955 |
| All other income | 524,982 | 415,209 |
| Total current income | $1,026,773,599 | $1,004,052,128 |
| Current operating expenses | 63,432,778 | 61,298,377 |
| Cost of earnings credits | 10,452,713 | 9,581,389 |
| *Current Net Income* | $ 952,888,108 | $ 933,172,362 |
| **Profit and loss** | | |
| Additions to current net income | | |
| Profit on foreign exchange transactions | $ 108,256,617 | $ 118,237,824 |
| Profit on sales of government securities | 2,511,011 | 3,918,560 |
| All other additions | 20,142 | 9,134 |
| Total additions | $ 110,787,770 | $ 122,165,518 |
| Deductions from current net income | | |
| Loss on foreign exchange transactions | $ -0- | $ -0- |
| All other deductions | 691 | 5,032,520 |
| Total deductions | $ 691 | $ 5,032,520 |
| Net additions or deductions | $ 110,787,079 | $ 117,132,998 |
| **Assessments by Board of Governors** | | |
| Cost of unreimbursable U.S. Treasury services | $ 3,094,741 | $ -0- |
| Board of Governors expenditures | 4,822,900 | $ 5,865,800 |
| Federal Reserve currency costs | 10,906,391 | 11,299,418 |
| Total assessments by Board of Governors | $ 18,824,032 | $ 17,165,218 |
| *Net Income Available for Distribution* | $1,044,851,155 | $1,033,140,142 |
| **Distribution of net income** | | |
| Dividends paid | $ 6,719,445 | $ 6,590,413 |
| Payments to U.S. Treasury (interest on Federal Reserve notes) | 1,036,752,610 | 1,022,235,729 |
| Transferred to surplus | 1,379,100 | 4,314,000 |
| Total distributed | $1,044,851,155 | $1,033,140,142 |

# Federal Reserve Bank of Cleveland Directors

*As of December 31, 1987*

Cleveland Directors (left to right, standing) Robert D. Storey, Raymond D. Campbell, William A. Stroud, Deputy Chairman John R. Miller; (seated) Laban P. Jackson, Jr., Frank Wobst, Richard D. Hannan

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& Federal Reserve Agent
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Columbus Office

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*Vice President*

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