



*Federal Reserve Bank of Cleveland
Annual Report 1984*



As international markets become more important to the prosperity of the United States, its economic perspective must shift from internal to external, from a closed economy to an open one. Understanding the workings and idiosyncracies of an open economy requires an open and creative mind. How we see the world depends largely on how we interpret and connect events. Our 1984 annual report helps in this process. We appeal to your imagination, through words and illustrations, to help you attain a better understanding of the world in which we live.

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The President's Foreword

Economic activity in 1984 was strong and steady and advanced without a significant increase in the rate of inflation. Perhaps the most puzzling aspect of the past year was the simultaneous strength of the dollar in foreign exchange markets and the growing imbalance in the U.S. international transactions. Instead of declining, as the current-account deficit approached record levels, the dollar continued to appreciate, buoyed by substantial net inflows of foreign capital. In part, the net inflow of foreign capital to the United States reflects higher interest rates on assets denominated in dollars. The dollar's strength may also reflect a more favorable return to real capital in the United States than in most other developed countries. Beyond these factors, there seems to have been a fundamental improvement in the way in which foreign investors view the future prospects of the dollar. The dollar's persistent strength is an enigma that portends continued current-account deficits in the foreseeable future.

The strong dollar has greatly reduced the competitive position of U.S. trade-related industries, and has encouraged protectionist pressures in this country to an extent not witnessed since the Great Depression. The United States was a \$24-billion net exporter of goods and services in late 1982 when the current expansion began, but in 1985 the U.S. is a net importer. The traditional capital goods industries bore the brunt of intense foreign competition in the earlier stages of the recovery. Intense competition from imported goods has aggravated the structural problems of the Fourth District's capital-goods producers and is now being felt widely throughout the economy.

It is important to note, however, that the effects of the strong dollar have not all been adverse. The dollar's appreciation has reduced import prices, and the resulting intense competition with imports has forced U.S. firms to maintain prices at their lowest possible levels. Moreover, the resulting current-account





deficit has, as its counterpart, a current-account surplus elsewhere in the world. Our expanding trade deficit has encouraged recovery abroad and has helped the less developed debtor countries to reduce their debt burden.

Concern for the adverse effects of the strong dollar and for the growing current-account deficit has prompted policymakers to consider possible options for dealing with the situation. The 1984 Annual Report essay "A Puzzle for the World" examines the issues surrounding the current international situation and reviews the policy choices for correcting current imbalances in U.S. international transactions.

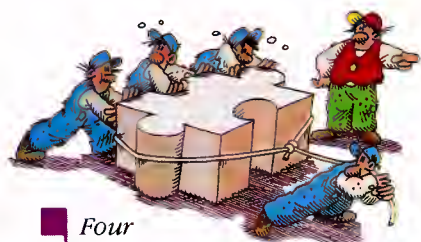
During 1984, the Federal Reserve Bank of Cleveland continued its efforts to provide high quality and efficient services to Fourth District depository institutions. The Bank's activities throughout the year were strengthened by the advice of our 23 directors who represent a variety of banking, business, and educational interests. Richard Fitton (President and Chief Executive Officer of First National Bank of Southwestern Ohio) who served on our Cincinnati Board since 1982, and Robert Milsom (President of Pittsburgh National Bank) who served on our Pittsburgh Board since 1982, completed their terms of service in 1984. John G. McCoy (Chairman of the Executive Committee of Banc One Corporation) completed his term as the Fourth District representative to the Federal Advisory Council. I am grateful to them and to all of our directors for their valuable and dedicated service and guidance. The Bank will also miss the services and enthusiasm of Sister Grace Marie Hiltz, S.C., a Cincinnati Branch Director, who passed away on March 29, 1985. Sister Grace was the President of Sisters of Charity Health Care Systems, Inc.

Finally, I wish to express my appreciation to the officers and staff whose energy, creativity, and commitment made 1984 a successful year.

Sincerely,

Handwritten signature of Karen N. Horn.

Karen N. Horn
President
April 1, 1985





PUZZLE FOR THE WORLD

The United States is part of a closely integrated, global economic network. International markets have become increasingly important for the U.S. economy since World War II, as the shares of international trade in domestic production and consumption have risen. U.S. exports and imports averaged 8.9 percent and 8.3 percent of total output, respectively, during the 1970s and 5.9 percent and 4.9 percent of total output, respectively, during the 1960s. By 1984, U.S. exports and imports of goods and services, respectively, accounted for 10.0 percent and 11.7 percent of total output. International financial arrangements have become more integrated as foreign trade has expanded and as technological developments have improved communications.

Events of the past few years have clearly illustrated the extent and importance of international interdependence. The growing trade deficit, the strong dollar, the rise in protectionist sentiments, the moderation in U.S. inflation, the net inflow of foreign capital, and the improved international debt situation are all pieces of the same economic puzzle. Each piece is distinct, yet is integrally related to the other pieces, and each is vital for an understanding of the current world economic situation. As with any puzzle, to understand it we must assemble the pieces and try to relate them to each other.

The task is not easy; pieces that appear to fit together often do not. A simple, straightforward relationship between the trade balance and the dollar is a case in point. When we find pieces that do not fit together, we must reexamine the puzzle and reevaluate the relationships.

Perhaps no other puzzle has generated more controversy and misunderstanding than the current international economic situation. This annual report attempts to understand the international economic puzzle by examining recent developments and showing how they are related to each other.

PROBLEMS IN THE CURRENT ACCOUNT

The most disturbing aspect of the recent economic developments is the growing imbalance in U.S. international transactions. Due to the relative strength of the U.S. economic recovery, and to the strong dollar in foreign exchange markets, imports have flooded the U.S. market while U.S. exports have fared poorly. Consequently, U.S. industries that compete against imports, and U.S. export-orientated industries, are not experiencing the rapid pace of economic growth that other sectors have enjoyed. The situation has rekindled protectionist sentiments which now seem stronger than at any time since the Great Depression. While an associated inflow of foreign savings has helped to finance both public and private credit demands, and to keep U.S. interest rates below levels they otherwise would have reached, such savings flows could evaporate quickly, with adverse consequences for domestic interest rates, as the recovery abroad proceeds. This section investigates recent developments in U.S. international transactions, surveys the factors that underlie these transactions, and describes their interrelationships.

1. See *"The Exchange Rate System: Lessons of the Past and Options for the Future: A Study by the Research Department of the International Monetary Fund,"* Occasional Paper, No. 30, Washington, DC: International Monetary Fund, July 1984.

INTERNATIONAL ACCOUNTS. In an accounting sense, international transactions that constitute the balance of payments always balance. This is more than a purely mechanistic balance; underlying it are numerous transactions, public and private, domestic and foreign, that are responding to many economic variables. The transactions create both demands for dollars and supplies of dollars. Any tendency of the transactions not to balance in total will cause adjustments either in exchange rates, or in other economic variables that will insure a balance.

When economists speak of disequilibrium, or imbalance, in international accounts, they refer to the *way* in which this ledger balances. Most observers define equilibrium in terms of the current account, which measures international trade in goods and services and unilateral transfers (see box). The current account need not always balance. Temporary factors, such as strikes and business-cycle fluctuations, artificial barriers to international transactions, and exogenous shifts in the terms of trade can result in current-account deficits.¹ Moreover, a surplus or deficit can persist if supported by equally persistent private capital flows, but experience has shown that large imbalances in the current account generally are unsustainable. Large current-account deficits

U.S. BALANCE OF PAYMENTS

Current Account

Balance of Goods and Services

Unilateral Transfers

Capital Account

Government

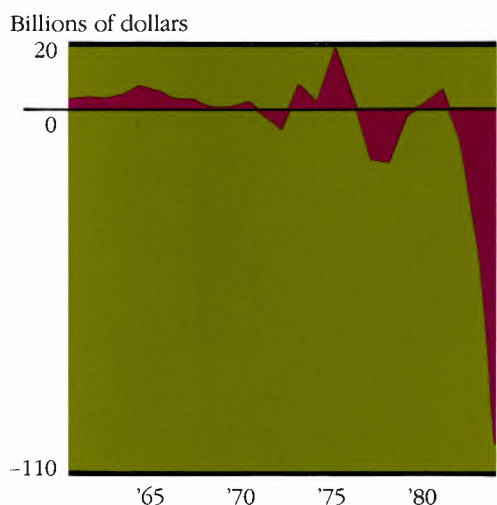
Official

Unofficial

Private

Errors and Omissions

Figure 1
U.S. Current-Account Balance



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

CURRENT ACCOUNT AND CAPITAL FLOWS. The tendency of the international accounts to balance transcends accounting principles because of the need to pay for imports either with exports or through the exchange of financial claims. If a country, like the United States, is not exporting goods and services in sufficient quantity to pay for its imports, that country either must trade foreigners a claim on its future production, or must reduce its financial claims on its trading partners. Countries running persistent current-account deficits experience net inflows of foreign capital, as they sell off existing financial and real assets or create new financial liabilities. Foreigners will acquire more stocks, bonds, bank deposits, real estate, etc., previously held by residents of the deficit country. If their current-account deficits persist, even countries that were once net creditors to the rest of the world eventually become debtor nations. Conversely, countries maintaining current-account surpluses experience capital outflows as they reduce their liabilities to foreigners and accumulate foreign assets; their net investment position grows. In this manner, a capital inflow (outflow) accompanies a current-account deficit (surplus).

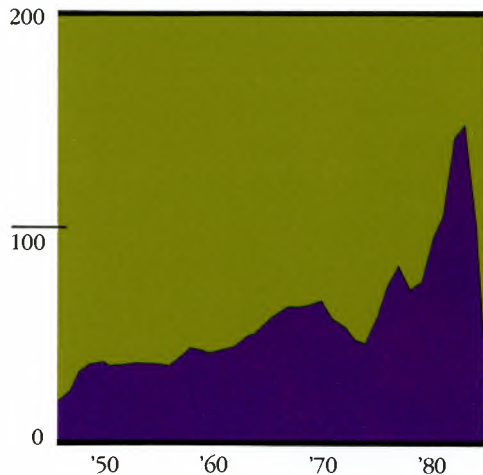


During the 1950s and 1960s, the United States acquired large amounts of foreign assets by running almost persistent current-account surpluses; our net international investment position grew (see figure 2). Recent current-account deficits have produced a sharp deterioration in our net international investment position, and the current-account deficits projected for 1985 and 1986 indicate that the United States will become a debtor nation sometime this year; that is, total U.S. liabilities to foreigners soon will exceed total U.S.-held foreign assets.

BEHIND THE CURRENT-ACCOUNT DEFICIT. The observed value of any economy's production will equal exactly its income, and will equal exactly the value of its consumption, investment, government spending, and net exports. Any nation that absorbs more resources through consumption, investment and government spending than it produces, necessarily imports more goods and services than it exports. Because such a nation is absorbing goods and services in excess of its nominal income, its domestic savings will be insufficient to finance investment and any government deficit. A deficit country, therefore, also experiences a net inflow of foreign savings.

Although these relationships are always true, the manner in which their components add together provides a clue to factors underlying current-account developments. For the recent U.S. experience, the saving relationship is most instructive. Initially in 1982, as the current account shifted to a deficit, growth in gross private domestic savings slowed, reflecting the recession and a slowing in the inflation rate. Private investment declined in 1982, but the government deficit grew more rapidly than could be accommodated out of private domestic savings even with the decline in investment. After 1982, private domestic savings grew at a faster pace. Although it remained very large, the government deficit grew more slowly in 1983 and declined in 1984. Gross private investment, however, recovered quite sharply, especially in 1984. With large government deficits, the increase in private investment exceeded private domestic savings and attracted a net inflow of foreign capital. Heavy public and private credit demands, therefore, play important roles in explaining recent international transactions. We now must go beyond these general relationships and discuss the developments that underlie the configuration among saving, investment, the government deficit, and the current account.

Figure 2
International Investment
Position of the United States
 Billions of dollars



NOTE: The 1984 data point is estimated from preliminary information on capital flows for last year.
 SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

USUAL RECOVERY PATTERN. A deterioration in the U.S. current account is fairly typical during the early stages of a business recovery. Economic recoveries in the United States usually lead recoveries abroad; in the early stages of an upturn, U.S. imports typically rise faster than U.S. exports. The current recovery, which began late in 1982, was no exception. The U.S. economy grew 6.3 percent in 1983 and 5.9 percent in 1984, while economic recovery among the industrial economies advanced at less than 3 percent in both of these years.² The recoveries in the less-developed countries also proceeded more slowly than the recovery in the United States.

As these cyclical developments produced an expanding U.S. current-account deficit in 1982 and through 1983, many exchange-market analysts anticipated a depreciation in the dollar, reasoning that such a depreciation was necessary to eliminate the current-account deficit. The dollar did not depreciate. Instead, the dollar appreciated 11 percent in 1983 and 12 percent in 1984 on a trade-weighted average basis. The dollar's appreciation further aggravated the current-account deficit by lowering the dollar price of U.S. imports and by raising the foreign-currency price of U.S. exports. According to some estimates, slightly more than one-third of the deterioration in the current account over the past four years is attributable to the dollar's appreciation over that period.³

A FUNDAMENTALLY DIFFERENT DEFICIT. The dollar's appreciation resulted from the heavy demand for dollar-denominated assets that is largely reflected in the substantial net inflows of private foreign capital to the United States. Beyond the cyclical developments taking place in the U.S. economy, structural changes underway both here and abroad precipitated major changes in the historical pattern of world capital flows. These changes include a growing structural budget deficit in the United States, an improved return on real investment in the United States, increased confidence worldwide in U.S. policymakers' resolve to combat inflation, and political concerns in many foreign countries. These factors altered the basic nature of the U.S. current-account deficit.

Net outflows of private capital accompanied the U.S. current-account deficits experienced in 1971 and 1972 and between 1977 and 1979. These outflows of *private* capital reflected a general lack of confidence in the dollar and in U.S. economic policies. The dollar depreciated in foreign exchange

2. *Growth rates are for the 10 largest foreign countries, expressed on a trade-weighted average basis.*

3. *Statement by Henry C. Wallich, Member of the Board of Governors of the Federal Reserve System, before the Subcommittee on International Economic Policy and Trade, Committee on Foreign Affairs, U.S. House of Representatives, Washington DC: Board of Governors of the Federal Reserve System, March 22, 1985, p. 2.*

4. *Many economists believe that the errors and omissions entry in the balance of payments data consists, in large part, of unreported private capital transactions. The errors and omissions component has been quite large on balance in recent years and has consistently suggested further private capital inflows since 1978.*

markets. At the time, net inflows of *official* capital, reflecting attempts to support the dollar, helped balance the international accounts, avoiding even sharper adjustments in exchange rates, or changes in income levels and in other economic variables.

Since 1983, however, the situation has been reversed. The U.S. current-account deficit has been accompanied by net inflows of private capital, amounting to \$33 billion in 1983 and swelling to \$77 billion in 1984.⁴ In general, the net inflow of private capital to the United States seems to reflect changes in the investment patterns of both U.S. and foreign investors. Much of the change appears to reflect a significant shift in bank-related capital over the past few years. In the past, the United States usually has experienced a net outflow of bank-related capital, but this net outflow narrowed in recent years and shifted to a net inflow in 1984. Last year, in particular, there was also a substantial increase in foreign demand for U.S. Treasury securities and U.S. corporate bonds and a stronger inflow of foreign direct investment to the United States.

Unlike the past, a lack of confidence in the dollar and in the U.S. economy has not accompanied the recent current-account deficit. These net inflows of private capital, however, have helped to maintain a strong dollar exchange rate, have enabled the current-account deficit to persist, and have caused international economists to rethink theories suggesting a rapid adjustment to current-account imbalances.

MOTIVATING FACTORS. Many factors have encouraged a net inflow of foreign capital to the United States. The leading factors are interest rate differentials that favor investment in dollar-denominated assets over assets denominated in other currencies, an improved climate for investment in real capital in the United States, and concern over political and social stability elsewhere in the world.

The most often cited factors encouraging capital inflows and keeping the dollar strong in foreign-currency markets are interest-rate differentials favoring dollar-denominated assets over assets denominated in other currencies. Large federal budget deficits, and the prospect that these federal budget deficits will remain large for the remainder of the decade, appear to be important factors contributing to higher U.S. interest rates. The relationship between federal budget deficits and higher interest rates is not simple; it



5. See Roger M. Kubarych, "Financing the U.S. Current Account Deficit," *Quarterly Review, Federal Reserve Bank of New York*, vol. 9, no. 2 (Summer 1984), pp. 24-31.

greatly depends on how the fiscal policies that generated the deficit influence private investment and savings. For example, a \$25 billion deficit produced solely by measures that increase saving \$25 billion probably would not affect interest rates.

Most empirical investigations of the relationship between federal budget deficits and interest rates generally have failed to verify that deficits produce high interest rates. This result probably reflects the fact that federal deficits have risen during periods of economic slack when private credit demands are weak, and they have moderated fairly quickly again when recovery was under way and private credit demands firmed. Moreover, federal borrowing historically has remained fairly small, on balance, relative to private saving. As discussed in last year's annual report, federal borrowing has risen sharply relative to private saving since 1979. In addition, private investment spending has been atypically strong over the recent recovery. Interest rates undoubtedly have been higher than they would have been in the absence of the enormous federal credit demands.

Nevertheless, heavy federal borrowing appears to have had less effect on interest rates than analysts had anticipated, and it has not hampered growth of the interest-rate-sensitive sectors of the economy to the extent earlier feared. The massive inflows of foreign savings which have accompanied the current-account deficit have helped finance both public and private credit demands. At present there is little prospect for a sharp decline in the federal demand on private savings, as structural deficits probably will remain in a range of 4 to 5 percent of GNP throughout the decade. As the U.S. expansion continues, and as private credit demands continue to firm, heavy federal borrowing seems likely to put further upward pressures on interest rates.

While heavy federal credit demands and a strong U.S. recovery maintained pressure on U.S. interest rates, the slow recovery in Europe resulted in weak credit demands there. In addition, Eurodollar markets remained liquid because foreign exporters have deposited dollars earned through trade with the United States in these markets.⁵ The weak recovery abroad and the liquidity in the Eurodollar market helped to produce interest-rate differentials that favored dollar-denominated assets and contributed to the inflows of capital to the United States.

An improved investment climate in the United States, in relation to other countries, was another major factor contributing to the net inflow of foreign capital, especially longer-term direct and portfolio investment. The return

6. See Economic Report of the President, Washington, DC: U.S. Government Printing Office, February 1985, p. 31.

7. Economic Report of the President, Washington, DC: U.S. Government Printing Office, February 1985, p. 109.

on real capital in the United States appears to have risen substantially since 1982. The improved return on real capital reflects the vigorous recovery in the United States, achieved without a resurgence of inflation, and changes in tax laws that improved depreciation allowances and investment credits. In addition, the cost of investment goods in particular has declined over the last two years, while other business costs including unit labor costs have risen only moderately.⁶

International investors now appear to hold more sanguine expectations about the future prospects for real growth in the United States, and have a renewed confidence in the willingness, and ability, of U.S. policymakers to prevent a rekindling of inflation. The high and variable rate of inflation experienced throughout most of the 1970s made it difficult for investors to assess the relative returns from individual projects. As a consequence, all too often during the 1970s, firms undertook investments with relatively rapid payback instead of the longer-term investments important for building the capital stock and for improving productivity growth.

In contrast with developments in the United States, the long-term investment climate in most other developed countries, especially those in Europe, does not appear to have improved. The recovery in most other developed countries, except in Japan and in Canada, has been sluggish. The European economies, in particular, face numerous structural problems and disincentives that have dampened employment and investment. These problems and disincentives include high nonwage labor costs, job security arrangements that limit labor mobility and new hiring, high marginal tax rates on labor and capital, and heavy regulatory burdens.⁷

In addition to relative rates of return, international investors consider the risks of investing funds in various currencies and countries. Much of the net inflow of foreign savings to the United States in recent years reflects the flight of capital away from political and economic instability elsewhere in the world. Latin America debtor nations, for example, have experienced severe difficulties in servicing their international loans, and the austerity measures undertaken in some of these countries have generated social strife. Many individuals, fearing increased capital controls and possibly the confiscation of assets, have moved funds out of Latin American countries and into dollar-denominated assets in the United States. The safe haven motive is not peculiar to capital movements from Latin America. Strikes, political unrest, and fears of capital controls also may have motivated capital flows from Europe and from the Middle East.

8. *Although it is true in principle that one nation's current-account surplus is a current-account deficit elsewhere in the world, measured worldwide trade flows do not balance.*

IMPACTS OF OUR DEFICIT. The U.S. current-account deficit has important implications for the rest of the world. The mirror image of the U.S. current-account deficit is in principle a current-account surplus elsewhere in the world; our imports are their exports.⁸ When the United States imports more than it exports worldwide, it tends to increase production and employment elsewhere in the world. At the same time, however, the flow of foreign savings into the United States that necessarily accompanies a U.S. current-account deficit will tend to raise interest rates abroad and slow investment and interest-sensitive spending in these countries. The net impact of the U.S. current-account deficit on our trading partners depends on how these two influences balance.

Over the past few years, the recovery among most developed foreign nations has been very sluggish; most continue to experience high rates of unemployment and excess capacity. Public and private credit demands in these nations have been rather weak. In this economic environment, the favorable effects on foreigners generated by U.S. imports probably have outweighed the adverse effects stemming from heavy capital flows out of their countries into the United States.

The implications of the U.S. current-account deficits for the less-developed debtor nations are of special interest. Although the international debt situation remains a major uncertainty, the crisis atmosphere seems to have dissipated in 1984. The prospects of a major disruption in servicing international debt, with cataclysmic consequences for U.S. banks, seem much smaller now than in 1983 or in 1984. Under the auspices of the International Monetary Fund, many debtor countries experiencing severe loan-servicing difficulties have renegotiated the terms of their loans and stretched out repayment schedules. Most nations now are sharing in the economic recovery.

With the immediate situation apparently under control, it is time to examine the problem in a longer-term context and to consider the implications of solving the debt situation. A necessary element of that solution is that creditor nations as a group run current-account deficits with the debtor nations; otherwise, the debtor nations will be unable to earn the necessary foreign exchange to service their loans.

If the debtor nations are to continue servicing their dollar-denominated loans, they must obtain dollars. Countries can earn foreign currency by selling assets, by inviting direct foreign investments into their countries, or by running a surplus in their trade of goods and services. Because most less developed debtor nations have few attractive assets to sell and, at present, offer few attrac-





9. Economic Report of the President, *Washington, DC: U.S. Government Printing Office, February 1985, p. 106.*

10. See Michael Dooley, William Helkie, et al., "An Analysis of External Debt Positions of Eight Developing Countries through 1990," International Finance Discussion Papers, No. 227, Washington, DC: Board of Governors of the Federal Reserve System, August 1984; and William R. Cline, "International Debt: From Crisis to Recovery," presented at the annual meeting of the American Economic Association, Dallas, TX, December 28, 1984.

11. Shafiqul Islam, "Foreign Debt of the United States and the Dollar," Research Paper, No. 8225, Federal Reserve Bank of New York, September 1984.

tive long-term investment prospects, they must earn foreign exchange through an export surplus.

The largest debtor nations have improved their current-account positions since 1981.⁹ Much of the improvement has resulted from austerity measures through which the debtor nations have reduced their imports, but the developing countries cannot reduce their imports below a minimum level necessary to support their economies. The debtor nations must expand production of their export sector, improving productivity so that they can compete even more effectively in the world markets.

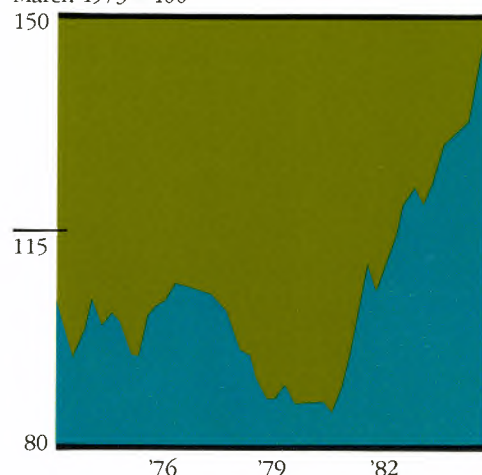
Export expansion, however, can only occur if the markets of the world absorb the exports of the debtor countries. Recent studies have suggested that industrial-country growth of approximately 2.5 to 3 percent per year is necessary if the developed countries are to absorb exports from debtor countries in sufficient quantities to enable the debtor countries to reduce their debt burdens.¹⁰ Such growth would provide an expanding world market for the exports of these countries.

In this context, the huge, growing current-account deficit of the United States has helped the debtor nations to earn foreign currency. Of the \$71 billion increase in the U.S. merchandise trade deficit between 1982 and 1984, \$12.8 billion, or 18 percent, represented net imports from Latin American countries. Growth in the world market, however, will not help resolve the international debt situation if developed nations limit access to these markets with such artificial barriers as tariffs, quotas or "voluntary" marketing agreements. For this reason, the rising tide of protectionist measures is especially disturbing.

UNITED STATES AS A DEBTOR NATION. The \$102 billion U.S. current-account deficit experienced in 1984 is not likely to narrow substantially in the near term. Consequently, the United States will become a debtor nation sometime in 1985 or in 1986; that is, total liabilities of U.S. residents to foreigners will exceed total foreign assets held by U.S. residents (see figure 2).

Economic theory suggests that high-savings, low-investment countries will run current-account surpluses, exporting savings to the rest of the world; low-savings, high-investment countries will incur current-account deficits, importing savings from the rest of the world. The usual presumption is that advanced countries, like the United States, are high-savings countries with a low mar-

Figure 3
Trade-Weighted Dollar Exchange Rate
March 1973 = 100



SOURCE: Board of Governors of the Federal Reserve System.

ginal return to investments in real capital because of the relative abundance of capital in these countries. At least through the 1950s and 1960s, the United States seemed to fit this description by typically running a current-account surplus. Nevertheless, developed, capital-rich countries can become capital importers because of a shift in their savings-investment preferences reflecting business-cycle developments, secular changes in the return on real capital, or their desire to run structural budget deficits. In the United States, for example, heavy demands for funds to finance the federal budget deficit and private investments currently exceed private domestic savings.¹¹

In the short to medium term, the persistence of debtor status depends on the persistence of the underlying factors generating the current-account deficit. In the long run, the ability of a debtor country to expand its debt continually depends on the willingness of foreigners to hold increasing amounts of the debtor's obligations. This willingness has an upward limit related to creditors' subjective evaluations about the ability of the debtor nation to service its debt.

STRONG DOLLAR

The dollar appreciated approximately 72 percent on a trade-weighted basis from mid-1980 through the end of 1984 (see figure 3) and has reached record levels against many currencies, including the U.K. pound and the French franc. Developments of the past few years have demonstrated just how difficult it is to isolate the fundamental economic determinants of exchange-rate movements. The dollar's appreciation initially seemed to reflect a change in U.S. monetary policy. Between 1977 and 1979, the trade-weighted dollar depreciated sharply as the U.S. current-account deficit widened, as inflation in the United States accelerated, and as confidence in U.S. policymakers' resolve to end inflation waned. A tighter U.S. monetary policy beginning in late 1979, and an eventual easing in U.S. inflation, appears to have initiated the dollar's appreciation.

Much of the rise in the dollar since 1982, however, has been unanticipated. In early 1983 and again in early 1984, many exchange-market analysts expected the dollar to depreciate because of a growing U.S. current-account deficit. Instead, heavy demands for dollar-denominated assets caused the dollar to appreciate approximately 11 percent in 1983 and 12 percent in 1984.

The continued appreciation of the dollar has been a major force shaping the contours of the recent economic recovery. Some of these influences were det-



12. *Actually, in the absence of the current-account deficit, the dollar might have appreciated even more than it has.*

rimental, but others had a positive effect on the recovery. As discussed in the previous section, a major detrimental effect of the strong dollar was the worsening U.S. trade balance, which slowed the recovery in many U.S. industries producing internationally traded goods. Most are manufacturing industries, and many are predominant in the Fourth District.

The adverse consequences of the sharp and persistent rise in the dollar have led to complaints that the dollar is overvalued. “Overvalued” is a difficult judgment to make because it depends on many things. It depends crucially on the economic variables that one believes determine an equilibrium exchange rate, and on the time frame over which these variables operate to correct imbalances. In the short-run, the exchange market is almost always in equilibrium, equating supplies of currencies with demands for them. The exchange-market consists of many traders, continually assessing information. Because transactions costs are small, and because the market is virtually worldwide, trading occurs almost continuously. In such a market, imbalances will not persist for long.

Individuals who contend that the dollar is overvalued appear to have a different, longer-term notion of equilibrium. Long-term equilibrium implies that the world as a whole is in equilibrium, that is, the markets for goods and services, the markets for labor, and the market for financial assets all are in equilibrium. It furthermore implies that all expectations are met and that all relative prices are constant. The real world, however, is adjusting continually to shocks and to new information. Deviations from this long-term notion of equilibrium are the norm. Consequently, economists who argue that the dollar is overvalued base their judgments about where dollar exchange rates *should* be on a limited set of “proximate causes.”

Exchange-market analysts do not completely agree about which factors determine the equilibrium value of exchange rates, about the linkages among these factors, and about the period in which particular factors have their full influence. Usually, however, exchange-market analysts rely on current-account developments, or on international interest-rate differentials when judging the dollar as overvalued or undervalued. When the United States incurred current-account deficits in 1971 and 1972, and again in 1977 through 1979, the dollar eventually depreciated, but, to the dismay of analysts who define equilibrium solely in terms of the current account, the dollar has not responded in a similar manner to the recent, larger current-account deficit.¹² Interest-rate differentials also are important determinants of the dollar, but the correlation between interest-rate differentials and the dollar’s movements is not always close.

Such “proximate causes” as the current account and interest rates are determined in turn by other factors, including relative rates of real economic growth, relative inflation rates, propensities to save and invest, and technological changes. The relative stance of a nation’s monetary and fiscal policies, moreover, influence all of the factors mentioned above and, in that sense, seem the most fundamental of all factors influencing exchange rates.

Exchange rates often deviate from levels predicted by past relationships with these fundamentals because unquantifiable and unpredictable events, such as expectations and noneconomic developments, dominate short-run movements in exchange rates. The unpredictable nature of many daily events affecting exchange markets creates almost random fluctuation in exchange rates. Moreover, markets for foreign currency may react more rapidly to new developments than markets for most goods and services. Consequently, they can overshoot their ultimate equilibrium value when responding to new economic developments. When making decisions to buy or sell foreign exchange, market participants process all available information about past and expected events. From time to time, however, market participants lack complete information about developments in the market, or are slow to form opinions about the implications of new events. In such circumstances, the exchange rate might adjust very slowly, or might move temporarily in the wrong direction.

While the dollar clearly seems overvalued in view of the recent deterioration in the U.S. current account, it is not necessarily overvalued in terms of other factors, such as interest-rate differential, or the high return on real capital in the United States. Even though most economists might expect the dollar to eventually depreciate, they cannot predict when, or how quickly, it will occur.

PRICE PRESSURES AND THE DOLLAR. Not all the effects of the strong dollar were detrimental for the economy. For the first time in over a decade, a significant acceleration of prices did not accompany either the economic recovery or the subsequent expansion. Many factors were responsible for this, including moderate money growth, reduced inflationary expectations, and declines in commodity prices. The rapid appreciation of the dollar, however, was a major factor.

Because the exchange rate is the price of one nation’s currency in relation to that of other nations, it is easy to see how exchange-rate changes affect the price of one nation’s goods and services relative to another’s products. It is

13. See Peter Hooper and John Morton, "Summary Measures of the Dollar's Foreign Exchange Value," Federal Reserve Bulletin, vol. 64, no. 10 (October 1979), pp. 783-9.

more difficult, however, to understand how exchange-rate movements translate into aggregate price-level movements within a specific country. The relationship between exchange rates and prices is not simple and direct; nor is it constant over time. Instead, it depends on many factors, including the extent to which resources are unemployed within the relevant country, the size and expected duration of the exchange-rate change, the response of foreign prices to the exchange-rate change, and most important, the stance of monetary policy.

The relationship between exchange rates and inflation is further complicated by a two-way causal relationship that exists between price-level and exchange-rate changes. On the one hand, exchange-rate changes produce price pressures; on the other hand, relative inflation rates among countries are important determinants of exchange rates. To further complicate the relationship, third factors can cause both prices and exchange rates to change, disguising the causal relationship between prices and exchange rates. Ideally, therefore, when assessing the impact of exchange-rate changes on prices, we want to consider exchange-rate movements independent of the inflation process. *Real* exchange rates theoretically record such exchange-rate movements.¹³ On a real, trade-weighted basis, the dollar appreciated approximately 65 percent from its low point in 1980 through 1984.

An appreciation in the real exchange rate initially will lower the dollar price of U.S. imports and raise the foreign-currency price of U.S. exports. These initial price pressures will cause foreign and domestic demand to shift away from U.S. goods and services towards foreign goods and services. U.S. firms that compete against imports, or that export goods to world markets, will cut their costs as much as possible and adopt the most efficient production methods to protect their profits and sales against intensified foreign competition. As demand for their goods declines, these trade-related industries will purchase fewer inputs from their suppliers and might reduce their work force. Consequently, prices in the supplier industries and wages could soften. The price pressures will ripple back through the economy to the very basic resources for production, and eventually could affect firms not closely involved with foreign trade.

The extent to which the downward price pressures ripple back through the economy depends on many factors. A small exchange-rate change naturally will have only a small effect on aggregate price levels, whereas a large exchange-rate change will have a larger impact on prices. Even a large exchange-rate change, however, can have no impact on prices if observers expect it to be quickly reversed. Moreover, the effect of an exchange-rate change on domes-



14. Peter Hooper and Barbara Lowrey, "Impact of the Dollar Depreciation on the U.S. Price Level: An Analytical Survey of Empirical Estimates," International Finance Discussion Papers, No. 128, Washington, DC: Board of Governors of the Federal Reserve System, January 1979.

tic prices will depend on how foreign prices react to the exchange-rate change. If, for example, foreigners react to an increase in demand for their products by raising prices instead of expanding output, they will offset the favorable influence of the dollar's appreciation on U.S. price levels.

The extent to which dollar appreciation moderates U.S. price pressures will depend primarily on monetary policy. The previous example implicitly assumed that monetary policy was unaffected by the dollar's appreciation. If monetary policy became too expansive as domestic prices softened, perhaps to prevent unemployment in trade-related industries, the dollar's appreciation would be blunted, as would the associated price effects. While dollar appreciation can help the disinflation process, it cannot supplant the need for moderate money growth.

Research suggests that on average during the 1970s a 10 percent depreciation of the dollar's real, trade-weighted exchange rate increased consumer prices between 1.5 percent and 1.75 percent, with approximately one-half of the impact occurring within one year of the exchange-rate change, and with the remainder spread over the next two to three years.¹⁴ This rule of thumb suggests that the dollar's recent appreciation trimmed approximately three percentage points off the rise in consumer prices over the 1983-1984 period.

It is difficult to project the dollar's course over 1985 and 1986. Nevertheless, even with a sharp and rapid depreciation of the dollar, this rule of thumb suggests that the impact on aggregate prices would be less than two percentage points because of lags in the relationship between exchange rates and inflation. The exact effect, however, will depend on the relative restraint or ease of monetary policy.

POLICY CHOICES

Many observers, concerned over the detrimental effect of the strong dollar and the huge current-account deficit, have sought action from U.S. policymakers. As discussed in previous sections, U.S. economic policies are important pieces of the international puzzle. Policymakers have many options for influencing various aspects of the international situation. We can summarize these policy options under four broad classifications: 1) expand the money supply at a faster pace to promote dollar depreciation, 2) intervene in foreign-exchange markets to encourage dollar depreciation, 3) institute broad or selective trade barriers

15. Phillippe Jurgensen, chairman, Report of the Working Group on Exchange Market Intervention, Washington, DC, March 1983; and Owen Humpage, "Dollar Intervention and the Deutschmark-Dollar Exchange Rate: A Daily Time-Series Model," Working Paper 8404, Federal Reserve Bank of Cleveland, September 1984.

to stem the tide of imports into the United States, and 4) trim the federal budget deficit to reduce pressures on U.S. interest rates. Most policy alternatives, however, involve trade-offs with domestic economic objectives. Some are ineffective.

By expanding the money supply more rapidly, the Federal Reserve System can promote dollar depreciation. At the current stage of the business cycle, however, rapid money growth would translate quickly into higher prices. As rising prices rekindled inflationary expectations, lenders would raise nominal interest rates to protect the real purchasing power of the funds they lend out. The Federal Reserve could only hope to achieve a permanent reduction in interest rates by continually accelerating money growth. A higher inflation rate would ensue; interest rates would rise; the trade deficit would worsen, but the dollar eventually would depreciate.

Some might argue that recent success at reducing the rate of inflation has provided substantial room for accommodating more inflation in exchange for dollar depreciation. The rate of inflation experienced in 1984, measured by the consumer price index, was the lowest since the late 1960s, and the present outlook for inflation is quite favorable. Nevertheless, the current rate of inflation is still higher than the rate experienced throughout most of the 1960s, and the inflation experience of the 1970s remains fresh in individuals' memories. Inflationary expectations are likely to respond quickly to any evidence that policymakers are not resolved to prevent a resurgence of inflation.

As an alternative to expanding the money supply, some observers argue that the Federal Reserve System could promote dollar depreciation by purchasing foreign exchange with dollars and by offsetting the resulting expansion of the money supply through domestic open-market operations. Such a transaction is referred to as *sterilized intervention*. Sterilized exchange-market intervention seems to offer an attractive alternative to expansionary monetary policy because it would not result in a higher inflation rate.

Unfortunately, the ability of the Federal Reserve System to promote dollar depreciation through sterilized intervention is severely limited. From time to time, when the exchange market is temporarily unsettled, sterilized intervention can reduce exchange-rate volatility. But sterilized intervention cannot produce a lasting dollar depreciation when more fundamental factors, such as interest-rate differentials or relative inflation rates, indicate that the dollar should remain strong. For this reason, the United States decided in March 1981 to cease intervention on a routine basis and to reserve intervention for periods of market disorder.¹⁵

16. See Michael F. Bryan and Owen F. Humpage, "Voluntary Export Restraints: The Cost of Building Walls," *Economic Review, Federal Reserve Bank of Cleveland*, Summer 1984; Michael F. Bryan and Owen F. Humpage, "Would Taxing Imports Help?" *Economic Commentary, Federal Reserve Bank of Cleveland*, March 1, 1985; and Gerald H. Anderson and Owen F. Humpage, "A Basic Analysis of the New Protectionism," *Economic Review, Federal Reserve Bank of Cleveland*, Winter 1981-82.

Increasingly, U.S. industries facing intense competition from foreign imports are seeking relief through legislated trade restrictions. Usually trade barriers are industry specific, and occasionally they are aimed at an individual trading partner. Recently, however, some policymakers are considering an across-the-board tax on imports as a method for lowering the U.S. current-account deficit and for providing revenues to trim the federal budget deficit. A comprehensive tariff could help remedy these twin economic problems, but at a substantial cost to U.S. consumers and exporters. Moreover, the tariff could invite foreign retaliation.

Economists have long recognized the benefits of free international trade. When nations specialize in the manufacture of goods that can be produced relatively inexpensively, and when each nation exchanges its goods for the goods of other nations, all nations benefit. The benefits are manifested in lower prices and in a wider set of items available for consumption. Tariffs tend to restrict imports and to raise prices. They transfer income away from consumers toward domestic producers of the protected goods and toward the government. Moreover, tariffs inflict net losses on both national and world economies, because they shift production to less efficient producers and lower the overall level of consumption. Usually the costs of tariffs far exceed their benefits.¹⁶

U.S. tariffs, or other types of trade restraint, tend to cause the dollar to appreciate under a floating exchange-rate system. By restricting imports, a tariff reduces the supply of dollars in the foreign exchange market and simultaneously lowers U.S. demand for foreign currencies necessary to buy foreign goods. The dollar, consequently, will tend to appreciate relative to the currencies of our trading partners, blunting the impact of the tariff on our imports, and making our exports less competitive in world markets. Consequently, floating exchange rates limit the effectiveness of comprehensive tariffs for improving the current account.

Tariffs and other trade restraints place much of the burden of adjustment on our major trading partners, many of whom derive a major share of their export revenue from trade with the United States, and many of whom import large amounts of goods produced in this country. These countries could retaliate against U.S. trade barriers by restricting U.S. exports to their markets. A tariff, therefore, would harm U.S. export industries because it would inspire either a dollar appreciation, retaliation, or both. With the resulting reduction in exports, the improvements in the U.S. current account would be smaller.

Given the inefficiencies and the wide range of possible adverse side effects associated with an across-the-board tariff, such a policy seems very costly. Moreover, an across-the-board tariff primarily would address the symptoms of the international problems and not the root causes. As discussed in the previous sections, the large current-account deficit in the United States reflects a tendency to absorb resources in excess of our income growth and to finance such activities through an inflow of foreign savings. An across-the-board tariff does nothing to reduce the rate at which the country is absorbing resources, or to increase permanently the rate of real income growth. By shifting consumption from foreign goods to domestic goods, a tariff will result in higher prices as the economy approaches full employment. This will also adversely affect the export sector and diminish any favorable effects of the tariff on the current account.

Reducing the federal budget deficit is a fourth option open to U.S. policymakers. The first section of this annual report argued that the federal budget deficit is absorbing savings and keeping U.S. interest rates higher than otherwise would be the case. The relatively high level of U.S. interest rates has attracted foreign capital and kept the dollar strong in foreign-exchange markets. Moreover, the pressures exerted from our deficit on U.S. and world interest rates are likely to intensify as recoveries abroad mature, and as industries worldwide reach capacity limitations. A reduction in the U.S. federal budget deficit could help lower U.S. interest rates and could promote a dollar depreciation.

While large federal budget deficits certainly are not the only factor contributing to the dollar's strength, reducing the deficit is the best policy option available. It is the only feasible policy that would not involve costly trade-offs in terms of domestic policy objectives, or that would not result in substantial costs in terms of economic efficiency.

Nevertheless, other factors, such as the high return on real capital in the United States and capital flight into the United States, are keeping the dollar strong in foreign-exchange markets. Therefore, the observed impact on the exchange rate of reducing the federal budget deficit might be small. The dollar's recent strength might be consistent with other economic fundamentals, despite the large current-account deficit, and policymakers might be able to alter the exchange rate only if they are willing to alter such things as the return to real capital or the inflation rate. Seldom does cutting the pieces to make them fit solve the puzzle.

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Comparative Financial Statement

For years ended December 31

Statement of Condition

	1984	1983
<i>Assets</i>		
Gold certificate account	\$ 617,000,000	\$ 659,000,000
Special drawing rights certificate account	302,000,000	302,000,000
Coin	34,730,126	36,861,081
Loans and securities:		
Loans to depository institutions	1,202,000	28,550,000
Federal agency obligations bought outright	464,506,387	512,195,486
U.S. government securities:		
Bills	3,933,137,910	3,899,095,369
Notes	3,612,081,955	3,787,905,782
Bonds	1,270,765,897	1,233,156,486
Total U.S. government securities	8,815,985,762	8,920,157,637
Total loans and securities	9,281,694,149	9,460,903,123
Cash items in process of collection	193,118,962	313,757,611
Bank premises	27,639,546	27,423,020
Other assets	422,751,603	471,760,022
Interdistrict settlement account	707,143,437	(693,739,261)
TOTAL ASSETS	\$11,586,077,823	\$10,577,965,596
<i>Liabilities</i>		
Federal Reserve notes	\$10,124,974,843	\$ 8,831,155,014
Deposits:		
Depository institutions	882,847,789	1,094,302,278
Foreign	10,350,000	10,950,000
Other deposits	673,094	21,855,551
Total deposits	917,312,347	1,127,107,829
Deferred availability cash items	189,147,400	275,111,613
Other liabilities	146,723,933	141,856,440
TOTAL LIABILITIES	\$11,378,158,523	\$10,375,230,896
<i>Capital accounts</i>		
Capital paid in	\$ 103,959,650	\$ 101,367,350
Surplus	103,959,650	101,367,350
TOTAL CAPITAL ACCOUNTS	\$ 207,919,300	\$ 202,734,700
TOTAL LIABILITIES AND CAPITAL ACCOUNTS	\$11,586,077,823	\$10,577,965,596

*Income and
Expenses*

	1984	1983
<i>Current income</i>		
Interest on loans	\$ 2,863,929	\$ 2,378,047
Interest on government securities	939,311,393	924,706,072
Earnings on foreign currency	15,021,379	19,987,049
Income from services	34,310,795	30,342,356
All other income	459,292	286,732
Total current income	\$991,966,788	\$977,700,256
Current operating expenses	55,450,346	54,278,653
Cost of earnings credits	9,195,430	6,514,992
CURRENT NET INCOME	\$927,321,012	\$916,906,611
<i>Profit and loss</i>		
Additions to current net income		
Profit on sales of government securities	\$ 2,779,521	\$ 1,336,302
All other additions	3,801	14,243
Total additions	\$ 2,783,322	\$ 1,350,545
Deductions from current net income		
Loss on foreign exchange transactions	\$ 31,382,265	\$ 33,309,709
All other deductions	395,929	45,472
Total deductions	\$ 31,778,194	\$ 33,355,181
Net additions or deductions	(\$ 28,994,872)	(\$ 32,004,636)
<i>Assessments by Board of Governors</i>		
Board of Governors expenditures	\$ 5,637,400	\$ 5,187,600
Federal Reserve currency costs	9,137,397	8,472,971
Total assessments by Board of Governors	\$ 14,774,797	\$ 13,660,571
NET INCOME AVAILABLE FOR DISTRIBUTION	\$883,551,343	\$871,241,404
<i>Distribution of net income</i>		
Dividends paid	\$ 6,177,578	\$ 6,018,002
Payments to U.S. Treasury (interest on Federal Reserve notes)	874,781,466	863,002,352
Transferred to surplus	2,592,300	2,221,050
Total distributed	\$883,551,343	\$871,241,404

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