

Voice

**of
the Federal Reserve Bank of Dallas**
El Paso · Houston · San Antonio

December 1978

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The Role of Productivity Gains in Solving National Economic Problems

Remarks by

G. William Miller, Chairman
Board of Governors of the Federal Reserve System
Washington, D.C.

before the

American Productivity Center
Productivity Conference
New York, New York

October 3, 1978

Inflation is a clear and present danger which affects all our lives and all our opportunities. As far as monetary policy is concerned, the emergence early this year of inflation as a more virulent threat to our system has placed enormous responsibilities on the Federal Reserve. Monetary policy must and will be used to restrain inflation, but it needs support from other economic policies in order to avoid undesirable side effects. The task the central bank has set out for itself is to use prudent monetary policy to restrain the forces of inflation, by bringing down the rate of growth of the money supply, but to do so without triggering a recession that would work against the overall objective. It is reassuring to note that earlier this year, when

it became apparent that the effort would not be left to monetary policy alone, positive initiatives were taken by the Administration and by the Congress. There have been substantial changes toward a more restrictive fiscal policy to help bring down the rate of inflation.

With this as background, I am particularly pleased to be here to participate in this conference on productivity. An initiative to achieve productivity gains is one that we can all endorse and aggressively support. A successful effort to improve economic efficiency will directly offset the upward cost pressures on prices. It will tend to make our output more competitive in international markets, and thus improve our balance of trade and help stem the deterioration of the dollar in the currency exchange markets. It will contribute to long-range increases in our economic capacity and in our standard of living. Unless the economy's productivity expands at a faster rate, we will be unable to reduce unemployment without igniting inflation. Increased productivity is the best prospect for breaking the vicious cycle of wages chasing prices and prices chasing wages.

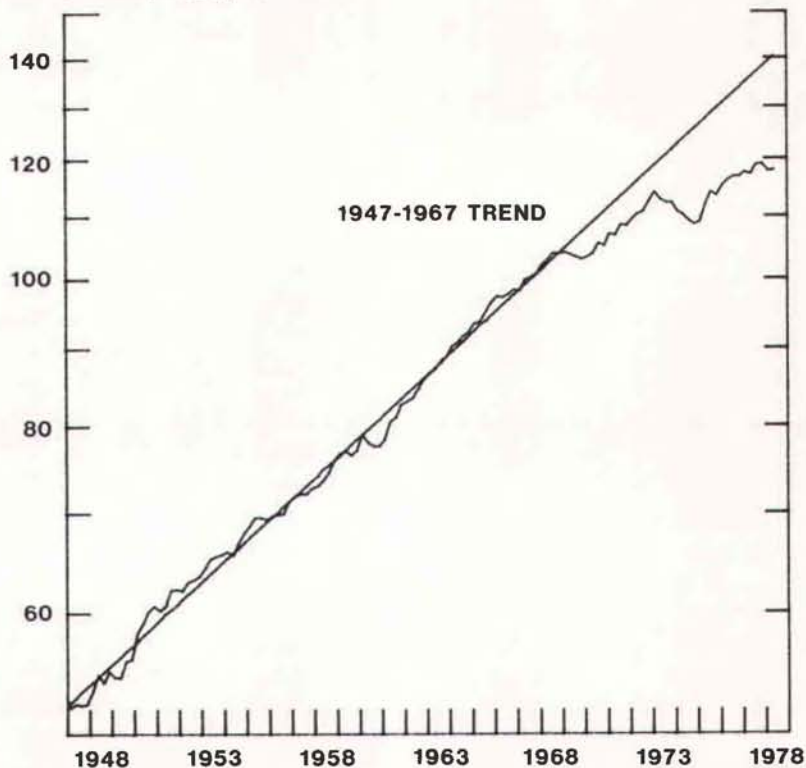
Because it is imperative that we act now to achieve such benefits as we can from increased productivity, it is well worth our time today to look at some of the historical trends and to discuss some of the public policies that could accelerate such gains.

History shows that productivity gains have been a key factor in our economic growth and in our rising standard of living. Output per work hour

CHART 1

Output Per Hour, Private Business Sector

RATIO SCALE, INDEX, 1967=100



SOURCE: Board of Governors, Federal Reserve System.

in the private sector rose more than 125 percent over the past 30 years. The bulk of the improvement, however, occurred between 1947 and 1967. During that period, output per hour doubled. Since 1967, output per hour has risen less than one-fifth, only about half the average pace prior to 1967.

Chart 1 shows that output per hour is now well below its postwar trend. Even before the oil embargo and the recession of 1974-75, the rate of productivity growth had slowed down. Prior to 1967 the annual rate of growth was about $3\frac{1}{3}$ percent; in the years 1967-72, it was only about 2 percent. Other things being equal, this added more than a full percentage point to the rise in unit labor costs. Such increases in costs are eventually re-

flected in final prices, and that was certainly the experience in the 1967-72 period. While we thought in those years that 2 percent was a weak performance, in the following five years things have gotten much worse. Coincident with the quintupling of oil prices and the deep recession of 1974-75, productivity fell into an unusually long and deep decline.

Chart 2 shows how output per hour has lagged during this recovery cycle. Its eventual upturn was so belated and so mild that by 1977, output per hour was up only $6\frac{1}{2}$ percent from the 1972 level. That amounts to an average annual gain of only $1\frac{1}{3}$ percent. Think about that for a moment: an average efficiency gain of only $1\frac{1}{3}$ percent a year,

little more than one-third the pace in the two decades ending in 1967. Even if wages and salaries had remained stable—and, of course, they did not—the productivity slowdown would have added 2 percentage points to the rise of unit labor costs. The result is a commensurate impetus to inflation.

During the years of strong productivity gains, workers and their families became accustomed to generous increases in their real incomes. America's standard of living rose dramatically; average work schedules were shortened; leisure time was increased. Over time, we came to expect an annual improvement in our real incomes. In fact, an allowance of 3 percent or more in productivity gains was included in the wage-price guidelines set in the Kennedy Administration in the early 1960's. These expectations of regular and sizable increases in the average standard of living were subsequently frustrated.

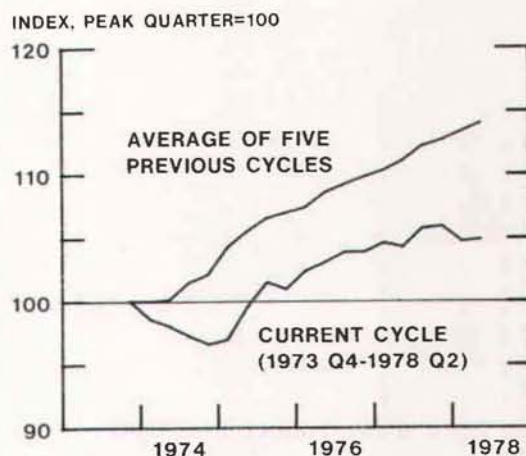
As productivity growth slowed, real income gains began to fall below individual and collective expectations. This had serious consequences for inflationary pressures. In an effort to sustain past patterns of real income growth, wages were pushed up, setting in motion a cycle of intense upward pressure on costs and prices. This occurred despite high levels of unemployment and excess industrial capacity. Thus the slowing of productivity growth helped trigger a spiral of inflationary wage-price adjustments throughout the economy.

The lower rate of productivity growth and the higher rates of inflation at home have contributed to the imbalance of our trade with other nations. Growth of productivity in the United States has been slower than that of most of our major international trading partners, making us less competitive in the international arena. Slow growth of our exports has contributed to the decline in the exchange value of the dollar, which in turn has fueled domestic inflation both directly and indirectly. Higher dollar prices for imports raise consumer prices directly, while domestic producers of competitive goods can raise their prices with less fear of losing market shares. The resulting inflation further saps confidence in the dollar. It also contributes to a lower value of the dollar in a self-reinforcing phenomenon. It is critical that we break this spiral.

Perhaps it would be worthwhile to review the trends that sustained the productivity gains in the private sector from 1947 to 1967 and to com-

CHART 2

Cyclical Comparisons of Output Per Hour, Private Business Sector *



* Changes following the cyclical peaks as specified by NBER.

SOURCE: Board of Governors, Federal Reserve System.

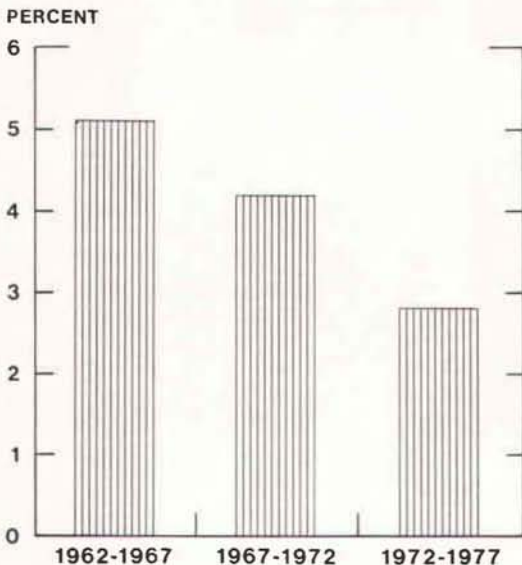
pare them with the developments of the last decade.

The first two decades of the postwar era were marked by significant development and expansion of new technology and improved methods of operation accompanied by high rates of capital formation. Significant advances in the quality of the work force also occurred. There was a shift of resources from low- to higher-productivity sectors. Underlying some of these factors were substantial investments in research and development and in workers' educations. After 1967, however, the economic and demographic trends that supported substantial efficiency gains became much less favorable, and new trends emerged that tended to retard the growth of productivity.

A crucial factor in the slow rate of efficiency improvement has been a slackening in the introduction of new technology or, to put it more broadly, in the application of new ideas and improved ways of doing things. The effect of technology on productivity is usually associated with equipment and materials, such as an electronic device that vastly expands data processing capabilities or a new chemical that can help multiply crop harvests.

CHART 3

**Average Annual Growth
of the Capital Stock ***



* Private nonresidential net capital stock measured in constant dollars.

SOURCE: Board of Governors, Federal Reserve System.

But just as important are new management techniques that greatly improve the application and organization of resources, whether of labor, physical capital, or financial resources. But no matter what the form of advance in human knowledge, it frequently requires significant investment in new plant and equipment in order to exploit fully the opportunities presented.

Yet we have failed to maintain an adequate rate of capital accumulation and investment. Indeed the nation's stock of capital expanded at an annual rate of only 2.8 percent over the past five years, barely half the rate over the preceding decade. Chart 3 shows this progressive and disturbing decline.

Capital accumulation per member of the labor force has slowed even more dramatically. Compared to 1974-75, the amount of capital per person in the labor force has actually declined. This can be seen in Chart 4. At the same time, the

share of capital investment devoted to environmental compliance has increased, and the imposition of environmental standards may have caused practical obsolescence of some existing plant and equipment.

In a similar vein, the massive increase in the price of energy clearly has shortened the economic life of some of our capital stock. So, in many ways, the data on the accompanying charts understate the problem that we face.

Another reason for the slower pace of productivity growth was the huge flood of inexperienced workers into the labor force. The figures are staggering. Nearly 15 million more young people and women were in the labor force in 1977 than in 1967. They accounted for nearly four-fifths—almost 80 percent—of the overall expansion of the work force over the decade. Even though these new workers enjoyed the best health, the highest educational attainment, and the best working conditions in our history, they still had to learn skills and accumulate experience before they could achieve the same productivity as employees with long tenure in a particular trade.

Improving the efficiency of the economy under these circumstances demands a comprehensive, forward-looking program—a program that will restore a climate favorable to productivity growth. Its principal elements must include, first, a commitment to conquer inflation so that investment plans can be made in an environment of more certainty and, second, greater economic incentives for private investment.

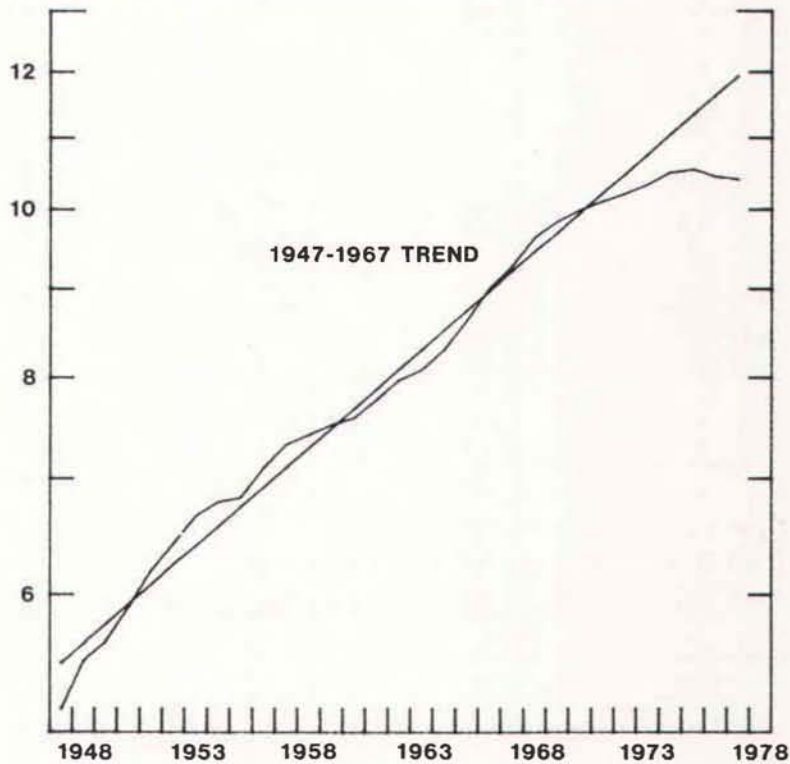
The nation's tax policies have not offered adequate incentives for new capital investment. In particular, depreciation allowances are not adequate to provide cash flows sufficient to encourage increased fixed investments in today's conditions, nor to offset the substantial risk of obsolescence. Higher inflation has made it extremely difficult for firms to predict forward costs and prices and thus has shaken confidence in business forecasts of financial conditions and general economic activity. Facing a less reliable calculation of the real cost of capital and of expected revenues, prudent businessmen set high requirements for prospective returns on investment. Capital spending inevitably is retarded.

Because we have been neglecting capital accumulation, a larger share of GNP must now be devoted to capital investments. Raising the amount of capital per worker will have a favorable impact on productivity in its own right. Also, since new

CHART 4

Ratio of Capital Stock to Labor Force

RATIO SCALE, THOUSANDS OF 1972 DOLLARS PER PERSON



SOURCE: Board of Governors, Federal Reserve System.

capital also generally embodies new technologies, there should be an extra increment to efficiency gains. Newer equipment and structures utilize energy more efficiently, and the resulting conservation and cost savings will contribute to achieving our overall goals.

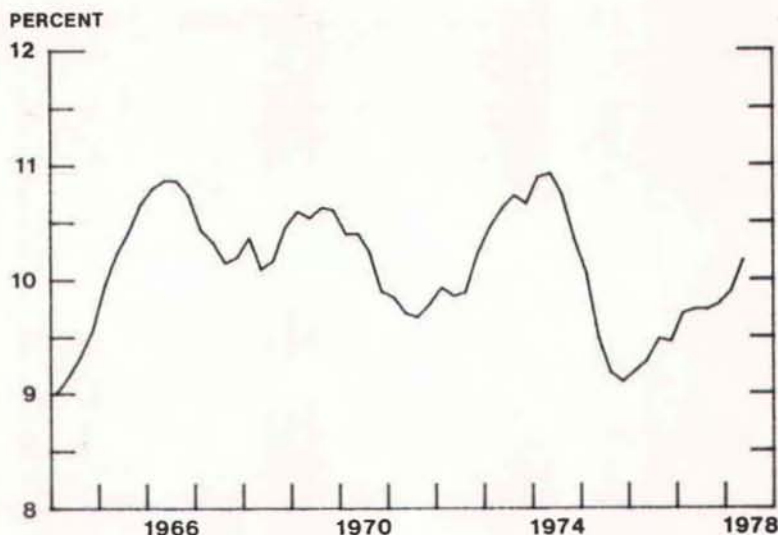
However, it is not enough simply to reach the past peak levels of $10\frac{1}{2}$ or 11 percent of GNP, reflected in Chart 5. The nation should set an ambitious objective for capital investment of, say, 12 percent of GNP for an extended period of time in order to enable us to make up for past deficiencies and to narrow the gap between our performance and that of our strong industrial competitors. The Japanese economy spends over 20

percent of GNP on capital investment; West Germany 15 percent. It certainly would be appropriate for us to seek a 12-percent level.

Another element in a long-term strategy aimed at a high-growth, low-inflation economy is extensive reform of Federal regulatory activities. We need to take a critical look at price-regulating Government programs. Price regulation in the marketplace tends to discourage or prevent full competition, which is, after all, a powerful incentive for the development and adoption of the most efficient techniques. In recent years there has been a major increase in well-intentioned laws and regulations aimed at protecting the environment and promoting health and safety. These regula-

CHART 5

Ratio of Business Fixed Investment to GNP *



* Based on constant-dollar data.

SOURCE: Board of Governors, Federal Reserve System.

tions greatly influence when and where new productive capacity may be built and how firms may operate. Just hiring the personnel necessary to keep track of the rules, prepare the reports, and attend the hearings has swollen overall costs without any compensating increase in measured output.

In addition to requiring major expenditures, these regulations create uncertainties about the appropriate scale, location, and acceptability of major new additions to or modernization of our productive capacity. Protection of the environment and of public health and safety must be a major social goal. But the actual benefits of new forms of protection must be carefully weighed against the cost to our economy of achieving them.

Another aspect of a forward-looking growth policy is to assure that our work force continues to be ready to meet the challenge of developing new ideas and implementing new technologies. Government employment and training programs should be redesigned to provide effective skill

training and work experience to disadvantaged workers. The emphasis on these programs should be on training individuals for careers in the private sector. Younger people are affected more severely than most other groups by high unemployment since early employment is essential for that on-the-job training which lays the foundation for a successful life career. With today's very high levels of unemployment among younger workers, it is possible that unless we act vigorously, a larger part of that generation will be denied the opportunities to develop the skills, attitudes, and motivation they need to become productive participants in the adult work force and to experience the self-satisfaction of personal accomplishment.

In addition to investing in human capital in the forms of direct skill upgrading, we should improve the links between the classroom and the world of work and expand apprenticeships and similar opportunities to assure that younger workers are prepared to meet the needs of their private-sector employers. Methods of raising workers' incentives

to become more productive should also get more attention. Stockownership incentives, profit sharing, labor-management productivity councils are possibilities that certainly warrant closer examination and further experimentation.

We need all these government actions and incentives. But even more we need a change in attitude among managers and workers; among all citizens. America has always been a "can do" nation characterized by an innovative and competitive spirit. I am convinced that a substantial cooperative effort in the private sector, coupled with a reorientation in tax and regulatory policy, will stimulate productivity growth and will help ease inflationary pressures without curtailing growth. Such trends would be self-reinforcing, for reduced inflationary expectations would enhance confidence in our economic future. All this in turn would lessen the burden on monetary policy in the fight against inflation and improve the prospects for lower interest rates.

In the past few months we have learned a great deal about the limits of government, the importance of coordinating government economic policies, and the importance of a stronger partnership between government and the private sector. Much has been accomplished. Our fiscal program has

been changed so that the prospective deficit for the year that began this week has been reduced by over \$22 billion, a significant contribution to the fight against inflation. There has been cooperation with President Carter's deceleration program, although much more needs to be done and the President intends to announce other anti-inflation actions. Progress has been made in establishing elements of a national energy policy that will reduce our dependence on imported energy. We have taken steps, both through short-term bridging actions and in addressing the longer-term fundamentals, to assure a sound and stable dollar, which is essential to our economic well-being.

But much more needs to be done. In the fight against inflation, and in the campaign to raise productivity gains once again to the level that will assure increases in real incomes and increases in our standard of living, we need to have the purpose, the determination, the constancy to implement effective long-range programs. We will need to maintain our efforts for five to seven years in order to achieve the economic goals of full employment, price stability, and a sound dollar. The reward will be enhanced prospects for peace and prosperity in the world.

“Fed Quotes”

Brief Excerpts from Recent Federal Reserve Speeches, Statements, Publications, Etc.

“Although thrift institutions are not permitted to provide most services to businesses, certain types of consumer lending, or trust services, it appears that other factors diminish the importance of these activities in the overall delineation of the product market. For example, studies have shown that loans to firms beyond a relatively small size tend to be made in the regional or national market, rather than the local market. Business can draw also on trade credit as another source of credit. This suggests that the impact on competition of the proposed acquisition would be less severe than in the absence of such factors. Other evidence that mortgage lending is fungible and permits the financing of consumer expenditures through the mortgage of homes implies that certain consumer credit services are in fact available from thrifts. This likewise indicates that the competitive impact of the acquisition would be less severe than in the absence of such factors. For these reasons, I would include thrift institutions in the competitive analysis to a much greater extent than does the majority in this case. I would conclude that, because thrifts now offer a diversified group of banking products and services in direct competition with commercial banks, the competitive strength of commercial banks is diminished, reducing the anticompetitive character of the acquisition.”

Henry C. Wallich, Member, Board of
Governors of the Federal Reserve System
(Dissenting Statement, Federal Reserve Board
Order Denying Acquisition of Bank, October 3,
1978, in the matter of United Bank
Corporation of New York, Albany, New York)

“The quality of bank assets is reflected by the volume of assets classified by bank examiners and by the volume of non-earning assets being carried by banks. During 1977, the amount of classified assets of insured banks declined by about 10 percent, after more than tripling between 1973 and 1975. Moreover, the amount of assets classified by examiners as doubtful and loss—the two most serious classifications—declined by about 20 percent. Banks with assets exceeding \$5 billion experienced a slightly greater relative decline in classified assets than did the rest of the banking system. However, these large banks still have a much higher level of classified assets relative to their capital than do other banks.

“Other measures of bank asset quality also have shown marked improvement. Available data indicate that nonperforming assets (which include non-accruing loans, renegotiated loans, and real estate acquired in foreclosure) fell roughly 15 percent last year—despite a 13 percent rise in total bank assets.”

G. William Miller, Chairman, and Philip E.
Coldwell, Member, Board of Governors of
the Federal Reserve System
(Statement before the Committee on Banking,
Housing, and Urban Affairs, U.S. Senate,
May 25, 1978)

"At the present time, the consumer often receives lengthy and complex Truth in Lending disclosures interspersed among contractual provisions and disclosures required by State laws. We believe that Truth in Lending cannot be truly effective when the consumer is presented with discouragingly detailed and complicated disclosures. Overwhelming the consumer cannot result in a better informed, credit-conscious consumer; rather, it will result in a consumer who will often ignore all disclosures and not attempt to digest the information provided."

Philip E. Coldwell, Member, Board of
Governors of the Federal Reserve System
(Statement before the Subcommittee on
Consumer Affairs of the Committee on
Banking, Finance and Urban Affairs, U.S.
House of Representatives, September 6, 1978)

"We must have the national courage to endure small evils or small catastrophes without putting massive constraints on the freedom of the citizens to solve the problems.

"The resulting evils of using massive constraints are much greater than enduring the abuses of a few individuals."

Philip C. Jackson, Jr., Member, Board of
Governors of the Federal Reserve System
(*American Banker*, October 23, 1978)

"One continues to hear today the plea for gradualism for a slow return to less inflationary times. Personally I have some reservations about this prescription because I believe we are dealing heavily in a question of inflationary expectations. A gradual move toward anti-inflationary actions or moves which will only gradually take effect will still leave the expectation of inflation almost untouched in the short run and, after all, the long term is made up of a whole series of short term actions. Moreover, unless actions are visibly credible, the international value of the dollar will continue to erode and this too will place greater inflationary pressures on the United States."

"The basic problems [of inflation] are not likely to be addressed by guidelines or controls. Instead the actions of the Federal Government through monetary and fiscal policies still seem to provide the best answers for reducing inflation. One of our basic problems has been that the United States' economy is led by the consumer. Our consumers have learned to buy and to buy heavily saving only a small portion of their total income. Part of this habit is caused by the fact that we pay the saver a negative rate of interest. With the current inflation rate, someone placing funds in a savings and loan or bank which is paying 5 or 5½ percent rates of interest is immediately losing 2 to 3 percent of the value of his money every year and is also taxed on the nominal interest earned."

Philip E. Coldwell, Member, Board of
Governors of the Federal Reserve System
(Remarks at the Conference on Economic
Development, Troy, Michigan, October 19,
1978)

Two New Directors Elected

Lewis H. Bond, Chairman of the Board and Chief Executive Officer, Texas American Bancshares Inc., Fort Worth, Texas, and J. Wayland Bennett, Associate Dean for Industry Relations, College of Agricultural Sciences, Texas Tech University, Lubbock, Texas, have been elected to the Board of Directors of the Federal Reserve Bank of Dallas. Each director was elected for a term of three years to begin January 1, 1979.

Bond was elected a Class A director by banks in Group 1, which consists of member banks with capital and surplus over \$6 million. Bond succeeds Robert H. Stewart, III, Chairman of the Board, First International Bancshares, Inc., Dallas, Texas.

Bennett was elected a Class B director by banks in Group 2. This group includes member banks with capital and surplus between \$1 million and \$6 million. Bennett succeeds Thomas W. Herrick, Cattle and Investments, Amarillo, Texas.

The Board of Directors of the Federal Reserve Bank of Dallas consists of nine members: three

Class A directors, who represent member banks and are usually commercial bankers, and three Class B and three Class C directors, all six of which are engaged in pursuits other than banking. The mix on the Board of bankers, businessmen, and public members brings varied expertise to the operation and management of the Reserve Bank.

Class A and Class B directors of the Dallas Reserve Bank are elected by the member banks in the Eleventh Federal Reserve District, and Class C directors are appointed by the Board of Governors in Washington.

The Board of Directors has responsibilities common to directors of banks: it hires and fires officers, establishes budgets, evaluates performance, and provides general surveillance, all subject to the supervision of the Board of Governors. In addition to its regular duties of overseeing the operations of the Bank, the Board of Directors also establishes, subject to review and determination by the Board of Governors, the interest rate charged on loans to member banks.

Simplified Call Reports Proposed

Simplified reports of condition and income for small banks have been proposed by the Board of Governors of the Federal Reserve System. The reports, which could be used by over 90 percent of the nation's commercial banks, would require 40 percent fewer items of information than the standard form.

Under the proposal, the simplified version would become effective for reports as of December 31, 1978, and could be used by banks with less than \$100 million in assets that have domestic offices only. However, a bank eligible to file the short form could choose to use the standard version instead in order to comply with state regulations, to avoid changing accounting procedures, and so on.

The simplified reports reduce the reporting burden by eliminating many specific items now required, reducing the frequency of reporting some items, and easing the standards for determining which items are considered "material" for reporting purposes.

A Diminished Role for the Dollar as a Reserve Currency?

By Leroy O. Laney

The decline in the dollar's value in 1977 and 1978 has highlighted again the question of the future role of the dollar as a reserve currency. This is an important matter not only for the United States but for the entire international financial system as we know it today.

Under the rules of the Bretton Woods system from 1944 until the early 1970's, the dollar was fixed to gold at \$35 per ounce and other countries were obligated to fix their currencies to the dollar within narrow limits by official exchange market intervention. The U.S. currency was at the center of the system and served as an international unit of account. It was the major vehicle currency in private transactions, the primary intervention currency for official monetary agencies, and, perhaps most important, the major store of value for both private and official international liquidity.

The international monetary system that evolved in succeeding years, and that eventually was officially embraced in 1976 with the Jamaica Agreement, requires no unique role for the U.S. dollar. With no exchange rate guarantees, foreign holders of dollars are exposed to exchange rate risk in terms of the home currency or other assets when

the dollar fluctuates. The dollar's 1978 decline elicited widespread concern about capital loss on dollar reserves held by foreign central banks and by private market participants. There were reports that at least some central banks as well as private holders were diversifying out of dollars, and analysts cited this as one reason for the announcement on November 1, 1978, of the Federal Reserve-U.S. Treasury dollar support package. Another development in 1978 that brought attention to the dollar's future international role was the plan for a renewed effort to achieve European monetary unification.

Will the future for the dollar resemble the historical decline of the British pound as a reserve currency, or will the dollar remain the world's primary official reserve asset? Since there is little desirability or possibility under the current circumstances of returning to fixed exchange rates, exchange rate risks on U.S. dollar reserves will continue. But given a flexible or managed floating exchange rate system, the same kind of risk would apply to any other reserve asset. With the U.S. dollar available to serve as a key currency, it was feasible for private and official holders of the

pound sterling to shift away from that currency. Is there a comparable alternative available today to holders of dollars who become disenchanted with the U.S. currency as a reserve asset?

This article briefly outlines the benefits and costs of being a reserve currency country and notes the national characteristics that seem important in determining the use of a country's currency as a reserve asset. Available data on changes in currency composition of official reserves during the managed float are reviewed, and the forces that determine the mix of currencies held by a central bank under managed floating are identified. These may throw some light on the probable future role of the dollar as a reserve currency.

Benefits and costs of the reserve center

A reserve currency country has both benefits and responsibilities that other countries do not have. To the extent that other countries desire to increase their balances denominated in the center country's currency as international reserves, balance-of-payments deficits of the center country are automatically financed, and this can enable the country to consume more from abroad than it exports over the intermediate term. Alternatively or concurrently, the center country can be a net long-term investor abroad. Lending longer term in this fashion and borrowing short term by providing foreigners with liquidity, it can perform a financial intermediation function conceptually the same as that of a commercial bank. The financial community of the center country profits from this intermediation, and corporations can more easily make long-term direct investment abroad without putting pressure on the exchange rate.

The ability of the reserve currency country to create the world's liquidity has been labeled "seigniorage," since the position of a dominant reserve center roughly corresponds to that of a sovereign with the privilege of issuing fiat money. The fact that the center country does pay interest on the foreign holdings of dollar assets weakens the analogy, but it is still appropriate to the extent that borrowing costs to a reserve currency country are lower than to noncenter countries seeking the same financing for payments deficits.

If the reserve center country runs large and persistent balance-of-payments deficits, it can be accused of exporting its monetary policy to the rest of the world. Other countries may feel obliged to buy increasing amounts of the reserve currency to prevent their currencies from rising against the

center currency, since such a rise tends to place their export industries at a competitive disadvantage in world markets. Any increase in reserves of the outer countries leads, other things equal, to monetary expansion if the inflows are not sterilized in some way. But because the reserve currency country finances its payments deficits with liabilities to foreigners rather than by drawing down its reserve assets, no contraction of its own monetary base is forced.

Benefits are, on the other hand, balanced by certain costs. A foremost responsibility of the reserve currency country is to maintain confidence in its currency. Under the gold exchange standard such confidence usually could be maintained by convertibility of the currency at a fixed price to an internationally accepted asset such as gold. In such an arrangement the reserve country forgoes any active control over its exchange rate. Under a managed floating exchange rate regime the reserve center gains some control over the exchange value of its currency but is not relieved of its responsibility to maintain price stability. A stable price level as a national goal is not truly a "cost," of course, nor a responsibility to foreigners any more than to domestic citizens, since presumably this would be a goal in any case. But if the reserve country's domestic economic policies subordinate control of inflation to possible short-run gains in production and employment, a conflict arises between maintenance of its role as a reserve center and national objectives.

A foremost responsibility of the reserve currency country is to maintain confidence in its currency.

In addition to the direct costs and benefits to the reserve currency country itself, there are indirect costs and benefits to noncenter countries. A well-functioning international monetary system, made possible by the provision of appropriate levels of international liquidity from the center country, benefits everyone. If noncenter countries are forced to acquire more liquidity than they desire, however, in order to peg their currencies to the center currency or perhaps simply because of a reluctance to see their currencies rise against it, this benefit turns into a cost. This aspect was a net benefit with respect to the dollar in early post-

war years but turned into a net cost in the later years of the Bretton Woods system and periodically under managed floating. Such a cost can be seen to depend importantly on the international monetary system and is less under managed floating than under the Bretton Woods adjustable peg system, since now the latitude exists for allowing the exchange rate to adjust. While the cost for outer countries of acquiring more of the reserve currency than is desired is less under a managed float, the cost of exchange rate risk on accumulated reserves is more evident now.

It is important to recognize the benefits and costs of being a reserve center country, as well as those that apply to the outer countries, because they frequently are forgotten in day-to-day affairs.¹ It is not generally possible, however, for a reserve currency country, or a potential or declining one, to weigh benefits against the costs and actively change some of the factors that determine its reserve currency status. Governments have limits on their longer-run ability to change some underlying market characteristics.

Fundamental attributes of a reserve currency country

A history of economic growth can be important since most outer countries would not desire to accumulate balances in a currency backed by a secularly weak economy. Price stability, however, can be even more important to the international financial community because domestic inflation undermines the currency as a store of value.

A reserve currency role is enhanced by economic independence from foreign influences, since a relatively independent economy is more inclined to postpone adjustment to the rest of the world by borrowing to finance payments deficits. Both economic size and the relative openness of the economy to world economic activity are important indicators of independence. ("Openness" should be distinguished here from "integration" with the world economy. The former term, as

used here, relates to the importance of international trade and financial flows to the economy, while the latter relates to the extent to which such flows are *allowed* to affect the economy.)

Breadth and depth of domestic capital markets, and access to them by other countries, are crucial. Capital markets must have a scope such that foreigners who hold balances in them can liquidate sizable holdings without incurring significant capital loss. A high level of domestic savings and investment and a widely held and actively traded public debt provide volume for capital market development. Public debt issues, moreover—particularly short-term instruments with little price risk—have characteristics of security and liquidity that can appeal to both private investors and official foreign entities, especially the latter. (At the end of 1977, for example, approximately 70 percent of the outstanding stock of U.S. liabilities to official foreigners was held as obligations on the U.S. Treasury; of this amount approximately 48 percent was Treasury bills and certificates.)

National markets are not the only source of international liquidity in today's world since external financial markets or "Eurocurrencies" (a misnomer, as deposits in such markets are not currency and may not be in Europe) can play a significant role in both official and private international liquidity. A Eurocurrency deposit may be defined as a deposit denominated in a currency other than that of the country in which the issuing bank is domiciled. Significant levels of official reserves are held in the Euromarket today, rather than in national capital markets, partly because of higher yields there.

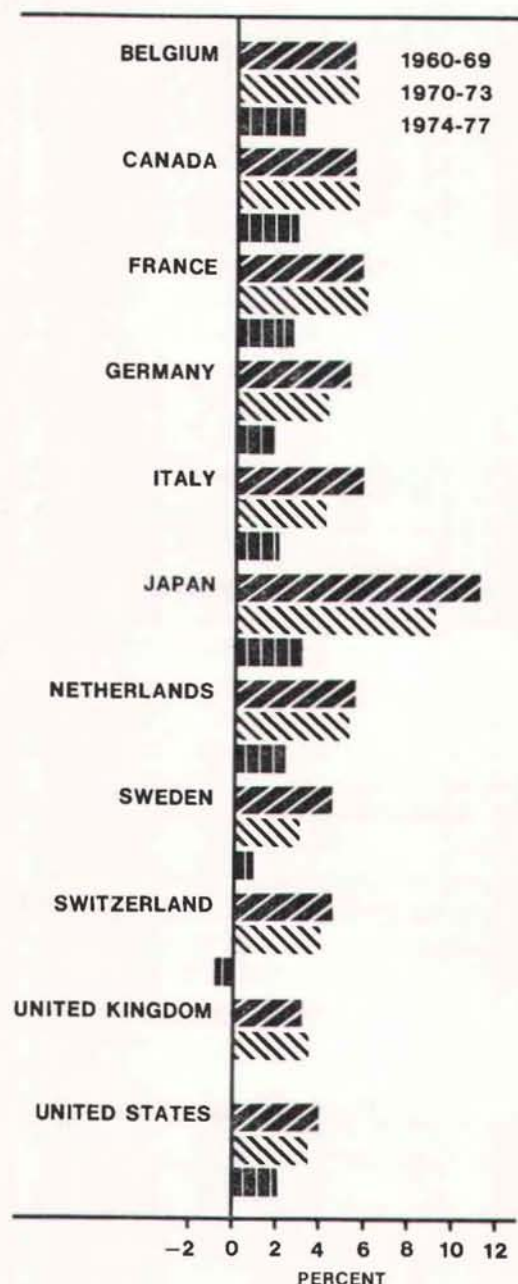
Conceivably Eurocurrency deposits can change the currency composition of world liquidity even if nations that correspond to the relevant currency do not meet the general conditions outlined above. Historically, the currency composition of international liquidity held in national markets and that in Euromarkets have not diverged significantly. But if monetary authorities of potential new reserve centers are reluctant to have their currencies assume a reserve currency role and capital controls are invoked to prevent it, then Euromarkets can service excess demand for a national currency. The United States' own experience with capital controls in the sixties demonstrated how artificial constraints could be circumvented by the Euromarket.

Historically, several of the above reserve center attributes have been quite important. National

1. For a more detailed discussion of the costs and benefits of being a reserve center country, as well as the basic characteristics of such a country, as discussed later, see C. Fred Bergsten, *The Dilemmas of the Dollar: The Economics and Politics of United States International Monetary Policy* (New York: New York University Press for the Council on Foreign Relations, 1975).

Growth rates have declined overall, but the U.S. decline has been less than for other countries

CHART 1. Growth in Real Output



SOURCES: International Monetary Fund.
Organisation for Economic Co-operation
and Development.

currencies were used as stores of official international liquidity even under the classical gold standard that existed prior to World War I, when Great Britain was the primary reserve center. Although the pound sterling dominated the world's official foreign exchange, the German reichsmark and the French franc were also important toward the end of the period at least, especially in continental Europe. (The existence of multiple reserve currencies under a gold standard is obviously quite different from a multiple reserve asset system under the present managed float, but liquid claims on these major reserve centers exceeded their total reserves and corresponding liquidity ratios of countries holding the claims were much smaller.) Price stability was not questioned because of similar movements in national price levels, and all three countries were net long-term investors abroad at the same time they were accumulating liquid liabilities to official foreigners. All three had relatively well developed capital markets, were relatively important in world commerce, and showed no particular desire to escape their special role.²

Although the British pound continued to have an international reserve role in the interwar years while the other two currencies did not, it was the U.S. dollar that became increasingly important. The size and rise of the United States as a world economic power, the relatively closed nature of its economy, and the rise to international prominence of the New York financial market were all important. Following the fragmentation of the world monetary system in the thirties, the U.S. dollar's reserve role was increased in the postwar period, under the Bretton Woods adjustable peg system, relative to both monetary gold and other foreign currencies. (See Table 1.)

How have basic reserve currency country characteristics changed during the seventies, during which the international monetary system has un-

2. For an in-depth treatment of this period, see Robert Triffin, *The Evolution of the International Monetary System: Historical Reappraisal and Future Perspectives*, Princeton Studies in International Finance, no. 12 (Princeton: Princeton University, Department of Economics, International Finance Section, 1964), on the workings of the classical gold standard, and see Peter H. Lindert, *Key Currencies and Gold, 1900-1913*, Princeton Studies in International Finance, no. 24 (1969), for an assessment of the role of the three reserve centers relative to each other.

Table 1

OFFICIAL INTERNATIONAL LIQUIDITY OF IMF MEMBER COUNTRIES

(Billions of U.S. dollars. End-of-year figures)

Item	1959	1965	1968	1969	1970
Gold	\$37.9	\$41.9	\$38.9	\$39.1	\$37.2
Foreign exchange	16.2	23.8	31.9	32.3	44.5
Liabilities to official foreigners as reported by United States and United Kingdom	17.1	22.9	27.2	24.9	30.5
U.S. dollars	10.1	15.8	17.5	16.0	23.9
U.K. pounds	7.0	7.1	9.7	8.9	6.6
Difference relative to total reported foreign exchange ¹	-.9	.9	4.7	7.4	14.0
Reserve positions in International Monetary Fund	3.2	5.4	6.5	6.7	7.7
Special Drawing Rights	—	—	—	—	3.1
Total reserve assets	\$57.4	\$71.0	\$77.3	\$78.2	\$92.5

1. Difference derives primarily from holdings in external financial markets.
NOTE: Details may not add to totals because of rounding.
SOURCE: International Monetary Fund.

dergone the change to managed floating? With respect to the economic growth criterion, the United States has performed relatively well recently compared with other countries in the Group of Ten plus Switzerland (Chart 1). All growth rates have fallen in the midseventies, but growth in the United States in the 1974-77 period has fallen less relative to the sixties and the early seventies than for other countries in the group. U.S. consumer price inflation, on the other hand, has not declined in recent years to the same extent as in most of the other countries (Chart 2). Inflation rates generally rose in the seventies, and some of the countries still show poorer price performance than the United States. But the downward trend is more noticeable for most foreign countries, and many show lower inflation absolutely in recent experience.

Table 2 presents comparisons of economic size, openness, and breadth of capital markets for the group as of the beginning of the decade and in the most recent year for which data are available. Not much has changed on the basis of economic size. The United States is still by far the largest country, and others in the group have maintained smaller and relatively constant sizes. Only Japan shows much of an increase relative to others in the group. All countries have become more open, according to the measure presented in the table,

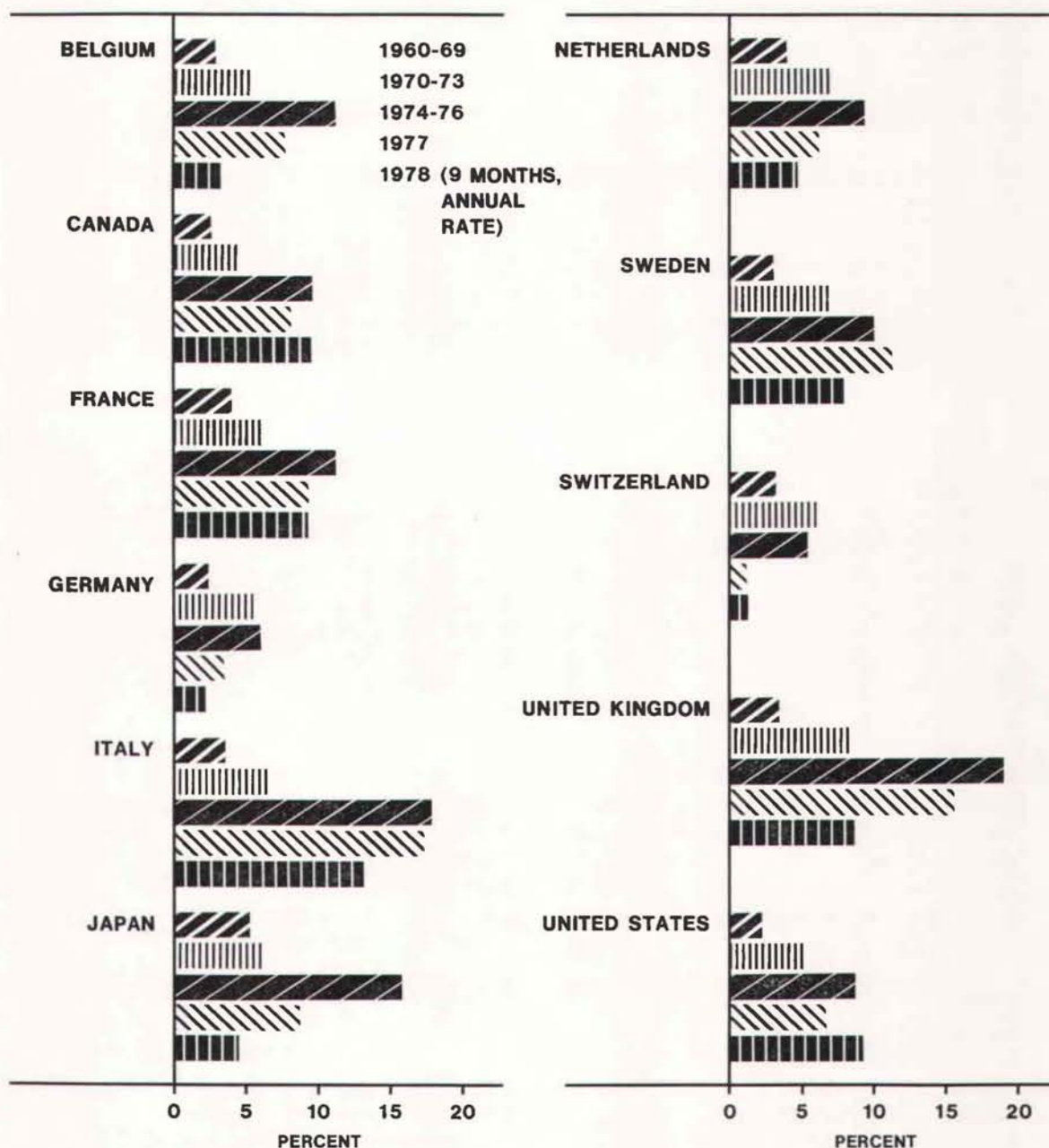
but some more so than others. The United States remains the most closed economy but also shows the greatest percentage increase in openness during the seventies. The percentage composition of security issues on domestic markets—a rough gauge of their breadth and ability to accommodate liquid holdings also—indicates a slight decline for the still-dominant United States but slight gains for Germany, Japan, Switzerland, and the United Kingdom. International exposure of relevant capital markets, measured here by a percentage breakdown of foreign bond issues in local markets, shows a dominant and increasing share for the United States at the expense of all others except Switzerland.

It is clear from the figures that the United States remains dominant with respect to most reserve currency country attributes.

Changes in the role of the public debt in providing volume, relative security, and liquidity to domestic capital markets are indicated in Table 3, in which the outstanding central government debt in marketable securities is given as a percentage of nominal gross national product for countries

**Inflation rates in most major foreign countries
have recently fallen more than in the United States**

CHART 2. Changes in Consumer Prices



SOURCES: International Monetary Fund.
Organisation for Economic Co-operation and Development.

Table 2

SELECTED CHARACTERISTICS OF RESERVE CURRENCY COUNTRIES

Country	Percent of group's real output ¹		Openness ²		Percent of group's security issues on domestic markets ³		Percent of group's foreign bond issues, by market country ⁴	
	1970	1977	1970	1977	1970	1976	1970	1976
Belgium	1.4	1.4	.85	.96	3.1	*	2.0	*
Canada	4.4	4.8	.45	.49	3.1	2.4	*	*
France	7.6	8.0	.30	.41	4.6	3.2	1.1	.5
Germany	9.1	8.6	.43	.53	7.8	9.2	18.2	7.2
Italy	5.7	5.5	.35	.53	7.8	5.6	*	.1
Japan	11.0	12.7	.22	.26	14.6	20.9	11.5	1.8
Netherlands	1.7	1.7	.96	.99	4.1	3.7	.8	3.7
Sweden	1.7	1.5	.49	.58	1.9	1.9	*	*
Switzerland	1.1	1.0	.65	.68	1.9	2.7	16.0	25.5
United Kingdom	8.0	7.2	.44	.61	2.1	5.4	.6	*
United States	48.3	47.6	.11	.17	49.0	45.0	49.8	61.2
Total, 11 countries ...	100.0	100.0	—	—	100.0	100.0	100.0	100.0

1. Computed from local-currency national products converted to U.S. dollars at average 1970 exchange rates to abstract from effects of exchange rate changes on proportions.

2. Computed as the ratio of the sum of exports and imports to gross national product. Results are not affected significantly when gross capital flows are added to trade flows.

3. Security market activity includes bonds, equities, and certificates of indebtedness. To abstract from exchange rate effects on proportions, local-currency totals were converted to U.S. dollars at constant 1973 exchange rates.

4. Foreign bond activity comprised of "traditional" issues, those placed on the market of a single country and denominated in the currency of that country. Method of computation was the same as in note (3).

* Either zero or less than one-half of 1 percent.

SOURCES: International Monetary Fund.

Organisation for Economic Co-operation and Development.
Federal Reserve Bank of Dallas.

in the group for which comparable data are readily available. This ratio has remained relatively constant in the United States through the seventies at a level somewhat below the sixties. A declining trend into the seventies is indicated for France and the United Kingdom, but for Japan and Germany the ratio has increased. (The lower absolute proportions of government debt initially for the last two countries can be traced not only to generally lower government borrowing but also to a lower base upon entering the postwar period; the United States and the United Kingdom carried into this period significant war debt.)³

It is clear from the figures that the United States remains dominant with respect to the reserve currency country attributes discussed. Some of these factors change only slowly, but when and if those

factors beyond the control of the authorities do change over the longer term, it is questionable whether the trend can be reversed.⁴

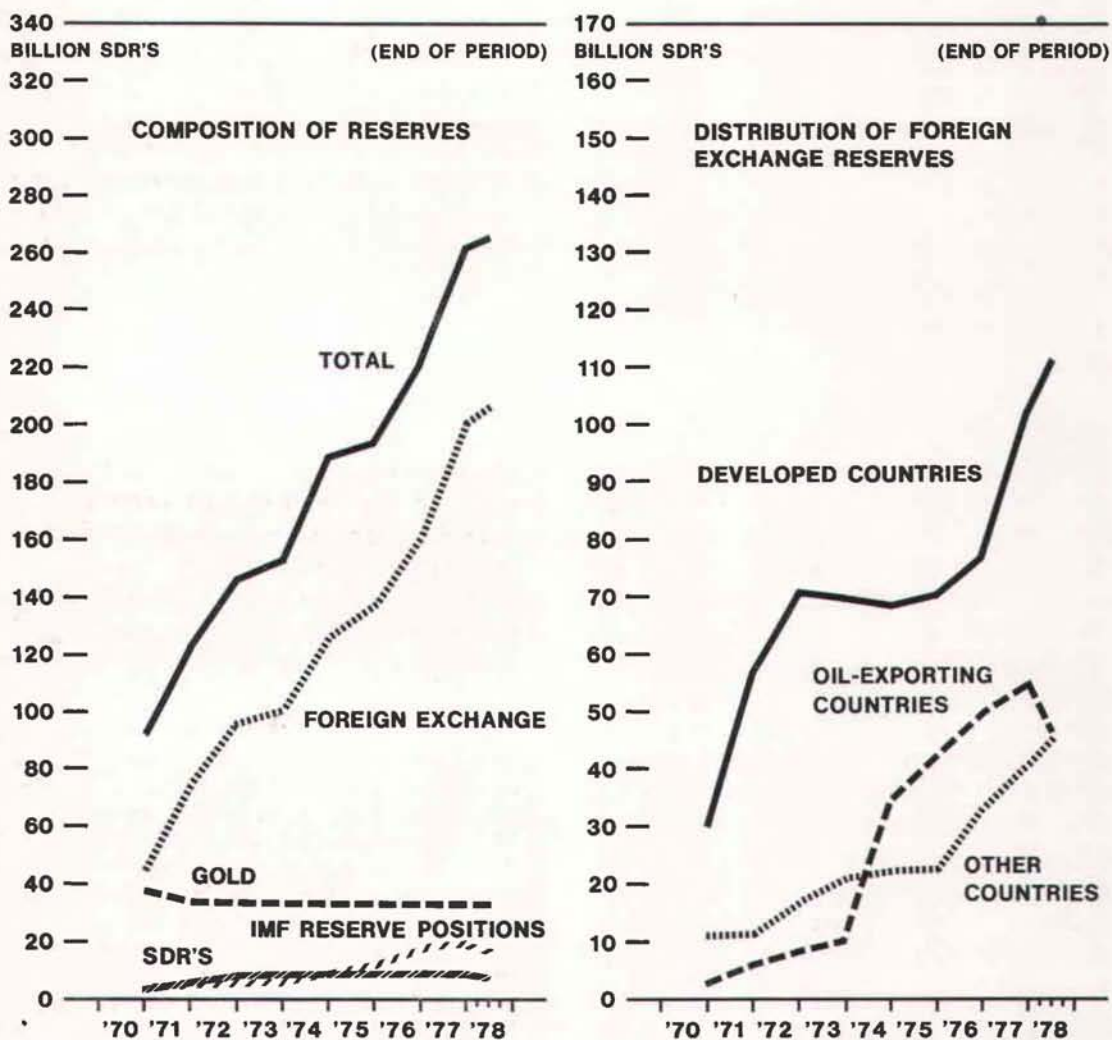
In addition to center country characteristics, it is also possible to look at the other side of the coin. This is the matter of what determines the currency mixture of foreign exchange for a given central bank under the managed floating system.

4. For the attitude of the Germany monetary authorities on this, for example, see Otmar Emminger, president of the German Federal Bank, "International Currency and Foreign Exchange Problems," an address in Munich, June 3, 1978, in which he states that "there is, in the foreseeable future, no substitute for the dollar as a vehicle currency for transactions, nor as a reserve currency." He also states, "Although we cannot entirely prevent the use of the DMark as a reserve currency, we shall continue to do everything in our power at least to slow down any further tendency for it to assume such a role." At the same time, however, he observes more generally that "it may be true that the dollar is somewhat over-extended in its international use," and he seems to point to at least one condition that would foster Germany's taking on a greater reserve center role when he predicts that his country will more regularly be an external deficit country by basic balance definition when capital inflows are not distorted by confidence factors.

3. Among other countries in the Group of Ten plus Switzerland analyzed earlier, an inspection of public debt-GNP ratios computed from available data of the International Monetary Fund indicates slight declines over the period for Belgium, Canada, and the Netherlands, relative constancy for Sweden and Switzerland, but a steady increase for Italy. Ratios are lowest for Switzerland and highest for Italy, but the data may not be directly comparable across countries.

The surge in international reserves in the 1970's has been due to the foreign exchange component, with developed countries as well as oil exporters posting large gains

CHART 3. Official International Reserves of IMF Member Countries



SOURCE: International Monetary Fund.

Official reserve asset choice under managed floating

Central banks have an incentive under flexible exchange rates to diversify foreign exchange reserves similar to the incentive for private holders. The portfolio choice for central banks is rather different from that for private entities, however. Most important, a large set of variables that influence currency portfolio risk and return—such as monetary growth rates, interest rates, and exchange market intervention—cannot be taken as exogenous to the central banks' own actions.

In addition, central banks may also have motives for currency choice that are irrelevant in the private sector. Official intervention, with the presumed goal of stabilizing exchange rates, dictates the sale of strong currencies for weaker ones. But if a reserve currency happens to be one of the weaker ones, this implies the accumulation of more reserve assets subject to probable capital loss. An alternative for central banks whose own

Central banks have an incentive under flexible exchange rates to diversify foreign exchange reserves similar to the incentive for private holders, but they may also have motives for currency choice that are irrelevant in the private sector.

currencies are strong would be to buy another currency instead. Then, even though they would not be reducing the quantity of their holdings of the reserve currency, they would at least not add to it. In the long run, diversification out of the primary reserve currency can occur in a more or less orderly fashion. When the currency becomes relatively strong again, it can be sold, but its levels do not have to be replenished when it is again weak. Even though this is more orderly diversification, the net effect is still downward pressure on the reserve center currency over the longer haul since net demand for it is less than otherwise.

Another factor that can influence the composition of official foreign exchange reserves for a given central bank, regardless of exchange rate risk, is the pattern of the country's trade with the rest of the world. This relates to the vehicle role of some currencies in private transactions and tends to correspond to the role of the reserve currency country in world trade. If residents of the

Table 3

CENTRAL GOVERNMENT DEBT HELD IN MARKETABLE SECURITIES OF FIVE MAJOR COUNTRIES

(As percent of nominal GNP)

Country	Average, 1960-69	1970	1976
France	16.7	10.5	7.4
Germany	2.3	2.3	5.1
Japan ¹	6.0	7.7	16.6
United Kingdom ¹ ...	75.0	54.9	44.8
United States	30.3	23.5	23.7

1. Fiscal-year basis.
SOURCE: Organisation for Economic Co-operation and Development.

domestic economy trade with another country, it is likely that the central bank will desire to hold precautionary balances in the currency of that other country also.

Still another determinant of a central bank's currency portfolio is the exchange rate arrangement of the country. Other things equal, an official monetary institution would be more likely to hold higher reserve balances in a given foreign currency if it fixes its own currency's value to that foreign unit. There is less foreign exchange risk in terms of the domestic currency if the home unit moves with the foreign unit and is expected to continue to do so because of pegging arrangements. The fact that most countries no longer peg to the dollar, as they did under the Bretton Woods system, could be a reason for holding fewer dollars.⁵

In spite of some considerations that make central bank portfolio decisions different from private ones, it is still true that central banks have a general and strong aversion to losses on reserves, even though such losses may be incurred as a result of efforts to insulate the domestic economy from developments the monetary authority believes to be economically disadvantageous or politically distasteful.

Central bank diversification of additions to reserves can occur only gradually over time, however. Trade patterns also do not change very quick-

5. H. Robert Heller and Malcolm Knight, in "Reserve Currency Preferences of Central Banks," an International Monetary Fund Research Department memorandum dated January 5, 1978, present evidence that both trade patterns and exchange rate arrangements are important determinants of official foreign exchange holdings.

ly, and even though exchange rate arrangements are a subject of national decree and can change abruptly, they are not undertaken without extensive deliberation. Increased foreign exchange assets have accounted for the surge in official liquidity that began in the seventies, at the same time the world moved to more flexible exchange rates (Chart 3).⁶ Did greater currency diversification accompany this increase?

Variation in the currency composition of official foreign exchange in 1970's

The International Monetary Fund (IMF) recently has published an aggregate currency breakdown of the foreign exchange reserves of 76 countries that report to it, accompanied by data for a constant sample of 53 of the countries (some countries did not report in certain years), as well as a breakdown for countries grouped according to exchange rate regimes. All data are for the interval from 1970 through 1977.

Table 4 presents the breakdown for the constant sample of 53 countries. It is apparent that although the total has exploded, the proportion held in U.S. dollars has hovered around 80 percent.⁷ The most notable changes are the decline for the pound sterling and the rise for the German mark. Apparently, price stability aspects of the two currencies have contributed importantly to their changing roles. The pound fell from 9.0 percent of total foreign exchange reserves at the end of 1970 to 1.5 percent at the end of 1977, while the mark rose from 2.1 percent to 6.9 percent. Other currencies, primarily the Swiss franc and the Dutch guilder, rose from 5.4 percent to 9.8 percent. Although the reversing roles in the aggregate

of the mark and the pound are evidence of a longer-run trend toward a rising key-currency role for the former and a declining one for the latter, data through 1977 at least show no diminution of the dollar's role following revocation of Bretton Woods obligations to peg to the U.S. currency.

Since exchange rate arrangements were highlighted earlier as an important determinant of reserve asset composition, the status of the dollar might surprise some, but the aggregate data here include some countries that continue to peg to the dollar as well as those that adhere to various other arrangements. A breakdown by exchange rate regimes shows that countries whose currencies used to be pegged to the dollar but are now floating independently have indeed reduced the proportion of their reserves held in dollars.⁸ This is seen in Table 5, which summarizes the 1970 and 1977 currency composition of official foreign exchange portfolios for five categories of countries among the total group reporting to the IMF, classified by the exchange rate arrangements that existed at the end of 1976.

Those countries classified here as independent floaters continue to hold most of their foreign exchange in dollars, but there has been a decline in the dollar proportion during the seventies. There was a relatively steady decline in the dollar share from about the end of 1972 through the end of 1976, when it stood at 74.2 percent, but the proportion rose to 84.6 percent by the end of 1977. It is clear from this that currency components sometimes can be erratic. There was an increase in the German mark share from 3.2 percent for 1970 to 4.9 percent for 1977, but at the end of 1976, the mark's proportion had been higher at 8.2 percent. The sterling component was quite small and declining over the 1970-77 interval; about 1974-75 there was a surge in official holdings of the pound, but this was reversed subsequently and, in any case, can be attributed to a single country.

The official foreign exchange reserves of countries that participate in the European joint float are dominated by U.S. dollars and the dollar share has even risen somewhat.⁹ This may be at-

6. The dramatic increase in official foreign exchange during this period is attributable not only to the overvaluation of the dollar in the early seventies, prior to floating, and the dollar weakness more recently but also to rising oil producer holdings, which increased with their investable surplus after 1973. The rise for oil-producing countries came mainly from investment of their export earnings rather than from intervention to prevent the fall of the dollar against the respective domestic currencies.

7. The contribution of countries excluded from this constant sample does not appreciably change either the aggregate total of reserves or the percentage held in dollars. At the end of 1977, the 76 countries recorded total reserves of \$173.1 billion, compared with \$160.1 billion for the constant sample. Of the former 81.1 percent was dollars, and of the latter 81.2 percent was dollars.

8. Major foreign countries with currencies that float independently are Canada, France, Italy, Japan, Switzerland, and the United Kingdom.

9. Participants in the European joint float at the end of 1976 were Belgium-Luxembourg, Denmark, Germany, the Netherlands, Norway, and Sweden.

Table 4

CURRENCY BREAKDOWN OF OFFICIAL FOREIGN EXCHANGE RESERVES

(Dollar amounts in millions of U.S. dollars)

Dec. 31	Total, 53 countries ¹	U.S. dollars	Sterling	German marks	French francs	Other reserve currencies	Other assets ²
1970	\$ 33,356 (100.0)	\$ 27,113 (81.3)	\$2,988 (9.0)	\$ 710 (2.1)	\$ 8 (.0)	\$ 1,800 (5.4)	\$ 737 (2.2)
1971	62,116 (100.0)	48,194 (77.6)	4,936 (7.9)	1,917 (3.1)	109 (.2)	3,951 (6.4)	3,009 (4.8)
1972	76,392 (100.0)	61,879 (81.0)	5,074 (6.6)	3,628 (4.8)	295 (.4)	5,048 (6.6)	469 (.6)
1973	88,866 (100.0)	70,864 (79.7)	4,409 (5.0)	5,870 (6.6)	469 (.5)	7,014 (7.9)	240 (.3)
1974	106,288 (100.0)	85,918 (80.8)	5,799 (5.4)	6,165 (5.8)	410 (.4)	7,825 (7.4)	169 (.2)
1975	102,618 (100.0)	82,869 (80.8)	3,390 (3.3)	6,363 (6.2)	925 (.9)	8,664 (8.4)	407 (.4)
1976	115,668 (100.0)	92,963 (80.4)	1,902 (1.6)	8,021 (6.9)	645 (.6)	11,803 (10.2)	333 (.3)
1977	160,136 (100.0)	130,063 (81.2)	2,335 (1.5)	11,122 (6.9)	527 (.3)	15,657 (9.8)	432 (.3)

1. Constant sample.

2. Consists mainly of U.S. Treasury securities issued to certain central banks in the late 1960's and denominated in the currency of the holder (Ruosa bonds). However, it also includes small amounts of assets held by regional clearing unions, whatever their currency of denomination, and a small residual error due to reporting irregularities.

NOTE: Figures in parentheses indicate percentages of totals.
Details may not add to totals because of rounding.

SOURCE: International Monetary Fund.

tributable not so much to the economic determinants mentioned earlier as to an institutional constraint imposed as part of the Basle Agreement of April 10, 1972, which formalized the European Community "snake." Participating central banks were restricted at that time from holding anything other than working balances in the currencies of other members, and intervention in U.S. dollars within the snake has increased in importance over time. The use of the snake currencies themselves as a medium of intervention has been discouraged in practice except at the mandatory intervention limits; inside the limits, intervention in other European currencies is subject to prior authorization by the other central bank whose currency is being bought or sold, and intervention must be discontinued if it is believed to have any adverse effect on that participant's currency. When currencies reach the limits, the central bank whose currency is strongest is mandated to buy the weakest currency, while the central bank whose currency is weakest simultaneously sells the strongest currency.¹⁰

The prior-approval provisions for intervention inside the band and restrictions against significant holdings of other participants' currencies can be

seen to relate to the previous reluctance of snake members to become reserve centers. This is especially the case with respect to Germany, whose currency is most important within the snake in

10. See "The European System of Narrower Exchange Rate Margins," *Monthly Report of the Deutsche Bundesbank* 28 (January 1976):22-29. In contrast to the restrictions on use of European currencies, snake participants can intervene in U.S. dollars at will and can borrow freely in dollars. Settlement is often in dollars even when intervention does take place in snake currencies. The use of the U.S. dollar as an intervention medium within the snake can also have an effect on the value of the dollar itself. If dollar purchases equal dollar sales, there is no net effect; but if sales exceed purchases, then the net effect is downward pressure on the dollar (and vice versa if purchases exceed sales). This has been the case in the past when dollar purchases by Germany have not been large enough, because of its relative indifference to the DM/\$ rate, to negate the dollar sales of other snake participants that were forced to keep up with the mark. For an analysis of the effects of different snake intervention responses on the European valuation of the dollar, see Joanne Salop, "Dollar Intervention Within the Snake," *International Monetary Fund Staff Papers* 24 (March 1977):64-76.

Table 5

CURRENCY COMPOSITION OF OFFICIAL FOREIGN EXCHANGE RESERVES, BY EXCHANGE RATE REGIMES

(Dollar amounts in millions of U.S. dollars)

Exchange arrangement ¹	Number of countries	December 31, 1970				December 31, 1977			
		U.S. dollars	Sterling	German marks	Other	U.S. dollars	Sterling	German marks	Other
Floater	11	\$11,672 (90.2)	\$ 264 (2.0)	\$409 (3.2)	\$593 (4.6)	\$58,539 (84.6)	\$ 746 (1.1)	\$3,422 (4.9)	\$6,481 (9.4)
Snake countries	6	10,471 (91.7)	10 (.1)	38 (.3)	904 (7.9)	41,057 (94.7)	12 (.0)	563 (1.3)	1,747 (4.0)
U.S. dollar peggers	27	3,519 (83.3)	385 (9.1)	38 (.9)	282 (6.7)	20,355 (82.5)	309 (1.2)	2,022 (8.2)	1,998 (8.1)
Sterling peggers	4	116 (17.2)	487 (72.4)	2 (.2)	68 (10.1)	1,114 (44.6)	393 (15.7)	547 (21.9)	445 (17.8)
Basket peggers	21	2,479 (45.5)	2,055 (37.7)	174 (3.2)	743 (13.6)	16,452 (55.6)	1,043 (3.5)	5,066 (17.1)	7,043 (23.8)

1. As of December 31, 1976.

NOTE: Figures in parentheses indicate percentages of totals.

SOURCE: International Monetary Fund.

the sense that other participants often must match its movements, rather than vice versa.

The removal of these constraints, should the dollar become less desired as a reserve currency and should Germany become more willing to have the mark used as a store of international liquidity, could have consequences for the reserve role of the U.S. dollar. This did not go unnoticed in the 1978 discussions of European monetary unification. As an alternative to the use of the German mark itself as a reserve asset, the use of some artificial reserve unit similar to the SDR (Special Drawing Right) has been discussed as a solution more acceptable to Germany. At this writing there is some indication that with the December 1978 agreement on the European Monetary System, more snake intervention is intended in currencies of participating countries rather than dollars.

The countries that continued to fix their currencies to the dollar continued to hold a dollar proportion of official foreign exchange that was quite close to the aggregate for all countries.¹¹ This proportion was just above 80 percent at both the end of 1970 and the end of 1977. Although the dollar component fell to 71.4 percent in September 1973, it rebounded subsequently. The declining role of sterling and the rise of the German mark are also quite apparent for this group. The pound's share fell from 9.1 percent at the end of 1970 to

1.2 percent at the end of 1977, while the mark rose from an almost negligible 0.9 percent to 8.2 percent.

The tenet that when a country pegs to a currency, its holdings of that currency tend to dominate its total foreign exchange is also borne out for the group of sterling peggers at the beginning of the period, when the pound's share in their reserves was 72.4 percent.¹² But it is not consistent with the sharp and steady decline in sterling holdings over the period to 15.7 percent at the end of 1977, symptomatic of the decline of sterling as a reserve asset for all reporting countries. The diminished share of sterling was accounted for by an increase in the dollar component from 17.2 percent to 44.6 percent, a large shift in the German mark's share from almost nothing at the end of 1970 to 21.9 percent at the end of 1977, and an increase in other currencies from 10.1 percent to 17.8 percent.

These same trends are apparent for the group composed of countries that peg to some form of currency basket.¹³ Under this relatively new practice, a country fixes its currency to a group of others weighted in some fashion. This could include SDR weights, trade weights, or some other basis. The increase in the dollar proportion for

11. The countries that continue to peg to the dollar are primarily less developed countries (LDC's) in Latin America, Africa, and the Far East.

12. Ireland continues to peg to the pound, as well as some small, less developed nations in Asia and Africa.

13. This group is also composed mostly of LDC's but includes some European countries and oil-exporting nations as well as nonoil LDC's.

this group, which rose from 45.5 percent to 55.6 percent, was somewhat smaller. Sterling fell from 37.7 percent to 3.5 percent, and the mark rose from 3.2 percent to 17.1 percent while the "other" component rose from 13.6 percent to 23.8 percent. These shifts were also relatively steady over the period.

Through the end of 1977 at least, the dollar proportion of aggregate reserves essentially remained constant even though there were changes for other currencies, such as the rising role of the German mark and the demise of the British pound.

In summary, the move to generalized floating earlier in this decade did not diminish the dollar's role as an international reserve asset, as might have been expected. Through the end of 1977 at least, the dollar proportion of aggregate reserves essentially remained constant even though there were changes for other currencies, such as the rising role of the German mark and the demise of the British pound.

Conclusion

Most of the underlying factors that determine a reserve currency can only change slowly, so that, barring SDR consolidation of existing dollar balances by the IMF, which in itself can only be an evolutionary process at best, one can expect the dollar to remain at center stage for some time. This should be true at least as long as the United States meets the price stability responsibilities of a reserve center country. At no point in recent history has a single reserve asset completely dominated, and the trend now may be toward more diversification rather than less. But sudden shifts are neither likely nor in the interest of anyone concerned.

There were indications during the 1978 decline of the dollar that at least some central banks do not consider it unthinkable, under certain circumstances, to diversify their foreign exchange reserves away from dollars.¹⁴ This factor may weigh increasingly on U.S. policy in the future. The official announcement in November 1978 for augmentation of U.S. foreign currency reserves provides some evidence of U.S. willingness to foster greater symmetry in the financing of payments deficits. By drawing foreign currencies on its reserve position in the International Monetary Fund, by selling Special Drawing Rights for foreign currency, and, especially important, by issuing bonds to foreigners denominated in foreign currency to finance payments deficits, the United States has indicated, at least in a minor way, a propensity to borrow and accumulate its own foreign currency reserves. It has signaled a willingness not to rely solely on traditional, if augmented, short-term swap arrangements and balance-of-payments financing via the accumulation of dollar-denominated liabilities to official foreigners.

As long as the dollar does remain at the center of the international monetary system, however, the continued cost must be borne by the United States. Its responsibility for maintenance of confidence in the currency is foremost in a world in which the market can immediately signal expectations by exchange rate adjustments.

14. In addition to several articles in the financial press in the latter half of 1978 alluding to diversification out of dollars, see "How Central Banks Are Ditching the Dollar," *Euromoney*, October 1978, in which a number of central bankers were quoted as saying that they had already reduced or were seriously considering reducing the dollar proportion of their portfolios. Most sources quoted were representatives of the smaller central banks in Latin America, the Far East, and the Middle East.

Fed Completes National EFT Network

A nationwide electronic funds transfer (EFT) network linking 32 automated clearinghouses (ACH's) has been completed by the Federal Reserve System, in cooperation with the National Automated Clearing House Association. With the completion of the system, ACH's can now transfer funds electronically across the nation.

The network, now serving some 9,400 banks and 1,500 thrift institutions that are members of ACH associations and some 6,000 corporations, is linked together by the Federal Reserve's computerized communications system. Any bank or thrift institution that belongs to an ACH can now present payment instructions recorded on magnetic tape to the nearest Federal Reserve facility for transmission nationwide. Most payments currently are payroll deposits, mortgage payments, and U.S. Treasury deposits for social security beneficiaries.

A pilot program for the national EFT network was approved by the Federal Reserve in 1975 and started the following year. The first live entries were sent in February 1977. By November 30, 1977, the monthly interregional volume was 45,000 items, valued at \$4 million. When the pilot was evaluated in December 1977, it was considered a success, and expansion was recommended. The Board of Governors of the Federal Reserve System published for comment a proposal to expand the network nationwide and received favorable response. The Board and the National Automated Clearing House Association agreed to establish the interregional ACH system, and expansion began in May for the Reserve districts and ACH's not involved in the pilot. The network's last links were completed in September 1978.

Bank Holding Company Study Available

The Bank Holding Company Movement to 1978: A Compendium, a study by the staff of the Board of Governors, is available. The report is a comprehensive review of the available research on bank

holding companies and covers the principal areas of competition, public benefits and community convenience and needs, operating performance and efficiency, safety and soundness, and concentration of resources.

Copies of the report may be obtained from Publications Services, Division of Administrative Services, Board of Governors of the Federal Reserve System, Washington, D.C. 20551. The price is \$2.50 per single copy (in quantities of ten or more sent to one address, \$2.25 per copy), and remittances should be made payable to the Board of Governors of the Federal Reserve System.

The Community Reinvestment Act and Regulation BB

By Richard B. West

An additional regulation affecting banks became effective November 6, 1978. Its rationale, content, implementation, and enforcement procedures are described briefly here. Those desiring "official" information are referred to the relevant act and regulation.

The Community Reinvestment Act (CRA) was passed on October 12, 1977, as part of the Community Development Act of 1977. Briefly, the act requires Federal financial regulatory agencies to use their authority to encourage financial institutions to help meet the credit needs of their local communities. The act further requires that in connection with the examination of a financial institution, the Federal regulator is to regularly assess the institution's record of meeting credit needs of its entire community, including low- and moderate-income neighborhoods, consistent with the sound operation of the institution. This record is then to be taken into account by the regulator in evaluation of any application for charter, deposit insurance, branch, other deposit facility, acquisition, or merger or any bank holding company application.

It is interesting to examine the records of the committee hearings held while the act was under consideration. Generally, supporters of the act gave four reasons why the act should be passed.

First, it was assumed that financial institutions rather than the Government should play the leading role in providing capital required by local communities in meeting housing and economic development needs. Second, as recipient of a public charter, a bank, savings and loan, or other financial institution was considered to have a responsibility to its community to provide adequate capital to meet the economic needs of that community.

Third, studies have shown that financial institutions to a significant degree have shunned the credit needs of their local neighborhoods, especially if these neighborhoods are of low- or moderate-income character and are located near the central city. Often deposit funds are taken from these neighborhoods and reinvested in mortgages in suburban areas. Fourth, and perhaps most important, there was a feeling on the part of many in Congress that the Federal regulatory agencies, in evaluating applications, have not given sufficient weight to the convenience and needs of the community. In particular, they have not given adequate weight to the need for credit services in a community as well as the need for deposit services.

In summary, it was the feeling on the part of many that the Community Reinvestment Act merely reasserts long-standing policy that had been ignored by the regulators. This policy is, simply, that the convenience and needs criteria used in evaluating an application also include credit needs.

Those opposing the act did so primarily on the basis that authority already existed that could be used by the regulatory agencies in encouraging financial institutions to meet the credit needs of their local communities. It was pointed out that the bill might impose a significant additional burden in administrative processes and paperwork on banks and other institutions. Opponents feared that the act would limit the ability of financial institutions to generate needed funds for loans in their primary service areas since often these funds are obtained through loan participations in lines of credit with correspondents in other areas. Opponents also expressed the concern that the act would be a major step toward allocation of credit since it would substitute the judgment of a Federal

agency for that of a financial institution determining what constitutes a legitimate credit need.

The act is not very specific; for example, it does not define "community" or "low- and moderate-income neighborhoods." It required the Federal regulatory agencies to draft a regulation by November 6, 1978, that would make explicit the responsibilities of financial institutions in complying with the Community Reinvestment Act.

The Federal Reserve Board regulation implementing the Community Reinvestment Act has been designated Regulation BB. It applies only to state-chartered banks that are members of the Federal Reserve System. However, it is virtually identical to the regulations issued by the other Federal regulatory agencies that apply to other financial institutions.

The new Regulation BB went into effect November 6, 1978. It can be divided into three main parts: first, a bank's duty under the act; second, the duties of the Federal Reserve banks in evaluating state member banks' performance under the act; and third, the duties of the Federal Reserve System in considering applications.

A bank's duties under CRA

Under Regulation BB the first step a bank must take is to determine its own community or communities. The bank may have more than one community, depending on the number of offices or branches. Three bases may be used by a bank in defining its own community. First, it may use the boundaries of a standard metropolitan statistical area (SMSA) or county, adjusted for adjacent areas it wishes to serve; and if the bank is small, its community can be part of a county or SMSA. Usually, the community will not be larger than a county or SMSA for a bank having only one office. Second, a bank's community may be its effective lending territory and other areas equidistant from each of the bank's offices, circular in shape. A bank located in a downtown area would be prohibited from excluding low- and moderate-income neighborhoods near its main office while including wealthier areas located greater distances from the central city. Third, a bank can use any basis that meets the purpose of the CRA, does not exclude low- and moderate-income neighborhoods, and is not based on arbitrary criteria.

The regulation requires that the bank define its community by using a map, that it be approved by the board of directors of the bank and reviewed at least annually, and that the map be made

part of the bank's Community Reinvestment Act Statement.

The second requirement placed on banks by Regulation BB is that by February 4, 1979, they prepare a Community Reinvestment Act Statement, which must be adopted and reviewed and updated annually by a bank's board of directors. The CRA Statement must include a map showing the bank's community or communities, a list of the principal types of credit the bank is prepared to extend to its community, and a copy of the Community Reinvestment Act Notice that is outlined in the regulation.

A bank should include on its list only those types of loans it definitely plans to make available within its community, including low- and moderate-income neighborhoods. Its performance under the act will be judged according to its effectiveness in actually providing these services. Examples of the types of services that may be provided and the specificity with which they should be listed are residential loans for one to four dwelling units, housing rehabilitation loans, home improvement loans, small business loans, agricultural loans, consumer loans, and so on.

Banks are encouraged also to include in their CRA Statement materials on how the bank is helping to meet its community's credit needs, periodic reports on how it has actually helped to meet those needs during the past year, and details about how community credit needs were ascertained.

The CRA Statement must be kept at the head office of the bank, and if the bank has one or more branches, the statement dealing with the local community of each branch must be kept at the branch office. Copies of a CRA Statement must be furnished, should they be requested, to any individual or group without charge other than for ordinary copying.

A bank must post in its lobby the Community Reinvestment Act Notice contained in the regulation. The notice describes the act, tells where a customer can obtain the bank's CRA Statement and where written comments concerning the bank's performance under the act may be sent, indicates that a customer can examine all letters received by the bank in the past two years concerning its performance and that comments received by the local Federal Reserve Bank concerning the bank's CRA performance can be examined, and indicates how announcements of applications dealing with firms covered by the Community Reinvestment Act may be requested from the local

Reserve Bank. If the bank is a subsidiary of a bank holding company, the notice must also provide that fact and that the bank's CRA performance will be taken into account in all holding company applications.

Files relating to the Community Reinvestment Act available for public inspection must contain all signed written comments received from the public in the past two years relating to the bank's Community Reinvestment Act Statement or its performance under the act. Responses to such letters may be included in the files; however, material harmful to any person's good name or reputation and letters that relate only to a particular credit application should not be included.

Evaluation of a bank's performance

The second part of Regulation BB deals with the responsibility of the Federal Reserve Bank in assessing the record of performance under the Community Reinvestment Act of a state member bank. The responsibility of other Federal regulators in assessing the record of performance of their banks is identical.

A bank's performance under the Community Reinvestment Act will be evaluated as part of the regular examination process. In the Eleventh Federal Reserve District, this assessment will take place during the bank's consumer affairs examination.

Examiners are instructed to determine whether the Community Reinvestment Act Notice has been placed in the lobby, to review the bank's CRA Statement and any signed written comments received by the bank or by the Reserve Bank, and to determine that appropriate files are being kept by the bank.

Examiners will make an assessment of the bank's performance under the CRA, giving consideration to the following factors:

1. Activities undertaken by the bank to determine the credit needs of its local community, including the extent of the bank's efforts to communicate with members of the community regarding credit services offered by the bank.

2. Marketing and credit-related programs to make the community aware of the credit services offered.

3. The extent of participation of the bank's board of directors in formulating policies and reviewing performance.

4. Evidence that the bank actually encourages applications for the types of credit it has listed

in its CRA Statement. Any efforts by the bank to discourage applicants from applying for any of the types of credit it is claiming to provide to the community will be considered a negative factor.

5. Geographic distribution of a bank's credit extensions, credit applications, and denials.

6. Evidence of discrimination or other illegal credit practices, including any violations of either the Equal Credit Opportunity Act or the Fair Housing Act.

7. The bank's record of opening and closing offices and providing services at these offices, in order to determine whether each office is providing appropriate credit services to its local community.

8. Participation in local community development and redevelopment programs.

9. Origination or purchase of residential mortgage loans, home improvement loans, and small business or small farm loans within the community.

10. Participation in Government-insured, -guaranteed, or -subsidized loan programs for housing, small businesses, or small farms.

11. The ability of the bank to meet the community credit needs, given the bank's size, financial condition, various legal restrictions, local economic factors, and other variables.

12. Any other factors that bear on whether the bank is meeting the credit needs of the entire community, including low- and moderate-income neighborhoods.

Obviously, a bank will not have to score well on all these factors in order to receive a favorable assessment.

If the examiners conclude that a bank is not adequately meeting the credit needs of its entire community, they will point out to the bank where they feel any shortcomings lie and encourage it to increase services in these areas. However, the act is not intended to force any bank into allocating credit or into making loans that are unsafe or unsound. It does not provide any specific penalties for noncompliance. It does provide, however, that a bank's record under the CRA be taken into account when a bank is involved in any application process that requires Federal approval.

Effect on applications

In the case of a bank holding company application, the Board of Governors of the Federal Reserve System is required to consider the record under the Community Reinvestment Act of each subsidiary of the applicant bank holding company. In

addition, the Board is required to consider each proposed subsidiary bank that has an officer, employee, or significant stockholder associated with the applicant. State banking departments may comment on the applications, and the Board must consider their views. Further, at the request of the applicant holding company, the Board can consider the record of nonbanking subsidiaries in meeting local community credit needs.

The Community Reinvestment Act and Regulation BB call for a careful and ongoing assessment on the part of both regulators and bankers of a bank's role in meeting the credit needs of its entire community. Regular consultation with community groups is encouraged, to determine both the community's credit needs and the effectiveness of the bank's programs in meeting those needs.

New member banks

Southwest Lubbock National Bank, Lubbock, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business November 20, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,000,000 and surplus of \$1,000,000. The officers are: Wayne Finnell, Chairman of the Board; Bill D. Horton, President and Chief Executive Officer; and Bill Kirkland, Cashier.

Citizens National Bank, Houston, Texas, a newly organized institution located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, opened for business December 1, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of \$500,000 and surplus of \$700,000. The officers are: W. Phillip Johnson, Chairman of the Board and President; Carroll C. Simmons, Executive Vice President; and Nelda L. Eaves, Vice President and Cashier.

Ingram Park Bank of Commerce, N.A., San Antonio, Texas, a newly organized institution located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business December 4, 1978, as a member of the Federal Reserve System. The new member bank opened with capital of \$625,000 and surplus of \$625,000. The officers are: Louis F. Lagledler, President; Frank W. Patton, Jr., Senior Vice President; and Miguel S. Reyes, Cashier.

New nonmember bank

Metro Bank, Midland, Texas, a newly organized insured nonmember bank located in the territory served by the El Paso Branch of the Federal Reserve Bank of Dallas, opened for business December 1, 1978.
