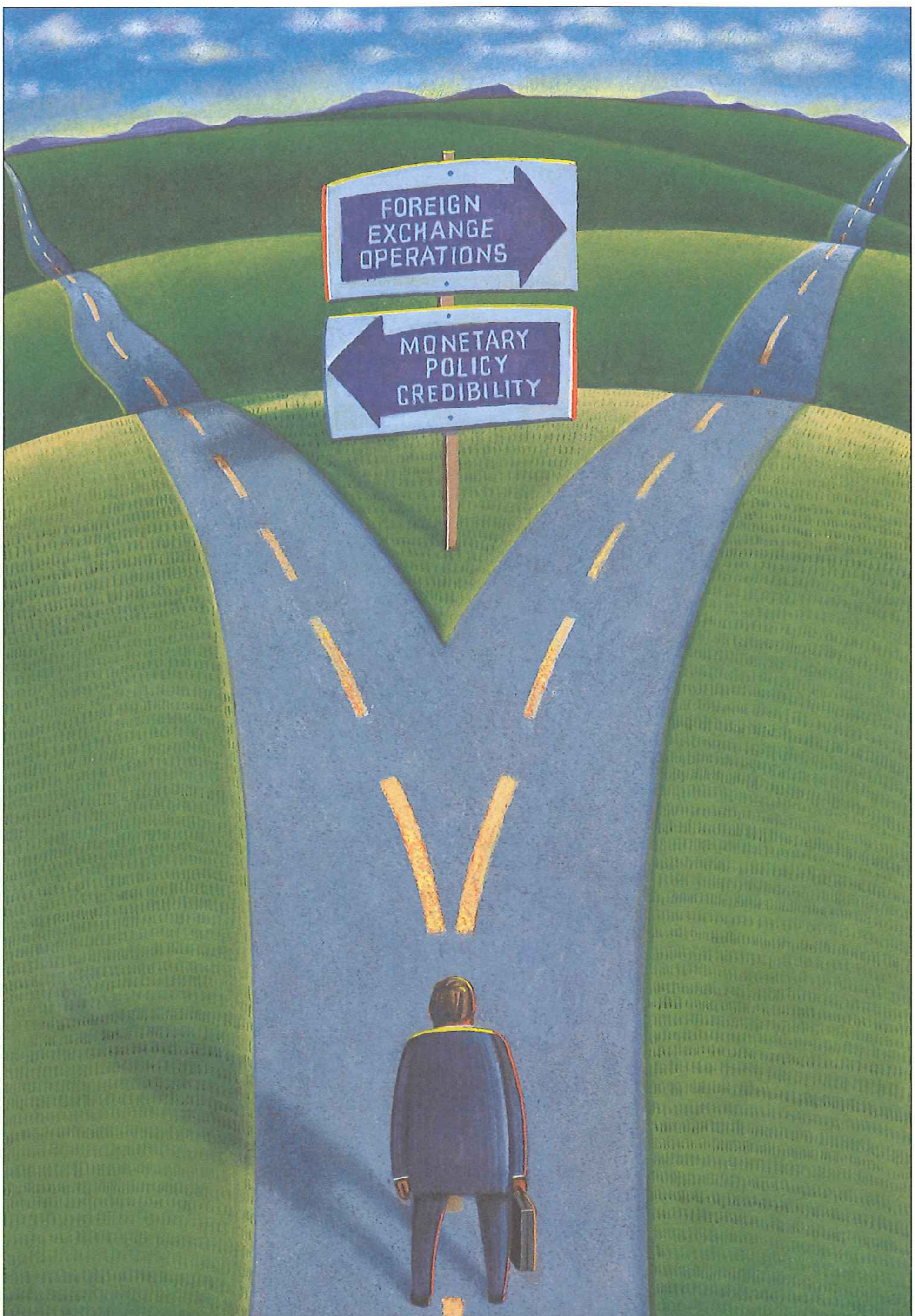
FEDERAL RESERVE BANK OF RICHMOND

1995
ANNUAL REPORT

FOREIGN EXCHANGE OPERATIONS AND THE FEDERAL RESERVE



FROM LEFT TO RIGHT

Claudine B. Malone, Deputy Chairman; Walter A. Varvel, First Vice President;
Henry J. Faison, Chairman; J. Alfred Broaddus, Jr., President

MESSAGE FROM THE PRESIDENT

It is a pleasure to present this Bank's *Annual Report* for 1995. As indicated in "The Year in Review" section, the Bank made significant further progress over the year toward achieving the long-term goals set out in its strategic plan. I believe that this progress enabled the Bank to serve Fifth District depository institutions, the U.S. Treasury and the public more effectively in 1995.

Progress was made across a wide range of Bank activities — from contributions to national monetary, banking, and payments system policies to specialized support for the payments activities of the U.S. Treasury. A number of successful steps were taken in accordance with our strategic goal to increase efficiency and reduce costs. This progress allowed the Bank to compete more effectively in the provision of priced financial services — another goal — as evidenced by a substantial improvement in cost recovery prospects in these activities.

In 1995, the Bank also focused heavily on strengthening and extending its public information outreach and educational efforts. For example, members of our Public Affairs staff strongly supported economic education programs throughout our District and played a key role in developing the national and international educational campaign mounted by the Treasury to prepare the public for the introduction of the redesigned U.S. currency. Elsewhere, our Community Affairs staff published several new community profiles and inaugurated *Marketwise*, a newsletter focused on community development initiatives in our region. And with the assistance of our Public Affairs staff, I have had the pleasure of visiting several smaller District communities for two-way discussions with local business people — especially owners of small businesses and bankers.

In keeping with the Bank's informational and educational mandates, this Bank traditionally has built its *Annual Report* around an essay aimed at strengthening the reader's appreciation of a public policy issue or operational matter relevant to the Bank's activities or Federal Reserve System activities. This year's essay, prepared by my colleague Marvin Goodfriend and me, focuses on the System's operations in foreign exchange markets and raises questions regarding possible negative consequences of these operations on the credibility and effectiveness of Federal Reserve monetary policy and the Fed's status as an independent central bank within the government.

J. Alfred Broaddus, Jr.

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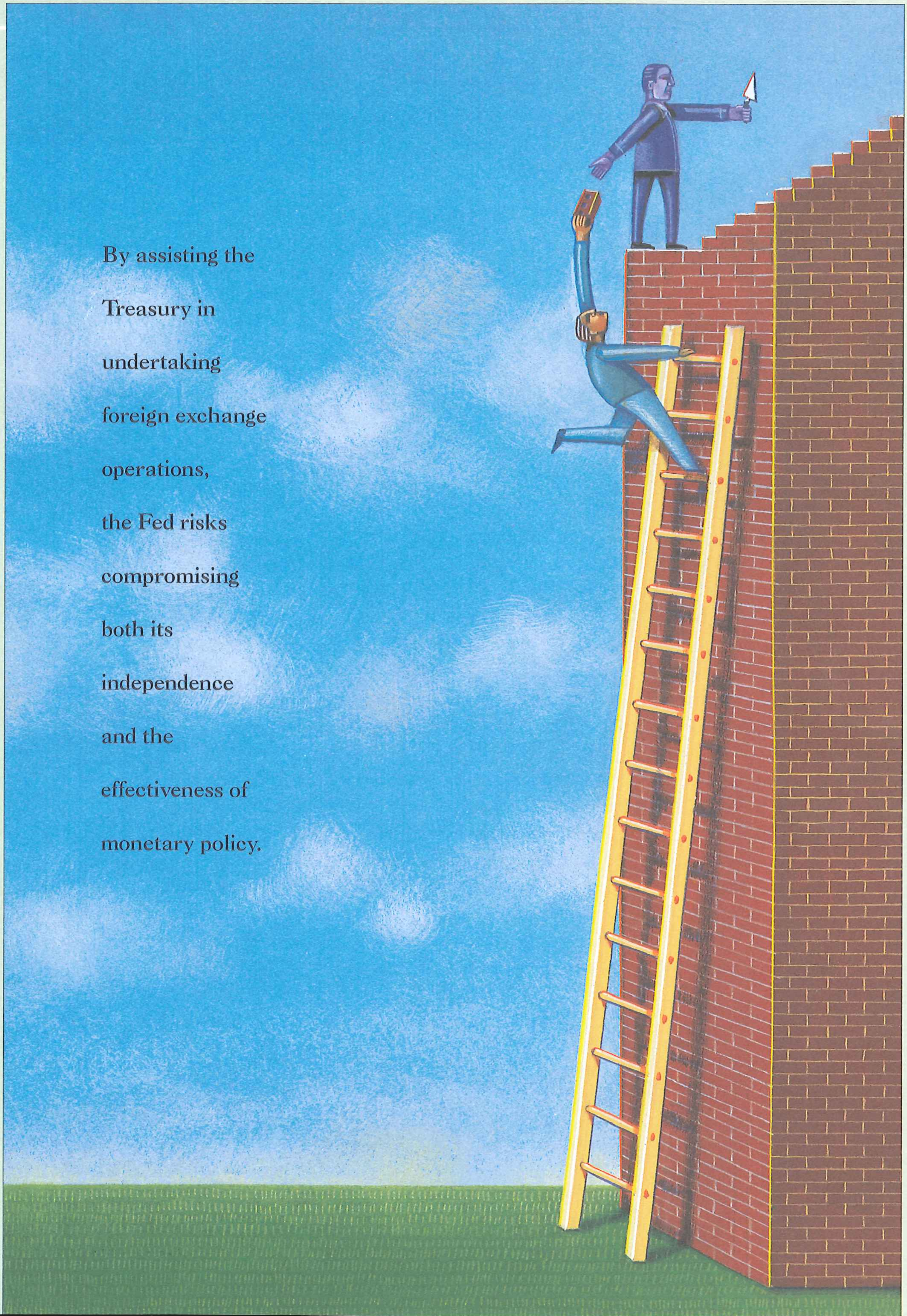
President



By assisting the Treasury in undertaking foreign exchange operations, the Fed risks compromising both its independence and the effectiveness of monetary policy.

Foreign Exchange Operations and The Federal Reserve

J. Alfred Broaddus, Jr.
and
Marvin Goodfriend

The operations of U.S. government agencies in foreign exchange markets are probably regarded as arcane by most Americans. These operations are, however, an important element of U.S. international economic policy. And from time to time they are highly visible to the public: for example, when the United States and other major industrial countries intervene jointly in the markets to influence exchange rates, or when they provide assistance to particular countries such as the substantial aid extended to Mexico in 1995.

The Gold Reserve Act of 1934 gives the Treasury primary responsibility for United States foreign exchange operations through its Exchange Stabilization Fund (ESF). Although the Federal Reserve (Fed) had been active in foreign exchange markets in the 1920s and early 1930s, its involvement ceased after 1934.[1] There was relatively little need for official U.S. foreign exchange operations in the early post-World War II period. Under the Bretton Woods arrangements of 1944, foreign governments assumed responsibility for fixing the value of their currencies against the dollar. For its part, the United States managed its monetary policy in accordance with the Gold Reserve Act so as to maintain the dollar's convertibility into gold at $35 an ounce.

U.S. authorities, however, were reluctant to pursue sufficiently tight monetary policy to protect the country's gold reserves following the resumption of full convertibility among the major currencies in the late 1950s. And the Fed resumed foreign exchange operations in 1962, after a nearly 30-year hiatus, to supplement and substitute for monetary tightening

The authors are respectively president, and senior vice president and director of research. The paper benefited greatly from stimulating discussions with Robert Hetzel and from presentations at the Macro Lunch Group of the Wharton School, University of Pennsylvania; the Masters of International Business Lecture Series, College of Business, University of South Carolina; and the Norwegian School of Management. Comments from Michael Dotsey, Thomas Humphrey, Robert King, Bennett McCallum, and Alan Stockman are greatly appreciated. The views expressed are the authors' and not necessarily those of the Federal Reserve System.

in defense of the dollar. Although the Fed has consistently held that it has independent authority to undertake foreign exchange operations, in practice the Fed works closely with the Treasury in conducting them. Indeed, the Federal Open Market Committee's (FOMC's) foreign currency directive requires that these operations be conducted "in close and continuous consultation and cooperation with the United States Treasury."[2] So it seems fair to say that the Fed recognizes the Treasury's preeminence in foreign exchange policy.

The Treasury welcomed the Fed's renewed participation in large part because the Fed brought with it resources to supplement those of the ESF. In 1962 the Fed established reciprocal currency agreements — commonly called "swaps" — with nine central banks and the Bank for International Settlements. Further, in 1963, the Fed agreed to "warehouse" foreign currencies held by the ESF. The primary objective of these initiatives was to provide U.S. authorities with a supply of foreign currencies to buy back dollars in order to help protect U.S. gold reserves.[3]

FOMC discussions at the time made it clear that some Fed officials recognized how following the Treasury's lead in foreign exchange operations could compromise the Fed's independence in conducting monetary policy.[4] This risk did not present serious operational problems at the time, however, because with the United States committed to the Bretton Woods arrangements, monetary policy was committed to defending the dollar.[5] Thus, the Fed and the Treasury were working toward the same general objectives, and the Fed's independence was not a pressing issue in practice.

We argue below that subsequent developments have undermined the favorable conditions that enabled the Fed to participate in foreign exchange operations without compromising either its independence or its monetary policy goals. We make our case by developing several preliminary points. In Section I we explain how theoretical advances and practical experience in recent years teach that the Fed's longer-term low-inflation objective must be *credible* if the Fed is to pursue this objective efficiently via monetary policy. Moreover, the Fed's independence is the cornerstone of this credibility. In Section II we explain why Fed credibility based on independence is inherently fragile, and we emphasize the crucial importance of the Fed's off-budget status in supporting its independence.

We take up the role of the Fed in foreign exchange operations in Section III, where we distinguish two broad types of official foreign exchange transactions: unsterilized and sterilized. As explained there, *unsterilized* transactions are essentially monetary policy actions and therefore are carried out independently by the Federal Reserve. Since *sterilized* transactions are *not* monetary policy actions, the Fed can acknowledge the Treasury's leadership regarding them without directly compromising its independence.

Evidence accumulated over the past two decades suggests, however, that sterilized intervention in exchange markets has at best only temporary effects on exchange rates and must be supported by monetary policy actions to have lasting effects. Consequently, the Fed's participation with the Treasury in sterilized operations creates confusion as to whether monetary policy is dedicated to the support of exchange rate or domestic objectives. Such confusion weakens the public's perception of the Fed's independence and undermines the credibility of the Fed's low-inflation goal.

In Section IV we lay out in more detail the inherent contradictions for monetary policy that arise when the Fed follows the Treasury's lead on exchange rate policy. And we argue in Section V that the Fed's financing of even sterilized foreign exchange operations constitutes a misuse of the Fed's off-budget independence that risks undermining the public's acceptance of the independence of the Fed. We believe that the best way to resolve the conflict between foreign exchange operations and monetary policy is for the Fed to disengage from foreign exchange operations completely. The concluding section summarizes our argument.

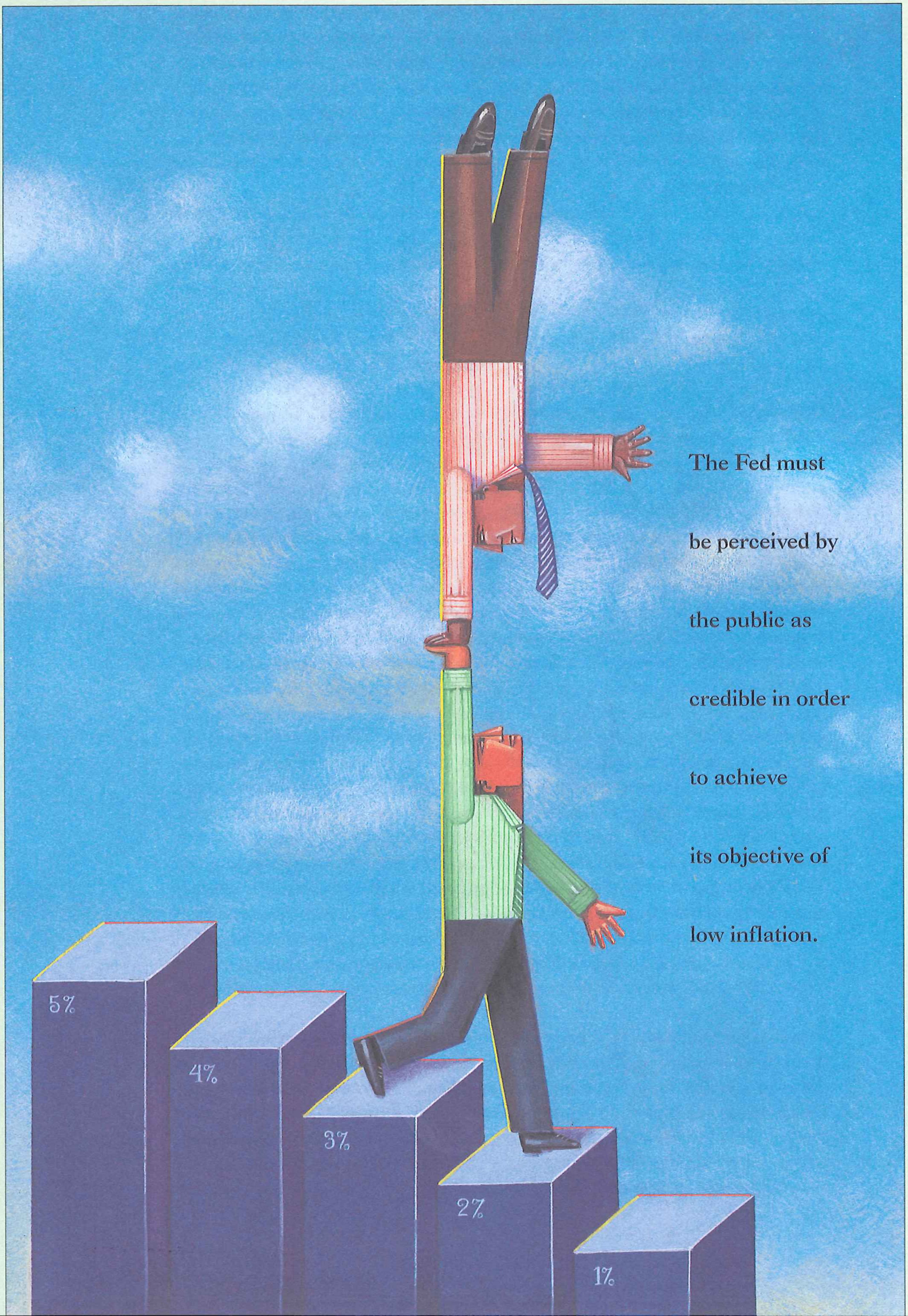
I

CREDIBILITY AND THE EFFECTIVENESS OF MONETARY POLICY

Numerous disinflations since the early 1980s have taught central bankers around the world that credibility — having a reputation for pursuing price level stability consistently and persistently — is the key to an effective anti-inflationary monetary policy.[6] We would even go so far as to say that the primary policy problem facing the Fed during this period has been the acquisition and maintenance of credibility for its commitment to low inflation — so much so that credibility concerns remain a motivating or restraining influence on monetary policy actions today, even though the Federal Reserve's low-inflation objective has nearly been achieved.

As it happens, the growing practical appreciation of the importance of credibility is supported by an improved scientific understanding associated with game theory and the rational expectations approach to monetary theory. In many ways, theory simply articulates what central bankers have learned from practical experience. Briefly, the theory recognizes that monetary policy involves continuous interaction between a central bank and the public that introduces a link, in the public's mind, between current policy and future policy actions. In the absence of credibility, expansionary current monetary policy tends to generate expectations of expansionary policy — and possibly excessively expansionary policy — in the future. Such expectations trigger aggressive wage and price increases that, in turn, neutralize the beneficial effects of the expansionary current policy. The result is higher inflation with little, if any, sustained increase in employment and output.

Theory supports the idea that the potential for future inflation, which can be thought of as a punishment imposed collectively by wage- and price-setters on a central bank, can discipline a central bank. In a reputational equilibrium, wage- and price-setters keep their part of an implicit bargain by not inflating as long as the central bank demonstrates its commitment to low inflation by eschewing excessively easy policy. A central bank may be said to have credibility when an implicit mutual understanding between the public and the central bank sustains a low-inflation equilibrium.[7]



The Fed must be perceived by the public as credible in order to achieve its objective of low inflation.

The key point is that a low-inflation equilibrium sustained by central bank credibility is *fragile*. In such an equilibrium the public is very sensitive to any central bank departure from the behavior it has come to anticipate; this expected continued behavior, indeed, is the essence of the central bank's credibility. The public is particularly nervous about such departures when the central bank has acquired credibility only recently. But there is evidence that low-inflation equilibria sustained by credibility continue to be fragile even when a central bank's actions have repeatedly demonstrated its commitment to low inflation over a period of years.

The fragility of the Fed's credibility is evident in the behavior of long-term bond rates.[8] The real yield on the 30-year U.S. government bond probably moves within a range of 2 percentage points or so around 3 percent per year. The remainder of the nominal long-term yield reflects inflation expectations. In the early 1960s, for example, when inflation averaged between 1 and 2 percent per year, the 30-year bond yielded roughly 4 percent.[9] In 1981, when the public's confidence in the Fed's commitment to controlling inflation was at its low point, the long-term bond yield reached nearly 15 percent. The rate stood at around 6 percent in late 1995, which indicated that the public expected about 3 percent inflation on average over the long term.

Doubts about a central bank's credibility often surface as "inflation scares" in the long-term bond market. Following a period of rising inflation in the late 1970s, for example, the 30-year rate jumped 2 percentage points in the first quarter of 1980, which signaled the most serious and sudden collapse of confidence in the Fed on record. The fragility of the Fed's credibility was apparent again in 1984 when the bond rate, after falling to about 10 percent in late 1982, registered another inflation scare by rising to around 13.5 percent, even though the Fed had by then brought actual inflation down from over 10 percent to around 4 percent.

The swings in the bond rate over the past two years have been less dramatic than in the early 1980s, but nonetheless substantial. Rising from a low of about 5.8 percent in October 1993, the bond rate peaked at around 8.2 percent in November 1994. We interpret that wide swing as evidence that the Fed's anti-inflationary credibility remains exceedingly brittle despite years of sustained progress in bringing the actual inflation rate down.

The fragile nature of the Fed's credibility imposes a number of costs on the economy. First, there is the direct cost of higher long-term interest rates with their negative effects on economic performance. Second, with inflation expectations higher than they should be, the Fed is left with the difficult choice of either accommodating these expectations and accepting higher rates of inflation or failing to accommodate them and risking negative short-term effects on real economic activity. Moreover, even hesitating to react can be costly because, by suggesting indifference, the Fed may encourage workers and firms to ask for wage and price increases to protect themselves from higher expected costs.

Finally — a related point — weak credibility makes it difficult for the Fed to respond when employment considerations call for an easing of policy, as they did in the 1990-91 recession and again in mid-1995. In such circumstances, the Fed must balance the desirable short-term effects of lower short-term rates against the risk of higher long-term rates.

II

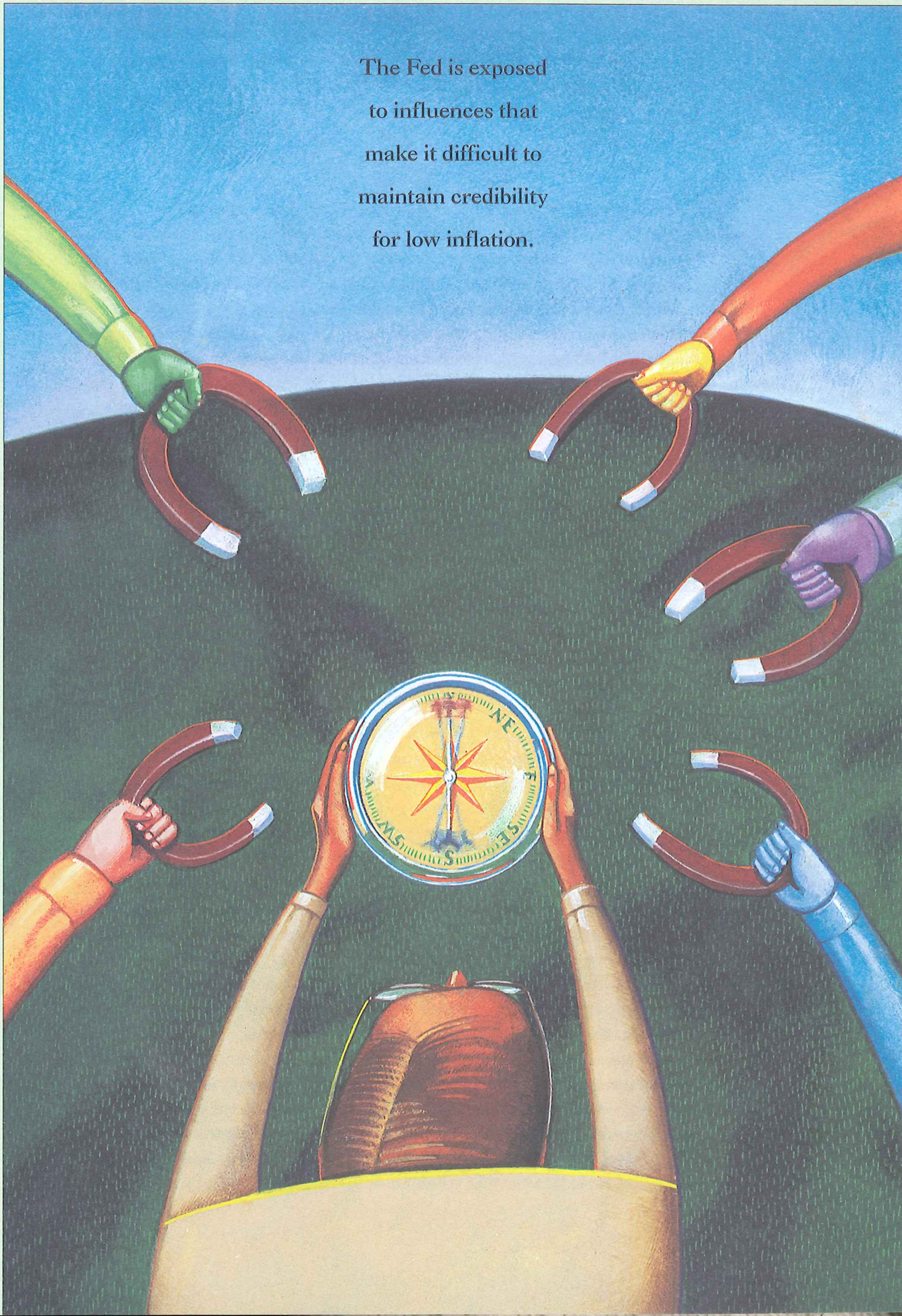
FEDERAL RESERVE INDEPENDENCE

A number of prominent institutional mechanisms have been used to assist central banks in maintaining credibility for low-inflation objectives. Historically, a national commitment to a gold or silver standard — that is, a commitment to maintain a fixed currency price of gold or silver — was the most important. A second mechanism, more prominent in recent years, is for a country to commit to fix its exchange rate against the currency of a trading partner that credibly maintains the purchasing power of *its* currency. An important motivation for the establishment of the European Monetary System (EMS), for example, was the desire of some countries to import credibility for low inflation by pegging their currencies to the deutsche mark (D-mark). Difficulties with fixing exchange rates, including the near collapse of the EMS in the early 1990s, have led some countries to experiment recently with a third commitment device: inflation targets.[10] Finally, countries have relied on central bank independence to supplement one of the other mechanisms or to substitute for them.

Broadly speaking, central bank independence implies a separation of bank decisions from the regular decisions of the political system.[11] At a minimum, it means that a central bank is free to conduct monetary policy without interference from the Treasury. The degree of actual operational freedom enjoyed by an independent central bank, however, has varied widely depending on the circumstances. For instance, in the nineteenth century, when wide support for central bank independence first developed, independent central banks were narrowly constrained by national commitments to various commodity standards. Similarly, the Federal Reserve was established in 1913 as an independent central bank mandated by the Federal Reserve Act to stabilize financial markets while keeping the United States on the gold standard.

A central bank may be said to lack "goal independence" when its objective is given by legislative mandate; however, one can still speak of a central bank as having "instrument independence" — the freedom to use a short-term interest rate or other monetary policy instrument to achieve its mandated goals.[12] The Fed has had full instrument independence, except for the World War II years and the period from the end of the war to the 1951 Fed-Treasury Accord. During that time the Fed was obliged to maintain low interest rates on government securities to facilitate the Treasury's finances. The Accord reasserted the principle that monetary policy should be used for macroeconomic stabilization, the fiscal concerns of the Treasury notwithstanding. In terms of the above definitions, the Accord fully restored the Fed's instrument independence.[13]

The Accord did not give the Fed *goal* independence because monetary policy was still committed under the Bretton Woods arrangements to support the fixed dollar price of gold. When the Bretton Woods System collapsed in 1973, however, the national consensus


The Fed is exposed
to influences that
make it difficult to
maintain credibility
for low inflation.

on the proper goal for monetary policy collapsed with it, and the Fed has been operating without an explicit congressional mandate since then.[14] Thus, during this period the Fed has had goal independence by default, as it were, and this independence is now arguably the sole institutional mechanism supporting low inflation in the United States.

INDEPENDENCE AND CREDIBILITY

A goal-independent Fed unrestrained by a legislative mandate is a particularly deficient mechanism for maintaining low inflation. The reason is that in this situation a low-inflation equilibrium must be supported entirely by credibility that the Fed creates for itself — credibility that is inherently fragile as discussed above. The unbridled discretion conferred on the Fed in this case only makes the acquisition and maintenance of credibility for low inflation more difficult. The Fed's goal independence gives other government entities strong incentives to attempt to influence its policies via such channels as congressional oversight hearings, appointments of Federal Reserve governors, proposed changes in the Fed's regulatory role, and so forth. Moreover, such attempts at influence can be of a conflicting nature, adding to the confusion. Knowing this, the public is rightly suspicious of any potential conflict between the Fed, the Treasury, and Congress. In this environment, any contact that Fed officials have with the rest of the government risks creating credibility problems for monetary policy.

At the same time — and paradoxically — central bank goal independence actually creates incentives for Fed officials to interact with the rest of the government.[15] The lack of clarity in the Fed's mandate necessitates deeper involvement in the legislative process by Fed officials who must see to it that proposed legislation does not compromise its monetary policy mission. Finally, the Fed's independence confers upon it a nonpartisan aura which leads others in government to seek its advice, certification, or arbitration in controversial policy disputes.

FINANCIAL INDEPENDENCE

In principle, a healthy democracy requires full public discussion of expenditures of public monies. The congressional appropriations process enables Congress to evaluate competing budgetary programs and to establish priorities for the allocation of public resources.

Congress has long recognized, however, that the pressure of budgetary politics could tempt future Congresses to press the Fed at least implicitly to help finance federal expenditures through inflationary monetary policy. Consequently, the Fed has been made financially independent — its operations are funded from the interest payments on its portfolio of securities, and the Fed has wide discretion over the assets it holds. In short, the Fed is exempt from the congressional appropriations process in order to keep the political system from exploiting inflationary money creation. It is critically important that the Fed not misuse this exceptional "off budget" status so as not to undermine public understanding of and support for its financial independence. This, in turn, requires the Fed to understand clearly what activities are and are not essential to its central banking mission.

III

THE ROLE OF THE FED IN FOREIGN EXCHANGE OPERATIONS

The points about credibility and independence developed above will serve as the basis for our assessment of the Fed's role in foreign exchange operations in what follows. Here we review the basic mechanics of foreign exchange operations. We begin by making the important distinction between unsterilized and sterilized transactions. Then we briefly discuss the means by which the Fed finances foreign exchange operations for its own account and warehouses foreign exchange for the ESF.[16] Our analysis identifies in a preliminary way the fundamental sources of conflict for monetary policy arising from the Fed's participation in foreign exchange operations.

UNSTERILIZED AND STERILIZED OPERATIONS

The distinction between unsterilized and sterilized operations is straightforward: unsterilized transactions involve changes in the monetary base, and sterilized transactions do not. For example, the Fed could acquire foreign exchange in an *unsterilized* purchase using newly created base money: that is, bank reserves or currency. Such a transaction would be an expansionary monetary policy action because it would increase the monetary base.

A foreign exchange purchase would be *sterilized*, in contrast, if the Fed offset its effect on the base by selling an equivalent amount of dollar-denominated securities. Because the Fed controls the monetary base, it is in a position to determine whether a foreign exchange operation is sterilized or not. In practice, the Fed routinely sterilizes foreign exchange operations that it undertakes for its own account and for the ESF. In sterilized operations the current federal funds rate target (the key policy instrument indicating the current stance of monetary policy) is maintained. This point is important because it implies that — at least as a mechanical matter — the Fed can follow the Treasury's lead in sterilized foreign exchange operations without relinquishing control of monetary policy.

Nevertheless, sterilized foreign exchange operations, or "intervention," pose significant problems for the Fed. For the most part, economists agree that sterilized intervention by central banks in foreign exchange markets has no lasting effect on exchange rates.[17] In the absence of supporting monetary policy actions, sterilized interventions can influence exchange rates temporarily, especially when the interventions are unexpected. But obviously the ability of authorities to surprise markets is very limited. Sterilized intervention can be most effective when it signals a government's resolve to follow up with monetary or fiscal policy actions that will powerfully influence the exchange rate in the future.[18] Consequently, Fed participation in sterilized foreign exchange operations under the Treasury's leadership creates confusion as to whether monetary policy will support short-term exchange rate objectives or longer-term anti-inflationary objectives. Only coincidentally will the monetary policy actions required to pursue these two sets of objectives coincide.

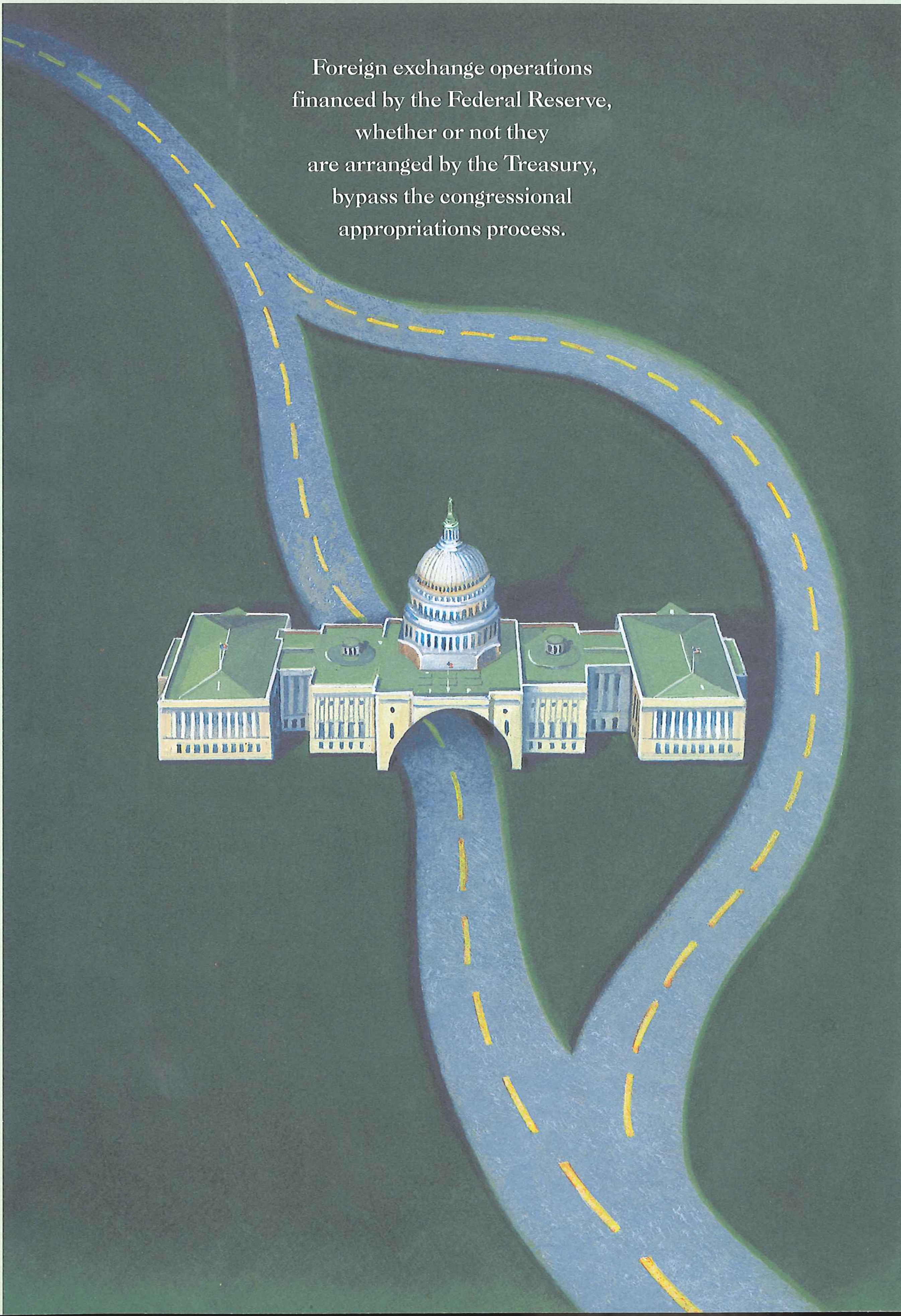
This confusion is compounded by a lack of consistency in U.S. exchange rate policy in the post-1973 floating exchange rate regime. Officially, the objective of foreign exchange operations is to counter "disorderly market conditions," but that phrase has never been defined operationally. It was interpreted most narrowly in the first Reagan administration, when U.S. operations were minimal. It was interpreted broadly between 1977 and 1979 when the dollar was viewed as unacceptably low and again in 1985 when the dollar was unacceptably high. Intervention was undertaken in these periods to help push the dollar into an acceptable range. Extensive interventions were carried out in the years following the Louvre Accord of 1987 to help stabilize the exchange rate.[19]

Moreover, much U.S. intervention in recent years has been coordinated with foreign governments. The Group of Seven finance ministers and central bank governors meet regularly to discuss exchange rate objectives. The enormous publicity surrounding these discussions, designed to underscore international harmony on exchange rate policy, heightens uncertainty regarding whether the Fed will support sterilized operations with monetary policy actions. The widespread coverage of internationally "coordinated" foreign exchange operations is almost certainly harmful to the public's perception of the Fed's independence and thereby weakens the credibility of the Fed's low-inflation strategy.

FINANCING MECHANISMS

Federal Reserve acquisitions of foreign exchange are generally financed in one of three ways. If the FOMC approves, the Fed can acquire foreign exchange for its own account by creating additional bank reserves or currency — that is, via an unsterilized transaction. Sterilized acquisitions, on the other hand, are financed by selling Treasury securities from the Fed's portfolio. Finally, the Fed has the option of borrowing currencies from foreign central banks using reciprocal currency agreements — the so-called "swap" network. Swap facilities are, in effect, short-term lines of credit giving central banks access to one another's currencies. The facilities provide for the swap (simultaneous spot purchase and forward sale) of each other's currency by the Fed and the foreign central bank. Swaps typically are not accompanied by any change in monetary policy — in other words they are sterilized transactions.[20] The Fed holds foreign exchange in the form of short-term securities or interest-bearing deposits at foreign central banks, so that sterilized transactions amount to substituting foreign-currency-denominated interest-earning assets for dollar-denominated securities in the Fed's portfolio.

The Fed bears the exchange rate revaluation risk — as well as the credit risk — for any foreign-currency-denominated assets it holds for its own account. Since the Fed marks its foreign currency assets to market monthly, a depreciation of the foreign exchange value of the dollar, for instance, raises the dollar value of the Fed's foreign holdings. Any such gains or losses eventually show up as larger or smaller Fed payments to the Treasury after expenses.[21] Whenever the Fed disperses foreign exchange acquired through a swap, it bears the exchange risk involved in covering its forward commitment to reverse the swap.


Foreign exchange operations
financed by the Federal Reserve,
whether or not they
are arranged by the Treasury,
bypass the congressional
appropriations process.

The Exchange Stabilization Fund

As mentioned above, the Treasury conducts foreign exchange operations through its Exchange Stabilization Fund. When it was established by the Gold Reserve Act, the ESF was capitalized with $2 billion derived from the proceeds of the 1934 revaluation of the U.S. gold stock from $20.67 to $35 per ounce. Later, $1.8 billion was transferred from the ESF as partial payment on the U.S. subscription to the International Monetary Fund (IMF), which left $200 million as the remaining capital of the ESF. ESF capital has grown since then as a result of retained interest earnings, revaluations of gold, and profits on foreign exchange acquisitions.[22]

Since use of its funds is not subject to the appropriations process, the ESF provides the Treasury with a degree of flexibility and discretion in its foreign exchange operations. The ESF serves two broad purposes. First, it is used to intervene in foreign exchange markets to influence dollar exchange rates with major currencies such as the D-mark and the Japanese Yen. Second, the ESF makes loans to foreign governments — frequently to heavily indebted governments and often in association with IMF or other official assistance programs. Typically such loans are made to deal with a serious balance of payments problem or to assist a country managing its external debt. Often the currencies of recipient countries are not fully convertible or are of secondary importance.[23] The recent loans to Mexico are a prominent example of this type of assistance.

The ESF's capacity for purchasing foreign currencies is limited, however, as it has not received an appropriation from Congress since 1934. Apart from the retained earnings on its investments mentioned above, the ESF has been able to augment the resources at its disposal in three significant ways. First, Congress has authorized advancing to the ESF foreign currencies borrowed from the IMF. Second, the ESF receives the Special Drawing Rights (SDRs) allocated to the United States by the IMF.[24] Third, the Fed has provided the ESF with additional resources, either by helping to finance operations on its own account or by warehousing foreign exchange for the ESF. It was because the ESF's resources were limited that the Treasury encouraged the Fed in the early 1960s to participate for its own account in foreign currency operations and to warehouse foreign currencies. In 1990, the dollar value of U.S. net foreign currency balances (the sum of acquisitions on the Fed's and the ESF's accounts) exceeded $40 billion.[25] The FOMC authorized warehousing of ESF foreign currencies up to a limit of $15 billion in 1990.

Warehousing allows the ESF to finance purchases of foreign exchange in much the same way that securities dealers use repurchase agreements with banks to finance their portfolios. That is, warehousing allows the ESF to enlarge its portfolio of foreign-currency-denominated assets with funds borrowed from the Fed. Suppose, for example, that the ESF wishes to sell dollars for foreign exchange to depreciate the dollar, but has inadequate resources to do so. The Fed can execute the transaction — warehouse the foreign exchange — by selling a Treasury security from its portfolio in the open market and using the proceeds to acquire the foreign-currency-denominated securities on behalf of the ESF. Because the Fed executes the purchase of foreign exchange on behalf of the ESF, the latter remains exposed to the revaluation gains or losses on the foreign exchange warehoused. Interest earnings on the foreign currencies warehoused accrue to the Fed. Note that the warehousing operation amounts to a sterilized acquisition of foreign exchange.

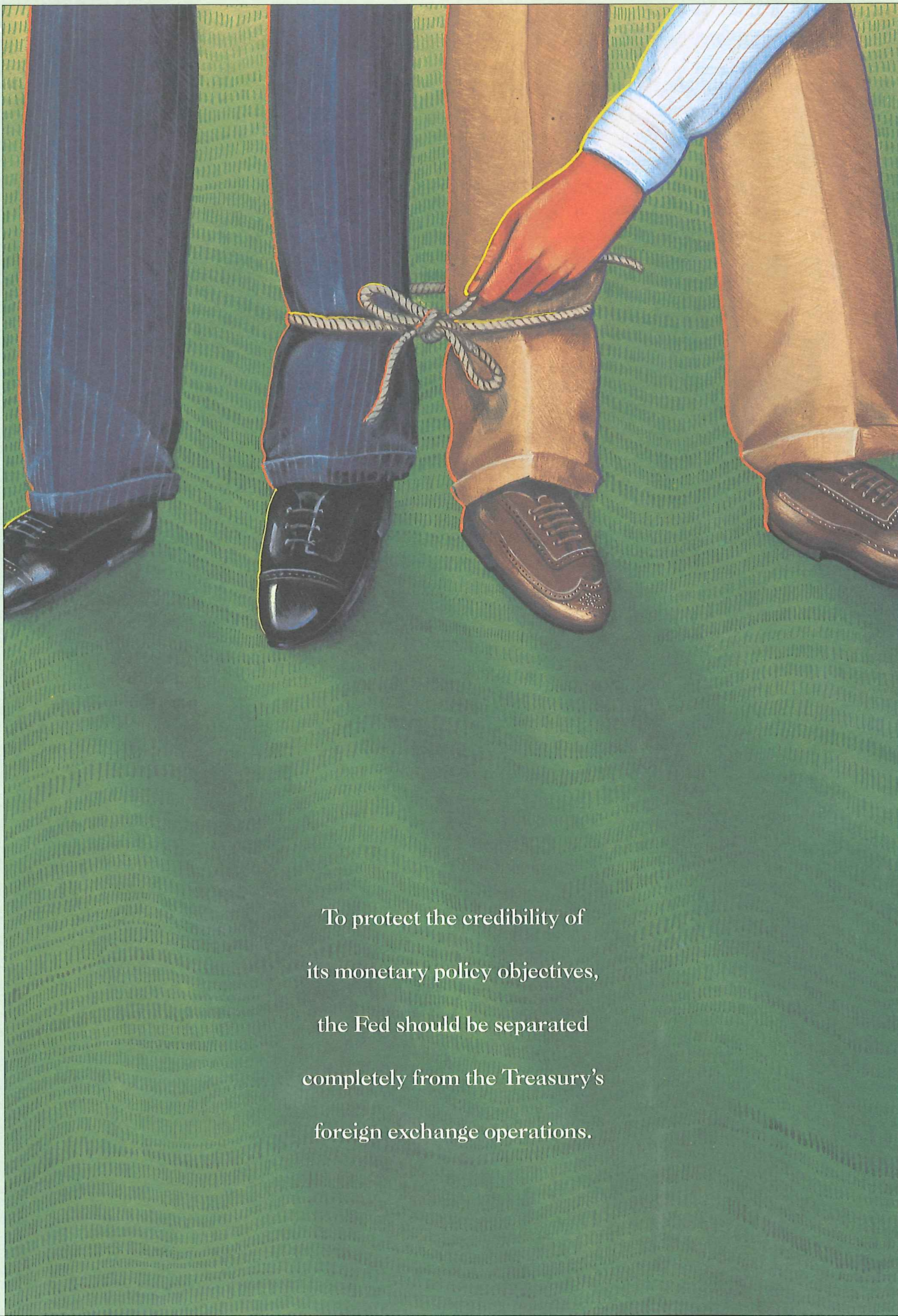
Whether or not the Fed finances sterilized foreign exchange purchases for its own account, or warehouses foreign currencies for the ESF, a sale of Treasury securities to the public is the ultimate source of the funds. True, the securities involved are not newly issued; they are sold from the Fed's portfolio. The results, however, are equivalent in many ways to those of a new issue since the Fed simply returns to the Treasury all of the interest it receives on the Treasury securities that it holds, minus a small fraction that covers the Fed's operating expenses. The main difference between Fed financing and financing by the Treasury itself is that the former is arranged between Treasury and Fed officials without an explicit appropriation from Congress. A second difference is that Fed financing does not show up as a measured increase in the federal deficit, since it does not involve newly issued debt.

Although the Fed is the junior partner with the Treasury on foreign exchange policy, it is certainly an equal partner in terms of the resources provided. It is able to make these resources readily available without a congressional appropriation because its financial independence puts its open market operations in Treasury securities off-budget. The exchange operations arranged by the Treasury, however, not infrequently involve broader foreign relationships in ways that may be politically charged. Hence, the Fed's involvement, especially because it is outside the formal budget process, puts public support for its financial independence at risk, and with it, the credibility of its low-inflation policy.

IV

THE CONFLICT BETWEEN EXCHANGE RATE POLICY AND MONETARY POLICY

The national commitment to the Bretton Woods arrangements minimized the risk of policy conflict between the Fed and the Treasury when the Fed resumed its participation in foreign exchange operations in the early 1960s. But the nation's unwillingness to support that commitment with sufficiently restrictive monetary policy led to the collapse of the fixed exchange rate system in 1973. Several years of sharply rising inflation followed. Despite this, Congress was unable to reach consensus on a new monetary policy mandate; consequently, in 1979 the Fed asserted its own commitment to restore low inflation.



To protect the credibility of its monetary policy objectives, the Fed should be separated completely from the Treasury's foreign exchange operations.

We believe that these developments have undermined the Fed's ability to participate in exchange rate policy without compromising its independence and its monetary policy goals. In particular, with the potential for Fed-Treasury policy conflicts now significantly enlarged, it is no longer possible for the Fed simply to follow the Treasury's lead on exchange rate policy without endangering its monetary policy credibility. This is true *even* in the case of sterilized interventions. Under the current arrangement, the Fed participates in sterilized operations without committing to support the operations with future monetary policy actions. This maintains the Fed's independence by keeping its options open. But such discretion increases the likelihood that particular operations may fail because the Fed is not willing to support them with monetary policy.

Failed foreign exchange operations are costly because they give the impression that the authorities are either unable or unwilling to achieve a prominent objective that they appear to be pursuing. For example, the failure of the June 24, 1994, intervention was reported in a front-page *New York Times* story carrying the headline: "16 Central Banks are Thwarted in Huge Effort to Prop Up Dollar."[26] Nor was attention to the event confined to major money centers. On the following day the *Richmond Times-Dispatch* reported the story with the front-page headline: "Effort to Bolster Dollar a Failure." Widely publicized policy failures undermine Fed credibility and thereby jeopardize the effectiveness of overall monetary policy.

We believe that, to best protect the credibility of its low-inflation goal and the independence of monetary policy more generally, the Fed should be separated completely from the Treasury's foreign exchange operations. In principle, the Fed could disengage unilaterally; however, there would be two major practical obstacles to such an action. The most serious obstacle is that the appointment process would make it difficult for the Fed to bind itself not to participate, since appointments to the Federal Reserve Board could be made on condition of cooperation with the Treasury. Congress might be able to block such conditions in the confirmation process in particular cases if it were so disposed, but legislation probably would be required to remove the Fed from exchange market intervention definitively.

The second main obstacle to unilateral disengagement is that it would deny the Treasury the benefit of the Fed's advice on foreign exchange intervention and the certification that goes with it. Here, though, the Fed cannot be indifferent to the use of its name in headlines that either box it in or harm its credibility. Moreover, the act of certification itself creates a perception of partisanship that erodes the value of that certification, even as it undermines the public's perception of the Fed's independence.

In these circumstances, it is natural to look for a middle-of-the-road solution to the problems presented by the Fed's involvement in exchange market operations. One might, for example, try to specify particular circumstances in which the Fed could participate. For instance, if the Fed routinely announced an inflation target, it could agree to help the Treasury intervene if the inflation rate were within a specified range of the target. Defining such conditions clearly, however, would be difficult, and this approach would leave the door open to many of the same problems the Fed faces currently.

V

THE CONFLICT BETWEEN FOREIGN EXCHANGE OPERATIONS AND THE FED'S FINANCIAL INDEPENDENCE

From the start, a major reason for the resumption of Federal Reserve foreign exchange operations in the 1960s was to make Fed resources available to the ESF. The Fed's financial independence gave it the discretion to allocate resources to foreign exchange operations without an explicit congressional appropriation. Apparently there was then little concern about misuse of the Fed's off-budget status because Fed financing of foreign exchange operations at the time seemed conformable with the nation's commitment to the Bretton Woods system. Such financing has become more problematic with the breakdown of the national consensus on monetary and exchange rate policy in the aftermath of the collapse of Bretton Woods.

Economists understand more clearly today than they did in the 1960s the distinction between Federal Reserve monetary policy and credit policy.[27] As pointed out in Section III, sterilized foreign exchange operations are not monetary policy since they leave the monetary base and the federal funds interest rate target unchanged. Such operations do, however, constitute credit policy since they amount to a substitution of loans to foreign authorities for dollar-denominated securities in the Fed's portfolio. In effect, sterilized operations are extensions of Fed credit financed by selling Treasury debt from the Fed's portfolio. Such extensions of credit are clearly fiscal policy, not monetary policy.

The extension of credit by U.S. authorities involves both market and credit risk. Although the default or credit risk of the securities in which major foreign currency balances are held is negligible, the revaluation or market risk is considerable. Credit risk, however, can be substantial when a loan is made to assist, say, a country managing its external debt or one with a serious balance-of-payments problem.

Thus, in their foreign exchange operations the Fed and the ESF assume risk — both market risk and credit risk — on behalf of the U.S. taxpayer. Provisions can be made to take collateral if the borrowing country proves unable to make scheduled payments. But such provisions are not always feasible or entirely effective. When a borrowing country's financial problems prove persistent, the ESF and the Fed can be "taken out" by longer-term funding arranged through international organizations such as the IMF.[28] But to the extent that collateralization is incomplete or "take outs" are not arranged in advance or are uncertain, taxpayers are at risk.

The national decision to put funds at risk in foreign exchange operations is clearly an important fiscal policy matter. The presumption is that — as with any fiscal action — Congress should authorize the expenditure and explicitly appropriate the funds. Fed financing of foreign exchange operations through its own account and by warehousing funds for the ESF sidesteps congressional authorization and obscures the funding.

The Fed's financing of foreign exchange operations without explicit direction from Congress exposes it to potentially harsh criticism if an initiative goes badly. Unfavorable outcomes would obviously undermine public support for the Fed's financial independence. But there is a more subtle risk, even if foreign initiatives funded by the Fed go well. Some will ask whether, if Fed financing of credit extensions to foreigners is beneficial, it might also be desirable for the Fed to support worthy domestic objectives. Any attempt to exploit the Fed's financial independence in this manner would almost guarantee that its independence would be withdrawn over time.

Fed off-budget funding attracted substantial attention in the Mexican case in 1995, as indicated by a remarkable headline in *The New York Times*: "Clinton Offers $20 Billion to Mexico for Peso Rescue — Action Sidesteps Congress."[29] Should the Fed take comfort from the relative absence to date of significant negative repercussions from its involvement in this initiative? We think not. The publicity for the Mexican rescue put the Fed's off-budget funding powers on the radar screen, along with the potential risks described above. The Fed appeared to receive the implicit support of the congressional leadership in this instance, but Congress itself probably would not have voted to authorize the funds, and the public at large did not seem to favor such generous support for Mexico. Indeed, many Americans, including some prominent ones, viewed the transaction as a bailout of big investors. If, over time, developments in Mexico turn unfavorable, the result could be an erosion of public and congressional support for the Fed's financial independence.

In brief, Congress deliberately placed the Fed outside the appropriations process in order to safeguard its independence. The Fed should not misuse its off-budget status to finance initiatives that are unrelated to monetary policy because there is very little to be gained and much to lose.

VI

CONCLUSION

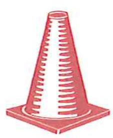
We have assessed the consequences of the Fed's participation in foreign exchange operations. Our analysis was based on the idea that central bank credibility for low inflation is the cornerstone of an effective monetary policy, and that public support for Fed independence is the foundation of that credibility.

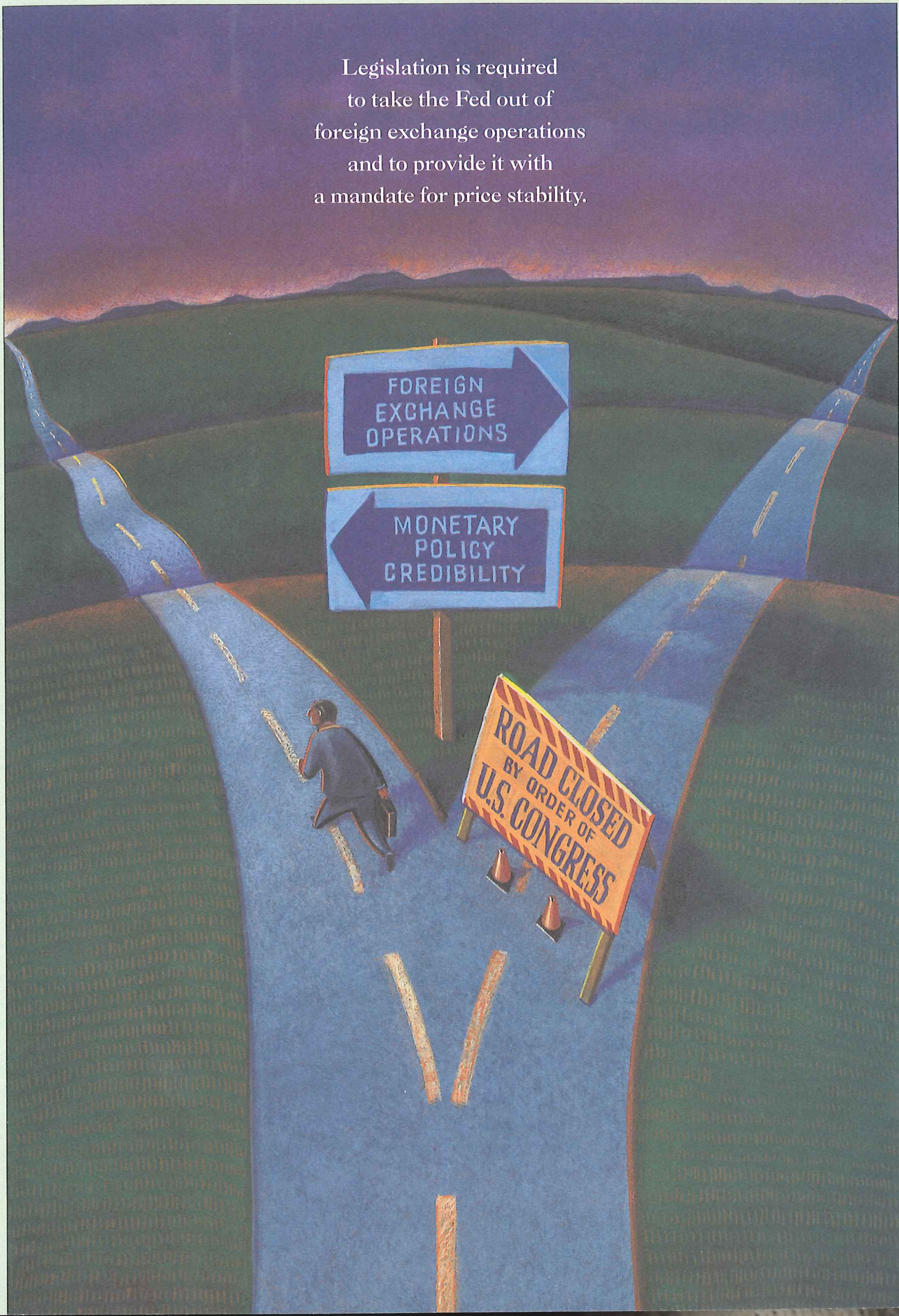
Distinguishing between sterilized and unsterilized foreign exchange operations, we recognized that as a mechanical matter the Fed can follow the Treasury's lead on sterilized operations without compromising its independence on monetary policy. There is little evidence, however, that sterilized intervention alone can have a sustained effect on the exchange rate. Thus, the Fed's participation in foreign exchange policy with the Treasury creates doubt about whether monetary policy will support domestic or external objectives, and this doubt undermines the credibility of the Fed's longer-term objective of reducing and ultimately eliminating inflation.

Although the Fed is the junior partner with the Treasury on foreign exchange operations, it has been an equal partner when it comes to providing the resources. The Fed can make these resources available without a congressional appropriation because its financial independence puts its open market operations off-budget. Foreign exchange operations initiated by the Treasury involve foreign relationships in ways that can be politically charged, especially when they involve direct loans to foreign governments. We think that Fed financing of such operations risks undermining public respect for its financial independence and with it the credibility of its longer-term price level stability objective.

We argued that central bank independence alone is an inherently fragile basis for the credibility of monetary policy. In view of that fragility, we recommended that the Fed be separated completely from foreign exchange operations. We did not argue that the nation should forsake official foreign exchange operations — only that the Fed, as an independent central bank, should not participate. The Treasury would be free to carry out sterilized operations. Having made this point, we acknowledged that it would be difficult for the Fed to disengage from foreign exchange operations unilaterally. Consequently, some sort of congressional legislation would probably be required to remove the Fed from foreign exchange operations permanently.

In our view, the problems created by the Fed's involvement in foreign exchange operations underscore the need for Congress to provide the Fed with a mandate for price level stability, recognizing a concern for the stabilization of employment and output. Such a mandate would constitute a long overdue replacement for the commitments made at Bretton Woods.[30] Moreover, firm congressional support is needed to strengthen the credibility of the Fed's anti-inflation strategy. By providing an overarching national goal for monetary policy once again, a price stability mandate would greatly reduce the risk of conflicts and credibility problems when the Fed works closely with the Treasury and other parts of the government.





Legislation is required to take the Fed out of foreign exchange operations and to provide it with a mandate for price stability.

ENDNOTES

1. See Chandler (1950) and Clarke (1967).

2. See the discussion in Humpage (1994), pp. 3-4.

3. Pauls (1990) details the evolution of U.S. exchange rate policy in the post-World War II period.

4. See Hetzel (1996).

5. That either a fixed exchange rate or a fixed gold price commitment requires monetary policy to be dedicated to that objective is emphasized, for example, by McCallum (1996a), Chapters 4 and 7.

6. See the accounts in Leiderman and Svensson (1995).

7. The introductory chapter in Persson and Tabellini (1994) contains a good survey of research on the role of credibility in monetary and fiscal policy. Barro and Gordon (1983), Cukierman (1992), and Sargent (1986) contain seminal analyses of credibility.

8. Goodfriend (1993) and King (1995), for example, interpret movements in long-term bond rates as indicators of credibility for low inflation.

9. See Salomon Brothers and Hutzler (1968).

10. Leiderman and Svensson (1995) and McCallum (1996b) contain accounts of the experience with inflation targets in a number of countries. For an empirical study of exchange rate credibility in the EMS, see Rose and Svensson (1994).

11. This definition is from Hetzel (1990), p. 165.

12. Fischer (1994), p. 292, distinguishes between goal and instrument independence.

13. The Fed actually abandoned its short-term interest rate peg in 1947; it gave up its long-term rate peg in 1951. Stein (1969) contains a good discussion of developments leading up to the 1951 Fed-Treasury Accord.

14. It is true that the 1978 Humphrey-Hawkins law mandates the Fed to set monetary aggregate targets as guides to short-run policy. But the Humphrey-Hawkins law instructs the Fed to take account of so many potentially conflicting macroeconomic concerns in setting the targets that it has exercised little restraint on the Fed's freedom of action.

15. See Bradsher (1995).

16. A detailed description of the mechanics of foreign exchange operations using T-accounts is found in Humpage (1994).

17. A representative survey of the academic literature on this point would include Bordo and Schwartz (1991), Edison (1993), and Obstfeld (1990), and references contained therein.

18. See Mussa (1981).

19. See Destler and Henning (1989), Funabashi (1989), and Pauls (1990) for historical discussions of U.S. exchange rate policy.

20. The Fed drew on its swap lines in the 1960s to protect the Treasury's gold stock by using the borrowed currencies to buy back dollar reserves from foreign central banks. These transactions effectively allowed the United States to assume other countries' devaluation risk on a portion of their dollar reserves. More recently, the United States has had sufficient foreign currency reserves to avoid drawing on its swap lines.

21. See the discussions in Goodfriend (1994) and Humpage (1994).

22. U.S. Congress (1976), pp. 3-5.

23. See U.S. Department of the Treasury (1991). U.S. Congress (1976) details ESF operations from 1968 to 1975. Todd (1992) presents a general history of the ESF.

24. SDRs are monetized by transferring them to the Fed.

25. See Pauls (1990), pp. 894 and 904, and U.S. Congress (1976), pp. 3-5.

26. See Friedman (1994).

27. This distinction is developed in Goodfriend and King (1990) and used in Goodfriend (1994).

28. To the extent that the funds are provided by the United States in the first place, the possibility of such takeouts amounts to only a partial reduction of U.S. taxpayer risk. On some occasions when U.S. authorities have drawn and dispersed foreign currencies through the swap network, the U.S. Treasury has repaid the swap loans with foreign exchange borrowed on a long-term basis using so-called "Roosa," or "Carter," bonds. Such actions, however, only shift the market risk from short to long term. See U.S. Congress (1976), pp. 4, 5, and 40.

29. See Sanger (1995). Folkerts-Landau and Ito, et al. (1995) contains a thorough account of the Mexican peso crisis.

30. Our conclusion that a central bank should have its goal legislatively mandated is also the recommendation, for example, of Blinder (1995), Lecture II, p. 16, Friedman (1962), pp. 224-43, and Fischer (1994), p. 316; although the suggested mandates differ from ours and from each other in certain respects.

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The Federal Reserve Bank of Richmond made substantial progress toward achieving its strategic goals and contributed heavily to Federal Reserve System initiatives in 1995. Among the highlights of the year were an expansion in public information and educational programs; a strong performance in providing financial services; substantial contributions to Systemwide monetary, banking, and payments system policy deliberations; and wide-ranging support to the U.S. Treasury in its payments activities.

The Bank expanded its public outreach and educational efforts during 1995. Professor Gary Becker of the University of Chicago, the 1992 Nobel Prize winner in Economic Science, was the guest lecturer in the Bank's Economic Lecture Series, cosponsored with local universities. Bank staff presented seminars to bankers, business leaders, educators, and the general public throughout the Fifth District. New publications were developed to further enhance communication between the Bank and its constituencies, and Bank officers shared their expertise in monetary policy, bank supervision, and payments systems with central bankers from a number of foreign countries. From economic education programs for teachers in Baltimore, Charlotte, and Richmond, to forums on community lending, the Bank presented and sponsored programs designed to foster a better understanding of the Federal Reserve System and its contributions to national and regional economies.

One of the Bank's strategic goals is to remain a constructive and competitive force in the markets for priced financial services. Much success was realized in this area in 1995, with the Bank fully recovering its costs of providing check collection and electronic payment services. Efforts focused on increasing the efficiency of our operations in the check and support areas. The Bank's voluntary early retirement program resulted in the retirement of 189 long-term employees. Filling the void created by the loss of so many highly experienced associates was a major challenge for the Bank this past year.

Another important Bank goal is to influence the direction of monetary, banking, and payments system policies. Research staff continued to provide high quality support to the Bank president for his participation in Federal Open Market Committee meetings, with special attention in 1995 devoted to the appropriateness of price level stability as the primary objective of monetary policy. Moreover, the quarterly banking policy briefings involving the president and senior staff expanded the knowledge and understanding of current banking and payments system policy issues throughout the Bank. Drawing upon our close contacts with Fifth District institutions, Bank staff members contributed to better understanding within the Federal Reserve of the emerging practices and unique business needs of large interstate banking organizations, and they are heavily involved in System efforts to define optimal policy and service responses to interstate branching.

Internal restructuring and formation of the Bank's Financial Group improved the integration and coordination of the Bank's credit and risk management activities, which boosted its contributions at the System level. The Bank's involvement in payments system policy issues increased rapidly in 1995 following the president's assignment as a member of the System's Financial Services Policy and Payments System Policy Advisory Committees. The Bank also helped organize a symposium on international payments system risk jointly with the System's Wholesale Payments Product Office and Financial Services Policy Committee and hosted it in Charlotte.

In keeping with another of its goals, the Bank continued to play a leadership role in providing high quality services and support to the U.S. Treasury. Consolidation of Fifth and Sixth Federal Reserve District savings bond activities at the Richmond Office was completed this year; the Office now serves as the regional processing site for the southeastern United States. Bank staff worked closely with the Treasury and other agencies to design, develop, and implement new automated payments systems that will improve the efficiency of governmentwide payments, and are engaged in further consultative work with the Treasury. In addition, the Currency Technology Office (CTO), located at the Richmond Office, provided technical support and training to all Federal Reserve Banks in the Systemwide installation of new high-speed currency processing and counterfeit detection equipment. The CTO also worked closely with the Bureau of Engraving and Printing in the design of new U.S. currency and led hardware and software development efforts to position the Federal Reserve System to process the new currency in early 1996. Finally, the Bank's Public Affairs staff were heavy contributors to coordinated Treasury-Federal Reserve communication plans to unveil the new currency design domestically and worldwide.

Paving the way for new Community Reinvestment Act regulations and examination procedures, a series of eight training seminars were conducted for bankers across the District. The Community Affairs Department also held five community development training sessions; published community profiles of Prince George's County and Cumberland, Maryland, Fayetteville and Raleigh-Durham, North Carolina, and Norfolk, Virginia; and launched *Marketwise*, a community development newsletter. The Research Department published in-depth economic profiles of Virginia, Maryland, and the District of Columbia, and inaugurated "state snapshots" — two-page summaries of economic and demographic information for District states. The Business Development and Planning Department introduced *Fifth District Dialogue*, a quarterly newsletter designed to provide financial institutions information about Federal Reserve financial services.

A series of consumer seminars on Treasury securities and mutual funds — "Everything You Always Wanted to Know about Treasury Securities" and "Mutual Funds: Understand the Risks" — was presented to audiences in Baltimore, Charlotte, and Richmond. Throughout the year, Bank officers made presentations to numerous civic and professional groups around the Fifth District. The Bank's president augmented his public speaking efforts with two-day community forums with bankers, and business and civic leaders in Wilmington, North Carolina, and Salisbury, Maryland. As further outreach, the Baltimore and Charlotte Offices held media conferences to strengthen relationships with media representatives and increase understanding of Federal Reserve goals and objectives.

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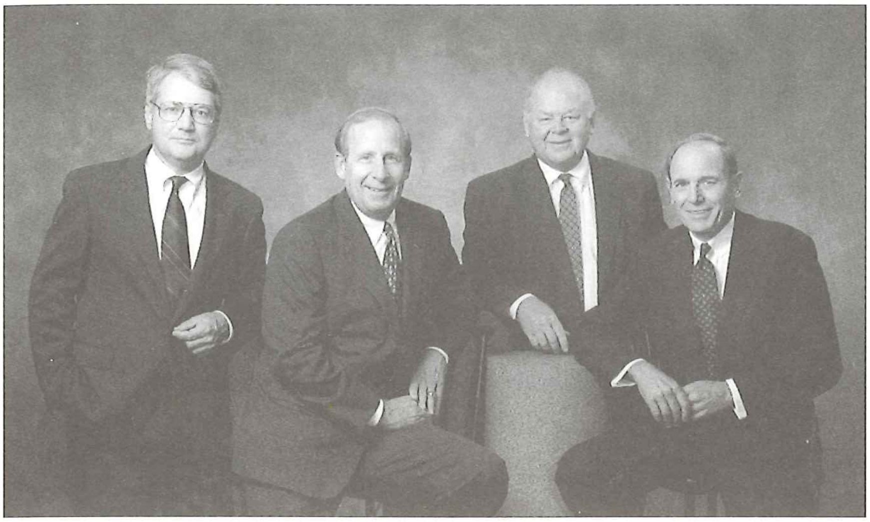

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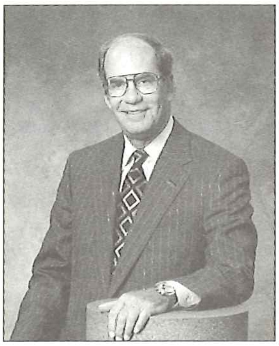

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Alexandria, Virginia

Associate Member

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Clearing House Association
Richmond, Virginia

First Vice President Jimmie R. Monhollon retired after 34 years of service to the Bank. Walter A.Varvel, senior vice president in charge of the Bank's Charlotte and Columbia Offices, was promoted to succeed Mr. Monhollon as first vice president and chief operating officer.

Senior Vice President Roy L. Fauber and Vice Presidents Wyatt F. Davis and Andrew L. Tilton retired. Senior Vice President and General Auditor H. Lewis Garrett retired, effective January 1, 1996. Robert E. Wetzel, Jr., was promoted to senior vice president and general auditor, effective January 1, 1996.

Senior Vice President James D. Reese assumed overall responsibility for Business Applications Services, Business Development and Planning, Cash, the Charleston Regional Check Processing Center, Fiscal Agency, Operations and Technical Support, Retail Payments, and Securities Operations and Funds Transfer, while retaining responsibility for the Currency Technology Office.

Marsha S. Shuler was promoted to vice president and assumed responsibility for the Business Development and Planning Department in addition to her responsibilities for Retail Payments. V. H. Rosson, Jr., was promoted to vice president and assumed responsibility for Business Applications Services and Operations and Technical Support. He continues as the supervising officer of the Currency Technology Office. Harold T. Lipscomb was promoted to vice president, with responsibility for the newly formed Securities Operations and Funds Transfer Department as well as for Cash and Fiscal Agency. Ruth S. Pratt was promoted to assistant vice president, Business Applications Services, and Janice E. Haase was promoted to assistant vice president, Operations and Technical Support. Howard S. Goldfine was named operations officer in the Retail Payments Department. John W. Moore, Jr., was appointed operations officer for the Securities Operations and Funds Transfer Department. Charles L. Huffstetler was appointed operations officer in the Currency Technology Office, effective January 1, 1996.

The Federal Reserve System's liaison officer for the U.S. Treasury, Bradford N. Carden, was promoted to vice president.

In the Banking Supervision and Regulation Department, Eugene W. Johnson, Jr., was promoted to vice president, John N. Weiss was promoted to assistant vice president, effective January 1, 1996, and Edward B. Norfleet and Burrie E. Eaves III were appointed examining officers. Also, James T. Wilkinson was appointed examining officer, effective January 1, 1996. Examining Officer Lawrence P. Nuckols retired.

Certain functions were reorganized, in accordance with the Bank's strategic plan, to serve the banking and business communities more effectively. Senior Vice President Bruce J. Summers was named chief financial officer of the newly formed Financial Group, which consists of the Reserve Accounts and Credit Division and the Financial Planning, Accounting and Control Division. The Loans Department and the Reserve Accounts Department were organized under the Reserve Accounts and Credit Division, and the Accounting and Control Department and the Financial Planning Department were organized under the Financial Planning, Accounting and Control Division. The following changes were made in connection with the new organizational arrangement: Vice President Michael W. Newton assumed responsibility for the Reserve Accounts and Credit Division. Assistant Vice President Howard S. Whitehead became the Bank's discount officer and acquired supervisory responsibility for the Loans Department and the Reserve Accounts Department. Frederick B. Johnson was appointed reserve accounts officer. Betty M. Fahed was promoted to vice president and assumed responsibility for the Financial Planning, Accounting and Control Division. Claudia N. MacSwain was appointed financial planning officer. Mr. Summers retained overall responsibility for Community Affairs, which became a separate department of the Bank. Jackson L. Blanton was promoted to vice president and assumed full-time responsibility for the department.

Kemper W. Baker, Jr., and Joseph F. Morrissette were promoted to vice president in the Public Affairs Division of the Research Department. Gwen W. Byer was appointed public affairs officer. Also in Research, Karen J. Williams was appointed statistical officer.

William A. Bridenstine, Jr., was promoted to associate general counsel.

Arlene S. Saunders was promoted to assistant vice president in the Personnel Department.

Thomas C. Judd, assistant vice president at the Culpeper facility, retired. Vice President G. Ronald Scharr assumed responsibility for the Culpeper Office in addition to his Building and Equipment duties in Richmond.

In Baltimore, Senior Vice President Ronald B. Duncan retired. William J. Tignanelli was promoted to senior vice president and succeeded Mr. Duncan as head of the Baltimore Office. R.William Ahern was promoted to vice president responsible for Cash and Fiscal Services, Data Services, Food Services, and Payment Services. David E. Beck was appointed operations officer, with responsibility for General Services and Accounting.

Dan M. Bechter was promoted to senior vice president in charge of the Charlotte and Columbia Offices, succeeding Mr. Varvel.

Woody Y. Cain, vice president and supervising officer of the Bank's Columbia Office, retired. Ronald D. Steele assumed responsibility as the supervising officer of the Columbia Office, in addition to retaining his current duties of overseeing Check Processing, Check Services, and Data Services functions in Charlotte. He was promoted to vice president, effective January 1, 1996.

RICHMOND

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J. Alfred Broaddus, Jr.
President

Walter A. Varvel
First Vice President

Lloyd W. Bostian, Jr.
Senior Vice President

Marvin S. Goodfriend
Senior Vice President and Director of Research

James McAfee
Senior Vice President and General Counsel

Joseph C. Ramage
Senior Vice President

James D. Reese
Senior Vice President

Bruce J. Summers
Senior Vice President and Chief Financial Officer

Fred L. Bagwell
Vice President

Kemper W. Baker, Jr.
Vice President

William H. Benner, Jr.
Vice President

Jackson L. Blanton
Vice President

William A. Bridenstine, Jr.
Associate General Counsel

Bradford N. Carden
Vice President

Michael Dotsey
Vice President

Betty M. Fahed
Vice President

Robert L. Hetzel
Vice President

Thomas M. Humphrey
Vice President

Eugene W. Johnson, Jr.
Vice President

Harold T. Lipscomb
Vice President

Yash P. Mehra
Vice President

Joseph F. Morrissette
Vice President

Michael W. Newton
Vice President

Virginius H. Rosson, Jr.
Vice President

G. Ronald Scharr
Vice President

John W. Scott
Vice President

Marsha S. Shuler
Vice President

Roy H. Webb
Vice President

Malcolm C. Alfriend
Assistant Vice President

James J. Florin III
Assistant Vice President

A. Linwood Gill III
Assistant Vice President

Janice E. Haase
Assistant Vice President

Sharon M. Haley
Assistant Vice President and Secretary

Jeffrey S. Kane
Assistant Vice President

Thomas P. Kellam
Assistant Vice President

Anatoli Kuprianov
Research Officer

Jeffrey M. Lacker
Research Officer

Susan Q. Moore
Assistant Vice President

Ruth S. Pratt
Assistant Vice President

Arlene S. Saunders
Assistant Vice President

James R. Slate
Assistant General Counsel

Charlotte L. Waldrop
Assistant Vice President

William F. White
Assistant Vice President

Howard S. Whitehead
Assistant Vice President

Arthur J. Zohab, Jr.
Assistant Vice President

Gwen W. Byer
Public Affairs Officer

Floyd M. Dickinson, Jr.
Examining Officer

Burrie E. Eaves III
Examining Officer

Howard S. Goldfine
Operations Officer

Peter N. Ireland
Associate Research Officer

Frederick B. Johnson
Reserve Accounts Officer

Claudia N. MacSwain
Financial Planning Officer

John W. Moore, Jr.
Operations Officer

Edward B. Norfleet
Examining Officer

Stacey L. Schreft
Associate Research Officer

John N. Weiss
Examining Officer

Karen J. Williams
Statistical Officer

H. Lewis Garrett
Senior Vice President and General Auditor

Robert E. Wetzel, Jr.
Vice President and Assistant General Auditor

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Vice President

Margaret M. Murphy
Vice President

John S. Frain
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Assistant Vice President

John I. Turnbull II
Assistant Vice President

David E. Beck
Operations Officer

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Jeff A. Walker
Vice President

Lyle C. DeVane
Assistant Vice President

Ronald D. Steele
Assistant Vice President

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Vice President

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Ronald D. Steele
Assistant Vice President

SELECTED FINANCIAL INFORMATION[1]

Assets, Liabilities, and Capital Accounts	December 31, 1995	December 31, 1994
Assets		
Gold certificate account	$ 862,000,000	$ 902,000,000
Special drawing rights certificate account	790,000,000	652,000,000
Coin	70,624,037	56,354,936
Items in process of collection	551,647,689	392,072,217
Loans to depository institutions	0	0
U.S. government securities and federal agency obligations	29,249,499,216	29,428,346,952
Investments denominated in foreign currencies	1,697,860,862	1,480,771,946
Bank premises (net)	126,528,369	133,814,710
Furniture and equipment (net)[2]	173,565,603	151,623,522
Other assets	733,208,751	750,005,787
Interdistrict settlement account	3,821,764,733	(867,239,113)
TOTAL ASSETS	$38,076,699,260	$ 33,079,750,957
Liabilities		
Federal Reserve notes	$ 34,911,521,452	$ 28,846,504,812
Deposits:		
Depository institutions	1,555,176,931	2,782,100,894
Foreign deposits	11,343,847	9,472,409
Other deposits	85,873,879	70,392,642
Total deposits	$ 1,652,394,657	$ 2,861,965,945
Deferred credit items	591,873,162	446,625,128
Other liabilities	337,877,989	331,987,072
TOTAL LIABILITIES	$ 37,493,667,260	$ 32,487,082,957
Capital Accounts		
Capital paid in	$ 291,516,000	$ 296,334,000
Surplus	291,516,000	296,334,000
TOTAL CAPITAL	$ 583,032,000	$ 592,668,000
TOTAL LIABILITIES AND CAPITAL	$38,076,699,260	$ 33,079,750,957

[1] The Federal Reserve Bank of Richmond is responsible for the integrity and fair presentation of its financial data. The selected financial information included in this report is Bank management's representation.

[2] Furniture and equipment (net) includes $80,756,077 in 1995 and $96,158,058 in 1994 for Federal Reserve Automation Services.

Income and Expenses	1995	1994
Income		
Interest on U.S. government securities and federal agency obligations	$1,837,407,739	$1,518,935,701
Interest on investments denominated in foreign currencies	62,370,529	60,179,648
Interest on loans to depository institutions	233,225	343,008
Income from services	59,431,062	62,684,004
Other income	924,425	556,485
Total Current Income	$1,960,366,980	$1,642,698,846
Expenses		
Operating expenses [1]	$ 152,381,151	$ 166,374,125
Cost of earnings credits	19,231,275	13,602,462
Total Expenses	$ 171,612,426	$ 179,976,587
CURRENT NET INCOME	$1,788,754,554	$1,462,722,259
Additions To/Deductions From Current Net Income		
Profit (Loss) on foreign currencies	$ 80,828,706	$ 162,752,518
Profit (Loss) on sales of government securities	426,981	(1,950,982)
Cost of unreimbursed Treasury services	(5,276,706)	(4,152,969)
Assessments by Board of Governors:		
Federal Reserve currency costs	(27,991,998)	(30,012,475)
Expenses by Board of Governors	(12,737,000)	(10,122,800)
All other additions (or deductions)	(6,933,468)	7,147
Net Additions/Deductions from Current Net Income	$ 28,316,515	$ 116,520,439
NET INCOME AVAILABLE FOR DISTRIBUTION	$1,817,071,069	$1,579,242,698
Distribution of Net Income		
Dividends paid to member banks	$ 17,570,732	$ 15,506,612
Payments to U.S. Treasury as interest on Federal Reserve notes	1,804,318,337	1,495,895,736
Transferred to surplus	(4,818,000)	67,840,350
TOTAL INCOME DISTRIBUTED	$1,817,071,069	$1,579,242,698

[1] Operating expenses include $31,458,259 in 1995 and $43,811,488 in 1994 for Federal Reserve Automation Services.

SUMMARY OF OPERATIONS

	DOLLAR AMOUNT		VOLUME	
	1995	1994	1995	1994
Cash				
Currency received and counted	30.3 Billion	28.4 Billion	2.2 Billion	2.1 Billion
Currency destroyed	6.9 Billion	6.8 Billion	680.5 Million	702.8 Million
Coin bags received and counted	208.1 Million	167.5 Million	158.2 Thousand	216.0 Thousand
Noncash Payments				
Commercial checks processed	1.0 Trillion	1.0 Trillion	1.4 Billion	1.5 Billion
Commercial checks, packaged items handled	173.5 Billion	157.3 Billion	285.3 Million	330.0 Million
U.S. government checks processed	89.3 Billion	91.7 Billion	53.4 Million	55.6 Million
Automated Clearing House transactions:				
Commercial	522.2 Billion	498.9 Billion	157.0 Million	134.0 Million
Government	126.2 Billion	101.8 Billion	81.1 Million	77.8 Million
Fedwire funds transfers	12.9 Trillion	11.4 Trillion	6.8 Million	6.5 Million
Loans to Depository Institutions				
Discount window loans made	1.3 Billion	2.5 Billion	38	274
Securities Services				
December 31 safekeeping balance of book-entry securities	126.2 Billion	138.0 Billion	N.A.	N.A.
Fedwire securities transfers	5.4 Trillion	5.1 Trillion	471.2 Thousand	529.2 Thousand
Services to U.S. Treasury and Government Agencies				
Issues, redemptions and exchanges of U.S. savings bonds	1.9 Billion	1.6 Billion	9.4 Million	6.3 Million
Federal tax deposits processed	1.0 Billion	636.4 Million	18.6 Thousand	21.6 Thousand
Food stamps redeemed	1.4 Billion	1.5 Billion	276.9 Million	292.2 Million

N.A. = Not Applicable

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