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ANNUAL REPORT 1970

FEDERAL RESERVE BANK OF NEW YORK

February 26, 1971

To the Member Banks in the
Second Federal Reserve District:

I am pleased to present our fifty-sixth Annual Report, reviewing the major economic and financial developments of 1970.

Last year the nation's economy endured the inevitable harsh consequences of the inflationary excesses of the previous half decade. The restrictive policies pursued throughout 1969, coupled with the de-escalation of the Vietnam war, led to the halting of real economic growth and a swift rise in unemployment. Yet, price and wage increases continued relatively unabated. We relearned the lesson that curing inflation becomes a progressively more painful process the longer that cure is delayed.

Monetary policy eased early in the year, as the Federal Reserve sought to cushion the economic adjustment by promoting a resumption of moderate growth of money and credit. And, after a midyear liquidity crisis had been narrowly averted, financial conditions more conducive to a resumption of sound economic growth were achieved. However, the easing of credit conditions at home imposed a heavy new burden on our international payments position. Although no serious repercussions developed during 1970, it became increasingly clear that our international payments problems will require close official attention in 1971.

The new year promises to challenge our resolve and our abilities. Clearly we must not abandon the battle against inflation, but neither can we ignore the problem of unemployment. Ways must be found to break the circular process of wage and price escalation, while at the same time encouraging a resumption of sound economic growth. I continue to believe that some form of incomes policy is essential in this regard.

Alfred Hayes

ALFRED HAYES
President

Federal Reserve Bank

of New York

FIFTY-SIXTH
ANNUAL REPORT

For the Year

Ended

December 31, 1970

Second Federal Reserve District

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Fifty-sixth Annual Report
Federal Reserve Bank of New York

A Year of Painful Transition

In 1970 the United States economy marked the end of a long period of generally excessive demand conditions that had begun in 1965 with the escalation of the war in Vietnam. This cooling of demand reflected, in part, the results of restrictive fiscal and monetary policy measures taken in 1968 and 1969. It had been widely recognized for some time that the elimination of demand pressures would be an absolute precondition for any progress in stemming inflation. It was also recognized that this process would not, and indeed could not, be entirely painless if it were to succeed. As it turned out, the disinflation of demand in 1970 proved rather more painful than had been generally expected. Sad to relate, moreover, progress in slowing the rate of price increases was disappointingly modest and uncertain, leaving policy makers at the end of 1970 with some very difficult decisions for the new year.

The effects of the slowdown in demand permeated every aspect of the economic fabric. The growth in the aggregate output of goods and services, which had actually begun to fall short of its long-term potential as early as the last quarter of 1968, halted altogether in the final quarter of 1969 and showed a fairly marked decline in the first quarter of 1970. In the spring and early summer, the decline seemed to be bottoming out and, indeed, real GNP rose slightly in the second and third quarters. The fourth quarter, however, was deeply marked by the depressing effects of the General Motors strike, and real GNP posted a renewed drop. The 1970 declines in output in the face of a growing labor force and further additions of productive facilities and technical know-how opened up a substantial amount of excess capacity in the economy. Unemployment, which was at a very low 3.6 percent of the labor force at the end of 1969, rose steadily in 1970 to 6.2 percent in its final month.

More perspective will be needed to place 1970 in relation to the past record of business-cycle developments. As the year drew to an end, however, it seemed entirely possible that 1970 might come to be entered into business annals as a year of mild recession. All major components of demand showed the effects of the overall slowing, though with varying timing. As is often the case, the last sector to react was business spending on plant and equipment, but by the last half of 1970 the growth of spending in this sector ground to a halt. The ending of the long expansion in outlays for capital goods was, among other things, a testament to the marked change in the overall economic atmosphere. When the economy began to slow in late 1969, it was widely feared that attempts to curb the boom atmosphere might be aborted by an "other-side-of-the-valley" psychology, one in which consumers and businessmen would look forward to a quick resumption of strong demand pressures such as had occurred after the short-lived "mini-recession" of 1967. By mid-1970, however, such talk had disappeared, perhaps largely as a result of the rather tumultuous developments in financial markets that had occurred in the first half of the year. Bond prices fell sharply and stock prices, which had already begun to decline in 1969, plunged nearly 25 percent from the end of that year to their May 1970 lows. This decline reflected, among other things, rather widespread fears that a serious "liquidity crisis" might be in the making.

Fears of a liquidity crisis—the cumulating inability of businesses with weakened balance-sheet positions to finance current expenses and/or maturing indebtedness because of a deterioration of creditor confidence—were probably exaggerated. Nevertheless, these fears were not wholly without substance. The inflationary euphoria of the previous several years had no doubt led to a general weakening of respect for traditional standards of prudent financial management. The liquidity positions of most business firms had reached rather low levels, and it had become increasingly difficult and expensive to obtain external funds. A wave of mergers had created a new type of conglomerate, with special problems in some cases. Moreover, a large number of stock brokerage firms were afflicted with a variety of serious problems. Unless inflation was to be underwritten indefinitely, it was almost inevitable that some of the more exposed positions would eventually prove troublesome.

While the soundness of a number of firms and industries did in fact come under suspicion in 1970, the most conspicuous development was the insolvency of the Penn Central in late June. Since the railroad had defaulted on a substantial block of maturing commercial paper, anxieties in the financial markets focused on this sector. Over the next few weeks, a large number of worried investors withdrew from the market and the outstanding volume of paper issued by nonbank borrowers dropped substantially. Had the banking system, assisted by the Federal Reserve, not been willing and able to replace this source of credit with bank loans, a number of firms formerly relying on sales of commercial paper to obtain funds might have experienced difficulties. These difficulties, in turn, might well have had serious further repercussions on the economy at large.

After a few weeks of strain, however, the financial situation returned to a more orderly condition. The experience may have had some salutary effects. Investors seemed to have become more conscious of the quality of the obligations they bought, while business and financial firms, on the other hand, became more conscious of the need to maintain sound balance-sheet positions. By the end of the year, some liquidity rebuilding had been achieved and both stock and bond prices had rallied sharply from their spring and summer lows. Problems in the brokerage business, however, some of them of a quite deep-seated nature, continued to surface throughout the year, leading to some spectacular rescue operations and a few failures as well.

As regards the United States international payments position, the most important development in 1970 was undoubtedly the large-scale repayment by United States banks of their borrowings in the Euro-dollar market. This process, which began late in 1969, accelerated early in 1970 when an increase in Regulation Q ceilings on time and savings deposit interest rates facilitated bank access to domestic funds. When Regulation Q ceilings on short-dated, large certificates of deposit were suspended in June 1970, United States banks shifted from Euro-dollar borrowings into CD's on a massive scale, since CD's represented a significantly cheaper source of funds. The rundown in Euro-dollar borrowings by United States banks received further impetus later in the year from the sharp weakening in United States loan demand and from a growing confidence that CD money would remain available in adequate amounts for the foreseeable future. These reflows contributed to a weakening of Euro-dollar rates and were accompanied by a substantial movement of funds into countries where loan markets remained tight and interest rates were maintained at high levels. In the process, dollars were converted into local currencies, adding to exchange market pressures on the dollar from other sources. As a result, a number of foreign central banks bought dollars to keep their currencies within exchange ceilings. The increase in foreign official holdings of dollars was reflected in a very large official reserve transactions deficit of over $10 billion. Since the foreign central banks that acquired dollars were in most cases willing to increase their holdings or needed dollars for debt repayment, the sharp deterioration of our official balance did not create a serious financing problem in 1970. Indeed, the exchange markets actually experienced their calmest period in quite some time. To a large extent, this reflected the constructive effects of the parity adjustments that had taken place in recent years.

The liquidity deficit, which is not directly influenced by flows of Euro-dollars into the hands of foreign monetary authorities, improved in 1970 but still amounted to almost $5 billion as compared with $7 billion in 1969. The usual accounting procedures, moreover, overstated the extent of the improvement and, in any case, the 1970 deficit was still excessive. One factor that did improve somewhat was the trade surplus, which rose from its dismal, strike-depressed 1969 level to $2.2 billion. Exports to several industrialized countries advanced sharply, especially during the first half of the year, and the slower growth of domestic demand tended to limit the growth of imports. The growth of imports was more rapid than might have been expected, however, given the sluggish state of the economy, in part because of the continued stimulus to imports from the rising domestic price level. The improvement in the liquidity deficit was also limited by a decline in foreign purchases of United States equities, reflecting the sharp drop in stock prices during the first half of the year.

Clearly the ability and willingness of private and official foreigners to absorb deficits of the 1970 magnitude are limited. Continued deficits on this scale could cause major problems for the dollar.

Monetary policy in 1970 turned its attention to cushioning the emerging economic slowdown without encouraging an excessive resurgence in demand. In January, the Federal Open Market Committee began actively to encourage a moderate growth in the money supply and bank credit, both of which had shown little growth in the latter half of 1969. Moderate growth in these aggregates remained an underlying objective throughout the year and one that was, indeed, largely realized. Against this background and in view of a reduction in credit demands associated with the economic slowing, especially noticeable toward the end of the year, interest rates fell substantially over 1970. Indeed, toward the year-end, declines in many rates, especially short rates, became quite precipitate. These declines were followed by a two-stage reduction in the Federal Reserve discount rate, totaling ½ percentage point in early November and early December. As 1970 closed, interest rates were poised for further drops in the new year.

Fiscal policy also began to move to a more stimulative position in 1970. Thus the 10 percent Federal income tax surcharge enacted in mid-1968 to dampen business and consumer demand was reduced to 5 percent in January and eliminated altogether in July. In the second quarter, moreover, a rise in social security benefit payments and an increase in Federal pay, both retroactive to the beginning of the year, produced a massive injection into the income stream. Partly offsetting these stimulative developments, however, Federal defense spending continued generally downward over the year, creating difficult adjustment problems for a number of defense-related industries, especially aerospace.

While a moderate growth in the monetary and credit aggregates was an underlying aim of monetary policy throughout 1970, this objective took second place in the spring and early summer to concern over tensions in the financial markets, reflecting the basic responsibility of a central bank to ensure the orderly functioning of these markets and to serve as lender of last resort. Thus the Federal Reserve provided reserves more liberally than might otherwise have been the case in late April and early May, partly to help avert the threatened failure of a Treasury financing in the highly unsettled market atmosphere following the announcement of the Cambodian incursion. Financial markets remained the primary concern of policy until well into the summer. When it became clear on Friday, June 19, that the insolvency of the Penn Central was imminent, this Bank took action over the weekend to advise its member banks that adequate assistance at the discount window would be available to banks pressed by heavy loan demands from creditworthy borrowers unable to roll over maturing commercial paper. The following week, similar assurances were also given by the other eleven Federal Reserve Banks. On June 23, the Board of Governors of the Federal Reserve System announced its suspension of the Regulation Q interest ceilings on short-dated CD's of $100,000 and over. This action permitted banks to market these certificates on a competitive basis and thereby to make loans to corporations which had formerly obtained credit directly through sales of commercial paper. Not surprisingly, the resulting reintermediation of credit led to a sharp expansion in the growth of bank credit for a time. The money supply growth rate remained on a generally moderate course during most of this period, as it did during most of the rest of the year.

The monetary aggregates, principally the narrow money supply (currency plus private demand deposits) and bank credit, played an increased role in the day-to-day conduct of monetary policy in 1970. The behavior of the aggregates, especially over the intermediate and longer runs, had always had a large place in the thinking of the Federal Open Market Committee. On certain occasions in the past, however, the growth rates in these aggregates had shown unduly large and undesired swings. The adoption of more explicit targets for these aggregates and their increased use as a focus of day-to-day operations may make it possible to avoid similar developments in the future.

It remains true, however, that undue concentration on the behavior of any single monetary aggregate, especially over short periods, can be dangerous, both as a program for policy makers and as a guide to observers of monetary developments. First, close control by the Federal Reserve over the behavior of these aggregates during relatively short periods is, for technical reasons, extremely difficult. Second, the behavior of the different aggregates may diverge rather sharply in the short run, and some flexibility in weighing the importance of these divergent movements is desirable. Third, there are occasions when concern over the health of financial markets and/or international developments may require the primary attention of a central bank. Fourth, current statistical information on the aggregates is, for a variety of reasons, often subject to revision. This fact of life was well illustrated in 1970 when it became necessary to make significant revisions in money supply data for that and other recent years. These revisions largely reflected new information on evolving market practices that were proving to have significant implications for the money supply data. Finally, the aggregates such as the money supply and bank credit may at times respond to sharp, but temporary and quickly reversible shifts in the demand for them. Such shifts can be offset, if at all, only by permitting equally sharp and short-lived changes in money market conditions. Such whipsawing may tend to impair the functioning of the money and credit markets and, in many cases, is quite inappropriate in the absence of any more fundamental change in the basic economic situation. All these considerations strongly suggest the need to continue evaluating a variety of factors in framing and executing monetary policy.

In some respects, economic developments in 1970 proceeded along a constructive course. The slowdown in aggregate demand essential for the curbing of inflationary pressures was achieved. At the same time, the monetary policy actions taken in 1970 seemed likely to encourage an environment in which a resumption of orderly economic expansion could take place. This policy was implemented, moreover, while warding off the escalation of some more or less inevitable financial turbulence into a disruption of far graver proportions. Nevertheless, the meagerness of the response of prices to the slowdown in aggregate demand stood out as a source of bitter disappointment in 1970. This response was both more modest in size and longer in coming than almost anyone had expected at the beginning of the year.

There are several reasons why prices and wages in a modern economy may continue to rise for a time after demand pressures have been removed. Some prices, such as public utility rates, tend to react only after a lag to inflationary conditions. Similarly, wage contracts that are negotiated every two or three years will frequently include a "catch-up" adjustment to past price increases. These increases raise costs and thereby lead to further price advances. More generally, the experience of inflation generates expectations of future inflation. Such expectations continue to get built into a wide range of price and wage adjustments well after the point where they might still be justified by current demand conditions.

Even after taking all these factors into account, the responsiveness of wage and price movements to the economic slowdown in 1970 nevertheless was unusually sluggish. Perhaps the explanation may lie in the sheer length and intensity of our recent inflationary experience. Whatever the reason, the persistence of consumer price increases at average annual rates of more than 5 percent toward the year-end, coupled with an unemployment rate of around 6 percent, made compelling the need for new approaches to supplement monetary and fiscal policy in combating inflation.

Indeed, the belief was spreading that a number of developments, some economic, some social and political, have made it increasingly difficult for monetary policy, even when supported by fiscal policy, to shoulder the full burden of simultaneously achieving price stability and steadily high levels of employment. By late 1970, a wide range of proposals was being offered by public officials and by others for strengthening the economy's ability to fight inflation. Some of these proposals were directed at improving the efficiency and competitiveness of labor and product markets. Others sought to provide more direct means for restraining excessive wage and price increases through some more general form of incomes policy. Clearly, these proposals deserved the serious and open-minded consideration of all those concerned with the future of the American economy. At the least, 1970 should have made clear the long and tortuous chain of events that is ultimately set in motion whenever aggregate demand becomes excessive—as it was during much of the latter 1960's. At the same time, this experience should provide powerful motivation for avoiding such episodes in the future.

THE UNITED STATES ECONOMY IN 1970

Business Conditions: Inflation in a Sluggish Economy

The anti-inflationary monetary and fiscal policies instituted in the second half of 1968 and pursued vigorously throughout 1969 had a major impact on the economy in 1970. Industrial production, which had begun to drop in August 1969, declined substantially further throughout 1970; overall economic growth as measured by real gross national product (GNP) came to a halt, and unemployment of both labor and production facilities increased markedly. The first half of the year was characterized by considerable turbulence in the financial markets, highlighted by a precipitous drop in the stock market which carried the major price indexes by May to their lowest point in almost a decade. Subsequently, the financial collapse of the Penn Central railroad sent tremors through both the debt and equity markets, and the Federal Reserve System immediately took steps to head off further major financial problems, especially in the commercial paper market. Thereafter, however, relative financial calm was gradually restored, and the most credit-sensitive sectors of the economy strengthened. Housing starts, which hit their low early in the year, recovered vigorously. State and local governments also regained a stronger position in the credit markets, and in the second half of the year this apparently was being reflected in an acceleration of their capital spending.

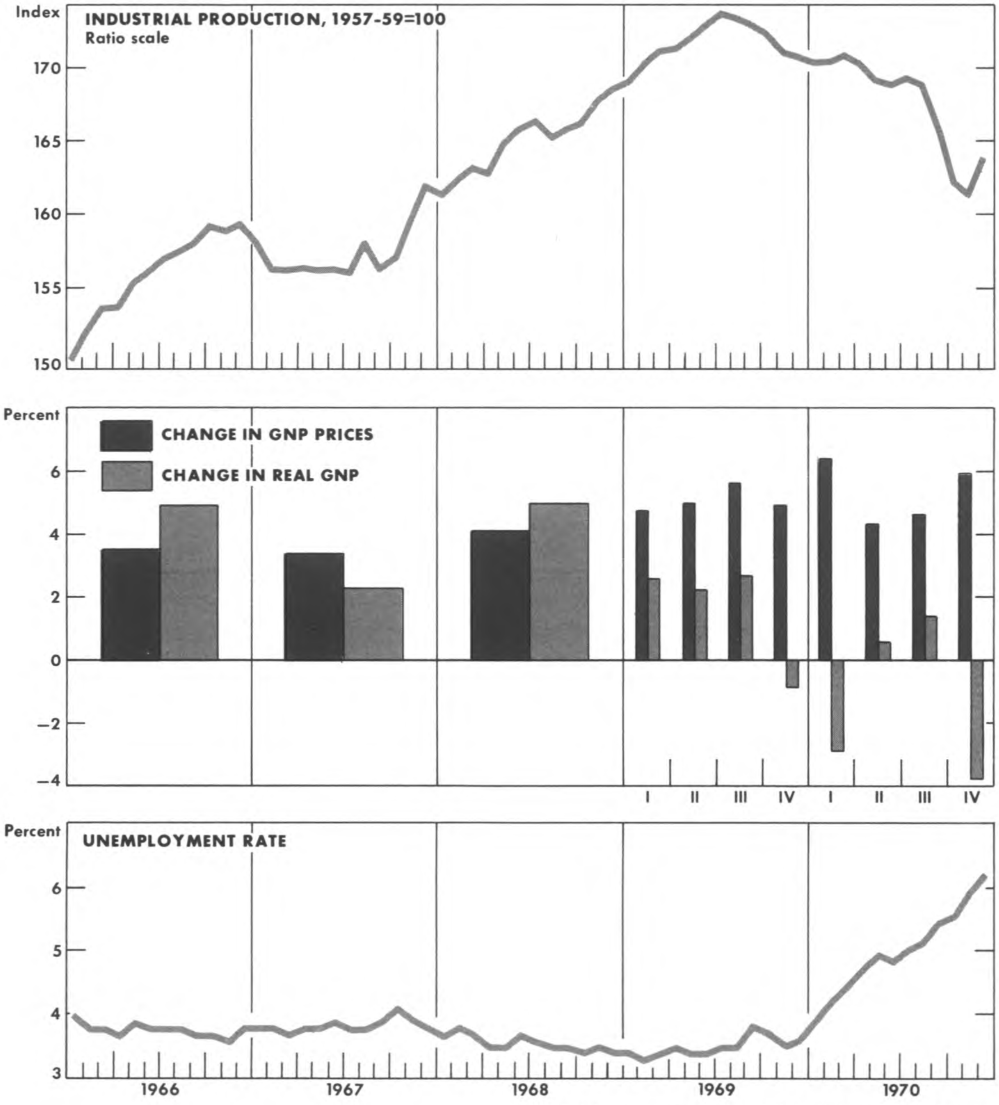
The emerging strength in home building and state and local government expenditures was not enough to offset the weakness that developed elsewhere. Sharply declining defense spending had a strong depressing effect on the economy in general and on the defense industry and its work force in particular. Plant and equipment spending weakened, rising above the 1969 total by less than the climb in capital goods prices. And inventory spending, while maintained at higher levels than might have been expected on the basis of historical experience, nevertheless cut substantially into GNP growth during the first half of the year. Consumers adopted quite cautious spending patterns, and higher savings absorbed a sizable share of the increase in their disposable income.

Despite the elimination of excessive demand pressures, and unemployment that reached 6.2 percent by the year-end, the pace of inflation was little diminished. Wages on average soared last year about twice the long-run average growth of productivity. At the same time the price indexes continued to move up rapidly, and convincing evidence of a slower rate of climb was still lacking at the year-end.

FALLING OUTPUT AND RISING UNEMPLOYMENT. Industrial production was already declining as 1970 began and, while unemployment remained low, the job market was also beginning to feel the pervasive economic effects of the restrictive monetary and fiscal policies initiated in 1968. Real GNP declined in the final quarter of 1969, and by early 1970 it was clear that the economy was in a period of contraction (see Chart 1). At the time, the general expectation seemed to be that inflation would progressively moderate and that output would turn higher later in the year, thereby preventing a large rise in unemployment. But, as matters turned out, industrial production fell fairly steadily throughout the year and was depressed sharply further from September through November by the strike at General Motors. In December, after auto production had been partially restored at GM, industrial production stood 4.2 percent below the previous December and 6.1 percent below the July 1969 peak. The drop last year in industrial activity was only partially offset by the continued expansion in the output of services. Real GNP turned marginally higher in the second and third quarters, but declined again in the fourth quarter because of the GM strike. Hence, fourth-quarter real GNP was down about 1 percent from a year earlier.

Declines in industrial production were pervasive, touching nearly all the major commodity and market groupings. As consumers turned more conservative in their spending patterns, businessmen quickly moved to adjust inventories and production of most categories of consumer goods tailed off. A three-month strike at General Electric, ended in February, held down the production of appliances and electrical machinery early in the year, and auto output was severely depressed by slumping sales and by the mid-September to late-November work stoppage at GM. The sluggish performance of retail sales dampened businessmen's anticipation of future sales and, together with reduced profits, contributed to a progressive scaling-back of business investment spending. Thus, while business equipment output remained near its October 1969 peak through March, it declined sharply thereafter. Reflecting the sharp curtailment in Federal Government defense expenditures, the production of defense goods plummeted further in 1970

Chart 1. PRODUCTION, PRICES, AND UNEMPLOYMENT: Activity in the industrial sector of the economy continued to drop in 1970, halting the growth of real gross national product. Yet the general price level continued to move sharply higher. Unemployment rose rapidly, as job opportunities declined while the civilian labor force grew.



All data are seasonally adjusted. Quarterly GNP numbers are at an annual rate.

and by the year-end stood about one-third below its mid-1968 peak. The only significant exception to the general trend of falling production was in the utilities sector, where output continued to climb.

The persistent sluggishness of output during 1970 and the growing preoccupation of businessmen with the need to cut costs led to a progressive softening of the labor market and a sharp rise in unemployment (see Chart 1). By December the unemployment rate had reached 6.2 percent of the labor force, up 2.6 percentage points over the year. At the end of 1969 and into the early months of 1970, the labor market remained tight even though general economic activity had turned down. In part, this appeared to be the result of business hoarding of labor in anticipation of renewed expansion and expected future difficulty in attracting workers. However, as the economic outlook deteriorated, many businessmen came to the view that the squeeze on profits would continue well into the future, requiring a major streamlining in 1970 of managerial as well as production employment. Hence, work forces were trimmed and the unemployment rate moved sharply higher. By the year-end the number of jobless workers had risen by 2.2 million to a level of 5.1 million. While the increase in joblessness was in part a result of a small decline in total employment, it was magnified by sustained labor force growth in the face of diminishing job opportunities. This labor force growth centered in young people and adult women who, not surprisingly, also absorbed much of the burden of rising unemployment. At the same time the civilian labor force was swollen further by a reduction in the armed services of about 400,000.

INCOME FLOWS AND THE PATTERN OF DEMANDS. Personal income growth during 1970 was about three fourths of the 1969 gain, as the economic downturn limited the rise in most categories of wage and nonwage income. In the case of wage and salary payments—by far the largest component of personal income—the slowing entirely reflected reduced employment and a shorter workweek inasmuch as advances in wage rates continued rapid. Increases in pay scales were particularly large among the more than 4.5 million union workers covered by major collective bargaining settlements during the year. For these workers, pay and benefit rates jumped an average of 13 percent in the first year of the new contracts. Federal Government employees, both military and civilian, also received an increase in pay rates in April, retroactive to January. Moreover, social security benefit scales were increased in April, again retroactive to January, contributing substantially to the growth of nonwage income. However, these income gains only partially offset the impact on personal income of declining employment and hours of work.

Despite slower personal income growth, disposable income moved sharply higher in 1970, largely as a result of the two-step elimination on January 1 and July 1 of the 10 percent surcharge on personal income taxes. However, the potential stimulus to consumption spending from this tax reduction was blunted by growing uncertainty among consumers as to the future course of the economy. Indeed, consumers channeled an exceptionally large share of this added income into current saving. Thus, the savings rate—the percentage of disposable income saved—jumped sharply and in the final three quarters averaged 7.5 percent, at the upper end of the post-World War II range.

With consumers saving a large share of income, consumption expenditures climbed slowly during the year. The weakness in consumer outlays occurred primarily in the durable goods category where expenditures declined in three of the four quarters. This was principally the result of weak auto sales, but expenditures on household durables were also sluggish. On the other hand, consumer purchases of nondurable goods and expenditures on services, measured in current dollars, expanded in 1970 at least as rapidly as in earlier recent years. Spending on services is usually maintained through periods of overall economic contraction, and this past year that tendency was reinforced by rapid further increases in the prices of services.

The slowing of consumption expenditures for manufactured goods during 1970 gave rise to an inventory correction, similar to but considerably smaller than that which occurred in the 1967 "mini-recession". As sales slowed, both retailers and manufacturers found themselves with unintentional accumulations of inventories. But, in contrast to the 1967 experience when the correction followed a record surge in inventory investment, businessmen this time began cutting back on inventory spending before severe imbalances developed. Thus, the major portion of the inventory adjustment was accomplished in the two quarters ended March 1970, when inventory spending dropped back by nearly $10 billion to reach the low of about $1½ billion. This phase of the inventory adjustment was largely completed by midyear with a much smaller adverse impact on GNP growth than occurred in the first half of 1967. Inventory spending remained low in the second half of the year, although total stocks did rise further in relation to business sales as the latter declined—in part because of the GM strike.

Business fixed investment spending, which had nearly doubled over the preceding seven years, leveled off in 1970 and declined in real terms. Despite the elimination in 1969 of the investment tax credit, businessmen at the outset of the year were still anticipating a large further increase in capital outlays. However, these plans were cut back substantially in the manufacturing sector, as a growing proportion of existing capacity became idle, the deteriorating economic outlook reduced prospects for profitable near-term investments, and the refinancing of a growing burden of short-term debt absorbed much of the proceeds of bond flotations. Business capital spending would probably have been cut back even further had it not been for continued strong inflationary expectations. Surveys taken during the year uniformly found that businessmen expected the current rapid increases in wages and capital goods prices to continue, an expectation that would be an incentive to upgrade production techniques in the near future. Moreover, exceptionally heavy long-term borrowing at the high 1970 interest rates suggests that businessmen were willing to gamble that inflation would help reduce the burden of carrying that debt in the future.

Residential construction activity generally suffers quickly and severely during a period of intense monetary restraint, and the sharp tightening of credit conditions early in 1969 slowed activity in this sector progressively in spite of massive support to the mortgage market by Federal credit agencies. Dramatic increases in flows of mortgage money in 1970 precipitated an equally rapid recovery. Continued heavy support by Federal agencies aided the market substantially, but privately supplied funds flowing through thrift institutions primarily accounted for the increase in mortgage lending. Thrift deposit inflows were increased both by the rapidly rising volume of personal savings and by lower market interest rates which, together with higher regulatory rate ceilings on deposits, improved greatly the ability of thrift institutions to compete for funds. With residential financing again enjoying good availability, the strong underlying demand for housing surfaced. The volume of housing starts, after dropping down close to a 1 million annual rate early in the year, turned sharply higher after midyear, resulting in substantial increases in residential construction outlays over the third and fourth quarters. By the last quarter, housing starts were up to an annual rate of 1.8 million units. However, there were increasing indications that home builders are attempting to offset soaring construction costs by reducing the size of housing units and eliminating some luxury features, with the result that actual construction expenditures—which lag behind starts—may not show proportionately as much strength as the latter. And, despite this attempt to hold down the rise of home and apartment construction costs, the continued high volume of mobile home sales indicates that many families remain unable to afford the price of conventional housing.

Outlays by state and local governments rose by $11 billion during 1970, continuing the strong expansionary trend set throughout the 1960's. The largest share of the expenditure increase came in the second half of the year, spurred by significantly higher sales of state and municipal bonds, some of which had been previously authorized but remained unsold because of high interest costs. However, the slowing economy cut into state and local government operating revenues, causing many local governments to limit hiring of personnel and to curtail services.

FEDERAL SPENDING AND TAXATION. The Federal budget began to move into deep deficit last year. Indeed, fiscal year 1971 (ending June 30, 1971) is now officially forecast to show an excess of expenditures over receipts amounting to $18.6 billion, in sharp contrast to the slight surplus of receipts planned by the Administration before the budget year began and far above the actual deficit of $2.8 billion that occurred in fiscal 1970.

About half of the expected sharp deterioration in the Federal deficit is a direct consequence of feedback effects on the budget from last year's lagging economy. These effects—the coming into play of the so-called automatic economic stabilizers—were reflected in both reduced tax payments by individuals and corporations and higher Federal transfer payments to persons such as for unemployment compensation. However, these effects of the economy on the budget were also supplemented by other spending and tax actions through which the Federal Government exerted a direct and active influence on the economy. On the spending side, expenditures for nondefense programs were increased sharply by an estimated $20 billion, about double the increase initially budgeted and also double the rapid climb in other recent years when the "Great Society" programs were being initiated. Some offset to this civilian spending surge was provided by the $4 billion reduction in defense spending, centering in calendar 1970. That reduction was, of course, achieved largely as the result of the de-escalation of the Vietnam war, and prospects for further large savings from defense cutbacks appear to have become increasingly limited. At the same time, the tax burden on the economy was reduced sharply last year through legislative actions. The phasing-out of the 10 percent income tax surcharge in two steps in the first half of calendar 1970 lowered personal and corporate taxes on the order of $10 billion annually. And, the Tax Reform Act of late 1969 contained a number of tax reducing steps spread over several years, including a $50 increase at mid-1970 in the personal exemption allowance. To be sure, the elimination of the investment tax credit in late 1969 (retroactive to the previous April) undoubtedly had some restraining effects on the economy last year, but taken together Federal tax actions in the past year were decidedly stimulative for the private sectors.

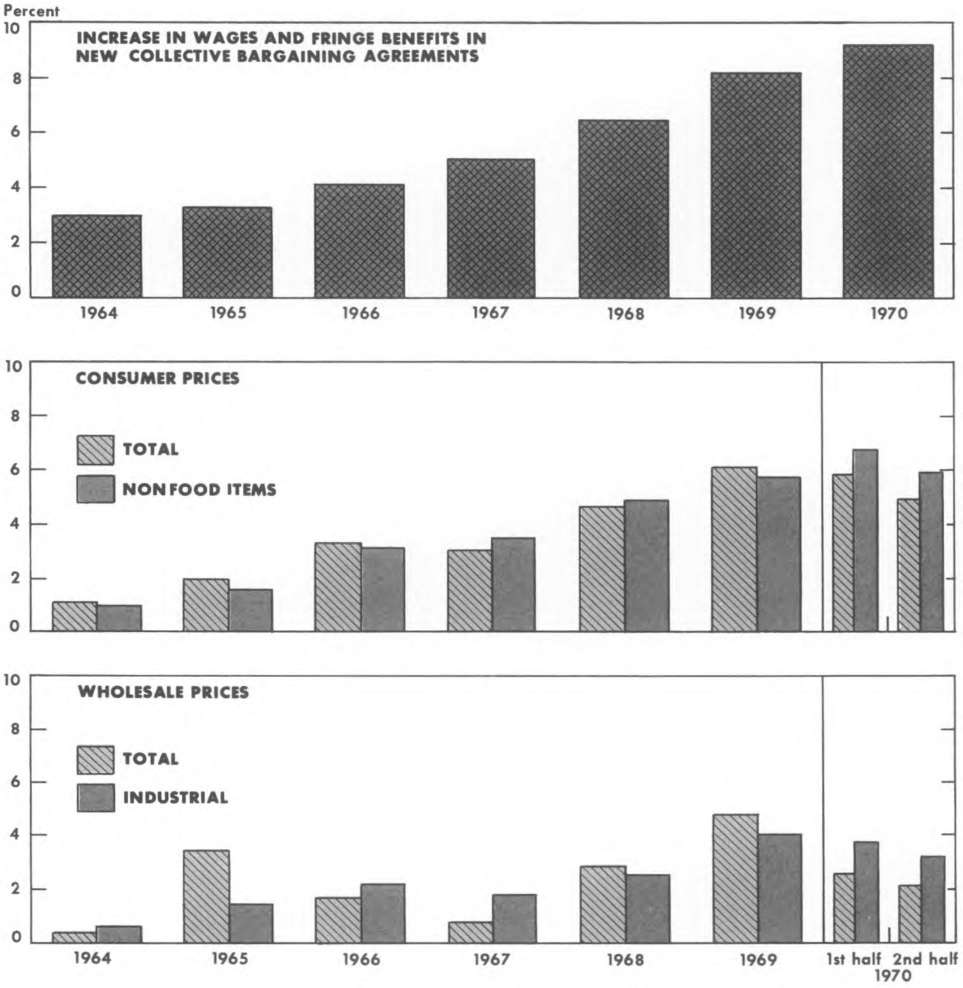
The recent rapid increase in Federal nondefense spending has centered in transfer payments such as those for welfare, social security, health, and grants-in-aid to state and local governments. Total Federal purchases of goods and services—that portion of budget outlays that is explicitly included in GNP—actually declined in calendar 1970, as defense purchases fell $4 billion over the year while nondefense purchases were about unchanged. Thus, the economic effects of budget outlays are increasingly indirect, having their effect on measured economic activity only as additional transfer payments to a particular economic sector are reflected in higher spending by that sector. Moreover, the rapidly growing activities of the Federal Government and its agencies in stimulating the private economy through various credit programs fall almost entirely outside the coverage of the budget. In fiscal 1971, total Federal and Federally assisted credit is projected to rise by $24 billion. Thus, the Federal Government and its agencies are currently involved in more than one fourth of all private borrowing either as direct lender, insurer, or guarantor. The effects of these rapidly expanding credit programs on the economy are almost impossible to quantify but are no doubt quite important, especially in the areas of home building and agriculture.

The relaxation of fiscal restraint that was undertaken in 1970 served both to bolster the economy and to provide for pressing social needs. However, the great momentum in Federal civilian spending that built up last year, together with the further cuts in taxes that are embodied in the Tax Reform Act of 1969, may make it difficult to preserve the budget flexibility needed to achieve, and maintain over the longer run, a strong and noninflationary economy.

PRICES, LABOR COSTS, AND PRODUCTIVITY: THE EMBEDDED INFLATION. Certainly the most discouraging aspect of the economic picture during 1970 was the failure to make more significant progress in the battle against inflation despite the sharp rise in unemployment. Restrictive fiscal and monetary policy succeeded in eliminating excess demand on the nation's economic resources, the first crucial step toward reducing the rate of inflation to an acceptable level. By the year-end it was clear that, while the elimination of excess demand had halted the acceleration of price gains and also generated a sharp reversal of business psychology, only modest progress had been made in reducing the rate of inflation. Indeed, the increase in many price indexes in 1970 turned out to be about as great as in 1969. The GNP deflator, an economy-wide measure of price behavior, accelerated slightly to a 5.3 percent rate of climb. However, the fourth-quarter deflator reading was distorted upward by the GM strike, and except for that distortion the deflator would probably have shown about the same gain as in 1969. The consumer price index rose about ½ percentage point less than in the previous year, but this was due entirely to slower growth of food prices (see Chart 2). This latter development reflected increased supplies of farm products and was not indicative of improvements in the underlying inflationary pressures. Indeed, price increases for housing and services (7.4 percent and 8.2 percent, respectively), which together account for a large part of consumption expenditures, were steeper in 1970 than in 1969. Wholesale prices on average increased last year at about half the 1969 pace of 5 percent, but this improvement also reflected a 1.2 percent decline in food prices in 1970 following a jump of 7.4 percent the previous year. Wholesale prices of industrial commodities, a better indicator of underlying inflationary pressures, climbed by 3½ percent, only about ½ percentage point less than the 1969 gain.

The economic slowdown in 1970 has, however, altered the nature of the current inflation significantly. Excess aggregate demand pressures were largely eliminated, and the inflation is now spurred on by cost factors, the most important of which is rapid wage rate gains. Compensation per man-hour in the private economy rose by 6.7 percent, continuing the trends of very high gains recorded since 1968. In part, this climb reflected historically high wage and benefit gains in major collective bargaining settlements, most of which extend for three years. During 1970 these settlements called for an average wage and benefit increase of 9 percent per annum over the life of the contract (see Chart 2) and about 13 percent in the first year. Contract settlements were particularly large in the construction industry, with first-year gains averaging nearly 20 percent. Of

Chart 2. **WAGES AND PRICES: Major labor contract settlements in 1970 led the advance in wages throughout the economy and underscored the extent of the current cost push on prices. Total consumer and total wholesale prices benefited from less inflation in the prices of agricultural products, but nonfood consumer prices were again sharply higher and industrial wholesale price increases moderated only slightly.**



Labor contract data are average annual wage and benefit increases over the life of contracts covering 1,000 or more workers, except for 1964 and 1965 data which are median increases. Price changes are based on index readings the last month before, and the final month of, the period plotted. Half-year data for 1970 are seasonally adjusted annual rates of change.

course, by virtue of the widespread publicity given these large settlements, their importance goes well beyond the relatively small proportion of the total labor force actually affected by the contracts themselves.

The large wage increases of 1970 substantially exceeded productivity gains, thereby contributing to upward cost pressures. Output per man-hour in the private economy edged up during the year by only 1½ percent, well below the long-run growth trend. The depressed productivity performance resulted in large part from the weakened state of the economy. In such circumstances, the downward adjustment of labor inputs usually lags that of output. This was particularly true in the first quarter of 1970. In that quarter, real GNP was on the decline, but businesses retained workers in anticipation of a quick resumption of economic expansion and productivity actually fell. Then, in the final quarter, the GM strike exerted a temporary depressing effect on average output per man-hour. Thus, productivity rose substantially only in the second and third quarters, when real GNP turned marginally higher and businesses at the same time aggressively trimmed work forces and overtime hours. Since the modest overall productivity gains of last year offset only a small part of the rapid climb in compensation per man-hour, labor costs per unit of output rose by about 5 percent.

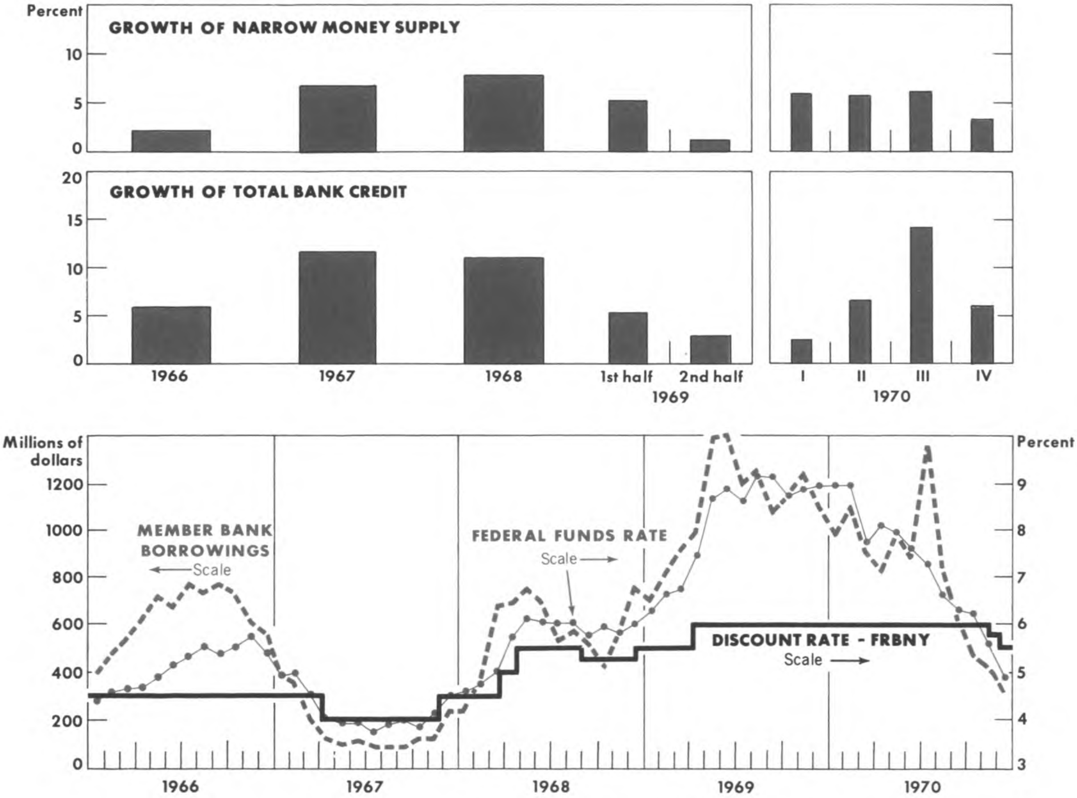
As the extraordinary stubbornness of the inflation became increasingly clear during the year, pressures mounted for additional policy actions that would control inflation without depressing economic activity further. At midyear, President Nixon requested a series of "inflation alerts" from the Council of Economic Advisers, calling public attention to major cases of inflationary cost and price increases. Two such alerts were issued, and in December the Administration initiated further limited measures designed to stem inflationary pressures. For example, steps were taken to expand the supply of oil in the hopes of easing the rapid increase in fuel prices. At the same time, many persons in and out of Government came to the view that an incomes policy would be a desirable addition to the battle against inflation. The Chairman of the Board of Governors of the Federal Reserve System and the President of this Bank both appealed publicly last year for the institution by the Administration of an incomes policy to guide private wage and price decisions.

Monetary Policy and Credit Market Developments

The attempt to bring inflation under some measure of control remained a major objective of monetary policy in 1970, although rising unemployment and increasing economic slack emerged early in the year as an additional major problem facing policy makers. The already difficult problems posed by the simultaneous existence of severe inflation and rising unemployment were further complicated several times during the year by the need to focus attention on turbulent and potentially dangerous conditions in the financial markets. Recognizing the economic downturn which emerged in late 1969, monetary policy was shifted early in the year from a stance of marked restraint toward a posture of moderate ease aimed at achieving a moderate acceleration of money supply and bank credit growth. However, liquidity pressures mounted during the spring, culminating in the summer's commercial paper market crisis. During this period, monetary policy was focused on promoting stability in the credit markets. A major step toward this objective was taken in June when the Federal Reserve suspended Regulation Q interest rate ceilings on large-denomination certificates of deposit of 30- to 89-day maturities. This action led to rapid flows of large CD's into commercial banks, further acceleration of bank credit growth, and a rechanneling of credit flows from direct short-term lending markets back into the banking system. Fears of a generalized liquidity crisis abated thereafter, and the primary thrust of monetary policy was redirected at promoting a moderate monetary expansion. Pursuit of this objective contributed to further declines in both short-term interest rates and net borrowed reserves over the remainder of the year. Short-term market yields, which had been generally around 9 percent early in the year, dropped below the 6 percent Federal Reserve discount rate by November, leading to two ¼ percentage point downward adjustments in the discount rate before the year-end.

MONETARY POLICY: A YEAR OF SHIFTING EMPHASIS. At the end of 1969, monetary policy was in a posture of active restraint. Both the money supply and bank credit had grown slowly in the preceding six months, interest rates were at or near record highs, and member bank borrowings at the Federal Reserve had averaged $1.1 billion in December (see Chart 3). The economic outlook at that point appeared to be for a short and shallow downturn followed by some recovery before the close of 1970. Thus, the move toward ease was made cautiously, in recognition of the still extremely strong inflationary psychology and widespread public skepticism that the required degree of monetary and fiscal

Chart 3. **MONEY, BANK CREDIT, AND MONEY MARKET CONDITIONS: The narrow money supply rose about 5½ percent last year, reflecting easier Federal Reserve policy. Bank credit growth also accelerated, as reserves were supplied in greater volume and banks once again became competitive in the issuance of large certificates of deposit. Reduced pressures on member banks' reserves were reflected in sharply lower Federal funds rates and reduced borrowings at the discount window. Toward the year-end, two cuts were made in the discount rate totaling ½ percentage point.**



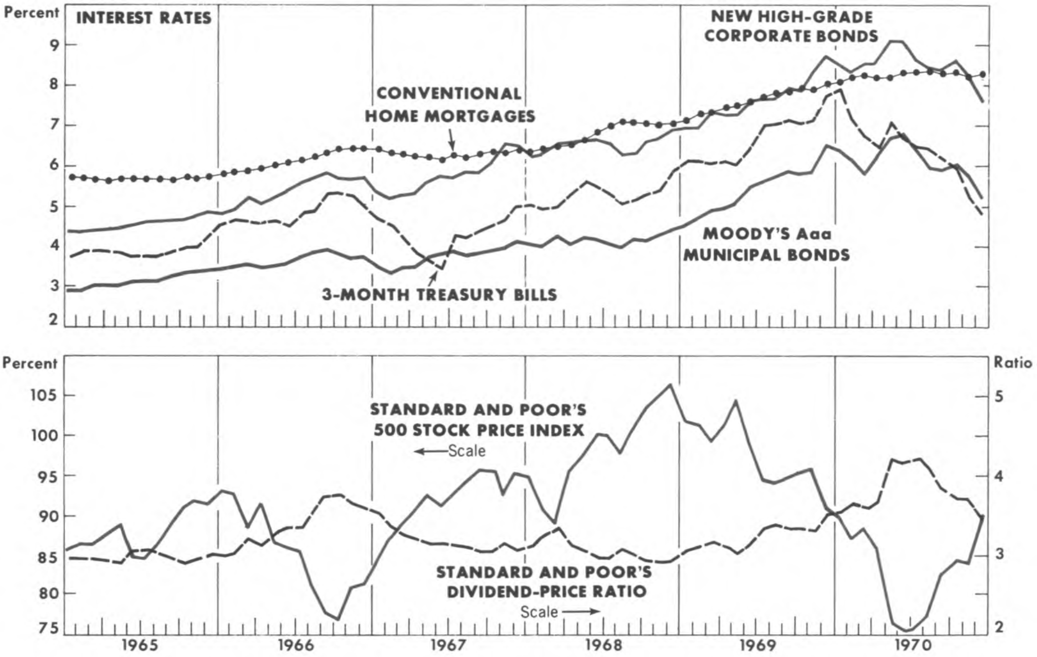
The money supply growth rates are computed from daily average levels in the final month of the preceding period and the final month of the period covered. Changes in bank credit include loan sales to affiliates and are based on levels for the last Wednesday of the period covered and the last Wednesday of the preceding period. Semiannual money and credit figures for 1969 and quarterly figures for 1970 are expressed at seasonally adjusted annual rates.

restraint would be pursued long enough to check inflation. Reflecting this easing, money supply growth increased and, on balance, interest rates fell through the first quarter. In an additional policy move, the Board of Governors of the Federal Reserve System raised Regulation Q interest rate ceilings to 4½ percent on passbook accounts and to a maximum of 7½ percent on large-denomination CD's maturing in a year or longer. This change, which took effect on January 21, was primarily designed to limit time deposit outflows from commercial banks. The higher Regulation Q ceilings, together with the downturn in short-term interest rates, contributed to modest growth in bank credit during the early months of the year.

The gradual easing of monetary policy during the first quarter gave rise to a growing expectation of further ease, which accentuated the rapid decline in short-term interest rates. However, early in the second quarter it became clear that credit demands were still relatively strong, as the scramble to rebuild depleted liquidity positions began to gain momentum. Moreover, market participants were increasingly coming to the view that the move toward monetary ease was more modest than they had initially anticipated, and this belief was reinforced when larger than expected money supply growth led the Federal Reserve to encourage temporary firming in the money market. Together, these factors set the stage for an upward adjustment in interest rates beginning in mid-April (see Chart 4) and led into a period, which was to last through midsummer, when the major emphasis of monetary policy was shifted to concern with financial market stability. The upward adjustment in interest rates began in the Treasury securities market, where anticipations of still lower short-term rates had been exceptionally strong. When these anticipations were disappointed, there was a major selling wave and a substantial increase in Treasury bill rates just prior to the major Treasury refunding in early May. As the refunding date approached, the Federal Reserve stepped up its purchases of Treasury securities to promote orderly market conditions. To complicate matters further, a large $3.5 billion cash offering was undertaken by the Treasury simultaneously with the refunding, and the entry of United States troops into Cambodia was announced. The financing was completed successfully, but the degree to which markets were strained is suggested by the fact that 100 percent subscription awards were made on the cash offering for the first time in at least thirty-five years. Subscription awards on cash offerings typically range around 25 percent.

The upward adjustment in interest rates spread to other financial markets through May and June, as additional demand for debt financing from state and

Chart 4. INTEREST RATES AND STOCK PRICES: Short-term interest rates moved sharply lower in 1970, yet long-term bond yields remained near their record highs until the closing months, reflecting enormous demands on the capital markets. Home mortgage rates remained at record postwar levels despite a vastly improved supply of mortgage funds. Stock prices began to recover after midyear, following a spring drop that had carried prices to a seven-year low and raised current dividend yields to a twelve-year high.



local governments and corporations pushed rates back to record levels. Uncertainties about the economy and the early May movement of United States troops into Cambodia also affected the financial markets, and contributed to a sharp decline in stock market prices, which reached a seven-year low later in the month. Matters reached crisis proportions on Friday, June 19, when efforts to secure Government-backed emergency credit for the failing Penn Central Transportation Company collapsed. This event made it clear that the railroad would be forced to petition for reorganization under Federal bankruptcy law within a few days, defaulting on some $82 million in outstanding commercial paper. Recognizing that these circumstances could lead to serious disruption of the commercial paper market, the Federal Reserve Bank of New York acted on Saturday, June 20. Member banks in the Second Federal Reserve District were informed that the Federal Reserve—in its capacity as lender of last resort—would regard discount window borrowings favorably if used in support of loans to creditworthy borrowers unable to roll over maturing commercial paper. The Penn Central bankruptcy petition was filed on Sunday, June 21, leading to a $3 billion contraction of commercial paper in the following three weeks and generating widespread fears of a general liquidity crisis as corporations unable to roll over maturing paper scrambled for scarce funds in other markets. Additional Federal Reserve actions were taken during the week of June 22. Discount officials at other Federal Reserve Banks conveyed similar information to member banks in their districts, and member bank borrowings rose by about $0.5 billion to average $1.4 billion during July (see Chart 3). Additional reserves were provided through open market operations during this period. In a further move on June 23, the Board of Governors suspended Regulation Q interest rate ceilings on large CD's maturing in 30 to 89 days. As a consequence, banks experienced massive inflows of large CD's which provided a more permanent source of funds to fill the credit gap created by the rundown of commercial paper.[1]

Following these actions, fears of a general liquidity crisis subsided and the financial markets stabilized. Consequently, in July the primary thrust of monetary policy was again redirected at promoting a moderate monetary expansion. However, it was clear that the economy was weaker than expected, leading to further easing of money market conditions in an effort to realize the desired rate of money supply and bank credit growth. In the fall, the long GM strike clouded the policy picture in several ways. The strike made it more difficult to determine strengths and weaknesses in the economy and apparently contributed to a weakening of the public's demand for cash, hindering efforts to achieve the desired

[1] *In a follow-up action aimed at equalizing treatment of CD's and bank-related commercial paper liabilities, the Federal Reserve announced on August 17 that all member bank funds arising from commercial paper sales by bank-related companies would be classified as deposit liabilities subject to reserve requirements. Banks were required to hold 5 percent required reserves against paper maturing in thirty days or more, and shorter dated paper was classified as demand deposits. Prior to the change, commercial banks had been able to secure reserve-free funds by selling loans to affiliated corporations in exchange for the proceeds of commercial paper sold by these bank-related firms. At the same time, the reserve requirement against time deposits in excess of $5 million was reduced from 6 percent to 5 percent. The October 1 effective date of these changes was timed to coincide with the fall period of seasonal reserve needs.*

rate of monetary expansion. Hence, money supply and bank credit growth slowed somewhat, and by the year-end short-term interest rates fell to their lowest levels since the fall of 1968. Long-term rates, which had remained at very high levels through much of the year, also began to retreat toward the end of the year. The prime lending rate charged by large commercial banks was lowered four times in the last third of the year to a level of 6¾ percent, and the Federal funds and Treasury bill rates dropped below the 6 percent Federal Reserve discount rate which had been in effect since April 1969. Thus, in technical responses to these interest rate declines, the Federal Reserve Banks lowered their discount rates a total of ½ percent to 5½ percent. The change occurred in two ¼ percentage point steps, one initiated on November 10, the other on November 30. Also on November 30, the Board of Governors announced several amendments to Regulations M and D pertaining to Euro-dollar reserve requirements which, taken together, were designed to provide an inducement to commercial banks to limit the rapid repayment of Euro-dollar borrowings. The repayment of such balances had contributed to the sizable balance-of-payments deficit on an official settlements basis during the year.

In response to the policies of moderate monetary expansion, the rate of growth of the money supply and total bank credit quickened in 1970 (see Chart 3). The money supply—the public's holdings of currency and checking deposits—expanded by 5.4 percent following an increase of only 3.1 percent in 1969. Since the money stock grew at an annual rate of only 1.2 percent in the second half of 1969, the acceleration in growth during 1970 was considerably more rapid than is suggested by the annual data. Money balances turned over at a somewhat slower pace in 1970 than in 1969. The income velocity of circulation—GNP divided by the money supply—turned downward after a 3 percent increase in the previous year. The decline in velocity probably, in part, reflected lower interest rates on alternative liquid financial assets as well as attempts of consumers and businesses to rebuild depleted liquidity positions.

A large revision in the money supply series was announced in late November, aimed primarily at elimination of a major downward bias in the money supply data. This bias arose from foreign exchange transactions, Euro-dollar borrowings, and other foreign payments flowing through certain institutions specializing in international banking, in particular Edge Act corporations and United States agencies and branches of foreign banks. These banking institutions had been accounting for a growing volume of transactions of this nature which in turn had resulted in a rising amount of "cash items in the process of collection" on the books of domestic commercial banks. Cash items are subtracted from total demand deposits in calculating the demand deposit component of the money supply in order to eliminate double counting. However, since the balances due to the institutions mentioned above are not reported as money supply deposits, the subtraction of the resultant cash items led to a downward bias in the money supply as previously measured. By mid-1970 the bias had reached quite sizable proportions, and the November revisions raised the reported money supply level by about $7 billion and significantly increased money supply growth rates over the first three quarters of 1970. Prior to the revisions, money supply growth rates had been reported at 3.8, 4.2, and 5.1 percent in the first three quarters, respectively. Correction for the downward bias raised these three quarterly estimates to 5.9, 5.8, and 6.1 percent. Money supply growth slowed to a 3.4 percent rate in the fourth quarter, owing in part to a temporary reduction in the public's demand for cash balances associated wtih the strike at GM.

Total bank credit expanded at a 7.4 percent rate in 1970, nearly double the 1969 gain. Most of the bank credit growth occurred in the third quarter of the year, following the suspension of Regulation Q ceilings on short-dated CD's in late June. This action, together with the across-the-board raising of Regulation Q ceilings in January and declining short-term interest rates, enabled commercial banks to expand large CD's by $15½ billion in the last eleven months of the year, more than offsetting the $14 billion CD loss between December 1968 and January 1970. As banks became more confident of their ability to attract and hold CD's, they reduced dependence on nondeposit funds which had been used heavily the preceding year. Toward the year-end, most banks had reduced Euro-dollar liabilities below their original reserve-free bases and, despite an increase in marginal reserve requirements designed to discourage further repayments, total Euro-dollar borrowings of banks fell further in December. In addition, use of bank-related commercial paper diminished markedly following the summer's crisis in that market, and Federal Reserve regulation changes announced shortly thereafter established reserve requirements on such liabilities. The net effect of all these developments was to increase rapidly credit flows into the banking system and shift the liability structure of commercial banks back into more traditional patterns. Moreover, these developments were accompanied by dramatic shifts in the composition of bank credit which greatly enhanced commercial bank liquidity.

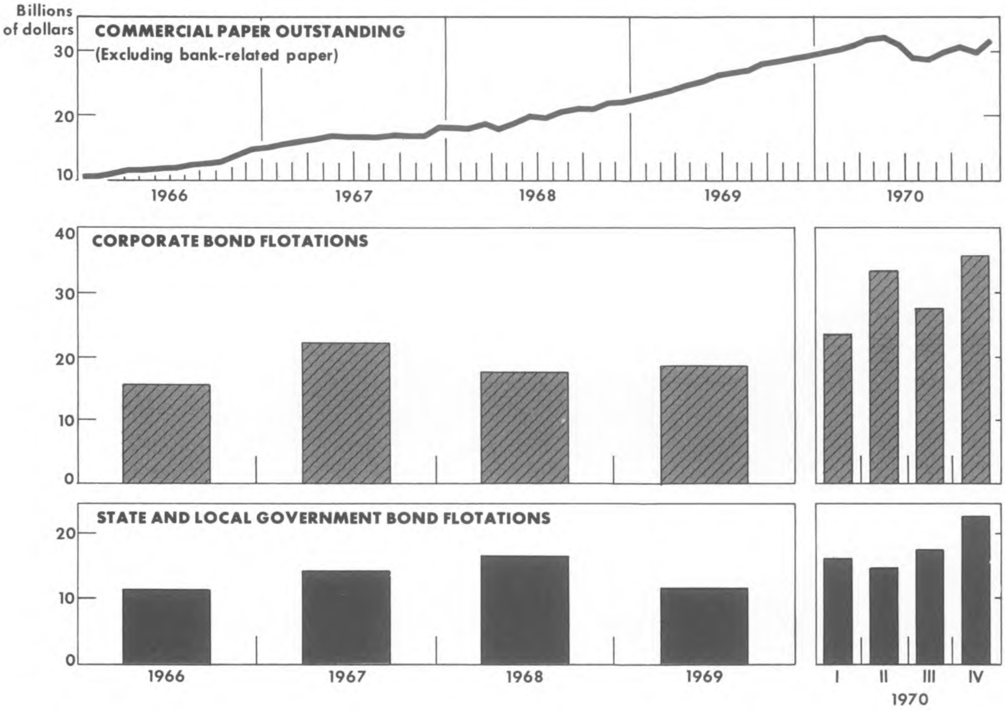
A YEAR OF LIQUIDITY REBUILDING. The major share of increased commercial bank deposit resources was used to acquire liquidity-building investments, as net loan demand waned considerably. In 1969, commercial banks had liquidated some $9.6 billion in securities holdings to finance additional loan expansions. This pattern was reversed in 1970, when bank holdings of Treasury and municipal securities rose by $20.4 billion. About $14.3 billion represented purchases of state and local government securities, which were spurred by a July Internal Revenue Service ruling that interest costs incurred by a bank on funds obtained in the ordinary course of business would remain tax deductible even if the bank invests in tax-exempt securities. In contrast, net demands for bank loans moderated throughout much of 1970, and the 3½ percent increase in total bank loans outstanding was the smallest since 1953. Business loan demand was weak throughout the year, reflecting reduced capital outlays, smaller inventory accumulations, and the shifting of existing corporate liabilities into long-term debt. Bank lending showed strength only in the third quarter, when loans to finance companies surged in the wake of the commercial paper crisis.

Although demands for short-term bank loans were moderate, long-term financing in the capital markets soared in 1970 as a wide array of borrowers entered the markets for funds that were available on somewhat easier terms than in 1969. This extraordinary demand limited the decline in long-term interest rates, and for much of the year borrowing costs in the capital markets were not much below the peak levels reached in 1969.

Liquidity rebuilding appeared to be a dominant element in the corporate capital markets last year, as reflected in the acceleration of both debt and stock issues at a time when bank loan availability was increasing and the cost of bank credit was declining. Total corporate bond issues came to $30 billion in 1970, far above the 1969 total of $18.3 billion and a new record by a wide margin (see Chart 5). Only a part of this increased borrowing could be ascribed to the fall in corporate profits that moderately reduced the flow of internally generated funds available to finance capital spending and other needs. A major proportion was used to repay short-term borrowings at banks and in the commercial paper market and to rebuild holdings of liquid assets, such as Treasury bills and bank CD's. The term structure of interest rates reflected this fact quite strongly. Thus, new high-grade corporate bond issues sold at an average of about 8½ percent throughout most of the year—except for a move upward in May and June and a drop at the very end—while Treasury bill rates declined sharply from 8 percent at the start of the year to less than 5 percent at the close.

The United States Treasury again became a major borrower in the capital markets in 1970, reversing the 1969 trend when $0.9 billion of marketable Treasury securities had been retired. The sluggish economy cut deeply into expected tax revenues throughout the year, Federal outlays climbed significantly in the second half, and the Treasury borrowed a total of $11.8 billion. Despite this sharp increase in the volume of outstanding Federal debt, interest rates on all maturity categories of Treasury securities declined sharply, as both banks and

Chart 5. **COMMERCIAL PAPER OUTSTANDING AND BOND FLOTATIONS BY MAJOR SECTORS: Following a long period of rapid expansion, the volume of nonbank commercial paper outstanding contracted sharply through 1970's summer crisis. With declining interest rates, flotations of both corporate and state and local government bonds accelerated to record rates.**



Commercial paper data are seasonally adjusted end-of-month levels. For securities issued from 1966 through 1969 data are total annual flotations, while data for 1970 are quarterly flotations at annual rate.

corporations purchased them in volume primarily to fill out depleted liquidity reserves.

Borrowing in the tax-exempt bond market was also a record last year (see Chart 5). State and local governments sold $17.7 billion of new debt issues, well above the $11.5 billion of 1969. The heavy borrowing in this market undoubtedly reflected some catching-up on the backlog of issues that had arisen as the result of earlier cancellations. Borrowing conditions in the tax-exempt market throughout 1969 and early 1970 had forced many governments out of the bond market, either because the rates being demanded on these issues exceeded ceiling rates that could be paid under state or local statutes or because buyers for the issues simply could not be found at rate levels issuers were willing to pay. However, by mid-1970 the market had recovered and interest rates on top-rated issues had dropped to around 6 percent. The lower rate levels made statutory borrowing ceilings much less of a problem and new issues flooded the market, tending to peg the tax-exempt rate at the 6 percent level. It was not until late in the year that tax-exempt rates were able to drop much below 6 percent.

Another major development in the financial markets last year was the much improved condition that emerged in the supply of mortgage credit from private lenders, most notably the mutual savings banks and savings and loan associations. Thus, despite slightly reduced Federal credit agency activity, the mortgage market eased, though more so in availability than in borrowing costs. The rise in conventional mortgage rates did come to a halt and rates began to decline later in the year, when the ceiling on Federally insured mortgages was also lowered. The reason for the easing of the mortgage market was, as noted earlier, the sharp improvement in the competitive position of the mortgage specialized thrift institutions. The rates paid on deposits rose—as a result of both higher permissible rate ceilings and improved earnings on their portfolios—and competing rates in the securities markets dropped. Thus, as the year wore on, thrift deposits once again became a relatively attractive investment for savers. At the same time, the thrift institutions also benefited from the surge in consumer savings that occurred last year.

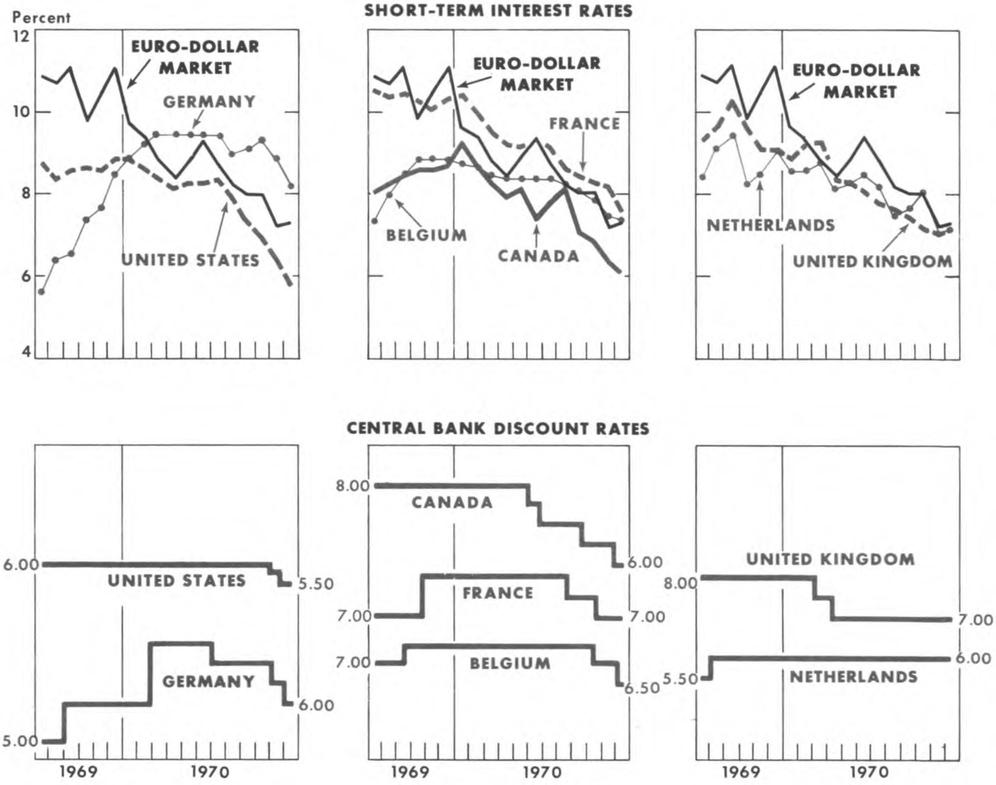
By the year-end, it appeared that the prior substantial easing in short-term rates was beginning to spread to the longer term markets. In November and December, all major long-term yield series declined. The new issue rates on high-quality corporate bonds, for instance, dropped a full percentage point to close the year at about 7½ percent, and the tax-exempt yield was down almost as sharply.

THE UNITED STATES AND WORLD ECONOMY IN 1970

The international financial markets were characterized by very large flows of short-term capital in 1970, as changes in monetary policies associated with shifting economic conditions among the principal industrial countries resulted in a sharp alteration in the international pattern of interest rates. Unlike other recent years, however, these capital flows were largely free of speculation over exchange rate relationships. Parity adjustments in 1967 and 1969, together with the changing configuration of cyclical economic conditions in the world, had contributed to a more balanced pattern of current-account transactions among the major trading nations and thus had alleviated some of the accumulated strains on the international monetary system.

Comparatively restrictive monetary policies were pursued in most major countries abroad in 1970 for a variety of reasons. The primary target of these policies remained strong inflationary pressures which persisted even where economic activity had slackened. On the other hand, with an economic slowing under way in the United States, Federal Reserve policy began to move toward a posture of less restraint as the year opened, and the trend to easier financial conditions became more pronounced during the second half of the year when credit demands contracted markedly. As United States banks were increasingly able to meet their liquidity needs in the domestic market, particularly following the partial suspension of interest rate ceilings on certificates of deposit in June, they repaid their higher cost Euro-dollar borrowings on a very large scale, thereby transmitting downward pressure to Euro-dollar rates. By the year-end, United States banks' liabilities to their foreign branches had been reduced by some $6 billion to approximately $7 billion, and the rate on three-month Euro-dollar deposits had fallen from about 10 percent per annum to 7 percent (see Chart 6). Concomitantly, funds moved through the Euro-dollar market into the domestic markets of countries where stringent credit conditions and high interest rates prevailed. Upon conversion into local currencies for domestic use, the dollars tended to accumulate in foreign official reserves. The dollar accruals represented a massive—and in some cases unwanted—inflow of liquidity, although a large proportion were used by foreign central banks to repay out-

Chart 6. SHORT-TERM INTEREST RATES AND CENTRAL BANK DISCOUNT RATES: As interest rates on dollar instruments declined sharply, many monetary authorities abroad reduced their discount rates, in part to forestall large flows of short-term capital into domestic money markets.



The interest rates shown for the foreign countries are the domestic short-term rates that are most competitive with dollar-denominated rates abroad. The United States rate is the market yield on prime four- to six-month commercial paper. The Euro-dollar rate is for deposits of three months' maturity.

standing foreign debts. These flows of funds contributed to a large-scale growth in, and redistribution of, official international reserves in 1970 and led to an enormous deficit in the United States balance of payments on the official settlements basis.

The unexpectedly large buildup of dollars in world reserves, coming at a time when international liquidity was deliberately increased through the initial allocation of special drawing rights (SDR's), evoked renewed concern about the chronic international payments imbalance of the United States. It also pointed up the difficulties of pursuing independent monetary policies in a world of high capital mobility, and sparked considerable discussion of the need to find additional and more effective methods to cope with domestic inflationary pressures without sacrificing the goal of external payments equilibrium.

Economic Conditions Abroad

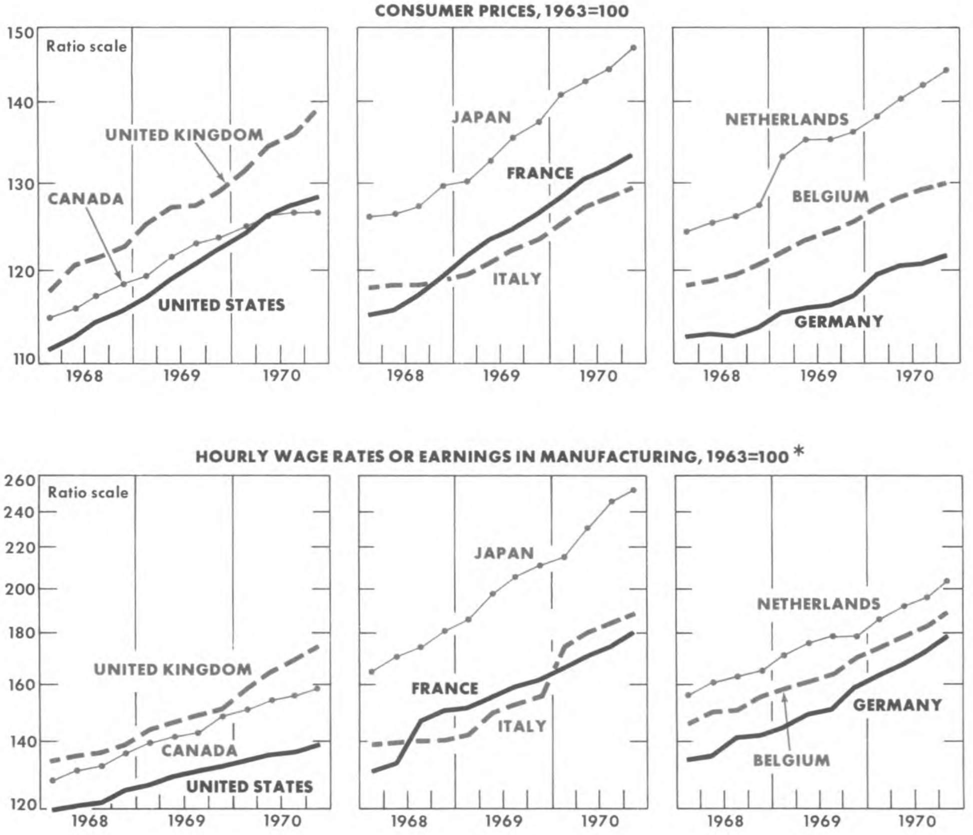
INFLATION PERSISTS. Inflation, which in 1969 had accelerated in most industrialized countries abroad, continued to be a widespread and worrisome problem in 1970. Although there were a few signs of moderation in the rate of price rise in some countries as the year progressed, it was increasingly apparent that the roots of the worldwide inflation had been deeply planted and that a return to price stability was likely to be a painful process. Much of the impetus for the present inflationary spiral abroad can be traced to the cyclical upswing in economic activity in Western Europe and Japan that began in mid-1967. By 1969, the upward pressure on prices from excess demand had induced many countries to apply restrictive stabilization policies. However, much as in the United States, the earlier demand-pull inflation gave rise to heavy cost pressures, primarily in the form of wage demands far in excess of productivity gains, which further bolstered inflation in 1970 (see Chart 7).

MOST COUNTRIES ABROAD MAINTAIN RELATIVELY HIGH INTEREST RATES. The desire to contain these inflationary pressures was a major factor behind the maintenance of restrictive monetary policies by many foreign monetary authorities in 1970. Germany, Japan, the Netherlands, and Belgium maintained high interest rates, as booming demand conditions continued to exert substantial upward pressure on prices. Although some signs of slackening in capacity pressures began to appear in most of these countries in the latter part of the year, rapid wage increases sustained the inflationary trends. Britain, Italy, and France, where aggregate demand was not pressing on capacity, also continued to experience substantial inflation arising out of large wage settlements. The decision to maintain relatively high interest rates in these countries reflected not only the battle against inflation, but also a desire to rebuild or bolster their international reserves. Italy, in fact, raised domestic interest rates early in the year in an attempt to curb short-term capital outflows and to encourage borrowing in the Euro-dollar market. Large flows of interest-sensitive funds into some countries, however, threatened to undermine their policies of monetary restraint aimed at restoring domestic price stability, and led to a variety of policy actions to curtail inflows while maintaining internal restraint.

In Germany, the pace of economic activity remained very buoyant in the first part of the year. There were few signs of any deflationary effect from the October 1969 revaluation. The merchandise trade surplus continued at roughly the 1969 rate, although Germany's current account did deteriorate as service and transfer payments swelled. With prices and wages rising rapidly, the German Federal Bank moved to tighten monetary policy in March, principally through a substantial increase in the discount and Lombard rates. As a result of the relatively high domestic short-term interest rates that developed, German banks—and even more importantly German corporations—began to borrow very heavily in the Euro-dollar market in an attempt to alleviate pressures arising from the domestic credit squeeze. This inflow of short-term funds was at times augmented by flurries of speculative mark purchases—particularly in the somewhat nervous market atmosphere following the floating of the Canadian dollar in early June—and was reflected in sizable dollar reserve gains by the German Federal Bank in the spring.

The maintenance of a restrictive monetary policy involving high interest rates was increasingly hampered by substantial borrowing in the Euro-dollar market by German corporations and banks during the second half of the year when the decline in Euro-dollar rates accelerated. The German Federal Bank acted to reduce the incentive for German banks and businesses to borrow abroad by lowering its discount and Lombard rates in three successive steps starting on July 1. In an effort to maintain a tight rein on domestic liquidity, the monetary authorities sharply raised the banks' minimum reserve requirements in the fall months and sought specifically to curtail nonbank borrowing abroad by extending the scope of reserve requirements to cover bank-guaranteed liabilities. With short-term money market rates in Germany remaining well above Euro-dollar rates, the inflow of funds borrowed abroad continued through most of the second half of the year. This was reflected in a further sharp buildup in the dollar reserves of the Federal Bank; by the middle of the fourth quarter, official reserves had climbed back to the level reached prior to the revaluation. However,

Chart 7. CONSUMER PRICES AND WAGES IN MAJOR INDUSTRIAL COUNTRIES: Prices continued to rise at a rapid rate in 1970, although there were some signs of a deceleration in a few countries by the second half of the year. Inflationary pressures were bolstered by rapidly increasing wages.



*Index for Belgium based on hourly earnings in manufacturing, mining, and transport; that for Japan, on monthly earnings in manufacturing. Fourth quarter based on partial data.

the inflows of short-term capital and accompanying central bank reserve gains tapered off sharply toward the year-end, as reductions in the discount and Lombard rates in November and December finally produced a significant reduction in the incentive for German borrowers to enter the Euro-dollar market.

The upward pressure on prices exerted by strong aggregate demand similarly lay behind the maintenance of a restrictive monetary stance in the Netherlands, Belgium, and Japan during most of the year. In the Netherlands, the combination of surging demand and cost pressures arising out of large wage settlements led the authorities as the year progressed to reinforce anti-inflationary policies by higher taxes, credit restrictions, and finally the institution of a price freeze in November. While the Dutch current account deteriorated as a result of booming domestic demand, official reserves were nevertheless augmented by sizable net capital inflows, occurring mainly in the second half of 1970. Much of the capital inflow was due to foreign purchases of recently issued guilder-denominated securities, stimulated in part by rumors of a possible guilder revaluation.

In Belgium and Japan, however, some signs of an easing in pressures on capacity began to appear during the latter part of the year, and the monetary authorities in those countries were induced by the steep decline in international interest rates to lower their discount rates so as to discourage excessive inflows of short-term capital. Thus, reserve gains in these countries came to be more fully associated with strong trade accounts, although short-term capital flows remained a contributory factor.

The effort to contain strong inflationary pressures, largely of a cost-push variety, contributed to the maintenance of relatively high interest rates in Britain, France, and Italy, even though a considerable amount of slack existed in their economies. This decision was reinforced by external considerations, as these countries adjusted their domestic interest rates to strengthen their international reserve positions.

Inflows of short-term funds, partly responding to interest rate differentials and partly reflecting the reversal of leads and lags, contributed to very large reserve gains by Britain and France, particularly in the first half of 1970. In addition, these countries enjoyed strong performances on current account as a result of sluggish or slowing domestic demand and the effects of both recent currency devaluations and selective policy measures aimed at stimulating exports and holding down imports. A large part of these reserve gains were used by France and Britain to repay previously incurred short- and medium-term foreign indebtedness. By midyear, more than $1 billion of the Bank of England's debts to the Federal Reserve and the United States Treasury had been repaid, and progress was made in reducing other foreign debts as well. By June the Bank of France had been able to liquidate completely the $1.5 billion in foreign short-term debts it had contracted prior to the franc devaluation in August 1969. During the second half of the year, as the buildup in cost pressures stemming from spiraling wage settlements threatened to undermine the recent strength in Britain's trade balance, the monetary authorities maintained relatively high interest rates despite the continued stagnation in business activity. Britain's reserves thus continued to benefit from inflows of interest-sensitive funds, which bolstered the demand for sterling from time to time, as well as from the surplus on current account, and the Bank of England was able to reduce further its outstanding foreign indebtedness. In France, with external equilibrium achieved by midyear, the focus of stabilization policy shifted toward stimulating lagging demand and checking rising unemployment. The Bank of France reduced its discount rate as international interest rates declined. In addition, selective consumer credit restraints were relaxed during the course of the year, and ceilings on bank lending were lifted in October.

Canada also pursued a fairly restrictive monetary policy during the beginning of 1970, as wage increases continued to exert upward pressure on prices despite sluggish domestic demand. Consequently, short-term capital began flowing into Canada as Euro-dollar rates fell. Canada's reserves were also bolstered by an expansion in the Canadian trade surplus, reflecting the domestic slowdown as well as a sharp growth in exports to countries abroad where economic activity was booming. Canada moved to reduce the interest incentive for short-term capital inflows by lowering the discount rate in May and, at the same time, by raising the banks' minimum secondary reserve requirements to offset domestically the effects of both the discount rate cut and the liquidity created by the capital inflows. However, with the trade account still in heavy surplus and the Canadian balance of payments entering its seasonally strong period, these actions had little apparent effect on curbing the capital inflows which, indeed, began to accelerate as speculation over a possible parity adjustment grew. To curtail further excessive reserve gains, the authorities announced that, effective June 1, the Canadian dollar for the time being would be allowed to appreciate on the exchange market in response to supply and demand forces. The deflationary force exerted on the domestic economy by this floating of the Canadian dollar permitted a further reduction in the bank rate at that time. These actions served to check short-term capital inflows, and the Canadian authorities were able to direct policy actions more to domestic considerations later in the year. As signs of an easing of inflationary pressures emerged, policies were aimed at stimulating sluggish domestic demand and reducing rising unemployment. The Bank of Canada reduced its discount rate several times and, in addition, the Canadian government moved further toward a posture of fiscal stimulus in December in an attempt to reduce a level of unemployment that was approaching 7 percent of the labor force. Although the floating of the Canadian dollar is conceived as a temporary measure, at the year-end steps had not yet been taken to reestablish a new parity.

United States Balance of Payments

Only modest progress was made in curtailing the net flow of dollars abroad in 1970. The improvement was primarily attributable to an expansion in the United States trade surplus, which benefited in 1970 from strong demand from countries abroad where high levels of economic activity prevailed. Much of this improvement was offset, however, by greater direct investment abroad by United States companies and by a reduction in foreign purchases of United States corporate securities. Despite some reduction in the recorded liquidity deficit, the dollar weakened sharply on the foreign exchange market, as easing credit conditions in the United States led to a sharp decline in the amount of private foreign-owned dollar balances employed in this country. Foreign private dollar holdings were instead redeployed in foreign loan markets, where the borrowed dollars were sold to obtain local currencies. The absorption by foreign monetary authorities of these excess dollars in exchange market operations produced a massive shift into deficit in the United States balance on official settlements.

MASSIVE DEFICIT EMERGES ON OFFICIAL SETTLEMENTS BASIS. In 1968, and particularly 1969, increasingly stringent monetary conditions in the United States, together with restrictive regulatory ceilings on deposit interest rates, had led to a substantial attrition in the volume of banks' time deposits. To replace these funds, major United States banks borrowed very heavily in the

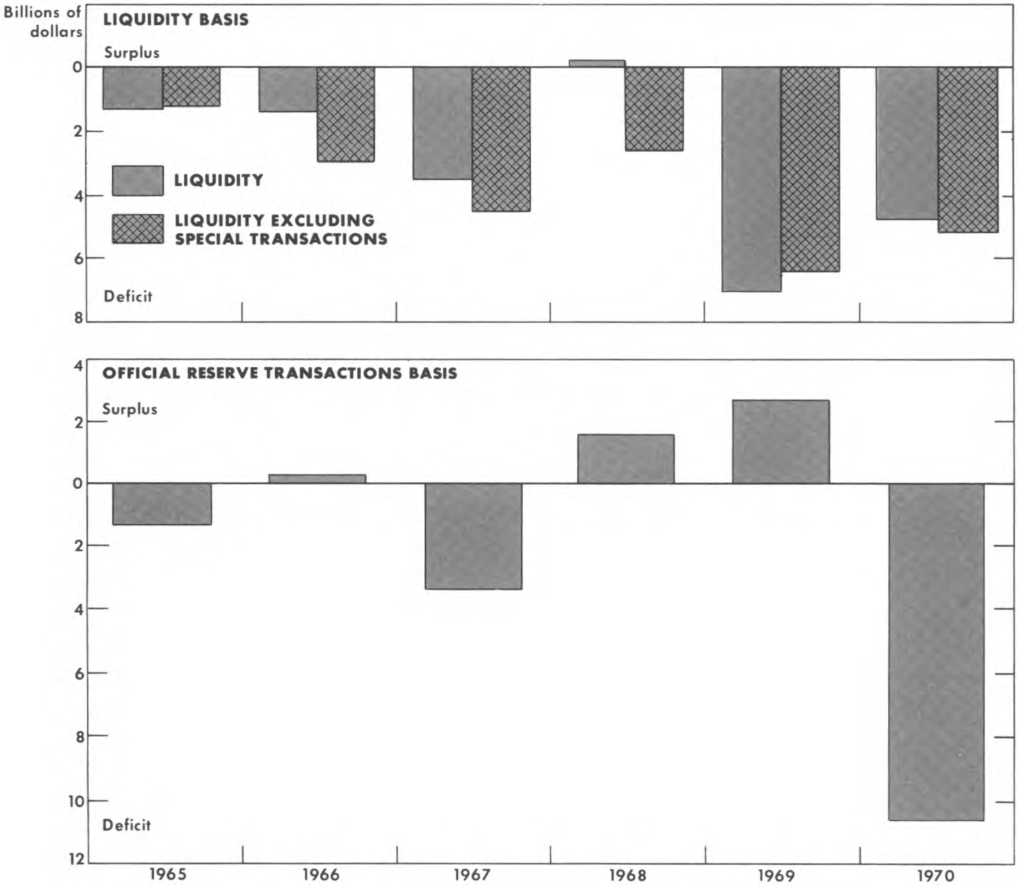
Euro-dollar market through their growing network of overseas branches, absorbing not only the net outflow of dollars generated by the liquidity deficit but also drawing dollars out of existing foreign official balances. As a consequence, the official settlements balance was in surplus by $1.6 billion in 1968 and $2.7 billion in 1969, and the dollar was relatively strong on the foreign exchange market. In 1970, however, this flow of liquid funds was reversed and was reflected in a tremendous $10.7 billion official settlements deficit for the United States (or $9.8 billion taking account of the $867 million initial allocation of SDR's).

As noted earlier, up to a point the flow of dollars to foreign central banks was not an unwelcome development, as it allowed certain countries to make substantial foreign debt repayments or rebuild reserves. In other instances, however, the continued absorption of excess dollars from the market by the monetary authorities was accompanied by increased recourse to the Federal Reserve System swap network. During the first half of the year, the Federal Reserve System remained a net creditor despite the liquidation of United Kingdom drawings, as the System's foreign indebtedness was reduced and Italy drew on the swap facility to cover reserve losses. Subsequently, the System's position shifted to one of net indebtedness as it was repeatedly called upon to provide exchange risk cover for dollar accruals by Belgium, the Netherlands, and Switzerland.

The financing of the 1970 deficit on the official reserve transactions basis was largely achieved through an accumulation of $7.3 billion of claims on the United States by foreign official institutions. The $3.3 billion decrease in United States monetary reserves ($2.5 billion including the SDR allocation) was mainly attributable to a $2.2 billion net decline in United States holdings of foreign convertible currencies, as monetary authorities abroad utilized dollar accruals to extinguish earlier drawings on mutual swap facilities with the United States. The $0.8 billion decline in gold holdings was largely the result of a resale of gold to the International Monetary Fund from its gold investment fund in the United States and of a gold payment to the IMF associated with the increase in the United States quota. Despite this quota increase, the United States IMF position declined $0.4 billion. Thus the 1970 official settlements deficit, although the largest on record, did not lead to massive strains on the international financial system. But there should be no doubt that the continued willingness of the international financial community, official as well as private, to finance the United States deficit through accumulations of dollars is likely to depend upon tangible evidence that the United States is dedicated to the task of restoring equilibrium in the balance of payments.

MODEST PROGRESS MADE IN REDUCING LIQUIDITY DEFICIT. In contrast to the deterioration in the official settlements balance, the change in the external position of the United States as measured by the liquidity balance

Chart 8. UNITED STATES BALANCE OF PAYMENTS: Excluding special transactions, the United States liquidity balance showed some improvement in 1970, but the excess of payments over receipts remained at an unacceptably high level. The official settlements balance swung massively into deficit, as United States banks repaid Euro-dollar borrowings on a large scale.



Data on United States balance of payments exclude initial allocation of special drawing rights.

showed a large, but mainly statistical, improvement last year, moving down from a recorded deficit of $7.0 billion in 1969 to a deficit of $4.7 billion in 1970 ($3.8 billion including the initial allocation of SDR's). Much of this improvement, however, represented the absence in 1970 of exceptionally adverse factors which had temporarily enlarged the deficit in the previous year. On the one hand, the liquidity balance in 1970 benefited superficially from a $0.4 billion conversion of liquid into nonliquid claims on the United States by foreign official institutions, largely reflecting the placement of dollar reserve gains by Canada into long-term instruments. This contrasted with 1969, when such special financial transactions resulted in a net shift from the nonliquid to liquid category and contributed adversely to the recorded balance by some $0.6 billion. Such shifts represent no fundamental change in the underlying external position of the United States, and when the published figures on the liquidity balance are adjusted for these transactions, it is clear that the $5.1 billion deficit in 1970, although less than the $6.4 billion deficit in 1969, was somewhat greater than the average net outflow in the 1966-69 period (see Chart 8).

Equally important, the liquidity deficit in 1969 had been inflated by circular flows of United States short-term funds to the Euro-dollar market in response to the high yields available there and then back to the United States as banks in this country absorbed the dollars through their foreign branches. Last year, however, in the absence of strong United States bank demand for Euro-dollars, rates in that market fell, thereby reducing the attractive yield differential. Thus, the distortion of the liquidity balance from such flows—which are largely unrecorded—was much less in 1970 than in 1969.

After accounting for special financial transactions and abnormal short-term capital flows, the underlying year-to-year improvement in our external position was of much more modest proportions than the recorded figures would suggest.

CURRENT-ACCOUNT SURPLUS WIDENS. After five years of deterioration, the surplus on current account expanded in 1970, as the merchandise trade surplus widened to $2.2 billion from the very disappointing level of $600 million registered in both 1968 and 1969. However, the bulk of the trade surplus was achieved in the first half of the year, with a significant deterioration setting in thereafter, and the improvement partly reflected the absence of the depressing effect of the 1969 dock strike. Furthermore, the magnitude of the 1970 surplus remained low by historical standards, and any optimism for future developments must be tempered by the fact that the pattern of cyclical conditions in the world was exceptionally favorable to the United States trade position in 1970. Since that pattern cannot be expected to continue indefinitely, it is increasingly important for the United States to restore price stability in order to enhance the competitiveness of domestic products on world markets.

The expansion of the trade surplus in 1970 was attributable to a 15 percent growth in United States exports to $42 billion and reflected, to a large extent, the high levels of economic activity abroad, particularly in Western Europe and Japan. Much of the export expansion was in shipments of machinery, manufactured goods, and industrial raw materials, and the bulk of the export growth occurred in the first half of the year when pressures on foreign industrial capacity were particularly severe. As these demand pressures abroad began to ease in the second half of 1970, the growth of United States exports tapered off sharply. In addition, exports were bolstered by very large shipments of agricultural products throughout the year.

Despite the reduced level of economic activity in the United States, merchandise imports rose rapidly in 1970, although a portion of the 11 percent rise reflected higher import prices. The import growth was primarily centered on an increase in purchases of food and consumer goods from abroad, such as automobiles from Western Europe and Japan, and was associated, to some extent, with the very sharp rise in disposable personal income in the United States. The further increase in prices in the United States may also have resulted in additional substitution of imported goods for domestic products.

The balance of other current-account transactions showed little change in 1970. The growth in receipts from investment income slowed from 1969, largely as a result of a smaller increase in income from United States direct investment abroad, but this was matched by a smaller growth in payments to foreigners on their investments in the United States, mainly reflecting the decline in interest rates. After five years of fairly rapid growth, the deficit on military transactions was essentially unchanged in 1970 as military expenditures leveled off.

PRIVATE LONG-TERM CAPITAL ACCOUNTS WORSEN. A significant portion of the favorable developments on current-account transactions last year was offset by a larger net outflow of private nonliquid capital. The deterioration principally occurred in the first half of the year when the precipitous decline in United States stock prices resulted in a net withdrawal of foreign funds from the United States stock market. Although foreign confidence in the stability of the United States market was somewhat shaken by the failure of several large brokerage firms and the financial troubles of the Investors Overseas Services empire, the net liquidation of outstanding holdings of United States equities by foreigners was relatively modest and was attributable to a tapering-off of purchases, as foreigners were apparently reluctant to commit new funds to the market during a period of uncertainty. Consequently, when the market began to rally, net purchases by foreigners resumed and exceeded the net sales of the first half. Still, for the year as a whole the net $0.7 billion investment in United States equities was far below the $1.6 billion figure of the previous year.

United States corporate expenditures on foreign plant and equipment facilities boomed last year. Although the amount of funds United States corporations were able to raise abroad for use both overseas and domestically was similar to the 1969 total, the increase in total direct investment expenditures resulted in a larger net transfer of funds from the United States.

Partially offsetting these unfavorable developments, United States portfolio investment abroad declined sharply in 1970. Part of this decline was associated with high long-term interest rates in this country, which discouraged the flotation of new Canadian bond issues in the United States market, and thus may be only of temporary duration.

Developments in the International Monetary System: Some Unresolved Issues

The difficulties inherent in successfully pursuing independent monetary policies in a world of high capital mobility prompted considerable discussion in official circles of the possible utilization of alternative policies to achieve simultaneously external and internal objectives. Widespread attention was given to the possibility of increasing the flexibility of exchange rates as a means toward facilitating international adjustment as well as reducing the impact of balance-of-payments constraints on domestic policy considerations. The Executive Directors of the IMF submitted a report of their study on this matter to the Fund Governors at the annual meeting in Copenhagen. The report, with which the Governors largely concurred, reaffirmed the Directors' belief in the fundamental soundness and viability of the fixed par value system. While ruling out proposals substantially altering the basic system, such as freely fluctuating rates, the Governors recognized that prompter and perhaps more frequent parity changes, if undertaken before large and persistent disequilibria are allowed to emerge, might facilitate the smoother functioning of the international financial system. Further study of several alternative methods of increasing flexibility, including slightly wider margins around parity and the use of a transitional float, is to be pursued by the IMF.

In juxtaposition to these discussions of greater exchange rate flexibility, the Council of Ministers of the European Economic Community intensified their consideration of steps to achieve complete monetary integration by the end of the decade, and agreed early in 1971 to begin a limited three-year trial phase. There are still serious obstacles in the path leading to the ultimate objective, but the first small move toward a single currency bloc is scheduled to begin early in 1971 in the form of narrowing the range of permissible fluctuations between the currencies of the Common Market countries. Should a European monetary union emerge, this could have manifold and far-reaching implications for the evolution of the international monetary system.

Against the background of concern about the United States balance-of-payments deficit and the difficulties of isolating domestic economies from the inflationary impact of dollar accruals, two other significant developments occurred on the international monetary scene in 1970. First, there was a sharp expansion in official international reserves. This was, in part, due to the initial allocation of SDR's, an unconditional and deliberately created reserve asset designed to ensure a growth in world reserves appropriate to the expansion in international payments. The bulk of the increase in 1970, however, was attributable to the unexpectedly large United States official deficit, and this unplanned addition to world reserves cast some doubt among participants on the advisability of further deliberate reserve creation through the SDR facility until the flow of dollars to official reserves has moderated.

Second, the use of monetary policy as a domestic stabilization tool frequently was complicated by international capital flows. With many countries encountering difficulties in obtaining prompt economic responses from the application of monetary and fiscal measures, the possibility of enhancing their efficacy through the implementation of an incomes policy received renewed interest in several official quarters. Although the historical record of experimentation with such policies presents no clear evidence of great success, the adoption of this approach might prove to be particularly suitable in economies faced with the dilemma of persistent inflation in a period of reduced demand accompanied by rising unemployment.

Certainly, it is to be hoped that balance-of-payments problems, whatever their source, do not lead to efforts to achieve their solution through protectionist devices. The relatively smooth functioning of the international monetary system in 1970 owed much of its success to the continued cooperation among the world's central bankers and their heightened awareness of the interdependency of the world's economies. In view of this, the apparent renewed interest in adopting protectionist trade measures in the United States was an ominous development. Not only would this move raise the specter of international retaliation, but it would represent a distressing reversal of two decades of efforts to liberalize trade policies—efforts which contributed substantially to growth and prosperity in the free world.

THIS BANK'S OPERATIONS

Volume and Trend of the Bank's Operations

This Bank continued to provide an expanding volume of services in 1970, and operations increased substantially in many departments. Indeed, by the past year the growth of activity related to transactions in United States Government securities had reached the point where it imposed exceptionally heavy strains on the financial community's facilities for handling those transactions. To cope with the problem, this Bank has made substantial progress toward further automation of its facilities for processing transactions in United States Government securities. By the year-end, preparations were virtually completed for the early introduction of high-speed equipment to handle telegraphic transfers of marketable Government securities with the major New York City banks. This system, in turn, will be linked to all other Federal Reserve Banks through a new nationwide communications-computer network. Moreover, during the year the volume of Government securities held by this Bank under book-entry procedures rose by $75 billion to over $96 billion, largely through the addition of securities held in the System Open Market Account. At the same time, most of the legal and tax problems that had limited the types of accounts eligible for such handling appeared well on the way to resolution by the year-end. This development, along with the full integration of book-entry procedures with high-speed clearing arrangements, is expected to reduce the mounting problems that have been associated with the delivery and custody of Government securities as well as with the rising number of thefts of such instruments.

The solution to these problems will not come too soon. Near the year-end, banks, brokers, and dealers were faced with the possible elimination or severe cutback in insurance coverage for bearer Government securities, as of January 4, 1971. It appeared for a while that this situation would lead to the withdrawal of some major participants from Government securities trading. Consequently, this Bank developed emergency procedures to accept Government securities from banks, brokers, and dealers for safekeeping until some of the remaining technical, tax, and legal roadblocks keeping the holdings of these accounts out of the book-

SOME MEASURES OF THE VOLUME OF OPERATIONS OF THE FEDERAL RESERVE BANK OF NEW YORK (including Buffalo Branch)

Number of pieces handled (in thousands)★	**1970**	**1969**
Currency received	1,709,975	1,648,335
Coin received†	2,081,501	1,725,617
Gold bars and bags of gold coin handled	297	169
Checks handled:		
United States Government checks	76,613	71,440
All other	920,925	888,011
Postal money orders handled	25,048	24,644
Collection items handled:		
United States Government coupons paid	3,185	3,187
Credits for direct sendings of collection items	236	254
Food stamps redeemed	118,540	23,703
All other	20,437	20,106
Issues, redemptions, exchanges by fiscal agency departments:		
United States savings bonds and notes	32,316	33,751
All other obligations of the United States	8,494	10,739
Obligations of Federal agencies	2,510	2,033
Obligations of international organizations	113	80
Custody of securities:		
Pieces deposited in and withdrawn from unissued stock held by this Bank as fiscal agent	37,616	40,444
Pieces received and delivered for safekeeping accounts	774	1,021
Coupons detached	4,236	4,276
Wire transfers of marketable securities	351	379
Wire transfers of funds‡	1,683	1,541
Amounts handled (in millions of dollars)		
Discounts and advances§	37,174	42,548
Currency received	12,516	11,816
Coin received†	249	220
Gold bars and bags of gold coin handled	5,210	2,290
Checks handled:		
United States Government checks	33,008	33,846
All other	1,758,205	1,285,116
Postal money orders handled	642	597
Collection items handled:		
United States Government coupons paid	1,636	3,514
Credits for direct sendings of collection items	710	771
Food stamps redeemed	162	33
All other	4,965	4,250
Issues, redemptions, exchanges by fiscal agency departments:		
United States savings bonds and notes	1,824	1,886
All other obligations of the United States	1,086,610	862,416
Obligations of Federal agencies	102,829	95,709
Obligations of international organizations	2,250	1,543
Custody of securities:		
Par value pieces deposited in and withdrawn from unissued stock held by this Bank as fiscal agent	1,012,877	929,146
Par value pieces received and delivered for safekeeping accounts	182,439	376,011
Par value wire transfers of marketable securities	374,745	312,891
Wire transfers of funds‡	4,360,404	3,569,025

★ Two or more checks, coupons, etc., handled as a single item are counted as one "piece".

† Excludes shipments of new coin from the Mint.

‡ Excludes Treasury transfers between Federal Reserve Districts.

§ The number of discounts and advances handled in 1970 was 2,251, compared with 3,947 in 1969.

entry system were hurdled. However, these emergency facilities were not needed in most cases, since a last-minute agreement was reached between the principal insurance carrier involved and some of the banks and firms affected. Modified insurance coverage will be provided to the money center banks concerned at least until April 1971, when the automated book-entry system should be available to such banks for the inclusion of their customers' securities.

In another effort to cope with the growing problem of thefts of Government securities, this Bank instituted a "checklist" procedure for maintaining a surveillance for Government securities reported as lost or stolen. Similar procedures were adopted at other Reserve Banks, and by the end of the year the procedures had been established on a uniform, coordinated basis among all Federal Reserve offices throughout the country, with this Bank acting as the coordinating bank for the System.

It was remarkable that, even with the limitations imposed by the Bank's standard transmission facilities in service during 1970, the number of intracity wire transfers of Government securities rose sharply. Nearly 39,000 of such transfers took place among the active participants in this Bank's Government securities clearing arrangement—which includes this Bank and ten New York City banks—while the dollar volume rose by about 66 percent to over $106 billion. At the same time, the total dollar volume of securities transfers, including intracity transfers and those to and from other Federal Reserve offices, expanded by nearly 20 percent to $375 billion.

During the year, money transfers handled by this Bank again rose sharply, although at somewhat decelerated rates in response to the slower pace of overall economic activity. The number of wire transfers (excluding Treasury transfers between Federal Reserve Districts) increased by more than 9 percent, to 1.7 million, and the dollar volume jumped by over 22 percent to a record level of $4,360 billion.

Both the number and dollar volume of total checks processed by this Bank advanced to new record levels in 1970. A total of 921 million checks (other than Government checks) was processed, an increase of almost 4 percent. On the other hand, the dollar volume of checks processed soared 37 percent to a level of $1,785 billion, with the further expansion of large-sized Euro-dollar transactions apparently accounting for much of this disparately faster growth. Following a small decline in 1969, the number of United States Government checks handled increased by 7 percent, primarily as a result of the payment of retroactive social security benefits in the early part of 1970. The total number reached a record 77 million, but the dollar volume declined to $33 billion, down 2½ percent from the 1969 high.

As a result of the easier financial environment that emerged in the latter part of 1970, member banks in the Second District cut back their use of this Bank's discount window. For the entire year, total member bank borrowings were lowered to $37.2 billion—about 12½ percent below the 1969 postwar high of $42.5 billion—and the number of discounts and advances declined by 43 percent, to 2,251 from 3,947. Moreover, the percentage of Second District member banks which borrowed at the discount window at least once during the year declined to 43 percent from 49 percent in 1969. A major feature of discount window operations last year was the provision of special credit assistance to member banks to enable them to meet the heavy demand for loans that arose during the summer's commercial paper crisis.

The dollar volume of this Bank's fiscal agency operations expanded markedly during 1970. The total amount of obligations handled for the United States Government (other than United States savings bonds and notes), Federal agencies, and international organizations increased by more than 24 percent to $1,192 billion. However, the number of certificates handled declined for the first time since 1967, to 11 million, down 13½ percent as a result of increased use of the book-entry procedure and the establishment of a higher minimum denomination for the issuance of new Treasury bills.

Average employment at the Bank rose, reaching a level of 4,528 persons, a 5 percent increase over 1969. By the end of the year, employment—including the officers and staff at the Head Office and at the Buffalo Branch—totaled 4,682.

During 1970 more than 776,000 copies of the Bank's publications and nearly 2.8 million Bank periodicals were distributed. About 10,279 visitors toured the Bank (compared with 13,621 during 1969), and 134 speeches were delivered by members of the Bank's staff.

Total assets held by the Bank for foreign and international accounts rose 45 percent during 1970, reflecting the massive accumulation abroad of official dollar holdings—primarily by the central banks of Germany, Canada, and France—and a further increase in IMF quotas. At the year-end, these accounts totaled $38.3 billion: international accounts amounted to $10 billion (up $2.9 billion) and foreign accounts were $28.3 billion (up $9.1 billion). The additional balances were concentrated in investments in United States Government securities, which by the year-end had nearly doubled to $21.6 billion. Holdings of gold and other assets each increased only slightly—to $12.9 billion and $3.8 billion, respectively.

Financial Statements

STATEMENT OF CONDITION
In thousands of dollars

Assets	**DEC. 31, 1970**	**DEC. 31, 1969**
Gold certificate account	1,942,743	2,325,038
Special Drawing Rights certificate account	93,000	0
Federal Reserve notes of other Banks	186,874	159,433
Other cash	20,419	7,888
Total	2,243,036	2,492,359
Discounts and advances	103,720	51,532
Acceptances bought outright	57,445	63,914
United States Government securities bought outright★	15,844,536	13,920,970
Total loans and securities	16,005,701	14,036,416
Other assets:		
Cash items in process of collection	2,810,169	2,494,160
Bank premises	8,188	8,997
All other†	376,900	828,356
Total other assets	3,195,257	3,331,513
Total Assets	**21,443,994**	**19,860,288**

★ Includes securities loaned — fully secured by United States Government securities pledged with the Bank	31,000	44,400

† Includes assets denominated in foreign currencies and IMF gold deposited.

STATEMENT OF CONDITION
In thousands of dollars

Liabilities	**DEC. 31, 1970**	**DEC. 31, 1969**
Federal Reserve notes	12,196,484	11,263,763
Deposits:		
Member bank reserve accounts	6,162,144	5,826,603
United States Treasurer — general account	336,769	302,780
Foreign★	56,232	36,628
Other†	736,528	538,713
Total deposits	7,291,673	6,704,724
Other liabilities:		
Deferred availability cash items	1,438,862	1,397,727
All other	147,395	140,976
Total other liabilities	1,586,257	1,538,703
Total Liabilities	**21,074,414**	**19,507,190**
Capital Accounts		
Capital paid in	184,790	176,549
Surplus	184,790	176,549
Total Capital Accounts	**369,580**	**353,098**
Total Liabilities and Capital Accounts	**21,443,994**	**19,860,288**
Contingent liability on acceptances purchased for foreign correspondents‡	65,993	37,107

★ After deducting participations of other Federal Reserve Banks amounting to	92,000	96,980
† Includes IMF gold deposit.		
‡ After deducting participations of other Federal Reserve Banks amounting to	184,074	108,841

STATEMENT OF EARNINGS AND EXPENSES FOR THE CALENDAR YEARS 1970 AND 1969 (In thousands of dollars)

	1970	1969
Total current earnings	987,142	848,842
Net expenses	69,848	60,432
Current net earnings	917,294	788,410
Additions to current net earnings:		
Profit on sales of United States Government securities (net)	2,073	0
Profit on foreign exchange transactions (net)	918	1,487
All other	20	31
Total additions	3,011	1,518
Deductions from current net earnings:		
Loss on sales of United States Government securities (net)	0	1,494
All other	94	4
Total deductions	94	1,498
Net additions	2,917	20
Net earnings available for distribution	**920,211**	**788,430**
Dividends paid	10,953	10,237
Payments to United States Treasury (interest on Federal Reserve notes)	901,017	761,717
Transferred to surplus	8,241	16,476

SURPLUS ACCOUNT

	1970	1969
Surplus — beginning of year	176,549	160,073
Transferred from net earnings for year	8,241	16,476
Surplus—end of year	**184,790**	**176,549**

Changes in Membership

During 1970 the total number of member banks of the Federal Reserve System in this District declined from 362 to 352. The net decrease resulted from the merger of fourteen member banks, the liquidation of a national bank, the conversion of one nonmember bank into a national bank, and the organization of four new member banks. The 352 banks constitute 78 percent of all commercial banks and trust companies in this District and hold 96 percent of the total assets of all such institutions in the District.

NUMBER OF OPERATING MEMBER AND NONMEMBER BANKS IN SECOND FEDERAL RESERVE DISTRICT AT THE YEAR-END

Exclusive of savings banks, private banks, and industrial banks

	DECEMBER 31, 1970			DECEMBER 31, 1969		
Type of Bank	Members	Non-members	Percent members	Members	Non-members	Percent members
National banks★	252	0	100	257	0	100
State banks and trust companies	100	97	51	105	96	52
Total	**352**	**97**	**78**	**362**	**96**	**79**

★Includes one national bank located in the Virgin Islands.

CHANGES IN FEDERAL RESERVE MEMBERSHIP IN SECOND DISTRICT DURING 1970

Total membership at beginning of year	**362**
Increases:	
New national banks	4
Nonmember converted into a national bank	1
Decreases:	
Member banks merged into other members★	13
Member banks merged into nonmembers	1
National bank declared insolvent	1
Total membership at the year-end	**352**

★Includes one merger into a member bank in the Third Federal Reserve District.

Changes in Directors and Officers

CHANGES IN DIRECTORS. In September, member banks in Group 1 elected W. D. Eberle a Class B director for the unexpired portion of the term that ended December 31, 1970. Mr. Eberle, President of American Standard Inc., New York, N. Y., succeeded Arthur K. Watson, who had resigned earlier in the year to accept appointment as United States Ambassador to France after having served as a Class B director since January 1965.

In December, member banks in Group 1 elected William S. Renchard a Class A director and reelected Mr. Eberle a Class B director for three-year terms beginning January 1, 1971. Mr. Renchard, Chairman of the Board of Chemical Bank, New York, N. Y., succeeded R. E. McNeill, Jr., Chairman of the Board of Manufacturers Hanover Trust Company, New York, N. Y., who served as a director of this Bank for the three-year term that ended on December 31, 1970.

Also in December, the Board of Governors of the Federal Reserve System redesignated Albert L. Nickerson *Chairman* of the Board and *Federal Reserve Agent* and appointed Roswell L. Gilpatric *Deputy Chairman,* each for the year 1971. Mr. Nickerson, former Chairman of the Board of Mobil Oil Corporation, New York, N. Y., has been serving as a Class C director and as *Chairman* and *Federal Reserve Agent* since January 1969; he formerly served as a Class B director from August 1961 to the end of 1966. Mr. Gilpatric, a partner in the law firm of Cravath, Swaine & Moore, has been serving as a Class C director since January 1969 and succeeded, as *Deputy Chairman,* James M. Hester, President of New York University, whose term as *Deputy Chairman* and as a Class C director expired December 31, 1970. Dr. Hester served as a Class C director since January 1965 and as *Deputy Chairman* since January 1969.

At the same time, the Board of Governors appointed Whitney M. Young, Jr., a Class C director for the three-year term beginning January 1, 1971. Mr. Young, Executive Director of the National Urban League, New York, N. Y., succeeded Dr. Hester as a Class C director.

Buffalo Branch. In November, the Board of Directors of this Bank appointed William B. Anderson and Angelo A. Costanza as directors of the Buffalo Branch for three-year terms beginning January 1, 1971. Mr. Anderson is President of The First National Bank of Jamestown, Jamestown, N. Y., and Mr. Costanza is President of Central Trust Company Rochester N.Y., Rochester, N. Y. On the Branch Board, they succeeded Wilmot R. Craig, Chairman of the Board of Lincoln Rochester Trust Company, Rochester, N. Y., and Charles L.

Hughes, President of The Silver Creek National Bank, Silver Creek, N. Y., who served on the Branch Board since January 1968. At the same time, the Board of this Bank designated Norman F. Beach as *Chairman* of the Branch Board for the year 1971. Mr. Beach, who is Vice President of Eastman Kodak Company, Rochester, N. Y., has been a Branch director since January 1968. As *Chairman,* he succeeded Robert S. Bennett, former General Manager of the Lackawanna Plant of Bethlehem Steel Corporation, Buffalo, N. Y., whose term as a director expired December 31, 1970. Mr. Bennett served as a Branch director since January 1965 and as *Chairman* of the Branch Board in 1967, 1968, and 1970.

In December, the Board of Governors appointed Rupert Warren a director of the Branch for a three-year term beginning January 1, 1971. Mr. Warren, President of Trico Products Corporation, Buffalo, N. Y., succeeded Mr. Bennett as a Branch director.

CHANGES IN OFFICERS. The following changes in the official staff, including the appointment of ten new officers, have been made since January 1970:

John J. Clarke, Vice President and Special Legal Adviser, was assigned responsibility for the newly established Foreign Banking Regulations Department in the Bank Supervision and Relations function on July 6, 1970. The responsibility of Fred W. Piderit, Jr., Vice President, for the other departments of the Bank Supervision and Relations function, including the newly established Bank Applications Department and Bank Reports and Analysis Department, was continued. Mr. Clarke's responsibility for the Payment Systems and the Consumer Information and Securities Regulations functions was also continued.

Leonard Lapidus, Assistant Vice President, was assigned responsibility for the Bank Reports and Analysis Department in the Bank Supervision and Relations function on July 6, 1970. Mr. Lapidus' responsibility for the Banking Studies Department in that function was continued.

Robert C. Thoman, Assistant Vice President, was assigned responsibility for the Bank Applications Department in the Bank Supervision and Relations function on July 6, 1970. Mr. Thoman's responsibility for the Bank Relations Department in that function was continued.

James H. Booth, Manager, formerly assigned to the Bank Examinations Department, was assigned to the Bank Reports and Analysis Department on July 6, 1970.

Edward F. Kipfstuhl, Manager, formerly assigned to the Bank Examinations

Department, was assigned to the Foreign Banking Regulations Department on July 6, 1970.

Benjamin Stackhouse, Manager, formerly assigned to the Bank Examinations Department, was assigned to the Bank Applications Department on July 6, 1970.

Thomas C. Sloane, formerly Assistant General Counsel, was appointed Deputy General Counsel on July 16, 1970.

Robert Young, Jr., formerly Assistant Counsel, was appointed Assistant General Counsel on July 16, 1970.

Scott E. Pardee, formerly Manager, was appointed Assistant Vice President on July 16, 1970 and assigned to Foreign.

John T. Keane, formerly Assistant Vice President, Buffalo Branch, was appointed Vice President at the Head Office on October 15, 1970 and assigned to Administrative Services, with supervisory responsibility for the operations of the Accounting, Management Information, and Planning Departments, under William H. Braun, Jr., Vice President.

Everett B. Post, formerly Assistant Vice President, was appointed Vice President on October 15, 1970 and assigned to Administrative Services, with primary responsibility for the newly established Computer Operations, Computer Planning, and Computer Support Departments, under the general supervision of Mr. Braun.

Howard F. Crumb, formerly Manager, was appointed Assistant Vice President on October 15, 1970 and assigned to Administrative Services, with responsibility for the Computer Operations and Computer Support Departments.

Karl L. Ege, Assistant Vice President, was assigned responsibility for the newly established Check Adjustment and Return Items Department in the Cash and Collections function on October 15, 1970. Mr. Ege's responsibility for the Check Processing and Collection Departments in that function was continued.

Ronald B. Gray, Cashier, Buffalo Branch, was appointed Assistant Vice President of the Branch on October 15, 1970. Mr. Gray's appointment as Cashier was continued.

Madeline H. McWhinney, Assistant Vice President, was assigned responsibility for the newly established Research Computer Department in the Research and Statistics function on October 15, 1970. Miss McWhinney's responsibility for the Statistics Department in that function was continued.

Donald C. Niles, Assistant Vice President, was assigned responsibility for the Computer Operations, Computer Planning, and Computer Support Departments in the Administrative Services function on October 15, 1970.

A. Marshall Puckett, formerly Manager, was appointed Adviser on October 15, 1970 and assigned to Research and Statistics.

Walter S. Rushmore, formerly Manager, was appointed Assistant Vice President on October 15, 1970 and assigned to Administrative Services, with responsibility for the Accounting and Management Information Departments.

Philip Van Orman, formerly Assistant Counsel, was appointed Assistant Vice President on October 15, 1970 and assigned to Personnel.

John C. Houhoulis, Manager, was assigned to the Consumer Information and Securities Regulations Department on October 15, 1970. Mr. Houhoulis' assignment to the Payment Systems Department was continued.

Joseph M. O'Connell, formerly Chief of the Accounting Division, Accounting Department, was appointed an officer with the title of Manager on October 15, 1970 and assigned to the Check Adjustment and Return Items Department.

James H. Oltman, formerly Manager, was appointed Assistant Counsel on October 15, 1970.

Ralph C. Schindler, formerly Special Assistant in the Statistics Department, was appointed an officer with the title of Research Computer Officer on October 15, 1970 and assigned to the Research Computer Department.

Rudolf Thunberg, formerly Special Assistant in the Securities Department, was appointed an officer with the title of Manager on October 15, 1970 and assigned to the Domestic Research Department.

William M. Walsh, formerly Chief of the Research Computer Division, Statistics Department, was appointed an officer with the title of Manager on October 15, 1970 and assigned to the Research Computer Department.

H. David Willey, formerly Senior Economist, was appointed Manager, and Assistant Secretary on October 15, 1970. As Manager, Mr. Willey was assigned to the Foreign Department.

Richard H. Hoenig's appointment as Assistant Secretary was terminated on October 15, 1970. Mr. Hoenig's appointment as Manager and assignment to the Public Information Department was continued.

Edward J. Geng was appointed Assistant Vice President effective November 21, 1970 and assigned to Open Market Operations and Treasury Issues. Mr. Geng had resigned as an officer of the Bank in November 1969 to accept appointment as Special Assistant to the Secretary of the Treasury for Debt Management, a position he held until November 20, 1970.

Paul Aiken, formerly Chief of the Computer Programming and Training Division, Computer Support Department, was appointed an officer with the title of

Manager on January 7, 1971 and assigned to the Computer Support Department.

Gerald Hayden, formerly Special Assistant in the Statistics Department, was appointed an officer with the title of Manager on January 7, 1971 and assigned to the Computer Planning Department.

Bernard J. Jackson, formerly Chief of the Foreign Operations Division, Foreign Department, was appointed an officer with the title of Manager on January 7, 1971 and assigned to the Foreign Department.

Thomas P. Kipp, formerly Chief of the Securities Division, Securities Department, was appointed an officer with the title of Manager on January 7, 1971 and assigned to the Check Processing Department, with primary responsibility for the operations of the evening and night forces of that Department.

Ronald E. Long, formerly Chief of the Methods and Systems Division, Planning Department, was appointed an officer with the title of Manager on January 7, 1971 and assigned to the Accounting Department.

Benedict Rafanello, formerly Chief of the Credit Division, Credit and Discount Department, was appointed an officer with the title of Manager on January 7, 1971 and assigned to the Credit and Discount Department.

Edwin R. Powers, Manager, formerly assigned to the Foreign Department, was assigned to the Computer Operations Department, effective January 8, 1971.

In addition, one officer has resigned since March 1, 1970. John T. Arnold, Manager, Foreign Department, resigned effective July 16, 1970 to accept a position as an Assistant Vice President of Morgan Guaranty Trust Company of New York. Mr. Arnold joined the Bank's staff in July 1958 and became an officer in January 1968.

MEMBER OF FEDERAL ADVISORY COUNCIL—1971. The Board of Directors of this Bank selected John M. Meyer, Jr., to serve during 1971 as the member of the Federal Advisory Council representing the Second Federal Reserve District. Mr. Meyer, Chairman of the Board of Morgan Guaranty Trust Company of New York, New York, N. Y., served as a member of the Council during 1970.

Directors of the Federal Reserve Bank of New York

DIRECTORS	*Term expires Dec. 31*	*Class*	*Group*
William S. Renchard Chairman of the Board, Chemical Bank, New York, N. Y.	1973	A	1
Charles E. Treman, Jr. President, Tompkins County Trust Company, Ithaca, N. Y.	1971	A	2
Arthur S. Hamlin President, The Canandaigua National Bank and Trust Company, Canandaigua, N. Y.	1972	A	3
W. D. Eberle President, American Standard Inc., New York, N. Y.	1973	B	1
Milton C. Mumford Chairman of the Board, Lever Brothers Company, New York, N. Y.	1971	B	2
Maurice R. Forman Chairman of the Board, B. Forman Co., Inc., Rochester, N. Y.	1972	B	3
Albert L. Nickerson, *Chairman, and Federal Reserve Agent* Former Chairman of the Board, Mobil Oil Corporation, New York, N. Y.	1972	C	
Roswell L. Gilpatric, *Deputy Chairman* Partner, Cravath, Swaine & Moore, Attorneys, New York, N. Y.	1971	C	
Whitney M. Young, Jr. Executive Director, National Urban League, New York, N. Y.	1973	C	

DIRECTORS—BUFFALO BRANCH	
Norman F. Beach, *Chairman* Vice President, Eastman Kodak Company, Rochester, N. Y.	1971
James I. Wyckoff Chairman of the Board, The National Bank of Geneva, Geneva, N. Y.	1971
Morton Adams General Manager, Pro-Fac Cooperative, Inc., Rochester, N. Y.	1972
David J. Laub Chairman of the Board, Marine Midland Bank — Western, Buffalo, N. Y.	1972
William B. Anderson President, The First National Bank of Jamestown, Jamestown, N. Y.	1973
Angelo A. Costanza President, Central Trust Company Rochester N. Y., Rochester, N. Y.	1973
Rupert Warren President, Trico Products Corporation, Buffalo, N. Y.	1973

MEMBER OF FEDERAL ADVISORY COUNCIL—1971	
John M. Meyer, Jr. Chairman of the Board, Morgan Guaranty Trust Company of New York, New York, N. Y.	1971

Officers of the Federal Reserve Bank of New York

Alfred Hayes, *President*
William F. Treiber, *First Vice President*

Charles A. Coombs, *Senior Vice President*
Marcus A. Harris, *Senior Vice President*

Alan R. Holmes, *Senior Vice President*
Robert G. Link, *Senior Vice President*

David E. Bodner, *Vice President*
William H. Braun, Jr., *Vice President*
John J. Clarke, *Vice President and Special Legal Adviser*
Richard A. Debs, *Vice President*
Peter Fousek, *Vice President*
George Garvy, *Economic Adviser*
Edward G. Guy, *Vice President and General Counsel*

John T. Keane, *Vice President*
Spencer S. Marsh, Jr., *Market Adviser*
Fred W. Piderit, Jr., *Vice President*
Everett B. Post, *Vice President*
Peter D. Sternlight, *Vice President*
Thomas M. Timlen, Jr., *Vice President*
Thomas O. Waage, *Vice President*

Thomas C. Sloane, *Deputy General Counsel*

A. Thomas Combader, *Assistant Vice President*
Robert J. Crowley, *Assistant Vice President*
Howard F. Crumb, *Assistant Vice President*
Richard G. Davis, *Adviser*
Karl L. Ege, *Assistant Vice President*
Martin French, *Assistant Vice President*
Edward J. Geng, *Assistant Vice President*
Peter P. Lang, *Adviser*
Leonard Lapidus, *Assistant Vice President*
Madeline H. McWhinney, *Assistant Vice President*
Paul Meek, *Assistant Vice President*

Donald C. Niles, *Assistant Vice President*
Scott E. Pardee, *Assistant Vice President*
Charles R. Pricher, *Assistant Vice President*
A. Marshall Puckett, *Adviser*
Walter S. Rushmore, *Assistant Vice President*
Frederick C. Schadrack, Jr., *Assistant Vice President*
William M. Schultz, *Assistant Vice President*
Frederick L. Smedley, *Assistant Vice President*
Robert C. Thoman, *Assistant Vice President*
Philip Van Orman, *Assistant Vice President*
Robert Young, Jr., *Assistant General Counsel*

Paul Aiken,
Manager, Computer Support Department

Bruce G. Alexander,
Manager, Personnel Department

James O. Aston,
Manager, Cash Custody Department, and Manager, Collection Department

Irving M. Auerbach,
Manager, Statistics Department

Leonard I. Bennetts,
Manager, Check Processing Department

Allen R. Bivens,
Assistant Counsel

James H. Booth,
Manager, Bank Reports and Analysis Department

Armond J. Braiger,
Manager, Savings Bond Department

Louis J. Brendel,
Manager, Planning Department

John Chowansky,
Manager, Management Information Department

Louis J. Conroy,
Manager, Service Department

Robert L. Cooper,
Manager, Acceptance Department, and Manager, Securities Department

Richard D. Coopersmith,
Assistant Counsel

Joseph R. Coyle,
Securities Trading Officer

Frederick W. Deming,
Manager, Securities Department

Adam R. Dick,
Manager, Bank Relations Department

Matthew C. Drexler,
Manager, Building Operating Department

Edna E. Ehrlich,
Senior Economist

(Continued)

Officers (*Continued*)

CHESTER B. FELDBERG,
Secretary, and Assistant Counsel

FREDERICK L. FREY,
Chief Examiner

RALPH H. GELDER,
Manager, Banking Studies Department

GERALD HAYDEN,
Manager, Computer Planning Department

RICHARD H. HOENIG,
Manager, Public Information Department

MATTHEW J. HOEY,
Manager, Government Bond and Safekeeping Department

JOHN C. HOUHOULIS,
Manager, Consumer Information and Securities Regulations Department, and Manager, Payment Systems Department

WHITNEY R. IRWIN,
Manager, Cash Department

BERNARD J. JACKSON,
Manager, Foreign Department

EDWARD F. KIPFSTUHL,
Manager, Foreign Banking Regulations Department

THOMAS P. KIPP,
Manager, Check Processing Department

FRED H. KLOPSTOCK,
Manager, International Research Department

RONALD E. LONG,
Manager, Accounting Department

JOSEPH M. O'CONNELL,
Manager, Check Adjustment and Return Items Department

JAMES H. OLTMAN,
Assistant Counsel

EDWIN R. POWERS,
Manager, Computer Operations Department

BENEDICT RAFANELLO,
Manager, Credit and Discount Department

LEOPOLD S. RASSNICK,
Assistant Counsel

MARY J. RODGERS,
Assistant Counsel

FRANCIS H. ROHRBACH,
Manager, Personnel Department

EDWIN S. ROTHMAN,
Manager, Foreign Department

HERBERT H. RUESS,
Manager, Credit and Discount Department

IRWIN D. SANDBERG,
Securities Trading Officer

RALPH C. SCHINDLER,
Research Computer Officer

BENJAMIN STACKHOUSE,
Manager, Bank Applications Department

ALOYSIUS J. STANTON,
Manager, Security Custody Department

RUDOLF THUNBERG,
Manager, Domestic Research Department

RUTH ANN TYLER,
Manager, Personnel Department

RICHARD VOLLKOMMER,
Manager, Government Bond and Safekeeping Department

WILLIAM M. WALSH,
Manager, Research Computer Department

WILLIAM H. WETENDORF,
Manager, Protection Department

H. DAVID WILLEY,
Manager, Foreign Department, and Assistant Secretary

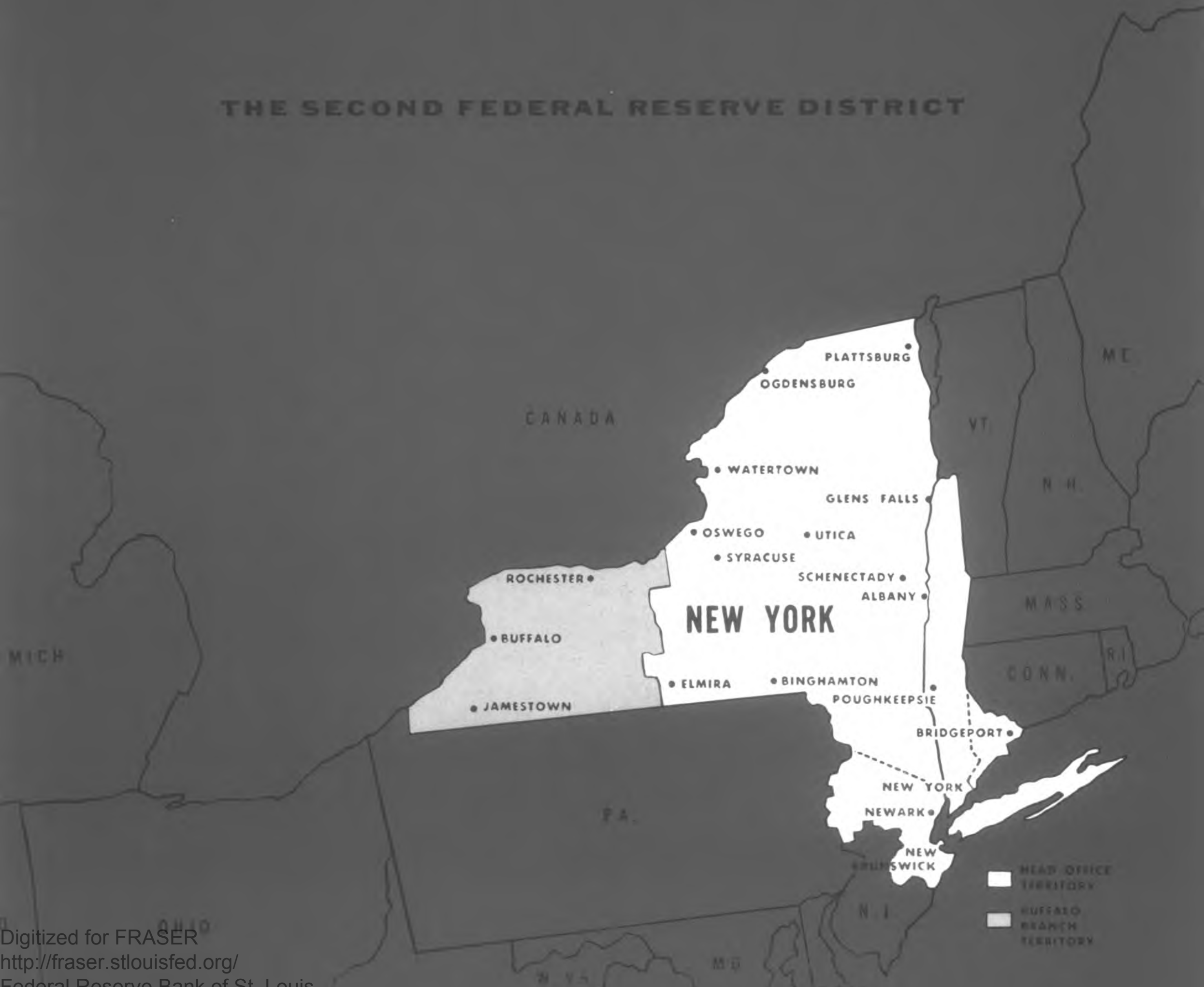
GEORGE C. SMITH, *General Auditor*
JOHN E. FLANAGAN, *Assistant General Auditor*

OFFICERS—BUFFALO BRANCH

ANGUS A. MACINNES, JR., *Vice President*
RONALD B. GRAY, *Assistant Vice President and Cashier*

HARRY A. CURTH, JR., *Assistant Cashier*
GERALD H. GREENE, *Assistant Cashier*
ARTHUR A. RANDALL, *Assistant Cashier*

THE SECOND FEDERAL RESERVE DISTRICT


CANADA
PLATTSBURG
OGDENSBURG
WATERTOWN
GLENS FALLS
OSWEGO
UTICA
SYRACUSE
SCHENECTADY
ALBANY
ROCHESTER
BUFFALO
NEW YORK
ELMIRA
BINGHAMTON
POUGHKEEPSIE
JAMESTOWN
BRIDGEPORT
NEW YORK
NEWARK
NEW BRUNSWICK
ME.
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N.H.
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HEAD OFFICE TERRITORY
BUFFALO BRANCH TERRITORY