MONETARY POLICY

AND

OPEN MARKET OPERATIONS

DURING 1992

A Report Prepared for the Federal Open Market Committee
by the Open Market Function
of the Federal Reserve Bank of New York
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Chart 4: **M2: Levels and Targets**

M2 consists of M1, overnight (and continuing contract) repurchase agreements (RPs) issued by all depository institutions and overnight Eurodollars issued to U.S. residents by foreign branches of U.S. banks worldwide, savings deposits (including money market deposit accounts), small-denomination time deposits (those in amounts less than $100,000), retail RPs, and balances in both taxable and tax-exempt general purpose and broker/dealer money market mutual funds. M2 excludes individual retirement accounts and Keogh balances at depository institutions and at money market funds. It also excludes all balances held by U.S. commercial banks, money market funds (general purpose and broker/dealer), foreign governments and commercial banks, and the U.S. Government. The chart is based on seasonally adjusted data as of January 28, 1993. The target ranges are for Q4 1990 to Q4 1991 and Q4 1991 to Q4 1992.

M3: Levels and Targets

M3 consists of M2, large-denomination time deposits (those in amounts of $100,000 or more), term RP liabilities issued by all depository institutions, term Eurodollars held by U.S. residents at foreign branches of U.S. banks worldwide and at all banking offices in the United Kingdom and Canada, and balances in both taxable and tax-exempt institution-only money market mutual funds. M3 excludes amounts held by depository institutions, the U.S. Government, money market funds, and foreign banks and official institutions. Also subtracted is the estimated amount of overnight RPs and Eurodollars held by institution-only money

market mutual funds. The chart is based on seasonally adjusted data as of January 28, 1993. The target ranges are for Q4 1990 to Q4 1991 and Q4 1991 to Q4 1992.

M1: Levels

M1 consists of currency held outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions; travelers checks; demand deposits at all commercial banks other than those due to depository institutions, the U.S. Government, and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float; and other checkable deposits, consisting of negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at depository institutions, credit union share draft accounts and demand deposits at thrift institutions. The chart is based on seasonally adjusted data as of January 28, 1993.

Domestic Nonfinancial Debt: Levels and Monitoring Ranges

Total domestic nonfinancial debt consists of the outstanding credit market debt of the U.S. government, state and local governments, and private nonfinancial sectors. Private debt includes corporate bonds, mortgages, consumer credit (including bank loans), other bank loans, commercial paper, bankers' acceptances, and other debt instruments. The chart is based on seasonally adjusted data as of January 28, 1993. The monitoring ranges are for Q4 1990 to Q4 1991 and Q4 1991 to Q4 1992.

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Long-Term Interest Rates

Yields include Moody's Indexes of Aaa-rated corporate and municipal bond yields (Thursday weekly averages). The bonds used to derive the indexes have average maturities of 20 years. The ten-year Treasury note and 30-year Treasury bond yields are constant maturity values.

Short-Term Interest Rates

Three-month Treasury bill rates are bank discount rates. in the secondary market (Wednesday weekly averages). The two-year Treasury note yields are constant maturity values. Federal Reserve discount rates are those in effect on Wednesdays at the Federal Reserve Bank of New York. Commercial paper rates are 90-day rates (Wednesday weekly averages).

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Biweekly averages of all reserves held at the Fed, including excess reserves and required clearing balances.

MONETARY POLICY AND OPEN MARKET OPERATIONS DURING 1992

I. Overview

During 1992, monetary policy was aimed at promoting and extending the economic recovery that had begun the previous year while achieving a further moderation of inflationary pressures. Following a series of moves to ease reserve pressures in the second half of 1991, policy was initially placed on hold. A burst of growth in the monetary aggregates and in consumer outlays early in the year suggested that the basis for a solid economic recovery might be in place. Nonetheless, because economic prospects remained uncertain, the Federal Open Market Committee responded quickly in April by slightly easing reserve pressures when it observed a fallback in the broader monetary aggregates and signs of weakening consumer demand. Two further easing steps were implemented over the summer as labor market conditions deteriorated and evidence accumulated that the recovery was losing momentum. The move in July was accompanied by a 1/2 percentage point cut in the discount rate to 3 percent. Over the last several months of the year, labor market conditions gradually improved and other economic indicators showed renewed strength. In these circumstances, and with price data pointing to a continued trend to lower inflation, the Committee left monetary policy unchanged.

The three moves to reduce reserve pressures facilitated a one percentage point reduction in the Federal funds rate and contributed to a modest decline in other short-term interest rates during the year. Yields on short-term fixed-income securities fell in line with the funds rate during the middle of the year, but then backed up in the final quarter as the economy strengthened and as expectations of further monetary policy accommodation diminished. Meanwhile, longer term rates moved up early in the year, fell in mid-year, and then rose again in advance of the Presidential election. These yields moderated once more after the election, ending the year about where

they began. Although long-term rates were supported by encouraging inflation statistics, uneasiness about future inflation lingered and sometimes impeded rate declines. Anxieties about future fiscal stimulus and the prospects for Federal budget deficits, particularly during the election campaign, were also a source of uncertainty that sometimes lifted longer term rates.

Declining short-term interest rates and heavy mortgage refinancing activity stimulated rapid growth in M1 deposits during 1992. In contrast, the broader monetary aggregates increased only very slowly, with both M2 and M3 ending the year below the bottoms of their annual growth cones. The weakness was associated with continuing efforts on the part of both households and nonfinancial corporations to reduce high debt levels, along with strong competition from alternative market instruments offering relatively attractive returns. Weak loan demand discouraged banks from competing actively for time deposits.

Financial strains in major sectors of the economy generally eased during 1992, assisted by declining interest rates, an improving economy, and increased equity issuance. Falling short-term interest rates facilitated a widening of bank profit margins and, through the refinancing of outstanding debt, helped to reduce debt service burdens on households, businesses, and municipalities. The improving domestic economy helped to increase business profitability, and heavy equity issuance also contributed to a strengthening of balance sheets of banks and nonfinancial businesses. Financial strains in Japan and Europe at times raised concerns but generally had only a marginal impact on U.S. financial markets.

In implementing the monetary policy directives of the Federal Open Market Committee (FOMC), the Desk continued to formulate its objectives for reserves by specifying an allowance for adjustment and seasonal borrowing from the discount window that was believed to be consistent with an expected range

of Federal funds trading. However, the behavior of adjustment credit continued to be affected by an ongoing reluctance of many depository institutions to tap the discount facility and by generally narrow spreads between the Federal funds rate and the discount rate. As a result, adjustment borrowing typically hovered around exceptionally low levels, although it occasionally bulged when the funds rate jumped or when temporary disruptions to normal payments flows forced some depositories to turn to the window. (Meanwhile, new pricing procedures that raised the rate on seasonal credit relative to adjustment credit when market rates were above the discount rate contributed to a low level of seasonal borrowing in 1992.) Consequently, the Desk continued to view its allowance for borrowing very flexibly.

In April, the Federal Reserve implemented a cut in reserve requirement ratios on transactions deposits to 10 percent from 12 percent. In planning for the change, efforts were made to ensure that reserve management would proceed smoothly. The change was announced in February, well before it took effect, giving depository institutions time to prepare for it. In addition, the implementation was timed to coincide with a seasonal peak in the level of reserve requirements. In contrast, the December 1990 cut in reserve requirements took effect just as required reserves were approaching a seasonal trough, contributing to some disruption in reserve management efforts at the time. Other developments in 1991 and 1992 helped to offset the impact that cuts in reserve requirements have had on the underlying level of reserves held at the Fed. Banks substantially increased their required clearing balances (described in section IV), and rapid growth in the components of the money supply subject to reserve requirements significantly lifted the level of required reserves.

Nonetheless, the reserve requirement cuts of the past two years left reserve levels at the Fed in 1992 considerably below their 1990 levels. Many

depositories have responded to this environment of lower reserve balances by holding fewer reserves early in a maintenance period in order to avoid accumulating an excess position that could be difficult to work off later without risking end-of-day overdrafts. This behavior contributed to a tendency towards softness in the funds rate until late in a maintenance period, even when large reserve deficiencies existed on the period. Moreover, the smooth functioning of banks' payments operations remains vulnerable to developments that would further reduce the level of reserve balances held at the Fed.

As in the preceding year, the Federal funds rate and reserve estimates frequently gave conflicting signals about reserve availability. Some of these discrepancies resulted from market expectations of possible easings in monetary policy. Other conflicts arose from faulty reserve projections (available either to the Desk or to banks), or from some banks' deliberate efforts to concentrate their reserve holdings late in a period to avoid finishing with unusable excess reserves. With the funds rate widely viewed as a key monetary policy indicator and expectations of a possible easing in policy often running high, the Desk took account of these discrepancies in formulating its reserve operations. To minimize the possibility that the Fed's current policy stance would be misconstrued, the Desk sometimes deferred addressing sizable reserve deficiencies until late in a period; it even absorbed reserves in a few instances despite estimates showing a shortage. As a result, the Desk occasionally had to arrange very large RP operations late in a period when the reserve need eventually showed through. Toward the end of the year, expectations of a policy easing faded, and the Desk began to take somewhat greater account of its reserve estimates in formulating operations when discrepancies arose between these estimates and the funds rate. It used these opportunities to re-establish a degree of

tolerance for deviations in the funds rate from its expected level that had gradually eroded over the previous few years.

II. The Setting for Policy

The Economy

The slow economic recovery that had begun in the spring of 1991 continued through 1992. The pace of the expansion picked up somewhat in the early months of the year, following its near stall late in 1991 (Chart 1). The economy grew at a 2.9 percent annual rate during the first quarter, the highest rate in more than three years, encouraging expectations that the expansion was gaining momentum. Most of the strength came from a pickup in consumer expenditures, with lower mortgage rates also leading to a jump in new home purchases. Inventories fell during the quarter, as the jump in spending was accompanied by a decline in industrial production (Table 1).

The economy faltered during the second quarter, with GDP growing at only a 1.5 percent annual rate. Consumer spending was about flat for the quarter, with durable expenditures falling following their double-digit increase in the first quarter. Net exports also fell as imports grew strongly and continued weak demand from abroad led to flat exports. Although industrial production did rise somewhat over the three months, the labor market softened during the quarter. The June employment report was particularly weak and was accompanied by a large jump in the unemployment rate (Chart 2).

The economy grew more rapidly in the third quarter, with real GDP rising at a 3.4 percent annual rate, although much of the economic data reported during the quarter suggested a more sluggish performance. The strength came from all of the major categories of consumer spending, particularly the volatile durable expenditures component. The evident areas of lingering weakness included industrial production, which advanced rather

Chart 1
Real Gross Domestic Product
(annualized growth rates)

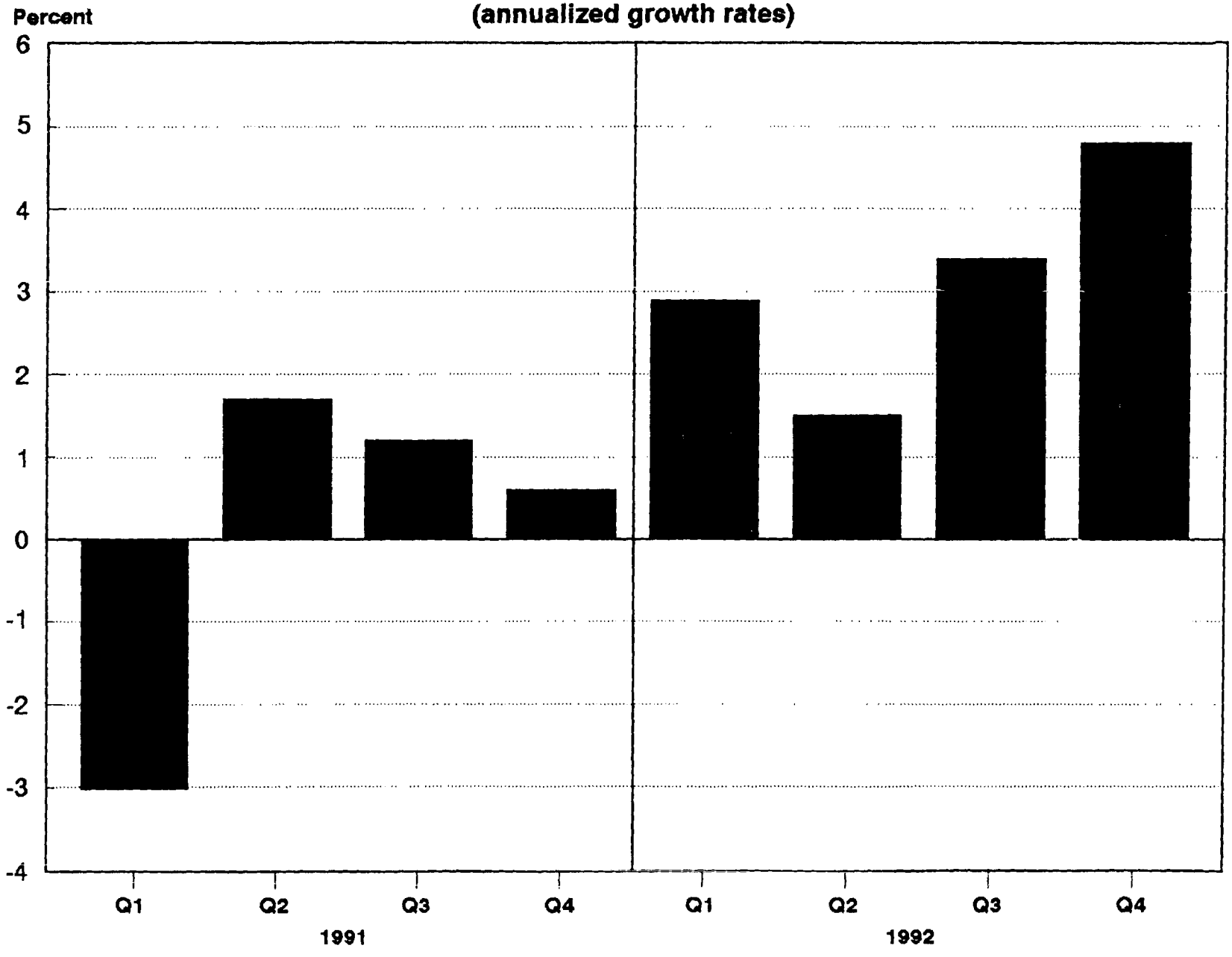


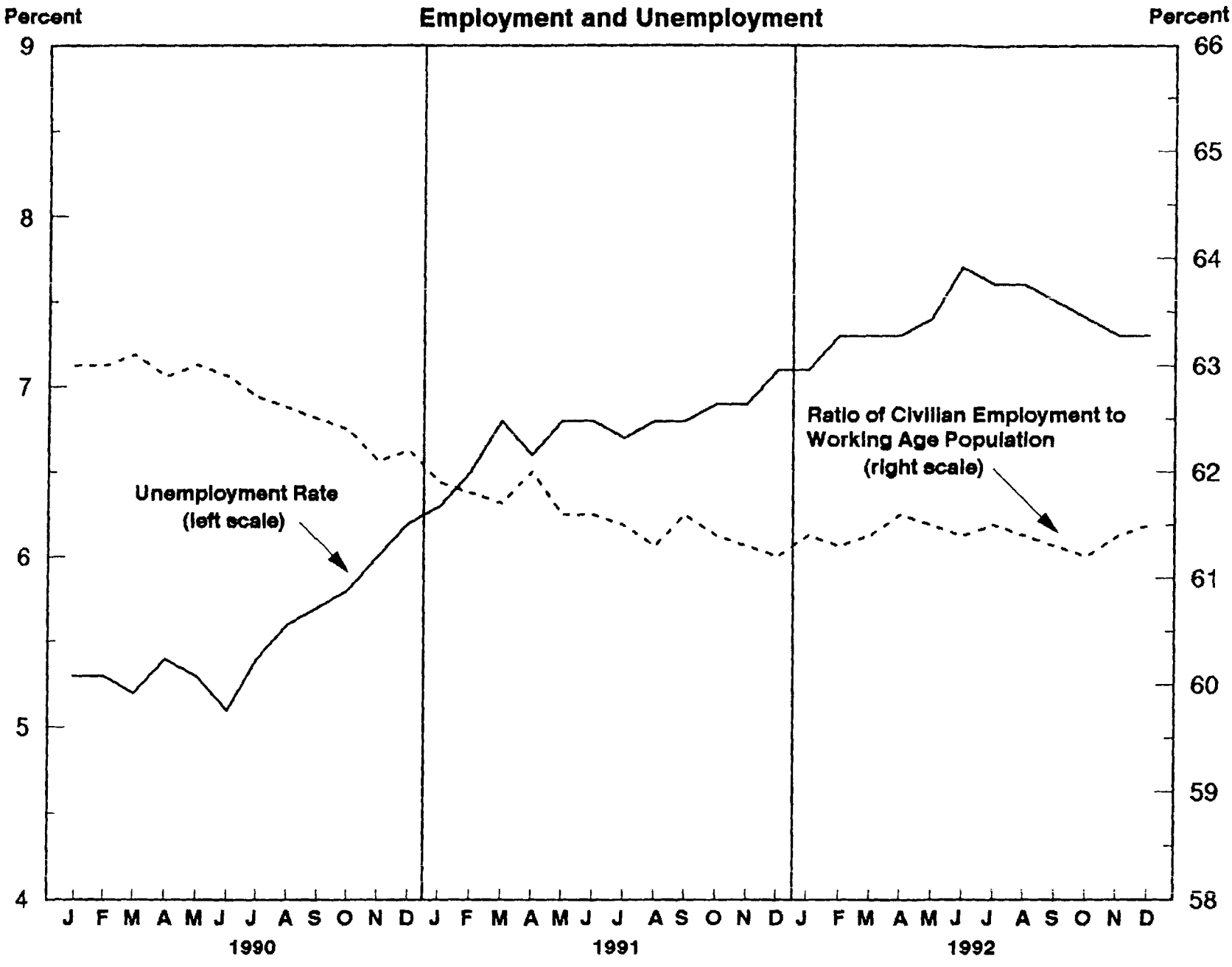
TABLE 1

REAL GROSS DOMESTIC PRODUCT AND ITS COMPONENTS
Seasonally Adjusted Annual Growth Rates[1]
(in percent)

	1991	1992				1991	1992
	IV	I	II	III	IV	Q4/Q4	Q4/Q4
Real GDP	0.6	2.9	1.5	3.4	4.8	0.1	3.2
Consumption	-0.3	5.1	-0.1	3.7	4.8	0.0	3.3
Durables	-3.1	16.5	-2.1	9.4	14.0	-2.5	9.2
Nondurables	-3.5	5.5	-1.5	2.5	6.7	-1.5	3.3
Services	2.3	2.2	1.2	3.1	1.6	1.6	2.0
Fixed investment	-1.2	7.4	15.2	2.3	14.1	-5.3	9.6
Producer durables	-2.4	3.2	24.1	9.5	14.4	-3.5	12.5
Nonresidential construction	-11.5	2.7	-0.8	-11.3	-1.1	-5.4	-2.8
Residential construction	11.3	20.1	12.6	0.2	26.1	-0.1	14.3
Change in inventories ($87 billion)	7.5	-12.6	7.8	15.0	9.9	-37.4	17.4
Change in net exports ($87 billion)	11.1	-1.0	-22.4	-8.8	4.7	12.2	-27.5
Exports ($87 billion)	17.2	4.0	-2.0	12.5	13.6	38.8	28.1
Imports ($87 billion)	6.0	5.0	20.5	21.3	8.8	26.5	55.6
Government purchases	-3.0	1.7	-1.2	3.8	-2.1	-0.6	0.5
Real GNP	0.4	3.6	0.7	3.9	na	-0.3	na
Addenda							
Industrial Production	-0.7	-3.1	5.2	2.3	3.8	-0.5	2.0
Change in nonfarm payroll employment (in thousands)	-56	-46	285	93	131	-1,118	822
Civilian unemployment rate	7.0	7.2	7.5	7.6	7.3	1.0*	0.3*

Note: Data are as of March 8, 1993.
* Change in rate.

Chart 2
Movements in Selected Measures of Employment and Unemployment



slowly, and the labor market. Despite some decline in the unemployment rate over the quarter, labor market conditions continued to look rather soft when assessed in terms of the proportion of the working age population with jobs (Chart 2). Consumer confidence measures also fell during the quarter, despite the strong spending numbers, again calling into question the sustainability of the expansion (Chart 3).

The economy grew rapidly in the fourth quarter, with real GDP estimated to have grown at a 4.8 percent annual rate. Consumer confidence measures improved strongly, as the resolution of the political uncertainty surrounding the Presidential election process contributed to an improving national mood. Retail sales expanded briskly in October, and the holiday shopping season was stronger than it had been in several years. The employment numbers also showed some strength during the last two months of the year.

Inflation

Progress in reducing inflation continued in 1992, in part reflecting the benefits of past monetary policy efforts. Persistent softness in the labor market and the slow, at times faltering, recovery also contributed to restrained wage and price pressures. While large swings in energy prices, related to the Iraqi invasion of Kuwait, had a big influence on the price indexes in 1990 and 1991, this factor was less important during 1992. The core inflation rate, which excludes the influence of food and energy, fell both in terms of the CPI and PPI; the annual rates of increase in the CPI and PPI dropped to 3.4 and 1.8 percent in 1992, from 4.5 and 3.1 percent, respectively, in 1991 (Table 2). Progress was especially visible in the second half of the year when the PPI rose at an annual rate of less than one percent.

Chart 3
Measures of Consumer Confidence

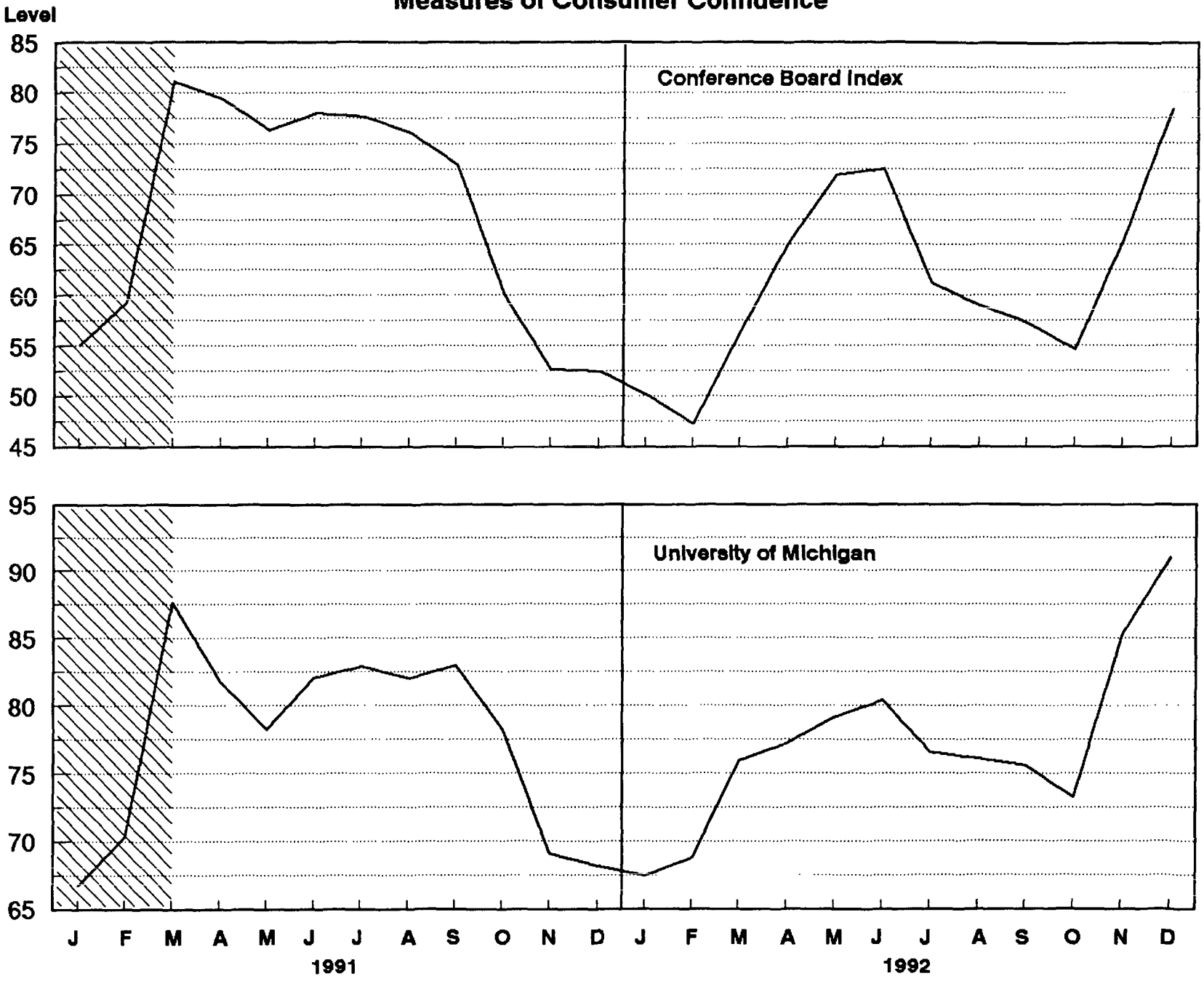


TABLE 2

PRICE INFORMATION
Seasonally Adjusted Annual Growth Rates
(In Percent)

	1991	1992				1991	1992
	IV	I	II	III	IV	Q4/Q4	Q4/Q4
Consumer price index							
Total	3.3	3.3	3.1	2.7	3.2	3.0	3.1
Excluding food and energy	3.8	3.9	3.8	2.5	3.6	4.5	3.4
Energy	-3.6	-6.0	6.4	6.8	3.0	-8.0	2.4
Producer price index							
Total	1.8	0.6	3.2	1.6	0.3	-0.1	1.4
Excluding food and energy	2.5	3.4	2.8	0.7	0.5	3.1	1.8
Energy	3.0	-8.0	11.3	4.5	-3.0	-10.2	1.0
Implicit GDP deflator	2.4	3.1	2.7	2.0	2.3	3.4	2.5
Fixed-weight GDP index	2.4	3.7	3.0	2.0	3.0	3.5	2.9
Employment cost index*	3.6	4.0	2.9	3.6	3.5	4.2	3.5

Note: Data are as of March 8, 1993 for CPI series, GDP series, and employment cost index. PPI series are as of February 22, 1993.

* This index, which covers civilian workers, is computed for the final month of each quarter. The growth rates therefore represent growth from the final month of the previous quarter, rather than quarterly average rates.

Monetary Aggregates

The broader monetary aggregates crept upward during 1992. After advancing at close-to-expected rates in the first quarter, both M2 and M3 grew considerably more slowly over the rest of the year, even declining at times, and finished the year below their respective annual growth cones (Chart 4).[1] In contrast, M1 grew very rapidly over the year. From the fourth quarter of 1991 to the fourth quarter of 1992, M1 grew 14.2 percent, M2 advanced 2.1 percent, and M3 increased 0.5 percent.[2]

The opportunity cost of holding M1 deposits decreased substantially over the middle part of the year because rates on checkable deposits fell to a lesser degree than yields on short-term market instruments. A lower opportunity cost explains some of the strong growth recorded for the narrow aggregate. Lower mortgage rates in late 1991 and again during the spring and summer of 1992 spurred a high volume of mortgage refinancing during the subsequent quarters. There is a strong link between the volume of mortgage refinancing and demand deposit growth, since the servicers of refinanced mortgages typically hold the prepayments temporarily in demand deposits prior to disbursing the funds to the owners of mortgage-backed securities. Currency grew moderately over most of 1992, with more rapid growth in the third quarter as demand from abroad picked up temporarily.

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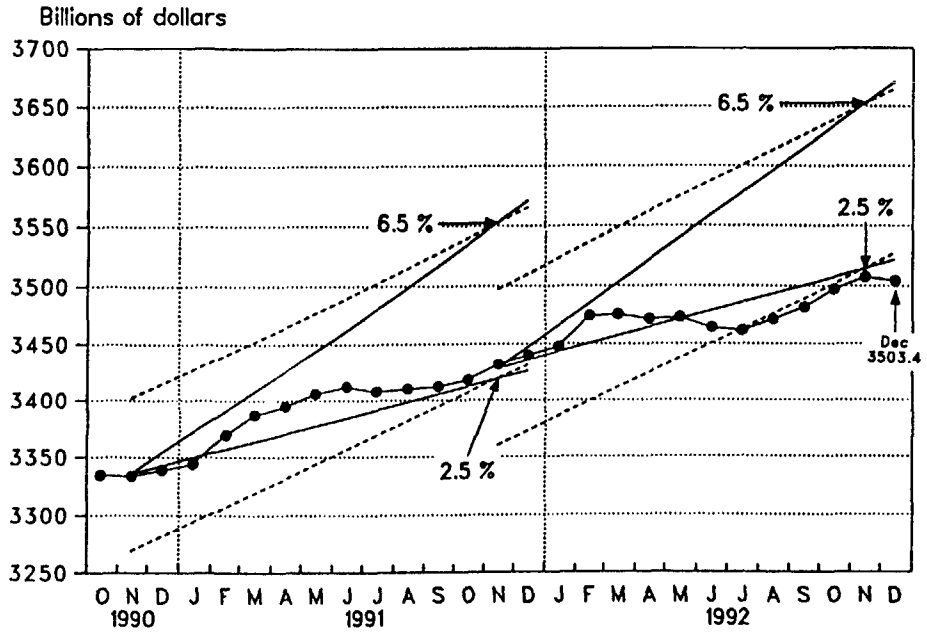
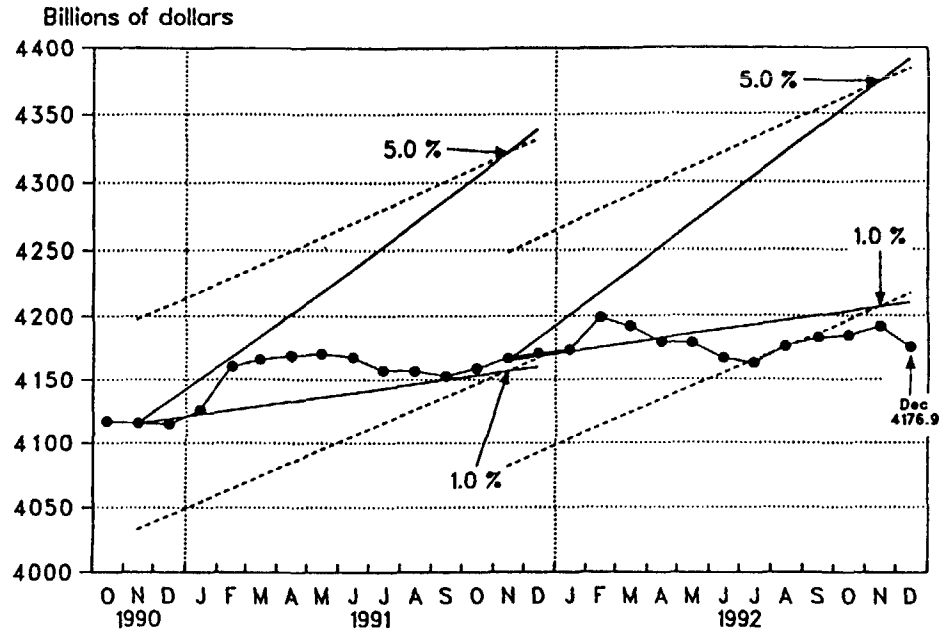
[1]The Committee also establishes a monitoring range for the growth of domestic nonfinancial debt. From the fourth quarter of 1991 to the fourth quarter of 1992, this aggregate grew 4.6 percent (as of March 11, 1993).

[2]Data are as of January 28, 1993. These data do not incorporate the annual benchmark and seasonal factor revisions of February 4, 1993, or subsequent revisions, because the earlier data more closely approximate the information that the Committee had available when it was making its decisions. As of March 11, 1993, net revisions have lifted M1 growth by 0.1 percentage point, depressed M2 growth by the same amount, and left M3 unchanged. More significantly, the revisions redistributed some of the growth in all of the aggregates from the first and fourth quarters to the second and third quarters.

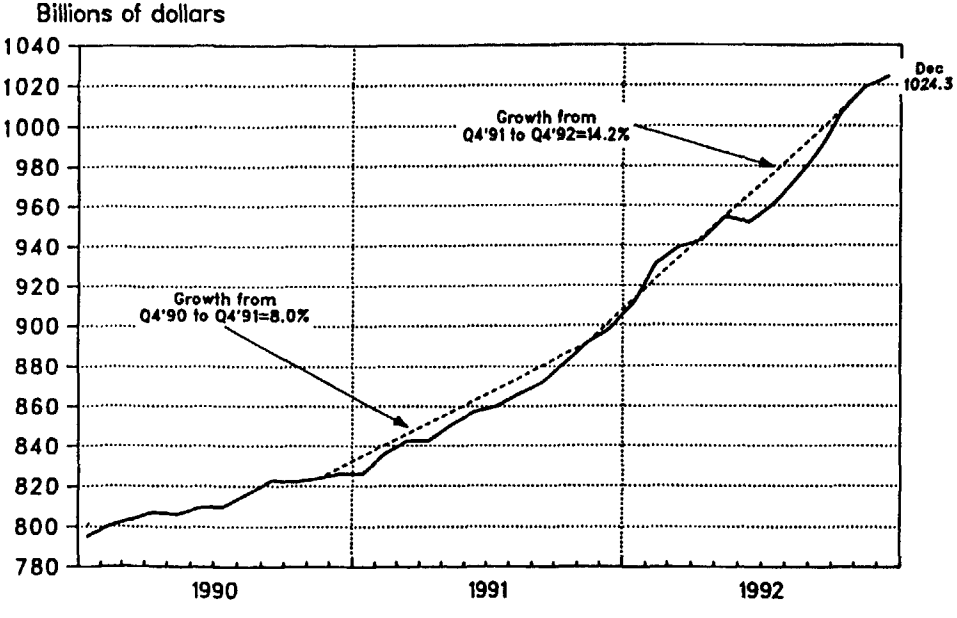
M2 : LEVELS AND TARGETS (CONES AND TUNNELS)



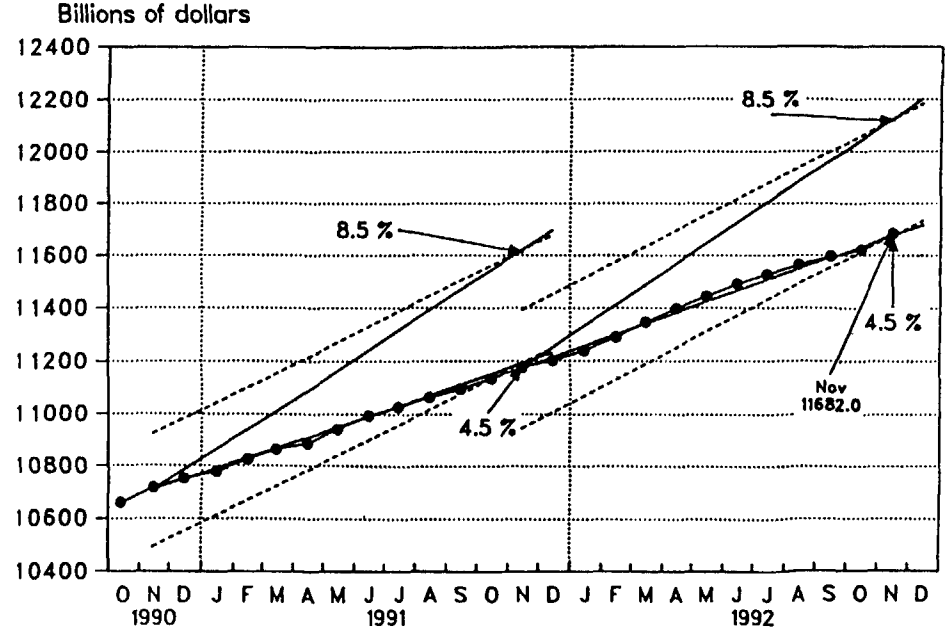
M3 : LEVELS AND TARGETS (CONES AND TUNNELS)



M1 LEVELS



DOMESTIC NONFINANCIAL DEBT : LEVELS AND MONITORING RANGES



Growth in the broader aggregates continued to be restrained during 1992.[3] Both the nontransaction component of M2 and the non-M2 portion of M3 fell quite steadily throughout the year, declining in all but one month. Several influences combined to reduce the growth rate of the depository sector and hence the broader aggregates. One contributing factor was the continuing trend on the part of both households and nonfinancial corporations toward reducing their high levels of debt. In addition, firms have gone directly to the capital market, issuing commercial paper, for example, rather than depending on bank credit. Meanwhile, households have also lowered their demand for new credit and refinanced existing debt, which banks and other intermediaries have increasingly securitized. Furthermore, depository institutions have increased the spreads between consumer loan rates and time deposit rates in recent years, with after-tax spreads rising further as a result of the phase out of the interest deductibility of consumer borrowing between 1986 and 1991. The wider spreads have encouraged households to reduce their levels of bank loans and discouraged the accumulation of noncheckable bank deposits. These balance sheet developments have contributed to the downsizing of the depository sector.

Reinforcing the effects of lower loan demand has been increased public awareness of bond and equity funds and other alternatives to bank and thrift deposits. Since interest rates on longer maturity assets have remained high relative to returns on bank deposits, these alternatives have become increasingly attractive. Finally, a third factor may have been a declining willingness to lend on the part of financial institutions, resulting from

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[3]Much of the discussion of the weakness of the broader aggregates is drawn from a 1992 Board Staff paper by Joshua N. Feinman and Richard D. Porter, "The Continuing Weakness in M2." In addition to providing more detailed discussion, the paper develops a new money demand model, with an alternative opportunity cost measure, to help explain the recent behavior of M2.

legislation passed both to deal with the troubles of the thrift industry and to strengthen the banking industry. Financial institutions now face stiffer capital requirements, higher deposit insurance premiums, and more stringent lending standards, all driving up the cost of depository intermediation and leading to reduced growth in the depository sector.

Financial and Business Developments

Yield movements

Short-term interest rates fell during 1992, while, for the most part, yields on securities maturing in three or more years ended the year about where they had started (Chart 5). Early in the year, short-term rates were steady, while longer term yields moved higher amid signs of a pickup in economic growth. Longer term yields were also influenced by talk of a fiscal stimulus package, which contributed to renewed inflation worries and concerns about further expansion of the budget deficit. Increases in yields were tempered, though, as it appeared increasingly unlikely that a sizable fiscal stimulus package would be adopted.

Over the second and third quarters, short-term rates fell in concert with the three easing moves by the Federal Reserve. Treasury bill yields were fairly steady between the monetary policy changes, though the third easing move on September 4 was followed by further rate declines on more signs of economic weakness and expectations of further easing. Meanwhile, coupon yields moved gradually lower over this period amid continued good news on inflation and signs that the economic recovery was sluggish. The Treasury yield curve steepened somewhat, as investors began to focus on the political and economic uncertainty associated with the Presidential election and worried once more about the potential for a costly fiscal stimulus package (Chart 6).

In the fourth quarter, short-term rates rose as the economy showed signs of strengthening, gradually leading the market to conclude that there

Chart 5
Long-Term and Short-Term Interest Rates

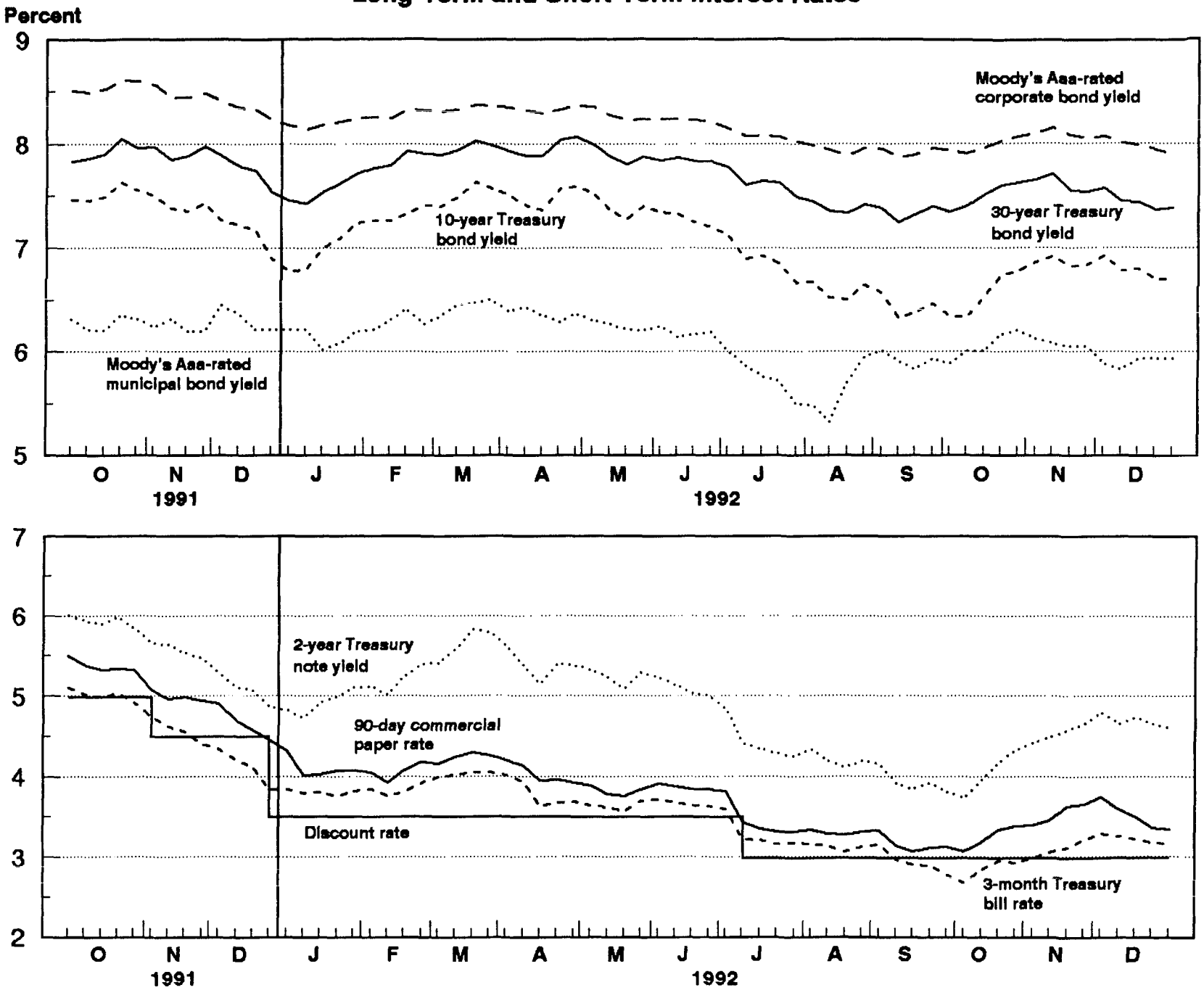
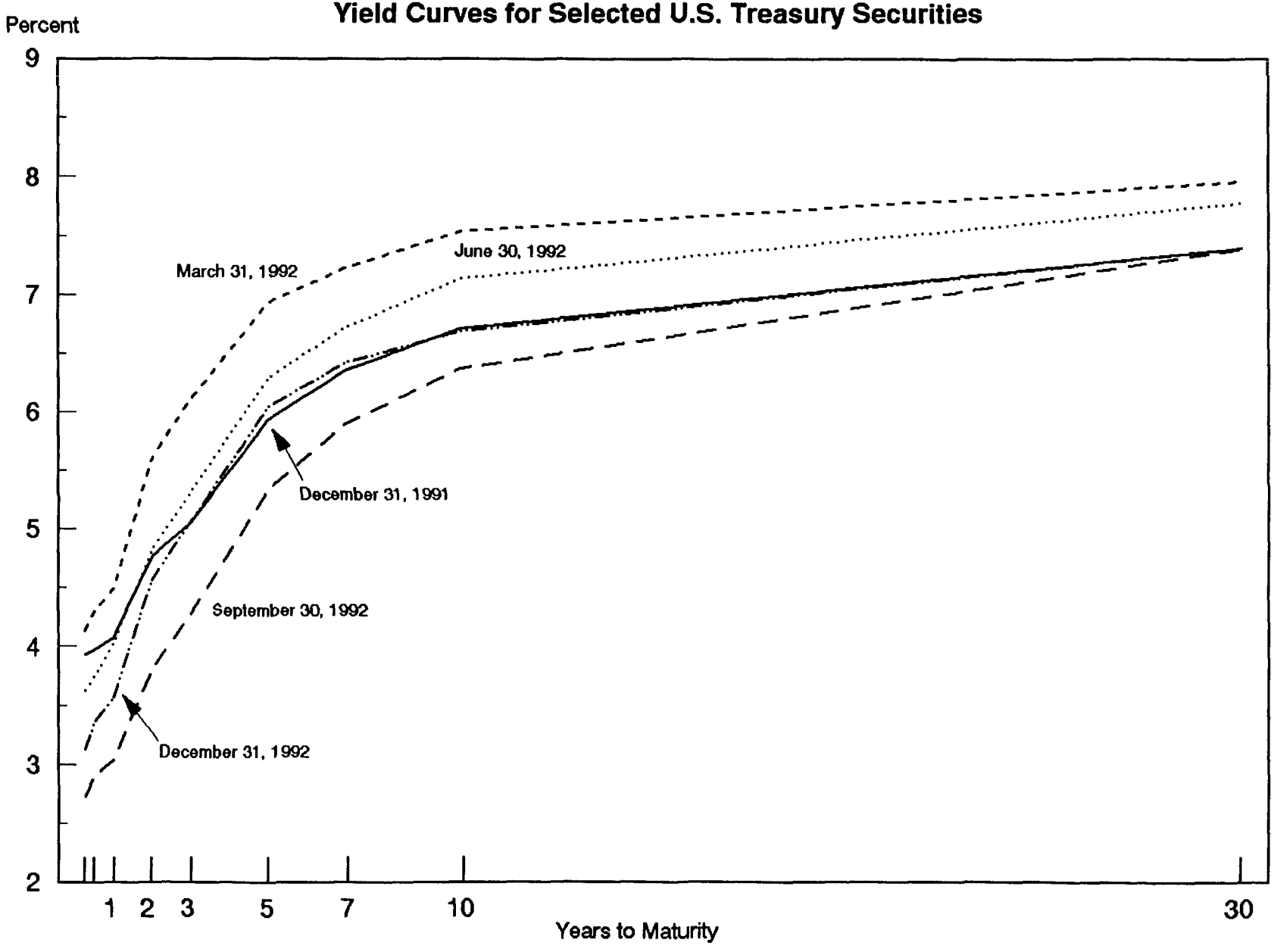


Chart 6
Yield Curves for Selected U.S. Treasury Securities



would be no further monetary policy easing. Long-term rates also rose in advance of the election, as the likelihood of a Clinton victory grew along with renewed concerns about the impact of his Presidency on inflation and the budget deficit. After the election, coupon yields fell back somewhat as inflation remained subdued, and stronger economic data appeared to reduce the likelihood of a large fiscal stimulus package from the new Administration.

Treasury finance

During the year, the topic of the appropriate maturity mix of Treasury debt issuance received considerable attention. Discussion of possible changes in the mix influenced yields and revived old debates about debt-management strategies and the term structure of interest rates. Suggestions were made early in the year that the Treasury might reduce the volume of long-term bonds and redirect more of its issuance to shorter term issues. Those supporting the shift argued that by taking advantage of the steep yield curve the Treasury could reduce its borrowing costs. Others suggested that any initial savings could be wiped out by higher costs incurred when the debt was rolled over.

Another aspect of the debate was whether a shift away from longer term and toward shorter maturity funding of the public debt would significantly flatten the yield curve and perhaps, by lowering long-term interest rates, also stimulate the economy. Proponents argued that lower long-term rates would induce private firms to issue more long-term debt and increase investment.[4]

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[4]The effect of the issuance patterns on the yield curve depends critically on the degree of substitutability among Treasury securities of different maturities. High substitutability would make it difficult to influence the yield curve over any meaningful time horizon. However, if substitutability is more limited, then Treasury issuance patterns could play a more important role.

At the February mid-quarter refunding, the Treasury cut the sizes of the 30- and 10-year issues by $2 billion and $1 billion, respectively, and announced that it planned to maintain the revised proportions among the 3-, 10-, and 30-year issues at upcoming refundings. The topic of debt management was revived during the Presidential election campaign when the candidates discussed the merits of selling less long-term debt. Expectations of smaller 30-year bond issues may have slightly lowered yields on outstanding long-term bonds at times and also may have pushed up shorter term yields, though it was difficult to distinguish these effects from the consequences of changing economic and inflation prospects.

The Treasury began its experiment with single-price auctions in the third quarter, using the new technique in monthly auctions of its two- and five-year notes. By applying the same price to all successful bids, the technique eliminates the so-called "winner's curse," in which some of those with winning bids find that they paid more than necessary. Proponents argue that the change has the potential to prompt more aggressive bidding at auctions, lowering average yields and saving money for the Treasury, as well as possibly reducing the incentive for collusive behavior among dealers. As of the end of the year, it was still too early to judge the experiment either a success or a failure.

The *Joint Report on the Government Securities Market*,[5] published in January, had recommended occasional reopenings of Treasury debt issues in the event of shortages that could be disruptive to the smooth functioning of the secondary markets. The heavy financing activity of corporations, municipalities, and foreign governments in 1992 frequently caused temporary Treasury price movements--which occurred to a limited extent in the cash

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[5]Prepared by the Department of the Treasury, Securities and Exchange Commission, and the Board of Governors of the Federal Reserve System.

market but more significantly in the financing market--as underwriters hedged their positions. Hedgers sold Treasury securities short and then borrowed the securities to meet delivery obligations. In October, the hedging of corporate debt contributed to an acute, protracted shortage of 10-year Treasury notes. The Treasury responded by reopening the latest 10-year note at the November refunding.[6]

Financial strains

The financial stress that had restrained economic activity since 1990 abated during 1992 in major sectors of the economy, though some vulnerabilities remained. Bank balance sheets improved substantially, helped by increased profitability and new equity issuance. Falling interest rates enabled banks to profit from widening interest rate margins and rising security values. Delinquency rates declined because of the improving economic conditions and more conservative lending practices. Better loan quality also contributed to higher profits. In addition, banks actively raised new equity, reflecting the increasing importance of capital in the new regulatory environment with its stiffer capital requirements.[7] All of these activities sharply increased the average equity capital ratio and improved the asset quality of banks during 1992. While the strengthened financial condition of banks may have reduced the incidence of bank failures, some banks remained

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[6]The reopening was made feasible by a recent Internal Revenue Service ruling allowing the Treasury to reopen an issue to eliminate an "acute, protracted" shortage without respect to the usual restrictions on original issue discounts. Normally, an issue sold with a discount greater than 1/4 point for each full year remaining to maturity--the situation for the note in question--would be subject to different tax treatment than an issue that was sold closer to par. Without the tax code change, the newly issued notes and the outstanding notes would have to have been treated as separate issues.

[7]Banks were required to achieve capital ratios of risk-weighted assets of 4 percent for tier 1 capital and 8 percent for tier 1 plus tier 2 capital by the end of 1992. In addition, the FDIC announced a new pricing scheme, charging a lower deposit insurance premium to well-capitalized banks starting January 1993.

vulnerable to increases in interest rates as a result of their large holdings of fixed income securities accumulated since 1990.

The debt burden of households decreased during the year as many households refinanced existing debt at lower interest rates and reduced their use of credit. Lower interest rates spurred large-scale mortgage refinancing during 1992 (Chart 7). Consumer installment credit, excluding mortgages, decreased sharply as a share of personal disposable income (Chart 8). Yet total household liabilities, which includes mortgage debt, as a ratio of personal disposable income decreased only modestly and remained high by historical standards.

Some positive developments also were noted in the corporate sector, but the evidence was uneven. Profits increased as the restructuring moves of previous years began to bear fruit and economic activity picked up (Chart 9). Cash flow improved as a result of the higher profits and the lower interest payments associated with refinancing. Accordingly, the average ratio of net interest payments to cash flow for nonfinancial corporations, a measure of financial strain, decreased markedly. On the other hand, the average ratio of total assets to net worth, a measure of leverage, showed little sign of decline. Furthermore, prolonged financial strains forced some major corporations such as General Motors, Westinghouse, Sears, and IBM to announce restructuring moves that involved downsizing. The airline industry also continued to experience financial difficulties. In sum, financial conditions improved somewhat overall and yield spreads to Treasury issues narrowed modestly for most grades of corporate debt, but further adjustment lay ahead.

Municipalities also took advantage of low interest rates to actively refinance debt. Municipal debt issuance was particularly strong toward the end of the year, as market participants perceived that the economy was improving and thought that interest rates might be bottoming out.

Chart 7
MBA Mortgage Application Indexes
(March 1990 = 100)

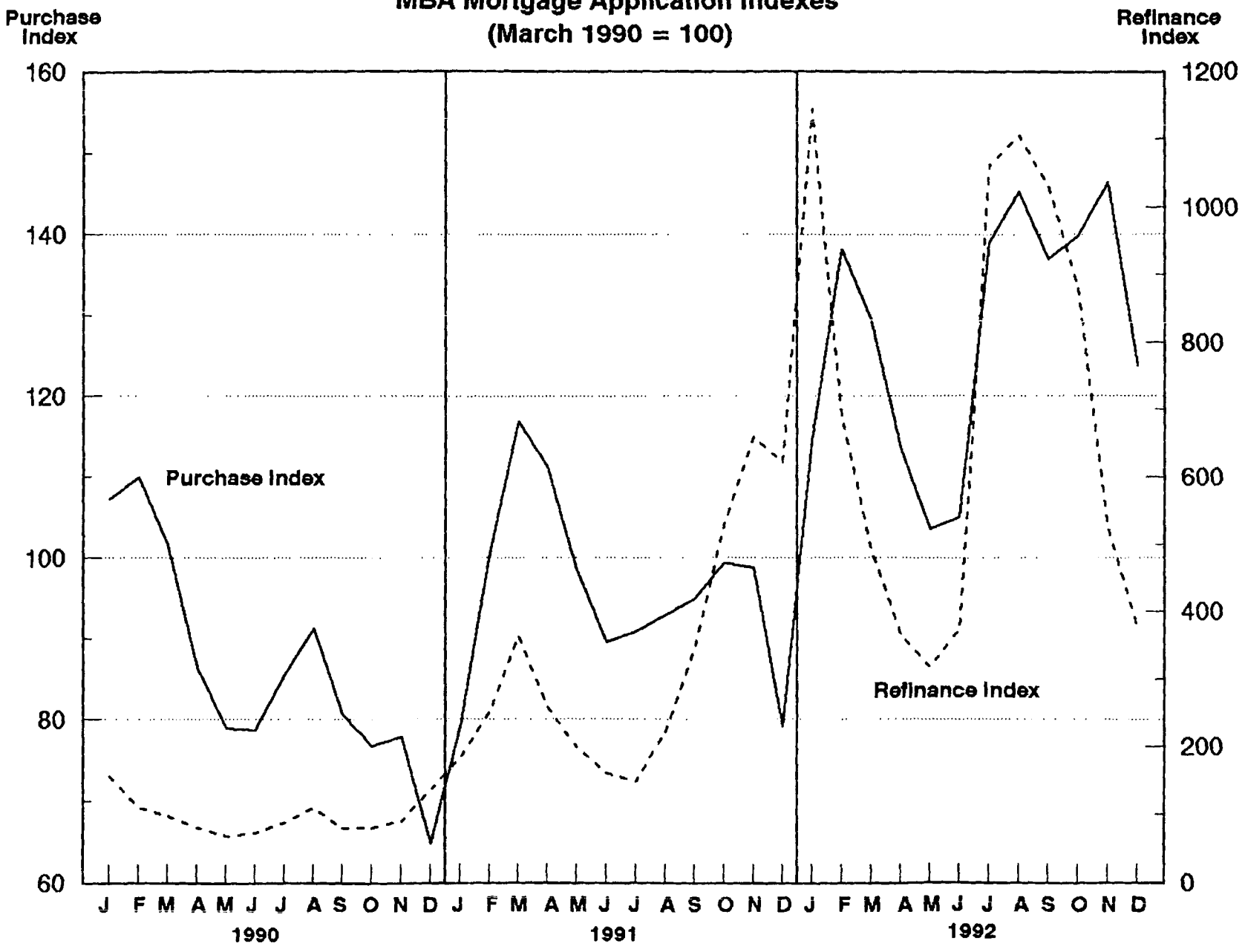


Chart 8

Consumer Installment Credit as a Percent of Personal Disposable Income

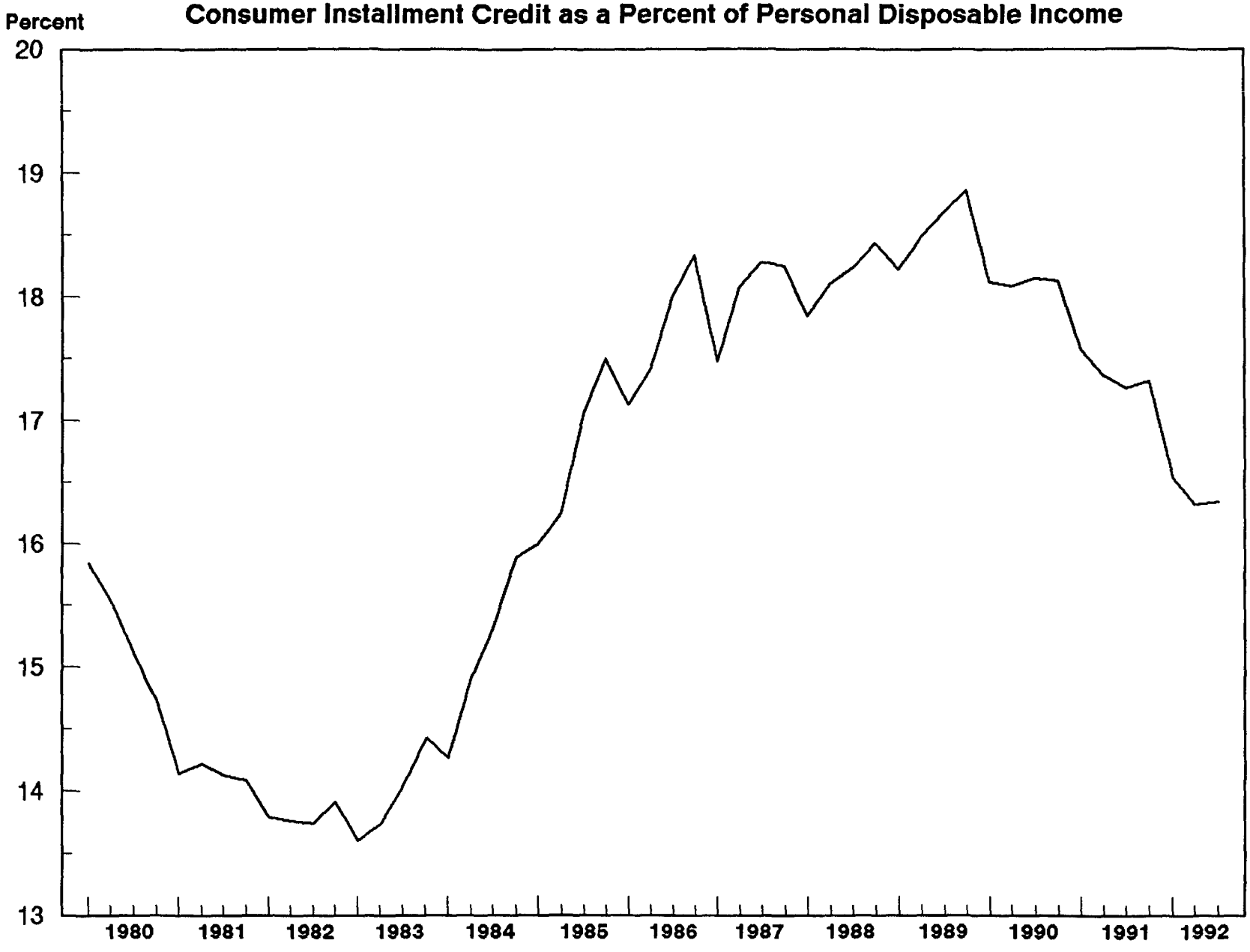
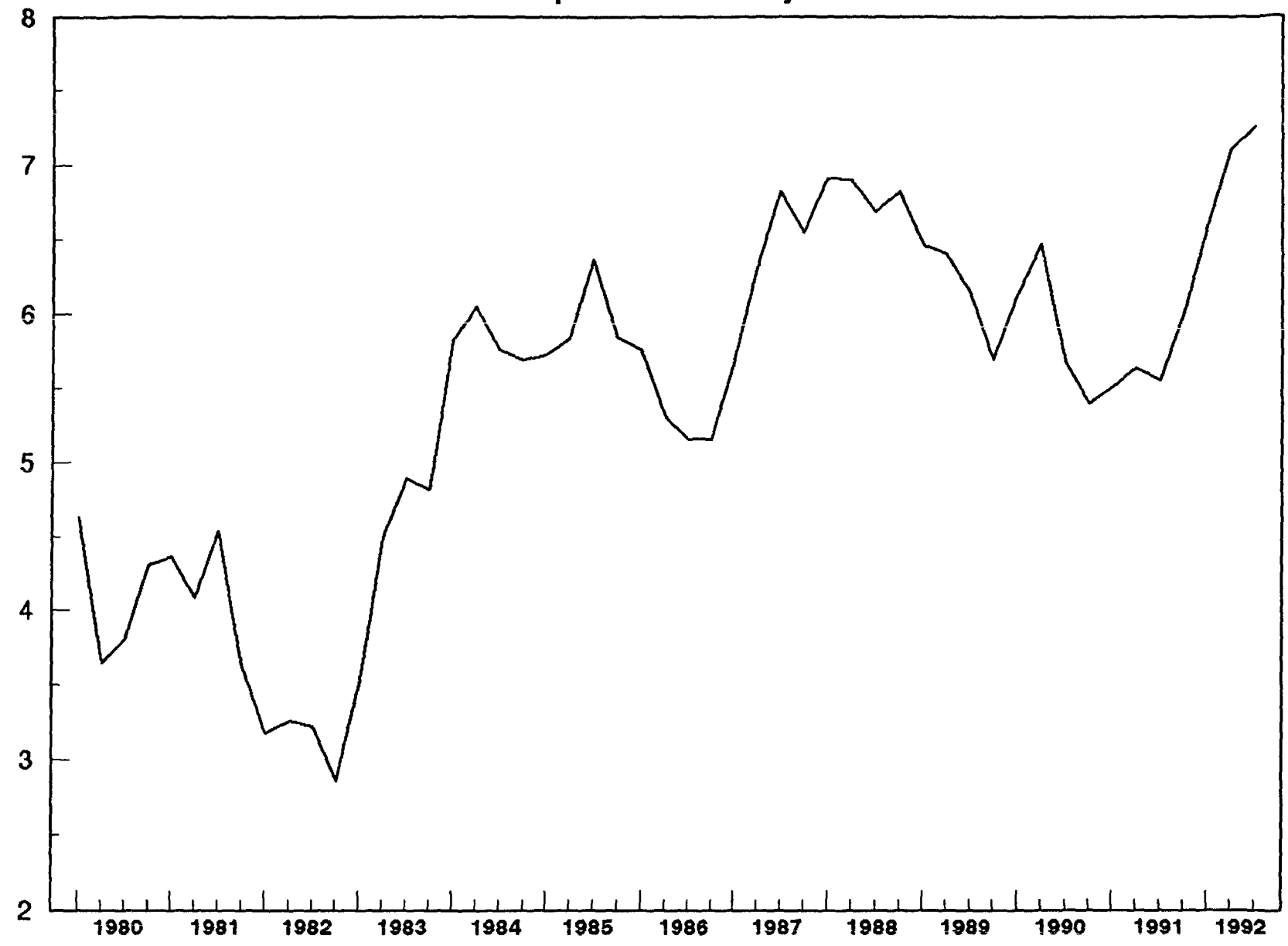


Chart 9
Corporate Profitability*



* Defined as the ratio of corporate profits to net worth.

Special factors also affected the municipal market over the course of the year. One influence was the expectation that property and casualty insurance companies would sell a portion of their inventory of municipal securities in absorbing the heavy level of claims associated with Hurricane Andrew's devastation of south Florida. Spreads of yields on municipal securities below comparable taxable yields narrowed considerably in mid- and late-August because of this expectation along with the influence of heavy municipal issuance. Late in the year, some of the expected hurricane-related sales by insurance companies reportedly did take place, again putting upward pressure on municipal yields.

A factor working in the other direction, especially after the Presidential election, was the expectation of an increase in marginal tax rates on high-income families sometime during 1993. This expected policy change increased the demand for municipal securities, pushing their yields downward relative to yields on taxable securities and more than offsetting the upward pressure from the sales by insurance companies.

International developments

Europe and Japan both experienced considerable financial stress during 1992 which at times contributed to demand for U.S. Treasury debt. In June, Danish voters rejected the Maastricht treaty on European economic and monetary union. The referendum result, which dimmed the prospect of European financial integration, resulted in the decline of European stock markets and the appreciation of the Deutsche mark (DM), the strongest EC currency, against other European currencies.

In July, domestic inflationary pressures induced the German central bank to raise its discount rate sharply. A large gap between U.S. and German short-term interest rates put upward pressures on U.S. interest rates and sent the dollar lower against the DM. Other European currencies then lost value

against the DM as investors doubted the commitment and ability of the governments to maintain the value of their currencies against the DM. Subsequent devaluations of some European currencies led to heightened variability in exchange rates, but otherwise had little direct effect on U.S. financial markets.

In Japan, stock prices continued under pressure and were volatile at times. In August, the Nikkei average dropped below 15,000 for the first time in six years. Large capital losses in the Japanese stock market further curtailed the ability of some Japanese investors to invest abroad and hence limited their participation in U.S. financial markets. However, large and growing Japanese current account surpluses required offsetting capital outflows, which came mainly in the form of repayment of foreign currency deposits by Japanese banks.

III. Course of Policy

Monetary policy in 1992 was conducted in an environment of uneven economic growth and continued moderation of inflationary pressures. The FOMC responded to indications of fragility in the economic expansion by easing reserve pressures on three occasions, leading to a 1 percentage point reduction in the Federal funds rate (Table 3). Meanwhile, the Board of Governors approved a 1/2 percentage point cut in the discount rate, bringing that rate to 3 percent. The policy moves in 1992 extended the string of easing steps begun in mid-1989. Since that time, the prevailing Fed funds rate has fallen by nearly 7 percentage points while the discount rate has declined by 4 percentage points.

During the winter and early spring, most economic indicators suggested that an economic expansion of modest dimensions was underway. A pickup in retail spending and consumer sentiment and faster growth in the broader monetary aggregates early in the year offered encouraging signs about

TABLE 3

SPECIFICATIONS FROM DIRECTIVES OF THE FEDERAL OPEN MARKET COMMITTEE AND RELATED INFORMATION

Date of Meeting	Specified Short-term Growth Rates (in percent) M2	M3	Discount Rate (in percent)	Borrowing Assumption for Deriving NBR Path (millions of dollars)	Associated Federal Funds Rate[1] (in percent)	Effect on Degree of Reserve Pressure	Guidelines for Modifying Reserve Pressure between meetings[2]
12/17/91	November to March 3	1 1/2	4 1/2 3 1/2 on 12/20	75 100 on 12/20* 75 on 1/16§	4 1/2 4	maintain	Slightly greater reserve restraint might be acceptable. Somewhat lesser reserve restraint would be acceptable.
2/4 to 2/5/92	December to March 3	1 1/2	3 1/2	75 100 on 2/6§	4	maintain	Slightly greater reserve restraint might be acceptable. Slightly lesser reserve restraint would be acceptable.
3/31/92	March to June 3 1/2	1 1/2	3 1/2	100 75 on 4/9† 100 on 4/30§	4 3 3/4	maintain	"
5/19/92	April to June 2 1/2	1 1/2	3 1/2	100 125 on 5/21§ 150 on 5/28§ 225 on 6/25§	3 3/4	maintain	Slightly greater or slightly lesser reserve restraint might be acceptable.
6/30 to 7/1/92	June to September 2	1/2	3 1/2 3 on 7/2	225 225 on 7/2‡ 250 on 7/30§	3 3/4 3 1/4	maintain	Slightly greater reserve restraint might be acceptable. Slightly lesser reserve restraint would be acceptable.
8/18/92	June to December 2	1/2	3	250 225 on 9/3§ 200 on 9/4†	3 1/4 3	maintain	"
10/6/92	September to December 2	1	3	200 175 on 10/8§ 150 on 10/15§ 125 on 10/22§ 100 on 10/29§ 75 on 11/5§	3	maintain	"
11/17/92	September to December 3 1/2	1	3	75 50 on 12/10§	3	maintain	"
12/22/92	November to March 1 1/2	0	3	50	3	maintain	Slightly greater reserve restraint or slightly lesser reserve restraint would be acceptable.

[1] The Federal funds rate trading area that is expected to be consistent with the borrowing assumption.

[2] Modifications to reserve pressures are considered in the context of the Committee's long-run objectives for price stability and sustainable economic growth, and giving careful consideration to economic, financial, and monetary developments.

* This increase was made so that only part of the accommodation from the cut in the discount rate showed through to the market.

† Change in borrowing assumption reflects adjustment to reserve pressures.

‡ The assumption was unchanged because the full effects of the discount rate cut was allowed to show through to the market.

§ Change in borrowing assumption reflects technical adjustment to account for actual or prospective behavior of seasonal borrowing.

the prospects for the recovery. Moreover, the FOMC during this time felt that enough stimulus probably had been provided through the series of easing steps implemented in the second half of 1991 to foster an upturn in economic activity consistent with a continued moderation of inflation pressures. Nonetheless, with the outlook still so uncertain, the Committee remained alert to signs that the economic expansion might falter. In mid-April, as consumer demand showed some signs of softening and after the broader monetary aggregates had contracted in March, the FOMC implemented a slight easing in reserve pressures that lowered the Federal funds rate by 1/4 percentage point. Also early in the year, the Board of Governors announced that it would reduce the reserve ratio on net transaction accounts to strengthen the financial condition of depositories in order to put them in a better position to extend credit.[8]

During the late spring and over the summer, evidence accumulated indicating that the expansion might be losing momentum, and the FOMC eased reserve pressures further. By early summer it was becoming apparent that the strength in final demand seen earlier in the year was not carrying through. Disturbing increases in the unemployment rate were reported, and household demand appeared to be restrained by continued weakness in labor market conditions. At the same time, the broader aggregates were about flat in May and June, and incoming data suggested that inflation was slowing further. Against this background, after a decline in nonfarm payroll employment was reported on July 2, the Board of Governors approved a 1/2 percentage point cut in the discount rate, and the FOMC allowed the full amount of this cut to show through to the funds rate. Economic data over the summer suggested that an expansion was continuing to take place, but at a subdued rate. In early

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[8]The cut was announced in February and became effective in April. Details about the cut in reserve requirements appear in section IV.

September, the FOMC implemented another slight easing of reserve pressures following a smaller-than-anticipated pickup in growth of the broader monetary aggregates, another reported decline in nonfarm payrolls, and the release of other data showing unexpected sluggishness in economic activity.

As autumn unfolded, the Committee was encouraged by a gradually improving tone to economic reports. Faster growth in private payroll employment was registered, and aggregate hours rose. A wide variety of indicators pointed to improvements in retail sales accompanied by a rebound in consumer confidence. Meanwhile, data suggested a continuing trend to lower inflation and some pickup in the growth of the monetary aggregates (although the broader aggregates weakened again in December). On balance, available evidence suggested that a moderate but sustainable expansion was underway. In this environment, the FOMC adopted a posture of watchful waiting and left monetary policy unchanged.

IV. Policy Implementation

Operating Procedures

Borrowed reserves

In 1992, the FOMC formulated its policy objectives in terms of the "desired degree of reserve pressure," an approach it first adopted almost ten years earlier. Formally, the concept of reserve pressure is specified in terms of an assumed amount of adjustment and seasonal borrowing from the discount window. (These anticipated levels of borrowing and other reserve measures for 1992 are presented in Table 4.) This borrowing allowance is associated with the Federal funds rate trading within some desired band around an expected level by drawing on the historical relation between discount window borrowing--particularly adjustment credit--and the spread between the Federal funds rate and the discount rate. The Desk's reserve operations are designed to provide a level of nonborrowed reserves that will just meet the

TABLE 4
1992 RESERVES LEVELS
(in millions of dollars)

Period Ended	RR Current	RR First Published	ER Current	ER First Published	TR	Adj. & Seas. BR	NBR plus Extended Credit BR Current	NBR plus Extended Credit BR First Published	NBR Interim Objective	Initial Anticipated Adj. & Seas. Borrowing	Final Anticipated Adj. & Seas. Borrowing	Initial Assumed ER	Final Assumed ER	Extended Credit Borrowing
8-Jan-92	56020	55979	1138	1206	57158	521	56637	56666	57098	100	100	1200	1200	1
22-Jan-92	54966	54925	913	935	55879	136	55743	55725	55850	100	75	1000	1000	0
5-Feb-92	53488	53432	1023	1088	54511	128	54381	54394	54538	75	75	1000	1200	2
19-Feb-92	54435	54489	1168	1177	55602	68	55533	55600	55226	100	100	1000	1000	2
4-Mar-92	54151	54130	941	958	55091	61	55028	55028	55030	100	100	1000	1000	3
18-Mar-92	56001	56149	508	395	56509	74	56434	56470	57002	100	100	1000	1000	2
1-Apr-92	54788	54872	1616	1586	56403	117	56286	56342	55772	100	100	1000	1000	1
15-Apr-92	49174	49247	1065	1085	50238	55	50183	50277	50140	100	75	1400	1000	1
29-Apr-92	49150	49283	1212	1123	50362	115	50244	50292	50160	75	75	1000	1000	4
13-May-92	48209	48247	628	541	48836	153	48683	48636	49147	100	100	1000	1000	0
27-May-92	47277	47314	1497	1488	48774	158	48617	48645	48271	100	125	1000	1000	0
10-Jun-92	48492	48492	474	482	48965	152	48814	48823	49354	150	150	1000	1000	0
24-Jun-92	48521	48602	1171	1162	49692	188	49504	49576	49459	150	150	1000	1000	0
8-Jul-92	48884	48832	1041	1158	49924	455	49469	49536	49600	225	225	1000	1000	1
22-Jul-92	49106	49041	950	1061	50056	215	49841	49887	49816	225	225	1000	1000	0
5-Aug-92	48447	48295	922	1074	49369	241	49128	49129	49041	225	250	1000	1000	0
19-Aug-92	49856	49833	825	837	50681	249	50432	50421	50585	250	250	1000	1000	0
2-Sep-92	48820	48721	1067	1172	49887	258	49629	49635	49426	250	250	1000	1000	0
16-Sep-92	51081	51153	795	681	51876	321	51556	51514	51927	225	200	1000	1000	0
30-Sep-92	50217	50102	1182	1290	51399	258	51140	51134	50848	200	200	1000	1000	0
14-Oct-92	52099	52127	1149	1115	53248	185	53064	53057	52781	200	175	1000	1000	0
28-Oct-92	51750	51792	1071	891	52821	118	52704	52566	52675	150	125	1000	1000	0
11-Nov-92	53346	53365	728	754	54074	66	54008	54052	54204	100	75	1000	1000	0
25-Nov-92	53485	53462	1361	1367	54846	138	54709	54692	54363	75	75	1000	1000	0
9-Dec-92	54625	54563	841	937	55466	95	55371	55406	55469	75	75	1000	1000	0
23-Dec-92	55357	55545	1225	1217	56582	58	56522	56704	56526	50	50	1000	1000	2
6-Jan-93	56288	56253	1385	1437	57674	269	57405	57422	57254	50	50	1000	1000	0

estimated demand for reserves less the allowance for borrowing, and which is expected to be consistent with Fed funds trading within its desired range.

That approach to reserve management depends on the link between adjustment borrowing and the spread between the Fed funds rate and discount rate being reasonably predictable. However, this relation has eroded in recent years. The series of banking difficulties that began in the 1980s left many depository institutions reluctant to turn to the discount window out of concern that any borrowing could raise public questions about their financial health.[9] When confronted with inconsistencies between the assumed behavior of borrowing and the expected level of the Federal funds rate, the Desk since late 1987 has generally modified its reserve objectives for the two-week maintenance period in a way that was intended to keep the funds rate within the desired range.

This unwillingness to tap the discount facility persisted in 1992, despite some apparent easing of the financial strains that had originally given rise to much of the reluctance to borrow. In addition, a generally low level of adjustment borrowing was encouraged by a narrow spread between the Federal funds and discount rates. For the year, the average effective Fed funds rate exceeded the discount rate by just 27 basis points, little changed from the average spread of 24 basis points in 1991. (As recently as 1990 and 1989, this spread averaged 112 and 228 basis points, respectively.) In fact, the expected levels of the funds rate and the discount rate were identical during the final four months of 1992. When the funds rate was close to the discount rate in the past, borrowing was generally near frictional levels and

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[9]The reports from the preceding two years include discussions of the reluctance of depositories to borrow.

the predicted relationships did not hold well.[10] A similar situation occurred in 1992. Adjustment borrowing was heavily concentrated on days when the funds rate spiked (most commonly on settlement days) or when unusual circumstances, such as interruptions to normal payments flows, forced some banks to turn to the window.

Reflecting these developments, adjustment credit averaged just $76 million a day in 1992, compared with $140 million in 1991 and $234 million in the preceding year.[11] Adjustment borrowing dropped to $13 million in the period ended November 11 when the average effective funds rate and the discount rate were virtually the same.[12] (Actual levels of borrowing and the effective Federal funds and discount rates are presented in Chart 10.)

In addition, the level of seasonal borrowing fell to unusually low levels in 1992. The level of seasonal credit was held down by the adoption of new pricing procedures for this type of borrowing, effective in the maintenance period ended January 22. Under the new policy, the rate charged on seasonal borrowing in a maintenance period is determined by the average of the effective Fed funds rate and a 90-day composite CD rate from the preceding period. Previously, the basic discount rate served as the rate on seasonal credit. By relying on market-based rates, the new pricing procedure removed much of the price incentive for using seasonal credit that would otherwise

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[10]During periods in the 1970s and in 1980, the funds rate was about the same as or below the discount rate.

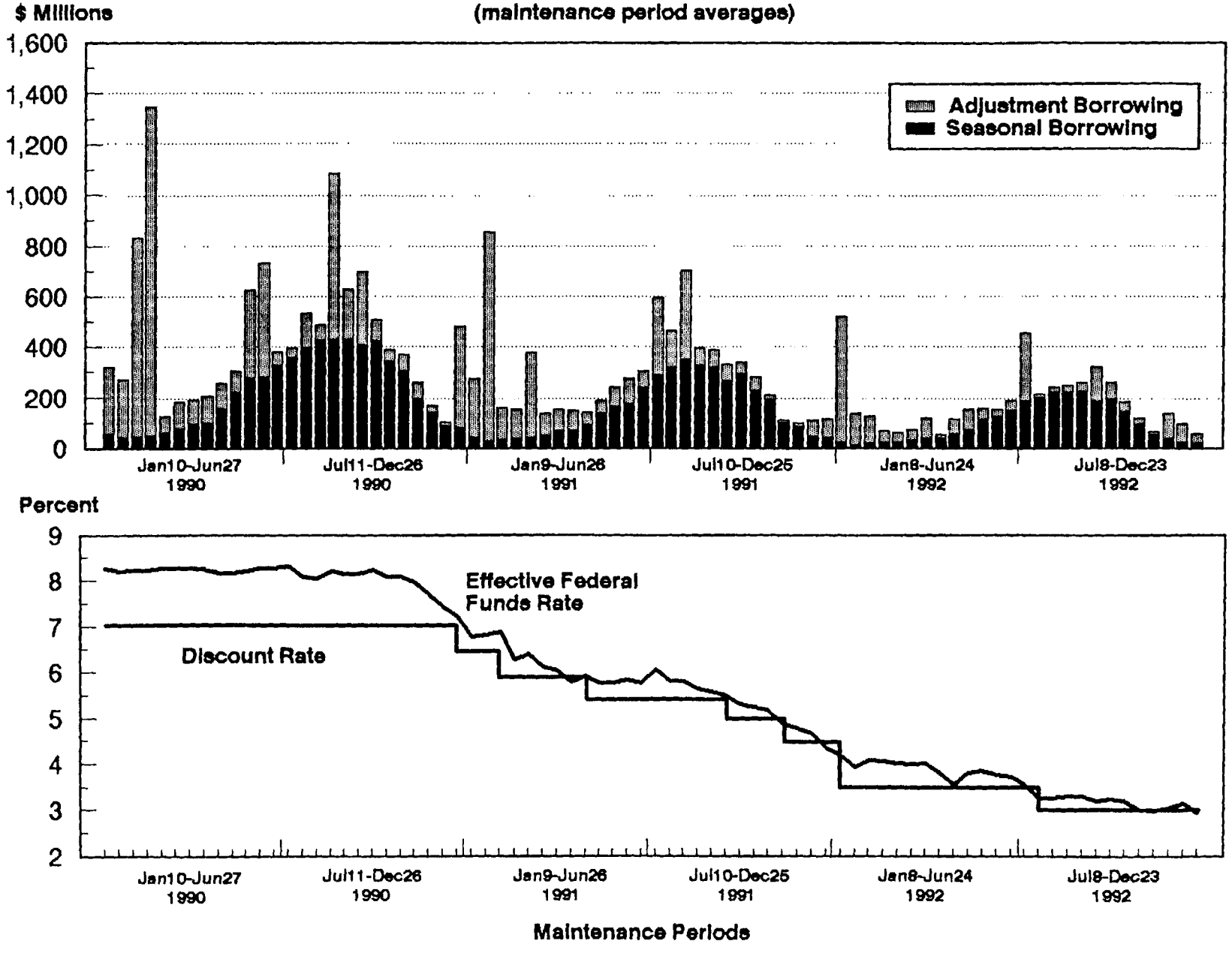
[11]Absent special situation borrowing by banks with financial difficulties, the averages for 1991 and 1990 were $123 and $164 million, respectively.

[12]This was the lowest average level of borrowing for a maintenance period since $12 million was borrowed in the July 9, 1980 week-long period. Adjustment borrowing averaged $14 million in the period ended November 13, 1991.

Chart 10

Borrowing, Federal Funds Rate, and Discount Rate

(maintenance period averages)



have been present during the part of the year when the Federal funds rate exceeded the discount rate.[13]

The average level of seasonal borrowing in every maintenance period in 1992 was below the amount in the corresponding period in 1991. The impact of the new pricing procedure on seasonal credit became apparent in late spring, when the rate of increase in seasonal borrowing typical at that time of year fell below the pace of previous years. For the year as a whole, seasonal credit averaged $97 million, compared with $155 million in 1991 and $223 million in 1990.[14]

Despite the lower overall level of seasonal credit, the general behavior of this borrowing conformed to its usual pattern--rising through the summer and falling thereafter. To keep pace with these movements in seasonal borrowing, the Desk made six upward technical adjustments to the borrowing allowance between February and July, and afterwards made seven technical reductions to the allowance.[15]

Adjustments to recent cuts in reserve requirements

On February 18, the Board of Governors announced that it would reduce the reserve ratio on net transactions accounts from 12 percent to 10 percent, effective April 2. This reduction was the first major change in the reserve ratio on transactions accounts since the Monetary Control Act was adopted in 1980, and it followed the elimination of remaining reserve requirements on nontransactions deposits in December 1990. The latest cut lowered total

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[13]Declines in seasonal borrowing in other recent years resulted from a narrowing Fed funds and discount rate spread and reduced total credit needs.

[14]Seasonal borrowing peaked at $226 million in the period ended September 2; its lowest average level was $12 million in the period ended January 22.

[15]In addition, one downward technical adjustment was made to the allowance in the maintenance period in January in which the switch to the new pricing procedure took effect.

reserve requirements by an estimated $8 billion, almost all of which was reflected in a reduction in required reserve balances--the reserves that depository institutions hold at Federal Reserve Banks to meet their reserve requirements.[16]

Reserve balances at the Fed are used by depositories not only to meet reserve requirements, but to process the heavy volume of daily transactions between financial institutions and to guard against unexpected late-day deposit withdrawals that could send a bank into overdraft.[17] Because a steep penalty is imposed whenever a depository institution ends the day overdrawn, considerable efforts are made to avoid such overdrafts.[18] The demand for reserve balances for these purposes is especially high at the larger banks. The Desk encountered substantial difficulties in formulating open market operations early in 1991 following the December 1990 cut to reserve requirements as depositories struggled to adapt their reserve management practices to a sharply lower level of reserve balances.[19] The Desk was confronted with difficulties occasionally later in 1991 as it sought to ensure that reserve supplies were sufficient to meet requirements on a period average

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[16]Required reserve balances are defined as required reserves less applied vault cash. Banks met a small portion of the April cut in reserve requirements by reducing their holdings of applied vault cash.

[17]A discussion of the varied uses of reserve balances at the Fed appears in "Monetary Policy Implementation and Reserve Requirements," by Ann-Marie Meulendyke, forthcoming in a Federal Reserve Bank of New York report, *The Adverse Side Effects of Operating with Low Reserve Requirements*.

[18]The charge for an overnight overdraft is the greater of 2 percentage points above that day's effective Fed funds rate or 10 percent. Currently, daylight overdrafts that are covered before the close of business are not subject to a monetary penalty, although the Board announced that it plans to begin charging for such overdrafts in April 1994.

[19]During the initial adjustment period, the Fed funds rate was unusually volatile, and excess reserve demand was highly uncertain. The adjustment to the December 1990 cut in requirement ratios is described in last year's report.

basis while at the same time always being adequate to support banks' daily clearing operations.

In contrast, serious difficulties in conducting operations were avoided in April 1992, in large measure because the latest cut in requirements was implemented at a time when seasonal factors were working to elevate the level of required reserves. The high seasonal level of reserves helped to provide the liquidity needed to support clearing operations, despite the substantial cut in requirement ratios.[20] The timing of the cut was chosen because of the problems that the Desk faced in 1991, when an earlier cut in reserve requirements preceded a pronounced seasonal decline in required reserve balances.[21]

Several other factors also eased the Desk's reserve management problems immediately following the April 1992 cut in reserve requirements, and mitigated reserve management difficulties later in the year. Rapid growth in M1 deposits in 1991 and 1992 lifted the underlying level of required reserves. In the fourteen months between the two rounds of reserve requirement cuts, the reservable portion of M1 rose at an annualized rate of 13 percent (using seasonally adjusted data), and it continued to expand at a similar pace over the remainder of 1992. In addition, depositories have significantly increased their required clearing balances.[22] These balances stood at $1.8 billion

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[20]The rapid buildup in transactions deposits, which raises the level of required reserves just ahead of the major April tax date, accounts for most of the seasonal increase in required reserve balances in April.

[21]Required reserve balances in early February 1991 averaged $16 billion in one maintenance period. They averaged about $22 billion in April 1992.

[22]A depository can establish a clearing balance by specifying an average level of reserves that it will hold at the Fed for clearing purposes. In exchange, it receives credits at a rate determined by the effective funds rate that it can use to pay for priced services provided by the Fed. A discussion of the required clearing balance program appears in "Expanding Clearing Balances," by S. Hilton, A. Cohen and E. Koonmen, in *The Adverse Side Effects of Operating with Low Reserve Requirements*.

just prior to the December 1990 cut in reserve requirements, little changed from their level one year earlier. By April 1992, clearing balances had been lifted to $4.7 billion, and by the end of 1992 these balances had reached $5.9 billion. Most of this growth was concentrated at the larger institutions, which faced the most severe difficulties operating with low balances at the Fed.[23] Growth in required clearing balances has widened the gap between total reserves at the Fed and required reserve balances over the past two years.[24] (See Chart 11.)

The above developments have partly offset the impact of recent cuts in reserve requirements on the level of reserve balances at the Fed. Nonetheless, throughout 1992, reserve levels at the Fed remained below the levels reached ahead of the December 1990 cut in requirements, while the need for bank liquidity to support clearing operations has remained high.[25] (See Chart 12.) Reserve management difficulties of the magnitude that arose in early 1991 when reserve balances fell to exceptionally low levels have been avoided so far; however, some of the ways that depositories have adapted their reserve management practices to cope with a lower level of required reserve balances have had an impact on the Desk's conduct of open market operations. In particular, since the December 1990 cut to reserve requirements, depository

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[23]For many banks, the expansion in required clearing balances was facilitated by further declines in the Federal funds rate, which raised the maximum useful clearing balance associated with a given usage of priced services.

[24]The gap between total reserves at the Fed and required reserve balances is affected by excess reserves and various as-of adjustments as well as by required clearing balances.

[25]In the two maintenance periods just prior to the December 1990 reserve requirement cut, total reserves maintained at the Fed (including required clearing balances) averaged a bit over $35 billion. In the corresponding periods in 1992, total reserves at the Fed averaged just over $31 billion.

Chart 11
Reserve Balances
(maintenance period averages)

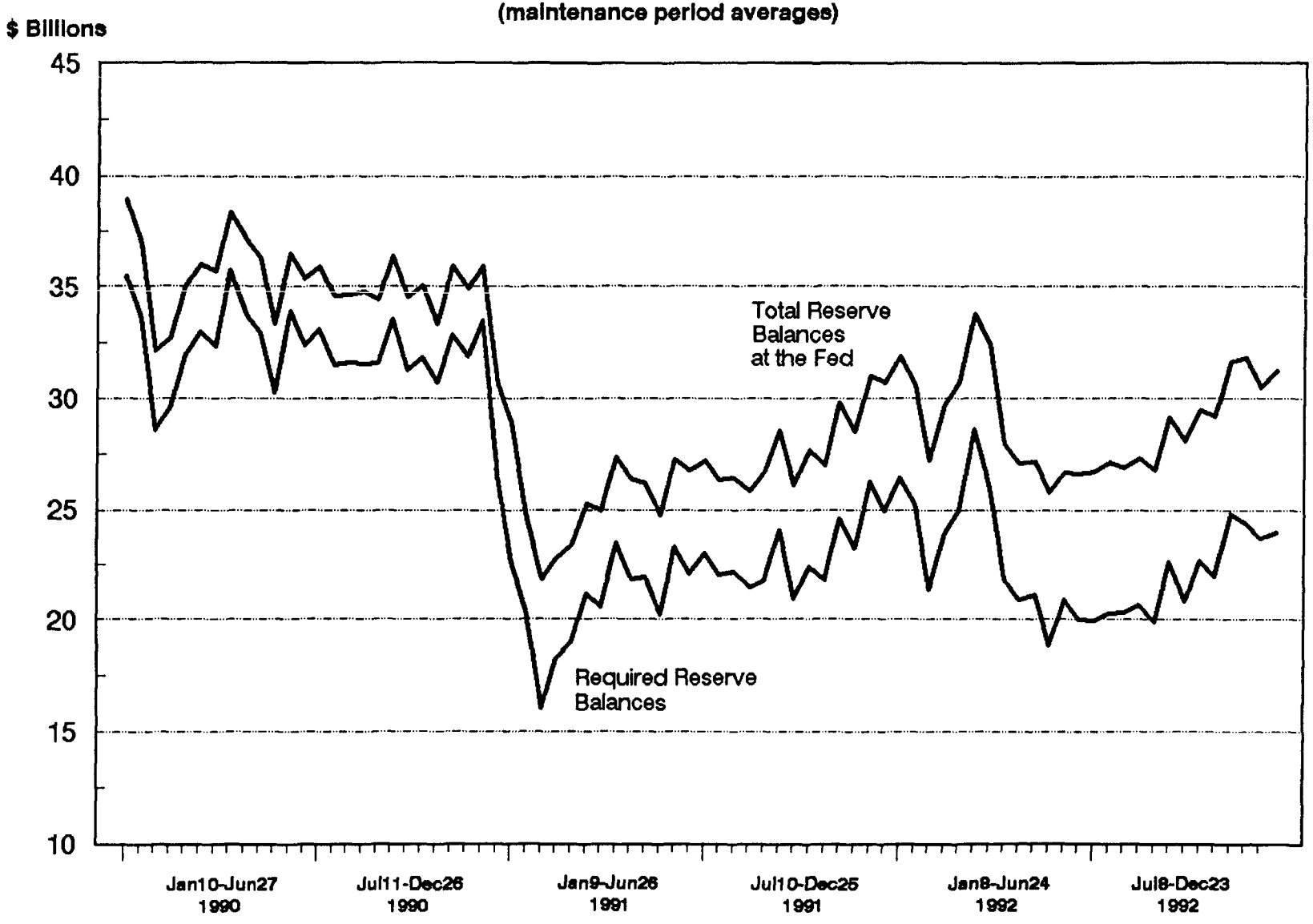
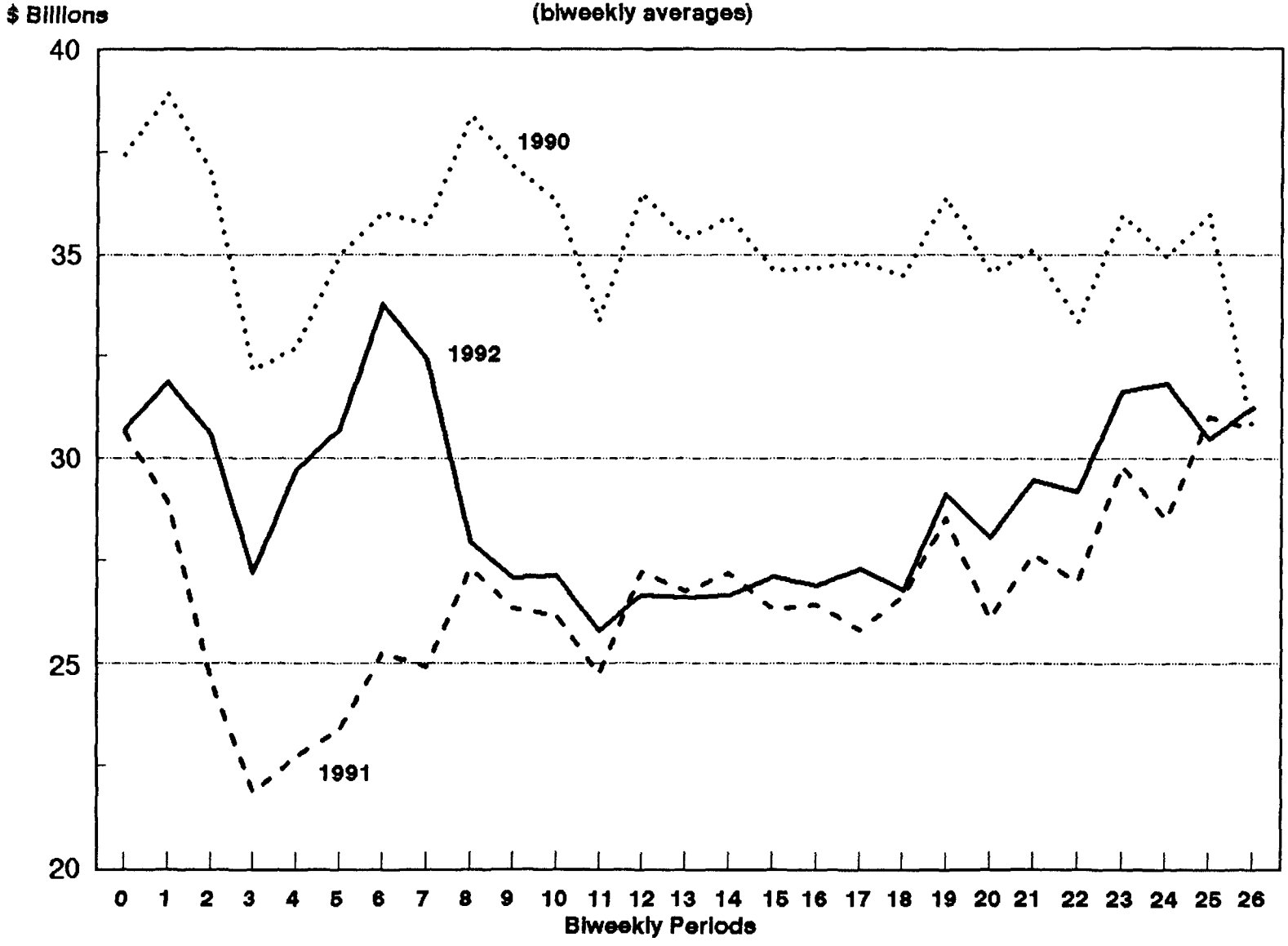


Chart 12
Total Reserve Balances at the Fed
Including Required Clearing Balances
(biweekly averages)



Note: For each set of annual observations, Period 1 covers the year-end, and Period 0 is equal to Period 26 from the preceding year.

institutions have often deferred holding reserves to meet their requirements until late in a maintenance period.[26]

With a smaller cushion of reserve balances available to work with, many depositories preferred to defer holding reserves to meet their requirements until late in a maintenance period in order to avoid accumulating an excess position early in a period that could be difficult to run off later without risking an overnight overdraft. This reserve management approach was reflected in a dramatic shift in the distribution of excess reserves within a maintenance period. In the two years prior to the December 1990 cut in reserve requirements, the average levels of excess reserves in the first and second weeks of a maintenance period were similar in magnitude. In the following year or so, average holdings of excess reserves became skewed toward the second week of a period, and this imbalance became even more pronounced following the April 1992 cut in reserve requirements.[27] In many maintenance periods, a reduced demand for reserves early in the period contributed to a tendency for the Federal funds rate to be on the low side of its expected trading range until late in the period, often despite a large period-need to

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[26]To help lift their holdings of reserves in order to meet their liquidity needs, depositories as a group also have apparently slightly increased their average holdings of excess reserves. However, the implicit interest cost of holding reserve excesses has discouraged depositories from enlarging these balances.

[27]From January 1989 to December 1990, excess reserves in the first and second weeks of all maintenance periods averaged $950 million and $910 million, respectively. (The averages exclude the period covering the 1990 year-end, when excess reserves in the first week exceeded $10 billion.) From January 1991 through March 1992, the average levels in the first and second weeks of periods were $500 million and $1790 million, respectively. From April through December 1992, the corresponding averages were $280 million and $1740 million. Several factors could contribute to a tendency to hold more excess reserves in the second week of a period, including expectations that interest rates might decline--which would make depositories postpone holding reserves in hopes of acquiring them more cheaply later. However, the size of the imbalances and the fact that the expectations effect was also present in 1989 and 1990 strongly suggests that efforts to work with lower reserve balances has played an important role.

add reserves. In periods when the add need was great, this intra-period pattern of reserve demand interfered with the Desk's ability to provide reserves smoothly.[28]

The Board undertook some measures during 1992 to limit the difficulties depository institutions and the Desk faced when working with low reserve balances at the Fed. Effective September 3, the limits for carrying forward reserve excesses or deficiencies for one maintenance period were doubled to the larger of 4 percent of a depository's required reserve level or $50,000. The enlarged carryover allowance was intended to provide depositories with more flexibility to manage their reserve positions to meet reserve requirements and to hold adequate balances for clearing purposes. Beginning with the period ended November 25, vault cash holdings became eligible to meet reserve requirements with a one period lag, a reduction from two periods. This shift was intended to lift the seasonal trough that required reserve balances reach early each year.[29] Nonetheless, despite these measures and the other factors that lifted reserve balances over the past two years, the Desk's ability to meet reserve needs smoothly remains vulnerable to developments that would further reduce the level of reserves maintained at the Fed.

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[28]Of course, the Desk's operations--in the absence of sizable discount window borrowing--will ultimately determine the distribution of excess reserves in a period ex post; however, in structuring its actions, the Desk often responds to indications of the immediate demand for reserves as reflected in current trading conditions in the money market. The following section addresses more broadly the sources of discrepancies between the Fed funds rate and reserve estimates in 1992, and the Desk's responses to them.

[29]Both measures were first proposed for public comment when the April 1992 cut in reserve requirements was announced.

Discrepancies between the Federal funds rate and the reserve estimates

The Desk's temporary open market operations each period are designed to close the gap between the objective for nonborrowed reserves and the available estimates of nonborrowed reserve supplies.[30] Trading conditions in the money market typically reflect the general reserve picture, with reserve shortages (surpluses) associated with a tendency towards firmness (softness) in the funds rate. However, conflicts between the Fed funds rate in the morning and the reserve estimates for the period continued to arise frequently in 1992. The emergence of such episodes was usually the result either of widespread market expectations of a possible change in Federal Reserve policy, incorrect estimates of the reserve need (available either to the Desk or to bank reserve managers), or the reserve management strategy of depositories that wished to avoid accumulating excess reserves early in a period.[31]

The Federal funds rate has taken on a high degree of visibility in recent years such that significant moves of the rate away from the level that was perceived to be the focus of policy could be misinterpreted as signalling a change in policy stance. The close focus of market participants on the funds rate meant that the Desk often felt the need to take account of trading conditions in the money market in formulating its actions, even when doing so was likely to cause sharp movements in the funds rate later in the day or period.[32] During much of 1992, market participants believed that there was a good chance that the FOMC could adopt a more accommodative policy. Against

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[30]The nonborrowed reserve objective or "path" is derived by subtracting the borrowing allowance from estimates of the total demand for reserves (required plus excess).

[31]Possible reasons for conflicts between the funds rate and the reserve estimates, and the way that the Desk may respond to these discrepancies, are described in more detail in last year's report.

[32]Last year's report described how the Desk often communicates changes in policy through its open market actions.

this background, on a number of days when the funds rate was to the low side of its expected trading level despite a period-need to add reserves, the Desk planned its day's course of action in a way that would clarify the stance of policy, or at least avoid sending misleading signals. Indeed, softness in the funds rate on many of these occasions resulted from widespread speculation about a near-term easing move. The Desk sometimes deferred meeting an add need, or substituted a smaller, less aggressive, customer-related operation in place of a System operation that the reserve profile suggested would be more appropriate. As a result, the funds rate sometimes firmed substantially in later trading, and on some settlement days borrowing was elevated.[33] On several occasions when an add need was seen, the Desk even drained a small amount of reserves to make clear the current stance of policy.[34]

Ideally, temporary conflicts between the funds rate and the reserve profile should not unduly complicate the Desk's approach to addressing reserve needs. Having more flexibility in formulating operations would give the Desk greater scope to meet reserve needs in a period gradually, rather than having to address most of a need late in a period when it could prove difficult to arrange large-scale reserve operations. Over time, greater tolerance for movements of the funds rate around an expected trading level might also decrease some of the attention market participants give to the rate as they try to interpret whether a movement signals a change in policy stance.

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[33]On several settlement days during the year, funds were firm even though reserves were estimated to be in surplus or at least adequate. There was little likelihood that a failure to add reserves in these circumstances would be misinterpreted as a signal that policy was being tightened. Still, the Desk usually provided extra reserves on these occasions to meet the apparent need reflected in the firm funds rate.

[34]These occasions occurred during the maintenance periods ended February 5, February 19, March 18, April 15, April 29, June 24, and August 5.

Over the final few months of the year, market speculation of an imminent easing in policy diminished; however, incongruities between a soft funds rate and an estimated reserve shortage still occasionally arose. The Desk sought to use these opportunities to re-establish a degree of tolerance of discrepancies between estimates of the reserve need and trading conditions in the money market that had gradually eroded over the previous few years. The Trading Desk took somewhat greater heed of the estimated reserve profile in formulating its operations--although it was careful to consider the possible information about the true reserve picture contained in market trading conditions.[35] On several occasions, the Desk added reserves as called for by the reserve estimates even when the funds rate was a bit on the low side of the expected trading level, and at other times it took no action when the rate slipped to levels that previously might have moved the Desk to drain reserves.

Open Market Operations and Reserve Management[36]

Changes in the System portfolio

The System's portfolio of U.S. Government securities grew by $30.2 billion in 1992, just shy of the previous year's record expansion and well above most increases in the preceding decade. As in most years, outright

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[35]Occasionly there were very large projection errors that misled the Desk in its operations. A huge miss in the projections of reserve supply in the period ended November 25 resulted from an error in applying the new accounting rules for calculating applied vault cash. As a result, for most of the period, the estimates showed a large need to add reserves, but trading conditions in the market were usually either comfortable or to the soft side. Still, the Desk aggressively added reserves when conditions allowed and met the estimated need. Late in the period, the projection error was discovered, and the reserve picture turned to show a large surplus. Over the final two days of the period, reserve supplies were brought back into near-balance with demand as a result of heavy withdrawals before maturity from earlier System RPs.

[36]Details of portfolio changes in 1992, their causes, and the accuracy of the available forecasts of reserve supply and demand are presented in Appendix A.

purchases were concentrated in the market, although the Desk still bought a sizable amount of securities from foreign accounts.[37] A moderate amount of securities was sold or redeemed in 1992.

The expansion of the portfolio was almost entirely used to offset the reserve drain arising from changes in operating factors. Increases in currency-in-circulation accounted for most of the net drain in reserves from market factors. The Federal Reserve also continued to reduce its holdings of foreign currency, which also drained a moderate amount of reserves. Required reserves were little changed on balance during the year. The impact of strong growth in the reservable components of the money supply on the level of required reserves was about offset by the April 1992 cut in requirement ratios.

Maturity Structure of the System Portfolio

The composition of the Federal Reserve's portfolio of Treasury securities came under scrutiny in 1992, in part because of the attention focused on Treasury debt management strategies, described in Section II. In these circumstances, the FOMC reviewed the history of the maturity structure and the principles that have guided the Desk's purchase and sale decisions.

The Federal Reserve manages its portfolio of Treasury securities primarily to implement its objectives for monetary policy. The securities purchased over time have largely supported the expansion of currency, although the size of the portfolio has also been adjusted in response to changes in the level of required reserves and to movements in other factors that have absorbed or supplied reserves. During the latter half of the 1970s and early 1980s, the average maturity of the System portfolio was fairly similar to the

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[37]In 1991, the Desk bought most of its securities from official foreign accounts largely because several accounts were making large sales in order to raise funds to pay for their Desert Shield/Desert Storm obligations at times when the Desk wished to add reserves on a permanent basis.

maturity of all Treasury debt outstanding. (See Table 5.) This similarity occurred because the composition of the Desk's purchases was shaped to some extent by the relative supplies of Treasury securities in the market. This approach also represented a fairly neutral posture vis-a-vis the yield curve.

In the mid-1980s, the Federal Reserve gave some thought to whether its liquidity needs might be better served by holding a proportionately greater amount of short-term securities. While the Federal Reserve would rarely have occasion to sell a large volume of securities from its portfolio, it must provide for possible contingencies. The Fed was reminded of the value of a liquid portfolio in 1984 when Continental Illinois National Bank faced a collapse of confidence. To keep operating, the bank borrowed a massive volume of reserves from the Federal Reserve's discount window. In response, the Fed reduced its holdings of Treasury bills to avoid an undesired increase in reserves.

For several years thereafter, the Fed managed its portfolio in a way that gradually shortened the average maturity while the Treasury was engaged in gradually lengthening the average maturity of its debt. The Desk concentrated its market purchases in bills, and it favored shorter term issues when rolling over maturing coupon securities. The effort to enlarge its bill holdings was interrupted in 1989 when heavy purchases of foreign currencies by the Federal Reserve provided more reserves than were consistent with policy objectives. The Desk offset that reserve creation by reducing its bill holdings through a combination of redemptions and outright sales, a process that was facilitated by holding a highly liquid portfolio.[38] Over the next 1 1/2 years, the Desk replenished its bill holdings by arranging all of its

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[38]In 1989, Treasury coupon holdings rose slightly while the total value of the portfolio fell on net by $10 billion. Bill sales and redemptions that year totaled $25.5 billion (offset by $14.5 billion of purchases).

TABLE 5

Weighted Average Maturity of Marketable Treasury Debt
(in months)

End of	Federal Reserve Holdings*	Total Outstanding
1960	19.3	55
1965	16.1	60
1970	23.9	40
1975	31.2	33
1976	34.2	36
1977	38.0	38
1978	47.4	44
1979	46.9	47
1980	53.7	48
1981	52.2	50
1982	48.6	47
1983	48.0	51
1984	50.4	55
1985	47.3	59
1986	43.7	62
1987	42.6	66
1988	40.5	67
1989	41.2	69
1990	38.7	68
1991	35.3	68
1992	36.2	67

* The effects of all outstanding temporary transactions--including RPs and MSPs with foreign accounts--are excluded from the calculation of the average maturity of the porfolio.

market purchases in bills (although it continued to acquire coupon securities from official foreign accounts).

In 1992, the Federal Reserve concluded that the desired buildup of liquid holdings had been achieved. Consequently, the Desk began to redirect slightly more of its purchases and rollovers to the longer maturities and to purchase a more even mix of bills and coupon issues in the market; however, the contemplated changes were intended to be modest. Consistent with this strategy, the Desk bought a record $19 billion of Treasury coupon securities in 1992, accounting for almost two-thirds of the total net increase in the System's portfolio.[39] Most of the growth in coupon securities was still in issues maturing within five years, but with longer dated issues making up a somewhat greater share of issues acquired in outright market purchases of coupon securities, holdings of longer term debt also increased. As a result of these efforts, the average maturity of the System's portfolio of Treasury securities ended its downward trend and rose by about 1 month.[40]

Forecasting reserves and operating factors

In formulating its reserve strategy, the Desk makes use of estimates of the demand for and supply of reserves. Forecasts of the demand for reserves are based on estimates of required reserves and expectations for excess reserve demands. Projections of the available supply of reserves are derived from forecasts of various operating factors. The accuracy of forecasts for most factors affecting reserve needs in each maintenance period

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[39]Because of some outright sales and redemptions of bills, coupon purchases as a share of total purchases was somewhat lower. (There were no sales or redemptions of coupons.) Coupon purchases as a share of the total net increase in the System portfolio were considerably higher in 1987 when about $17 billion of coupon securities were purchased out of a total increase of $21 billion in the System's portfolio.

[40]A modest extension of the average maturity of new issues that the Desk acquired in exchanges at some Treasury coupon auctions also contributed to this lengthening of the average maturity of the System's Treasury holdings.

usually improved as the period progressed, reflecting the availability of additional information. Still, large revisions coming late in the period did sometimes complicate the Desk's reserve management efforts.

The accuracy of staff forecasts of operating factors generally improved moderately in 1992. Projections of the Treasury's Fed balance showed the most improvement. Reserve projectors in 1992 did not have to contend with large foreign payments into the Treasury's Defense Cooperation Account for Desert Shield/Desert Storm contributions, which had proved difficult to anticipate in 1991.[41] As usual, the largest projection errors of the Treasury balance in 1992 occurred around major tax dates.

Estimates of excess reserves were modestly better in 1992. However, excluding the early maintenance periods of 1991, when depositories were adjusting to sharply lower required reserve balances, the forecast accuracy of excess reserves in 1992 and 1991 were similar. Meanwhile, forecast errors for required reserves were a bit larger at the beginning and in the middle of maintenance periods in 1992 than in 1991.

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[41]For a similar reason, initial forecasts of the foreign investment pool also improved in 1992.

APPENDIX
A

DESK ACTIVITY FOR THE SYSTEM ACCOUNT

APPENDIX A

DESK ACTIVITY FOR THE SYSTEM OPEN MARKET ACCOUNT

The four sections of this appendix review the Trading Desk's activities undertaken on behalf of the System Open Market Account during 1992. The first section discusses the outright changes made in the System portfolio during the year and the reasons for these transactions. The second part reviews the temporary transactions that were used to affect reserve levels. The third section reviews the accuracy of staff estimates of the demand for and supply of reserves. The final section summarizes System lending activity.

I. Outright Changes in the System Portfolio

Total System holdings of U.S. Government securities rose by $30.2 billion in 1992, slightly below the record increase of $31.0 billion in 1991, but well above the average annual increase over the preceding decade (even excluding 1989, when the portfolio fell). (See Tables A-1 and A-2.) About two-thirds of the net increase was in coupon securities, reflecting the Desk's desire to achieve a modest lengthening of the average maturity of its portfolio. At the end of 1992, the System's holdings had reached a total par value of $308.8 billion. Meanwhile, the Treasury's total marketable debt outstanding was rising at a similar pace, so that the System's share of that debt was about unchanged.

Bank Reserve Behavior

The expansion of the System's portfolio over the year was largely prompted by declines in reserves arising from movements in various operating factors. On balance, these factors drained almost $30 billion of reserves between the maintenance periods ended January 8, 1992 and January 6, 1993. (See Table A-3.) Currency growth of $27 billion accounted for most of this reserve drain. The increase in currency was record-sized, although its rate

TABLE A-1

SYSTEM PORTFOLIO: SUMMARY OF HOLDINGS *
(In billions of dollars)

	Year-End 1992	Change during **	
		1992	1991
Total Holdings:	308.8	+30.2	+31.0
Bills	150.2	+11.5	+20.0
Coupons	153.2	+19.4	+11.3
Agency Issues	5.4	-0.6	-0.3

* Commitment basis
** Year-end to year-end
Note: Figures may not add due to rounding.

TABLE A-2

SYSTEM PORTFOLIO OF TREASURY AND AGENCY SECURITIES •

(In millions of dollars)

		Treasury Securities											
				Coupon Issues								Federal Agency	
End of	Total Portfolio	Bills	%	Under 1 year	%	1-5 years	%	5-10 years	%	Over 10 years	%	Securities	%
1960	26,984	2,900	10.7%	11,955	44.3%	10,680	39.6%	1,178	4.4%	271	1.0%	-	-
1965	40,478	9,101	22.5%	15,478	38.2%	14,066	34.7%	1,448	3.6%	385	1.0%	-	-
1970	62,142	25,965	41.8%	10,373	16.7%	19,089	30.7%	6,046	9.7%	669	1.1%	-	-
1975	93,290	37,708	40.4%	8,730	9.4%	30,273	32.5%	6,425	6.9%	4,082	4.4%	6,072	6.5%
1980	131,344	46,994	35.8%	12,749	9.7%	34,505	26.3%	13,354	10.2%	15,002	11.4%	8,739	6.7%
1985	190,072	89,471	47.1%	20,179	10.6%	35,650	18.8%	14,785	7.8%	21,759	11.4%	8,227	4.3%
1986	210,249	108,571	51.6%	18,863	9.0%	36,469	17.3%	15,451	7.3%	23,066	11.0%	7,829	3.7%
1987	231,243	112,475	48.6%	22,966	9.9%	47,512	20.5%	15,313	6.6%	25,424	11.0%	7,553	3.3%
1988	245,756	117,910	48.0%	26,123	10.6%	55,279	22.5%	12,568	5.1%	26,909	10.9%	6,966	2.8%
1989	235,566	106,847	45.4%	28,883	12.3%	54,076	23.0%	12,529	5.3%	26,706	11.3%	6,525	2.8%
1990	247,586	118,675	47.9%	25,963	10.5%	58,749	23.7%	13,121	5.3%	24,736	10.0%	6,342	2.6%
1991	278,628	138,732	49.8%	30,542	11.0%	64,299	23.1%	14,469	5.2%	24,540	8.8%	6,045	2.2%
1992	308,848	150,219	48.6%	37,758	12.2%	68,750	22.3%	18,903	6.1%	27,805	9.0%	5,413	1.8%

• Commitment Basis.

% As percent of total System Account portfolio.

Note: Figures may not add to totals due to rounding.

System Holdings of Treasury Securities as a Percentage of Total Marketable Debt Outstanding

	Total Treasury	Within 1 year			1-5	5-10	Over 10
End of	Issues	Bills	Coupons	Total	years	years	years
1960	14.3	7.4	34.8	20.1	14.8	6.3	1.1
1965	18.9	15.1	46.6	26.3	23.2	4.2	1.5
1970	25.1	29.5	29.2	29.4	23.2	26.8	3.4
1975	24.0	23.9	20.7	23.3	27.0	24.3	16.5
1980	19.7	21.7	15.7	20.1	17.5	21.7	22.4
1985	12.8	22.4	10.2	18.4	7.7	8.2	11.8
1986	12.6	25.4	9.0	20.0	6.9	7.1	10.3
1987	13.1	28.9	9.4	21.3	8.2	6.4	9.9
1988	13.2	28.5	10.1	21.4	9.1	5.1	9.5
1989	11.9	24.8	10.5	19.2	8.5	4.7	8.3
1990	11.1	22.5	9.2	17.9	8.0	4.6	7.0
1991	11.1	23.5	9.6	18.6	7.5	5.0	6.5
1992	11.1	22.8	10.3	18.4	7.1	5.9	6.4

TABLE A-3

BANK RESERVES
(In millions of dollars)

	Maintenance Period Ended 1/6/93	Change during: 1992*	1991**
Nonborrowed Reserves			
Excluding extended credit	57405	768	1858
Including extended credit	57405	767	1838
Extended Credit Borrowing	0	-1	-21
Borrowed Reserves			
Including extended credit	269	-252	226
Adjustment plus Seasonal	269	-252	247
Adjustment	257	-242	266
Seasonal	12	-10	-19
Required Reserves #	56288	268	4540
Excess Reserves	1385	247	-2455

System Portfolio and Operating Factors***
(In billions of dollars)

System Portfolio	308.8	30.2	31.0
Operating Factors:			
Foreign Currency ##	18.7	-3.9	-4.9
U.S. Currency	334.3	-27.1	-20.6
Treasury Balance	7.3	2.2	-2.1
Float	2.5	1.7	-2.0
Special Drawing Rights	8.0	-2.0	-
Gold Deposits	11.1	0.0	-
Foreign Deposits	0.2	-0.3	0.2
Applied Vault Cash	31.1	1.5	0.7
Other Items	17.6	-1.2	-2.3
Foreign RP Pool ###	7.3	-0.6	-

* Change from maintenance period ended January 8, 1992 to that ended January 6, 1993.
** Change from maintenance period ended January 9, 1991 to that ended January 8, 1992.
*** Sign indicates impact of changes in operating factors on bank reserves.
\# Not adjusted for changes in required reserve ratios.
Acquisition value plus interest earnings. Revaluations of foreign currency holdings are included in "Other Items."
Includes customer-related repurchase agreements.
Note: Figures may not add due to rounding.

of growth was in line with growth rates during much of the past decade. There was again strong demand from abroad, although it was below the estimated amounts during the previous two years. In addition, strong domestic demand for currency emerged late in the year when the economy strengthened.

Changes in the System's holdings of foreign currency and certificates against Special Drawing Rights (SDRs) also had a significant impact on the supply of reserves. Sales and a "dewarehousing" of foreign currency drained about $6 1/2 billion of reserves over the year (market value), and net valuation losses on the System's portfolio of foreign assets drained another $1 billion or so of reserves.[1] Interest earnings on foreign currency assets totaling $2 billion were partly offsetting. Finally, a demonetization of SDR certificates in December initiated by the Treasury in order to meet an IMF quota increase drained $2 billion of reserves.

Most of the decline in the System's foreign currency holdings reflected a series of off-market transactions conducted directly between the Federal Reserve and the Bundesbank.[2] The Treasury's Exchange Stabilization Fund also dewarehoused the remaining $2 billion equivalent of its foreign currency holdings at the Fed in April. Net intervention in July and August in support of the dollar against the German mark decreased the Fed's foreign currency portfolio by a further $635 million equivalent (market value).

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[1]Revaluations of the Fed's foreign currency holdings, which occur monthly, affect the "Other Items" category in the tables. Also, when the Fed sells foreign currency, the book value of the currency sold is charged against "Foreign Currency" holdings, and the difference between the market and book values is charged against Other Items. In 1992, the market value of foreign currency holdings sold was about $3/4 billion greater than the acquisition value.

[2]The Federal Reserve sold a total of about $3 3/4 billion (market value) of German marks to the Bundesbank on May 20 in a spot and several forward transactions. The details of these transactions are provided in "Treasury and Federal Foreign Exchange Operations, May-July, 1992," Federal Reserve Bank of New York *Quarterly Review*, Autumn 1992.

Depository institutions increased their holdings of required clearing balances (RCBs) by almost $2 billion during the year in order to increase their reserve balances at the Fed in the face of cuts to reserve requirement ratios over the past two years. For convenience, these balances are treated as an operating factor and are included in the "Other Items" category in Table A-3. In this framework, an increase in RCBs lowers the supply of reserves coming from Other Items. In fact, RCBs are a source of demand for reserves.

Other factors affecting reserve supply and demand showed more modest changes on balance. Various other operating factors provided net additions to reserves. Meanwhile, the effects of the April 1992 cut in reserve requirement ratios on the level of required reserves was about offset by strong growth in the reservable deposit components of M1 during the year; the level of required reserves was about unchanged at the end of 1992 from its year-earlier level. Levels of excess reserves around the last two year-ends were similar.

Adjustment borrowing at the end of 1992 was down from the elevated level over the previous year-end. Seasonal borrowing was relatively low, and borrowing under the extended credit program was virtually nil throughout the year.

Outright Transactions

The Trading Desk conducted outright operations when reserve projections showed a large, sustained need to add or drain reserves. The overall volume of outright transactions in 1992 was well above the level in the preceding year, even though the net expansion of the System's portfolio in each of the two years was similar. (See Table A-4.) The total size of outright transactions in 1991 had been depressed by the almost complete absence of outright sales or redemptions of securities to meet the seasonal

TABLE A-4

SYSTEM OUTRIGHT OPERATIONS*
By Type of Transaction and By Counterparty
(In billions of dollars)

	1992	1991
Total Outright	37.9	31.8
By Type of Transaction:		
Purchases	34.1	31.4
Bills	14.7	20.2
Coupons	19.4	11.3
Sales	1.6	0.1
Bills	1.6	0.1
Coupons	0.0	0.0
Redemptions	2.2	0.3
Bills	1.6	0.0
Coupons	0.0	0.0
Agency Issues	0.6	0.3
By Counterparty:		
Total Outright in Market	21.9	10.4
Purchases	21.9	10.4
Bills	9.7	8.1
Coupons	12.3	2.3
Sales	0.0	0.0
Bills	0.0	0.0
Coupons	0.0	0.0
Agency Issues	0.0	0.0 #
Total Outright with Foreign Accounts	13.8	21.2
Purchases	12.2	21.1
Bills	5.1	12.1
Coupons	7.1	9.0
Sales	1.6	0.1
Bills	1.6	0.1
Coupons	0.0	0.0

* Commitment basis.
# One sale totaling $5 million occurred during the year, but the rounded value is zero.
Note: Figures may not add due to rounding.

reserve overage that typically occurs early in calendar years.[3] Early in 1992 the Desk did redeem a modest amount of Treasury bills at some of the weekly auctions and sold some bills to foreign accounts.

Most outright purchases of securities were arranged in the market, and more than half of these were for coupon issues, largely reflecting the desire to achieve a modest extension of the average maturity of the System's portfolio. In fact, of the six occasions that the Desk entered the market to buy securities outright in 1992, three were for coupons.[4] In the preceding two years, the Desk had arranged to buy coupons in the market only once.

The Desk continued to arrange a sizable amount of its outright transactions with foreign accounts when orders were compatible with estimated reserve needs. However, the volume of these transactions in 1992 was substantially below the previous year's level, which had been lifted by heavy sales of Treasury securities by foreign institutions seeking to raise funds to pay for their Desert Shield/Desert Storm obligations. Almost all transactions arranged with foreign institutions in 1992 were for purchases by the Desk. Over one-half of these purchases were of coupon securities.

The Desk restricted its activities in Federally sponsored agency securities to rolling over maturing issues if a suitable replacement was available, but it redeemed modest amounts when new issues were not offered or

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[3]A substantial share of the seasonal reserve surplus forecast for early 1991 had been addressed in late-1990 when the Desk drained large amounts of reserves at the time of the cut in reserve requirements; moreover, an unusually high Treasury balance through February 1991 reduced the size of the reserve surplus at that time.

[4]The Desk bought $3.2 billion of bills on May 27, $3.5 billion of coupons on June 2, $3.7 billion of coupons on September 1, $3.9 billion of bills on October 27, $5.0 billion of coupons on November 18, and $2.5 billion of bills on December 15. The Desk did not arrange to buy securities outright in the market in April as it usually does to meet a seasonal reserve need that month because the size of this need was sharply reduced by the cut in reserve requirement ratios.

when offerings were smaller in size than the maturing issue. As a result, the volume of outstanding Federal agency securities in the System's portfolio continued its downward trend in 1992, for the twelfth consecutive year.

II. Temporary Transactions

The Desk arranges self-reversing transactions to meet temporary reserve needs. The frequency with which such transactions were arranged in 1992 was in line with earlier experience, but the distribution of their cumulative value was more heavily weighted than usual toward adding rather than draining reserves. (See Table A-5.) Furthermore, compared with past years, the Desk arranged multiday System RPs more often, and these operations accounted for an unusually large share of the total value of all temporary reserve injections. A large portion of the value of many of these multi-day RPs was withdrawn by dealers ahead of the original maturity date, and the Desk frequently had to follow up with another temporary reserve addition as a result. On several occasions when the Desk saw a particularly deep reserve need, a multiday RP was made nonwithdrawable.[5]

The number of matched sale-purchase transactions (MSPs) arranged in the market in 1992 was well below the 1991 level, but in keeping with the number in earlier years. However, the cumulative value of these transactions was very low by past standards. As usual, only a small number of the MSP transactions had maturities exceeding one business day.

The Desk typically announced to the market at around 11:30 a.m. any intention either to add or drain reserves that day. To ensure adequate propositions, it once preannounced by one day its intention to arrange multi-day System RPs when high projected levels of the Treasury's Fed balance led to a deep estimated daily reserve deficiency. On two days ahead of

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[5]Nine of the multi-day System RPs arranged in 1992 were nonwithdrawable. The corresponding number in 1991 was three.

TABLE A-5

SYSTEM TEMPORARY TRANSACTIONS
(In billions of dollars)

	1992		1991	
	Number*	Volume	Number*	Volume
Repurchase Agreements				
System:	80	392.9	63	332.9
Maturing next bus. day	28	120.0	32	167.4
Term	52	273.0	31	165.5
Customer-related	64	140.4	79	175.8
Matched Sale-Purchase Agreements				
In Market:	20	28.6	33	75.3
Maturing next bus. day	17	23.0	29	66.8
Term	3	5.7	4	8.4
With foreign accounts**	253	1453.8	251	1495.2
Total Temporary Transactions	417	2015.8	426	2079.1
In Market	164	562.0	175	583.9

* Number of rounds. If the Desk arranged RPs with two different maturities on the same day, it is marked as one round.
The Desk arranged such multiple RPs on 1 day in 1992 and on 0 days in 1991.
** Volumes exclude amounts arranged as customer-related RPs.
Note: Figures may not add to totals due to rounding.

holidays late in the year when the market was scheduled to close early and the Desk faced sizable estimated reserve needs, it entered the market ahead of its usual intervention time to ensure adequate propositions.

III. Forecasting Reserves and Operating Factors

In formulating a strategy for meeting reserve needs, the Desk took into account potential revisions to the estimated demand for and supply of reserves. Faulty projections can hamper the formulation of an effective strategy, especially when they occur late in a maintenance period, because they can necessitate large reserve operations. During 1992, the accuracy of staff forecasts of excess reserves and of operating factors improved relative to 1991 while required reserve forecasts were less accurate. (See Table A-6.[6])

On the demand side, the forecast errors for required reserves were a bit larger early and in the middle of maintenance periods than in 1991. By the final day of the period, the size of these projection misses usually had narrowed considerably and, on average, were about unchanged from the previous year. Nonetheless, sizable revisions resulting from unexpected deposit flows around large tax payment dates or holidays occurred very late in several maintenance periods.

The excess reserves forecasting performance improved in 1992, largely because excess demand had been particularly difficult to predict in early 1991

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[6]The Trading Desk uses forecasts of required reserves, excess reserves, and operating factors made by staffs at the Federal Reserve Bank of New York and the Board of Governors. The Desk also takes into account a forecast of the Treasury's Federal Reserve balance, an operating factor, made by the Treasury staff.

TABLE A-6

Approximate Mean Absolute Forecast Errors for
Various Forecasts of Reserves and Operating Factors*
(In millions of dollars)

	1992			1991		
	First Day	Midperiod	Final Day	First Day	Midperiod	Final Day
Reserves						
Required	350–365	245–270	80	290–320	165–200	70–80
Excess**	220–245	210	n.a.	300–335	215–250	n.a.
Factors	1005–1095	385–465	60–85	1200–1285	590–815	50–60
Treasury	700–830	240–330	45–50	865–885	480–660	40–45
Currency	355–430	140–215	20–40	325–410	160–170	15–20
Float	180–190	135	35–45	230–280	125–150	40–50
Pool	245	140	10	330	115	10

* A range indicates varying degrees of success by the New York Reserve Bank and Board of Governors Staffs.

** The reported forecast errors overstate the degree of uncertainty about excess reserves. The Desk supplements beginning-of-period and midperiod forecasts with informal adjustments that are based on the observed pattern of estimated excess reserve holdings as each maintenance period unfolds.

n.a. Not applicable.

when operating balances had been unusually low.[7] The actual behavior of excess reserves remained uncertain and volatile in 1992, and numerous informal adjustments were made to the formal allowance during the year.[8] An elevated level of carryins contributed to this volatility.[9] The formal allowance for excess reserves was held at $1 billion during most of 1992. It was raised during the February 5 period to reflect expected pressures from low operating balances, and at the start of the April 15 period amid the cut in reserve requirements, although the expected high demand for excess in that period did not materialize.

On balance, the forecasts of operating factors were more accurate at the beginning and middle of maintenance periods than in 1991, despite a jump in the variability of operating factors from period to period. The accuracy of the forecasts by the final day of the period was about the same as in the previous year.

Most of the improvement in the forecast accuracy for total market factors was the result of more accurate projections of the Treasury's Fed

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[7]Forecast errors for excess reserves are calculated using projections of the demand for excess reserves made by the New York and Board Staffs. These projections are not usually incorporated in the formal allowance for excess reserves built into the Desk's reserve objective. The measurement of the forecast errors of the demand for excess reserves is imprecise because the projections are compared to actual holdings of excess reserves in a period. Excess reserves ex post can be affected by unexpected movements in reserve supplies occurring on the final day, or by the Desk's decisions to over- or under-provide reserves in response to other considerations. Finally, the calculation of forecast errors of the demand for excess reserves does not take account of the informal adjustments to the forecasts the Desk frequently makes based on carryins or on the observed pattern of excess reserve holdings to date in a period.

[8]The average period-to-period change in excess reserves in 1992 was $362 million. This amount was well below the level for all of 1991, but a bit above last year's average level after excluding the first few periods in 1991 when banks were operating with exceptionally low operating balances.

[9]The average absolute level of carryins at large banks in 1992 was $96 million, compared with $72 million the previous year and $56 million in 1990.

balance. The improvement was accomplished even though the mean absolute period-to-period change in the Treasury's Fed account was about the same in 1992 as in the previous year. Some of the improvement in these forecasts can be attributed to the absence in 1992 of large foreign official payments into the Treasury's Defense Cooperation Account for Desert Shield/Desert Storm expenses; uncertainty over the timing of these payments contributed to large errors in 1991. Also, spending tied to deposit insurance outlays, which have proven to be very unpredictable, declined in 1992.

As usual, the majority of the largest projection misses occurred following major individual nonwithheld and corporate tax dates. The timing and size of the Treasury's revenue flows were often uncertain at these times; moreover, the Treasury's total cash holdings often exceeded the capacity of the Treasury's tax and loan accounts in the banking system, thus causing large remittances that swelled the Fed balance.[10] By far, the largest start-of-the-period projection miss in 1992 occurred in September, when unexpectedly high tax receipts led to a $6 billion period-average error.

To deal with the greater volatility in cash balances after tax dates and to guard against inadvertent overdrafts, the Fed and Treasury changed their standard procedure for administering the Treasury's Fed account in the two weeks following major tax dates. The change was precipitated by an exceptionally large daily forecast miss one day in the period ended April 29 that left the Treasury balance at a very low level ($1.9 billion). For the remainder of that period, the Treasury and the Desk raised the "targeted" level of the Treasury balance at the Fed from its usual $5 billion level to $6 billion. Subsequently, the Fed and the Treasury agreed to lift the

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[10]The Treasury's Fed balance was above its "target" level because of capacity limitations on about 20 business days in 1992, down considerably from about 50 days in 1991. The number was 15 the year before.

targeted level of the Treasury balance to $7 billion for the two weeks or so following all major tax dates.

Initial errors in forecasting the size of the pool of temporary foreign investments decreased in 1992 from 1991. During 1991, foreign official institutions had often invested funds in the temporary pool with little advance notice, and later paid the funds to the Treasury's Defense Cooperation Account. These unexpected investments caused some large projection misses. In the absence of these payments in 1992, the forecast accuracy returned to more normal levels.

Applied vault cash projections were somewhat less accurate in 1992 than in 1991. However, this deterioration can be traced to a large miss in the November 25 period when a procedural error was made in estimating the reserve impact of the shift in the lag on eligibility of vault cash for meeting reserve requirements from two periods to one period.

An additional factor that contributed to forecast errors in 1992 was the premium or discount paid on reserve transactions undertaken by the Desk. A premium or discount arises when the par value of the securities exchanged in either a temporary or outright transaction differs from the market value. The actual reserve impact is determined by the market value of the securities--price plus accrued interest--less a margin to protect against price declines in the case of RPs. The formal measure of the reserve impact of an operation is based on the par value of the securities traded. The difference between the par value and the cash amount shows up as a forecast miss in the "Other Items" component of nonborrowed reserves on the day following a reserve operation. At the start of each maintenance period, the projections of this market factor make no allowance for any possible discount or premium, even in periods when large reserve operations are anticipated. Falling interest rates over the past two years have lifted the prices of many outstanding issues with

large coupons above par, enlarging the average premium in 1992. Consequently, the actual reserve impact of reserve addition operations often exceeded by a substantial margin the initial calculation based on the par value of securities acquired. In 1992, net premiums on securities held under RP averaged about 5 percent of the value of these operations.[11]

IV. System Lending Operations

The Desk lends U.S. Treasury securities from the System Open Market Account to primary dealers to facilitate the delivery of transactions in the U.S. Treasury Securities market. These loans are collateralized with Treasury securities of greater value than the issues borrowed, and no loans are made to cover short sales. For the year, the total number and value of these loans fell dramatically. (See Table A-7.) However, data on the daily average of outstanding loans shows that the decline occurred in the lending of bills; lending of coupon issues rose significantly in 1992. As a result, the share of coupons in total lending volume increased to 75 percent, from about 50 percent in the previous year.

The heavy issuance of corporate, mortgage-backed, and agency debt during the year contributed to the rise in System lending of coupon securities. In many instances, dealers hedged their inventories of non-Treasury debt by establishing short positions in certain Treasury issues, thereby creating strong demand for these securities. While the Fed does not lend against shorts, their existence in the market contributes to scarcities and delivery failures. Dealers sometimes turned to the System to obtain the issues to avoid a failure to deliver on their commitments. Lending of coupon securities was concentrated in the early part of 1992 and in the autumn,

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[11]The Desk often made an informal allowance for the likely size of the premium when deciding the par value of securities to accept under RP.

TABLE A-7

FEDERAL RESERVE LENDING OF TREASURY SECURITIES TO PRIMARY DEALERS
(In millions of dollars)

	1992	1991	PERCENTAGE CHANGE IN TOTAL 1991-1992
Number of Loans	1,443	2,477	-41.7%
Amount	$19,640	$33,895	-42.1%
	DAILY AVERAGES		
Number of Loans	6	10	-40.0%
Amount	$78.2	$135.6	-42.3%
Balance Outstanding	$179.9	$235.5	-23.6%
Size of Each Loan	$13.0	$13.6	-4.4%
	DISTRIBUTION OF LOANS OUTSTANDING (daily averages)		
Bills	$41.9	$119.9	-65.1%
Coupon Issues	$138.0	$115.6	19.4%
Total	$179.9	$235.5	-23.6%

coinciding with an increased number of issues trading "on special" in the RP market and of instances of failures to deliver coupon issues by primary dealers.

After having fallen the previous year, System lending of bills contracted even more sharply in 1992. A declining interest rate climate often left dealers holding large inventories of bills, which lessened the instances of delivery failures and the need to borrow bills from the System's portfolio. In addition, heavy issuance of bills by the Treasury added to market supplies.

TABLE A–8

DOLLAR VOLUME OF TRANSACTIONS EXECUTED BY TRADING DESK 1992 AND 1991 [a]

(In millions of dollars)

	Source Account											
	Total		System		Foreign		Treasury Investment Accounts		Member Banks		Retirement System and others	
	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991	1992	1991
Counterparty												
Market	729,833	710,235	443,502	418,564	285,995	291,574	*	*	1	3	335	94
System Account	1,467,611	1,516,328	–	–	1,467,611	1,516,328	–	–	–	–	–	–
Treasury	2,232	292	2,232 [b]	292 [b]	–	–	–	–	–	–	–	–
Foreign	1,477,212	1,519,186	1,467,611	1,516,328	9,601	2,858	–	–	–	–	–	–
Total	3,676,887	3,746,041	1,913,345	1,935,184	1,763,207	1,810,760	*	*	1	3	335	94
Outright Transactions												
Purchases												
Treasury Bills	85,221	68,993	14,714	20,158	70,171	48,742	–	–	–	–	335	93
Treas. Coupon Issues	35,292	29,710	19,365	11,282	15,927	18,427	*	–	*	2	–	–
Agency Issues	931	831	–	–	931	829	–	–	*	1	–	–
Cert. of Deposit	–	30	–	–	–	30	–	–	–	–	–	–
Bankers' Acceptances	2,072	1,561	–	–	2,072	1,561	–	–	–	–	–	–
Total Purchases	123,516	101,125	34,079	31,440	89,101	69,589	*	–	1	3	335	93
Sales and Redemptions												
Treasury Bills:												
Sales	46,371	32,444	1,628	100	44,743	32,343	–	–	–	–	–	1
Redemptions	1,600	–	1,600	–	–	–	–	–	–	–	–	–
Treasury Coupon Issues:												
Sales	16,217	16,095	–	–	16,217	16,095	*	*	–	–	–	–
Redemptions	*	–	*	–	–	–	–	–	–	–	–	–
Agency Issues:												
Sales	–	5	–	5	–	–	–	–	–	–	–	–
Redemptions	632	292	632	292	–	–	–	–	–	–	–	–
Cert. of Deposit	–	–	–	–	–	–	–	–	–	–	–	–
Bankers' Acceptances	134	109	–	–	134	109	–	–	–	–	–	–
Total Sales and Redemptions	64,954	48,945	3,860	397	61,094	48,547	*	*	–	–	–	1
Net Purchases (+) or Sales and Redemptions (–)	+58,562	+52,180	+30,219	+31,042	+28,007	+21,042	*	*	+1	+3	+335	+94
Temporary Transactions [d]												
RPs												
In Market	533,378	508,650	392,939	332,891	140,439	175,759						
With System Account	1,453,829	1,495,177	–	–	1,453,829	1,495,177						
MSPs												
In Market	28,638	75,279	28,638	75,279	–	–						
With Foreign	1,453,829	1,495,177	1,453,829	1,495,177	–	–						
Reverse RPs in Market	–	49,701	–	–	–	49,701						
Fed Funds sales	18,744	21,687	–	–	18,744	21,687						

[a] Outright transactions are on a commitment basis.

[b] Incorporates redemptions of maturing Treasury bills and Federal agency securities.

* Less than $0.5 million.

[d] Repurchase agreements are on a delivery basis.

Includes only the initiation of the matched transactions and repurchase agreements.

Figures may not add to totals due to rounding.

APPENDIX
B

SUMMARY OF POLICY GUIDES AND ACTIONS

APPENDIX B

SUMMARY OF POLICY GUIDES AND ACTIONS

Open market operations during 1992 were conducted under the Authorization for Domestic Open Market Operations. On two occasions, the Committee temporarily raised the authorized limit on intermeeting changes in System Account holdings of U.S. Government and Federal agency securities (paragraph 1.a). These actions, taken upon the recommendation of the Manager, were made to accommodate anticipated movements in various operating factors and required reserves that were expected to require outright operations in excess of the normal $8 billion intermeeting limit. The temporarily expanded leeway was used on both occasions. (See the following table.)

Effective Date	Original Limit on Change in System Holdings	Amended Limit	Actual Maximum Usage	Intermeeting Period
5/20/92	$8 billion	$10 billion	$ 8.1 billion	5/20/92 - 7/ 1/92
11/18/92	$8 billion	$11 billion	$10.7 billion	11/18/92 - 12/22/92

The Authorization for Domestic Open Market Operations in effect for 1992, except when amended as above, is reprinted below:

Authorization for Domestic Open Market Operations

1. The Federal Open Market Committee authorizes and directs the Federal Reserve Bank of New York, to the extent necessary to carry out the most recent domestic policy directive adopted at a meeting of the Committee:

   (a) To buy or sell U.S. Government securities, including securities of the Federal Financing Bank, and securities that are direct obligations of, or fully guaranteed as to principal and interest by, any agency of the United States in the open market, from or to securities dealers

and foreign and international accounts maintained at the Federal Reserve Bank of New York, on a cash, regular, or deferred delivery basis, for the System Open Market Account at market prices, and, for such Account, to exchange maturing U.S. Government and Federal agency securities with the Treasury or the individual agencies or to allow them to mature without replacement; provided that the aggregate amount of U.S. Government and Federal agency securities held in such Account (including forward commitments) at the close of business on the day of a meeting of the Committee at which action is taken with respect to a domestic policy directive shall not be increased or decreased by more than $8.0 billion during the period commencing with the opening of business on the day following such meeting and ending with the close of business on the day of the next such meeting;

(b) When appropriate, to buy or sell in the open market, from or to acceptance dealers and foreign accounts maintained at the Federal Reserve Bank of New York, on a cash, regular, or deferred delivery basis, for the account of the Federal Reserve Bank of New York at market discount rates, prime bankers acceptances with maturities of up to nine months at the time of acceptance that (1) arise out of the current shipment of goods between countries or within the United States, or (2) arise out of the storage within the United States of goods under contract of sale or expected to move into the channels of trade within a reasonable time and that are secured throughout their life by a warehouse receipt or similar document conveying title to the underlying goods; provided that the aggregate amount of bankers acceptances held at any one time shall not exceed $100 million;

(c) To buy U.S. Government securities, obligations that are direct obligations of, or fully guaranteed as to principal and interest by, any agency of the United States, and prime bankers acceptances of the types authorized for purchase under 1(b) above, from dealers for the account of the Federal Reserve Bank of New York under agreements for repurchase of such securities, obligations, or acceptances in 15 calendar days or less, at rates that, unless otherwise expressly authorized by the Committee, shall be determined by competitive bidding, after applying reasonable limitations on the volume of agreements with individual dealers; provided

that in the event Government securities or agency issues covered by any such agreement are not repurchased by the dealer pursuant to the agreement or a renewal thereof, they shall be sold in the market or transferred to the System Open Market Account; and provided further that in the event bankers acceptances covered by any such agreement are not repurchased by the seller, they shall continue to be held by the Federal Reserve Bank or shall be sold in the open market.

2. In order to ensure the effective conduct of open market operations, the Federal Open Market Committee authorizes and directs the Federal Reserve Banks to lend U.S. Government securities held in the System Open Market Account to Government securities dealers and to banks participating in Government securities clearing arrangements conducted through a Federal Reserve Bank, under such instructions as the Committee may specify from time to time.

3. In order to ensure the effective conduct of open market operations, while assisting in the provision of short-term investments for foreign and international accounts maintained at the Federal Reserve Bank of New York, the Federal Open Market Committee authorizes and directs the Federal Reserve Bank of New York (a) for System Open Market Account, to sell U.S. Government securities to such foreign and international accounts on the bases set forth in paragraph 1(a) under agreements providing for the resale by such accounts of those securities within 15 calendar days on terms comparable to those available on such transactions in the market; and (b) for New York Bank account, when appropriate, to undertake with dealers, subject to the conditions imposed on purchases and sales of securities in paragraph 1(c), repurchase agreements in U.S. Government and agency securities, and to arrange corresponding sale and repurchase agreements between its own account and foreign and international accounts maintained at the Bank. Transactions undertaken with such accounts under the provisions of this paragraph may provide for a service fee when appropriate.

Policy Actions of the Board of Governors

The interest rate charged on borrowings from the discount window for seasonal credit was changed effective January 9, 1992. (The announcement by the Board originally had been made on November 7, 1990.) Previously, the interest rate charged on seasonal borrowings was the basic discount rate.

Under the new approach, the rate charged is a market-related rate--the average of the effective Federal funds rate and the rate in the secondary market for 90-day certificates of deposit during the preceding maintenance period.

The Board announced on February 18, 1992, that it would reduce reserve requirements on transaction accounts of depository institutions from 12 percent to 10 percent effective the two-week reserve maintenance period beginning on April 2, 1992. This reduction in the reserve ratio was intended to strengthen the financial condition of banks and thereby improve their access to capital markets, thus putting them in a better position to extend credit. This change was the first major change in the reserve ratio on transaction accounts since the Monetary Control Act was adopted by the Congress in 1980.

On July 2, 1992, the Board announced that it had approved a half-point cut in the discount rate to 3 percent (the lowest level since July 1963).[1] The discount rate had been 3 1/2 percent since December 1992. The reduction was made against the background of sustained weakness in credit and money growth, continued movement toward price stability, and the uneven progress of the economic recovery.

On August 17, 1992, the Board announced the adoption of amendments to Regulation D (Reserve Requirements of Depository Institutions) to change the way depository institutions compute and maintain their reserve requirements. These amendments: (1) shorten by two weeks the lag in counting vault cash toward required reserves to reduce the decline in required reserve balances early in the year, and (2) double the carryover allowance for reserve balances

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[1]The decrease became effective on July 2 at the Federal Reserve Banks of Boston, New York, Philadelphia, Richmond, Atlanta, Chicago, Minneapolis, Kansas City, Dallas, and San Francisco. The Board subsequently approved similar requests by the Federal Reserve Banks of Cleveland and St. Louis, effective July 6 and 7, respectively.

(to the larger of $50,000 or 4 percent of required reserves plus required clearing balances). This increase was designed to provide institutions with more flexibility in managing reserves from one maintenance period to another.

The reduction in the lag in applying vault cash was effective for the maintenance period beginning November 12, 1992 for weekly reporting institutions. Quarterly reporting institutions were unaffected by the change. The carryover allowance was effective in the maintenance period beginning September 3, 1992 for both weekly and quarterly reporting institutions. Also, on August 17, 1992, the Board announced the adoption of further amendments to Regulation D designed to prevent erosion of the reserve base for transaction accounts by closing loopholes which some banking institutions used to avoid reserve requirements.

APPENDIX
C

DESK ACTIVITY FOR CUSTOMER ACCOUNTS

APPENDIX C

DESK ACTIVITY FOR CUSTOMER ACCOUNTS

The volume of the Desk's total outright trading activity on behalf of customer accounts grew at a substantial pace in 1992, rising for the third consecutive year following five straight years of decline. Meanwhile, temporary transactions declined a bit for the first time in ten years.

I. Outright Transactions

Total outright transactions on behalf of customer accounts rose significantly (Table C-1). As usual, the overwhelming majority of these transactions were arranged for foreign and international accounts, with much of the higher volume in 1992 reflecting increased activity on behalf of Thailand, Cananda, and Argentina. The Desk arranged $125 billion of these transactions in the market (Table C-3).

As is typically the case, almost all of the outright transactions for foreign accounts were arranged using Treasury securities. The remaining outright operations for foreign accounts involved purchases of bankers' acceptances and Federal agency issues. There were no transactions in large certificates of deposit in 1992, probably because the continuing environment of declining interest rates made these vehicles unattractive relative to other short-term investment instruments.

In October 1992, the Federal Reserve Bank of New York discontinued making purchases and sales of Treasury, Government-sponsored agency, and municipal securities on behalf of depository institutions. This service previously had been provided to a number of depository institutions, but recently only one Second District bank had made use of the service. In keeping with Federal Reserve policy that requires revenues to cover the full cost of providing a service, and in recognition of the adequate provision of

TABLE C–1

DOLLAR VOLUME OF TRANSACTIONS FOR ACCOUNTS OTHER THAN THE SYSTEM
(millions of dollars)

	Purchases		Sales		Total		Percentage Change in Total
	1992	1991	1992	1991	1992	1991	1991–1992
Total Outright	89,437	69,685	61,094	48,548	150,531	118,233	27
Foreign & Int'l Accounts	89,101	69,589	61,094	48,547	150,195	118,136	27
Treasury bills	70,171	48,742	44,743	32,343	114,914	81,085	42
Treasury coupons	15,927	18,427	16,217	16,095	32,144	34,522	– 7
Federal agencies	931	829	–	–	931	829	12
Bankers' Acceptances	2,072	1,561	134	109	2,206	1,670	32
Certificates of Deposit	–	30	–	–	–	30	
Treasury	#	–	#	#	#	#	
Depository Institutions	1	3	–	–	1	3	–67
Other Accounts*	335	93	–	1	335	94	256
Repurchase Agreements**							
With System	1,453,829	1,495,177	–	–	1,453,829	1,495,177	– 3
In Market	140,439	175,759	–	–	140,439	175,759	–20
Federal Funds*	–	–	18,744	21,687	18,744	21,687	–14

Less than $0.5 million.
*Includes retirement system.
**Transacted on behalf of foreign & international accounts only.

Notes: The above table includes only the initiation of RPs.
This table excludes reverse RPs arranged in the market on behalf of Saudi Arabia in 1991.
Includes transactions between two different foreign accounts, and between foreign accounts and the System Account.
Figures may not add to totals due to rounding.

the service by alternative market facilities, the Federal Reserve Bank of New York discontinued offering this service. (Some other Federal Reserve Banks continue to provide the service for depository institutions in their districts.)

II. Temporary Transactions

The total volume of repurchase agreements arranged on behalf of foreign official customers through the "pool" facility decreased by about 5 percent to $1.6 trillion in 1992. The average daily volume of the foreign RP pool was around $6.3 billion, compared with $6.7 billion in 1991.[1] The major reason for the decline was the cessation of most defense cooperation payments in support of Operation Desert Shield/Desert Storm, which had elevated the pool in 1991. (Even so, Kuwait's and Saudi Arabia's accounts were among the largest in the pool.) Poland, meanwhile, was the largest investor in the pool. Customer-related RPs arranged in the market comprised about 10 percent of the total value of all RPs arranged on behalf of foreign customers, with the remainder executed as matched sale-purchase transactions with the System Account. Total foreign account earnings from repurchase agreements were $231 million, substantially less than the almost $400 million in the prior year, stemming from the lower average market interest rates during the year as well as the lower pool volume. The average daily yield on these RPs was 3.62 percent (bond-equivalent basis), down from 5.85 percent in 1991.

The Desk also continued its practice of selling Federal funds on behalf of foreign accounts on those occasions when the funds arrived too late in the day to be invested in the RP pool. Total sales were about $19 billion,

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[1]The average daily volume is computed by weighting each transaction by the number of calendar days that it was outstanding, including weekends and holidays. The unweighted average volume was also about $6.3 billion.

down about $3 billion from the level in 1991. A total of 64 accounts participated in this activity during 1992.

TABLE C-2

NUMBER OF TRANSACTIONS PROCESSED FOR CUSTOMER ACCOUNTS*

	1992	1991	PERCENTAGE CHANGE IN TOTAL 1991-1992
Foreign & Int'l Accounts			
Outright	7,060	5,668	25%
Customer-Related RPs	7,548	10,690	-29%
Reverse RPs	-	974	
Treasury	2	1	100%
Depository Institutions	12	16	-25%
Other Accounts **	51	16	219%
Total	14,673	17,365	-16%

* Excludes transactions with System Account.
** Includes retirement system.

Note: Each transaction ticket for the Securities Trading and Clearance System is counted as one item. For RPs, only the purchase side of the transaction is counted.

TABLE C-3

DOLLAR VOLUME OF TRANSACTIONS IN 1992 BY DEALERS AND BROKERS ON BEHALF OF CUSTOMERS OF THE FEDERAL RESERVE
(In millions of dollars)

	OUTRIGHT		REPURCHASE AGREEMENTS*	
Securities Dealers	Total Volume	Percentage Share	Total Volume	Percentage Share
Lehman Government Securities, Inc.	6,967	5.6%	13,065	9.3%
Barclays de Zoete Wedd Secs. Inc.	5,559	4.4%	2,900	2.1%
Salomon Brothers, Inc. (a)(c)	5,498	4.4%	1,390	1.0%
Morgan Stanley & Co., Inc.	5,497	4.4%	3,125	2.2%
Fuji Securities Inc.	5,128	4.1%	1,055	0.8%
Deutsch Bank Government Securities, Inc.	4,893	3.9%	1,877	1.3%
Aubrey G. Lanston & Co., Inc.	4,629	3.7%	951	0.7%
Daiwa Securities America Inc.	4,458	3.6%	8,713	6.2%
SBC Government Securities, Inc.	4,447	3.6%	5,444	3.9%
First Boston Corporation	4,151	3.3%	7,215	5.1%
Carroll McEntee & McGinley, Inc.	3,914	3.1%	847	0.6%
Goldman, Sachs & Co.	3,825	3.1%	1,940	1.4%
BT Securities Corporation	3,761	3.0%	5,270	3.8%
Paine Webber Inc.	3,718	3.0%	5,083	3.6%
J.P. Morgan Securities, Inc.	3,609	2.9%	12,145	8.6%
Citicorp Securities Markets, Inc.	3,499	2.8%	7,850	5.6%
Chemical Securities, Inc.	3,474	2.8%	953	0.7%
Dean Witter Reynolds, Inc.	3,380	2.7%	851	0.6%
Harris-Nesbitt Thomson Securities Inc. (d)	3,275	2.6%	2,249	1.6%
Prudential Securities Inc.	3,241	2.6%	1,550	1.1%
Chase Securities, Inc.	3,218	2.6%	2,170	1.5%
Sanwa-BGK Securities Co., L.P.	2,983	2.4%	5,545	3.9%
Dillon, Read & Co., Inc.	2,904	2.3%	901	0.6%
Greenwich Capital Markets, Inc.	2,810	2.2%	3,860	2.7%
Nomura Securities International, Inc.	2,673	2.1%	3,123	2.2%
Merrill Lynch Government Securities, Inc.	2,556	2.0%	950	0.7%
Bank of America N/T & S/A	2,315	1.9%	150	0.1%
First Chicago Capital Markets, Inc.	2,143	1.7%	3,447	2.5%
UBS Securities Inc.	2,098	1.7%	500	0.4%
Eastbridge Capital Inc. (b)	2,004	1.6%	3,722	2.7%
Kidder, Peabody & Co., Inc.	1,772	1.4%	765	0.5%
The Nikko Securities Co., Int'l Inc.	1,680	1.3%	1,061	0.8%
Bear, Stearns & Co., Inc.	1,578	1.3%	5,000	3.6%
S.G. Warburg & Co., Inc.	1,532	1.2%	4,122	2.9%
Discount Corporation of New York	1,421	1.1%	3,423	2.4%
Smith Barney, Harris Upham & Co., Inc.	1,346	1.1%	313	0.2%
CRT Government Securities, Ltd.	1,059	0.8%	1,293	0.9%
Donaldson, Lufkin & Jenrette Securities Corp.	1,026	0.8%	4,786	3.4%
Yamaichi Int'l (America) Inc.	901	0.7%	10,835	7.7%
Total	124,942	100%	140,439	100%

CROSSES BETWEEN ACCOUNTS	
Between Foreign Accounts and System Open Market Account:	
Outright	13,782
RP's	1,453,829
Other Crosses	9,601
FOREIGN ACCOUNT FEDERAL FUNDS SALES	18,744
GRAND TOTAL	1,495,956

TABLE C-3 (Cont'd)

DOLLAR VOLUME OF TRANSACTIONS IN 1992 BY DEALERS AND
BROKERS ON BEHALF OF CUSTOMERS OF THE FEDERAL RESERVE

		Change Effective
(a)	Temporarily removed from list of authorized dealers.	June 1
(b)	Added to the list of authorized dealers.	June 24
(c)	Reinstated to list of authorized dealers.	Aug. 3
(d)	Formerly Harris Government Securities, Inc.	Dec. 31

* Includes only the initiation of RP transactions.

Note: Includes Treasury and Federal agency securities.
Figures may not add to totals due to rounding.
Ranked according to volume of outright transactions.

APPENDIX
D

DEVELOPMENTS AMONG PRIMARY DEALERS

APPENDIX D

DEVELOPMENTS AMONG PRIMARY DEALERS

Administration of the Federal Reserve Bank of New York's primary dealer relationships was modified in early 1992 along the lines described in the *Joint Report on the Government Securities Market*, published in January and discussed in last year's annual report. The Dealer Surveillance Function at the New York Federal Reserve was disbanded in February. The administration of relationships with primary dealers was assumed by the Open Market Function. In the event that a firm's capital were to slip below designated standards, regular consultation would be undertaken between the Federal Reserve and the primary regulator regarding the problem. As discussed in the *Joint Report*, the New York Federal Reserve at the same time created the Market Surveillance Function that monitors market practices and helps to evaluate anomalous market conditions that might call for action by the Treasury or the Securities and Exchange Commission.

List of Primary Dealers

The *Joint Report* noted the Fed's intention to create a more open system of primary dealers. In this regard, the Federal Reserve Bank of New York dropped its requirement that a primary dealer maintain a one percent market share of customer volume. To remain a primary dealer, a firm must maintain at least $50 million of regulatory capital ($100 million for a commercial bank primary dealer) and must meet all other capital standards of its primary regulator. It is expected to participate on a regular basis in open market operations and to provide the Desk with information about market developments. Primary dealers also continue to have underwriting responsibilities in bidding for Treasury debt.

The introduction of more open access attracted a number of inquiries concerning the steps required to become a primary dealer, but only one dealer actually was added to the list during 1992, and that dealer had sought to become a primary dealer before the change in rules. That dealer was Eastbridge Capital, Inc., and was added to the list in June. The addition brought the total number of primary dealers to thirty-nine. (No dealers were deleted in 1992.) The only other development affecting the list was a revision to reflect a name change; Harris Government Securities was replaced by Harris-Nesbitt Thomson Securities, Inc., effective on December 31. During the year, the Desk traded with all of the firms on the list, except for the temporary suspension of Salomon Brothers (described below). Meanwhile, the elimination of the one percent market share requirement apparently encouraged some existing firms to shrink their customer business. In 1991, only one dealer failed to meet the market share requirement then in place, but in 1992 the trading volume of seven dealers fell short of the old standard.

Primary dealers' aggregate pretax profits were $2 billion, a record high, but only slightly above the previous year's level. Declining interest rates helped to boost profits. Dealers reported profits of $1.1 billion in the market for U.S. Treasury securities and $0.8 billion for mortgage-backed securities, both little changed from their 1991 levels. Several dealers reported either a substantial improvement or deterioration in their mortgage-backed operations.

Status of Salomon Brothers as a Primary Dealer

On May 20, the Desk announced that it had completed its review of the status of Salomon Brothers as a primary dealer. In recognition of the management and other changes undertaken by the firm since the initial disclosure of bidding irregularities, the Bank decided to retain Salomon Brothers' status as a primary dealer. At the same time, the Bank concluded

that the nature of the irregularities was such that the firm should be sanctioned for its past violations of its obligations as a primary dealer. Accordingly, the Federal Reserve Bank of New York suspended its trading activities with the firm for a period of two months, commencing June 1. The Bank resumed its full trading activities with Salomon on August 3. The announcement of these sanctions coincided with the conclusion of a formal investigation by regulatory authorities into the firm's bidding improprieties and the announcement of certain civil settlement agreements.

TABLE D-1

LIST OF THE PRIMARY GOVERNMENT SECURITIES DEALERS REPORTING TO THE MARKET REPORTS DIVISION OF THE FEDERAL RESERVE BANK OF NEW YORK

Bank of America NT & SA
Barclays de Zoete Wedd Securities Inc.
Bear, Stearns & Co., Inc.
BT Securities Corporation
Carroll McEntee & McGinley Incorporated
Chase Securities, Inc.
Chemical Securities, Inc.
Citicorp Securities Markets, Inc.
CRT Government Securities, Ltd.
Daiwa Securities America Inc.
Dean Witter Reynolds Inc.
Deutsche Bank Government Securities, Inc.
Dillon, Read & Co. Inc.
Discount Corporation of New York
Donaldson, Lufkin & Jenrette Securities Corporation
Eastbridge Capital, Inc.
The First Boston Corporation
First Chicago Capital Markets, Inc.
Fuji Securities Inc.
Goldman, Sachs & Co.
Greenwich Capital Markets, Inc.
Harris-Nesbitt Thomson Securities, Inc.
Kidder, Peabody & Co., Incorporated
Aubrey G. Lanston & Co., Inc.
Lehman Government Securities, Inc.
Merrill Lynch Government Securities Inc.
J. P. Morgan Securities, Inc.
Morgan Stanley & Co. Incorporated
The Nikko Securities Co. International, Inc.
Nomura Securities International, Inc.
Paine Webber Incorporated
Prudential Securities, Inc.
Salomon Brothers Inc.
Sanwa-BGK Securities Co., L.P.
Smith Barney, Harris Upham & Co., Inc.
SBC Government Securities Inc.
UBS Securities Inc.
S.G. Warburg & Co., Inc.
Yamaichi International (America), Inc.

February 25, 1993

APPENDIX
E

STATISTICAL SUMMARY

Operations in United States Government Securities and Federal Agency Securities

(In thousands of dollars)

The total of United States Government securities and Federal agency securities held by the Federal Reserve System at the close of business on December 31, 1992, together with changes from holdings on December 31, 1991, are summarized the following table on delivery basis.

System Open Market Account	Purchases	Sales	Redemptions	Exchanges	Net Changes		Holdings 12/31/92	Holdings 12/31/91
Government Securities								
Treasury Bills:				308,699,220			141,794,280	132,635,005
Outright	14,714,200	1,628,000	1,600,000	(308,699,220)	11,486,200			
Matched Transactions	1,480,139,820	1,482,466,745	-	-	(2,326,925)			
Market	28,638,000	28,638,000	-	-	-			
Foreign official	1,451,501,820	1,453,828,745	-	-	(2,326,925)			
Treasury Notes and Bonds maturing:								
Within 1 year	1,096,000	-	-	(30,542,384)	(29,446,384)	#	37,758,332	30,542,384
1 to 5 years	13,117,535	-	2	25,810,915	38,928,448	#	68,749,893	64,299,367
5 to 10 years	2,818,200	-	-	3,531,469	6,349,669	#	18,903,132	14,469,423
Over 10 years	2,333,400	-	-	1,200,000	3,533,400	#	27,804,969	24,540,019
Total Notes and Bonds	19,365,135	-	2	-	19,365,133		153,216,326	133,851,193
Total Govt. Secs. Incl. Matched Trans.	1,514,219,155	1,484,094,745	1,600,002	-	28,524,408		295,010,606	266,486,198
(Excl. Matched Trans.	34,079,335	1,628,000	1,600,002	-	30,851,333		303,434,956	272,583,623
Federally Sponsored Agency Issues maturing:				2,301,000				
Within 1 year	-	-	237,930	(3,212,500)	(1,149,430)	##	2,064,200	2,340,430
1 to 5 years	-	-	272,120	754,400	482,280	##	2,510,655	2,508,140
5 to 10 years	-	-	87,825	157,100	69,275	##	696,000	1,007,940
Over 10 years	-	-	34,000	-	(34,000)	##	141,770	187,990
Total Agency Issues	-	-	631,875	-	(631,875)		5,412,625	6,044,500
Total System Account Incl. Matched Trans.	1,514,219,155	1,484,094,745	2,231,877	-	27,892,533		300,423,231	272,530,698
(Excl. Matched Trans.	34,079,335	1,628,000	2,231,877	-	30,219,458		308,847,581	278,628,123
F.R.B. of New York								
Repurchase Agreements for System	392,939,000	400,743,000	-	-	(7,804,000)		8,094,000	15,898,000
Customer-Related RPs passed through to the market	140,439,000	140,439,000	-	-	-		-	-

Does not include the following maturity shifts:

##

(In thousands of dollars)

	Within 1 year	1 to 5 years	5 to 10 years	Over 10 Years
#	36,662,332	(34,477,922)	(1,915,960)	(268,450)
##	873,200	(479,765)	(381,215)	(12,220)

Declines appear in parentheses.

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS - 1992

Outright Transactions*
Gross purchases plus gross sales
(In thousands of dollars)

Securities Dealers	Outright Transactions					
	Dollar Volume			Percentage Share		
	Treasury Bills	Treasury Coupon Issues	Total Treasury Issues	Treasury Bills	Treasury Coupon Issues	Total Treasury Issues
Salomon Brothers, Inc. (a)(c)	894,000	3,000,000	3,894,000	9.3%	24.5%	17.8%
Daiwa Securities America Inc.	2,104,900	263,000	2,367,900	21.8%	2.1%	10.8%
Morgan Stanley & Co., Inc.	506,000	994,300	1,500,300	5.2%	8.1%	6.8%
Greenwich Capital Markets, Inc.	53,000	1,400,000	1,453,000	0.5%	11.4%	6.6%
Merrill Lynch Government Securities, Inc.	461,200	400,000	861,200	4.8%	3.3%	3.9%
Lehman Government Securities, Inc.	442,000	387,000	829,000	4.6%	3.2%	3.8%
Bank of America N/T & S/A	469,000	290,000	759,000	4.9%	2.4%	3.5%
J.P. Morgan Securities, Inc.	615,000	122,400	737,400	6.4%	1.0%	3.4%
Barclays de Zoete Wedd Secs. Inc.	335,000	385,000	720,000	3.5%	3.1%	3.3%
Goldman, Sachs & Co.	35,000	680,000	715,000	0.4%	5.5%	3.3%
First Boston Corporation	546,000	163,000	709,000	5.7%	1.3%	3.2%
BT Securities Corporation	250,000	310,700	560,700	2.6%	2.5%	2.6%
Aubrey G. Lanston & Co., Inc.	433,000	126,800	559,800	4.5%	1.0%	2.6%
Chemical Securities, Inc.	398,000	150,000	548,000	4.1%	1.2%	2.5%
UBS Securities Inc.	165,000	245,000	410,000	1.7%	2.0%	1.9%
Paine Webber Inc.	10,000	395,000	405,000	0.1%	3.2%	1.8%
Chase Securities, Inc.	261,000	130,000	391,000	2.7%	1.1%	1.8%
Sanwa-BGK Securities Co., L.P.	210,000	163,000	373,000	2.2%	1.3%	1.7%
Fuji Securities Inc.	213,000	152,000	365,000	2.2%	1.2%	1.7%
Deutsch Bank Government Securities, Inc.	60,000	277,500	337,500	0.6%	2.3%	1.5%
Bear, Stearns & Co., Inc.	15,000	315,000	330,000	0.2%	2.6%	1.5%
Harris-Nesbitt Thomson Securities Inc. (d)	74,600	250,500	325,100	0.8%	2.0%	1.5%
Nomura Securities International, Inc.	100,000	212,600	312,600	1.0%	1.7%	1.4%
Kidder, Peabody & Co., Inc.	75,000	206,000	281,000	0.8%	1.7%	1.3%
Discount Corporation of New York	237,000	35,000	272,000	2.5%	0.3%	1.2%
Eastbridge Capital Inc. (b)	186,000	73,000	259,000	1.9%	0.6%	1.2%
CRT Government Securities, Ltd.	-	230,000	230,000	-	1.9%	1.0%
Prudential Securities Inc.	50,000	170,100	220,100	0.5%	1.4%	1.0%
Citicorp Securities Markets, Inc.	100,000	80,000	180,000	1.0%	0.7%	0.8%
The Nikko Securities Co., Int'l Inc.	125,000	45,000	170,000	1.3%	0.4%	0.8%
SBC Government Securities, Inc.	70,000	98,000	168,000	0.7%	0.8%	0.8%
Smith Barney, Harris Upham & Co., Inc.	60,000	96,500	156,500	0.6%	0.8%	0.7%
Dillon, Read & Co., Inc.	10,000	107,000	117,000	0.1%	0.9%	0.5%
Donaldson, Lufkin & Jenrette Securities Corp.	-	113,000	113,000	-	0.9%	0.5%
First Chicago Capital Markets, Inc.	60,400	49,500	109,900	0.6%	0.4%	0.5%
Dean Witter Reynolds, Inc.	8,000	58,000	66,000	0.1%	0.5%	0.3%
Carroll McEntee & McGinley, Inc.	25,000	39,000	64,000	0.3%	0.3%	0.3%
S.G. Warburg & Co., Inc.	-	35,000	35,000	-	0.3%	0.2%
Yamaichi Int'l (America) Inc.	-	20,000	20,000	-	0.2%	0.1%
Total	9,657,100	12,267,900	21,925,000	100%	100%	100%

Notes appear on the final page of the table.

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS - 1992

Temporary Transactions#
(In thousands of dollars)

Securities Dealers	Repurchase Agreements		Percentage Share Securities Dealers	Customer Related		Percentage Share Securities Dealers	Matched Transactions		Percentage Share Securities Dealer
Lehman Government Securities, Inc.	81,060,000	(1)	20.6%	13,065,000	(1)	9.3%	150,000		0.5%
Daiwa Securities America Inc.	26,564,000	(3)	6.8%	8,713,000	(4)	6.2%	750,000	(10)	2.6%
BT Securities Corporation	27,998,000	(2)	7.1%	5,270,000	(9)	3.8%	2,663,000	(4)	9.3%
J.P. Morgan Securities, Inc.	15,225,000	(6)	3.9%	12,145,000	(2)	8.6%	250,000		0.9%
SBC Government Securities, Inc.	17,917,000	(4)	4.6%	5,444,000	(8)	3.9%	-		-
First Boston Corporation	15,475,000	(5)	3.9%	7,215,000	(6)	5.1%	275,000		1.0%
Bear, Stearns & Co., Inc.	14,018,000	(7)	3.6%	5,000,000		3.6%	2,850,000	(3)	10.0%
Citicorp Securities Markets, Inc.	11,419,000	(10)	2.9%	7,850,000	(5)	5.6%	1,250,000	(8)	4.4%
Yamaichi Int'l (America) Inc.	9,086,000		2.3%	10,835,000	(3)	7.7%	-		-
First Chicago Capital Markets, Inc.	13,921,000	(8)	3.5%	3,447,000		2.5%	250,000		0.9%
Barclays de Zoete Wedd Secs. Inc.	10,088,000		2.6%	2,900,000		2.1%	4,510,000	(2)	15.7%
Paine Webber Inc.	10,913,000		2.8%	5,083,000	(10)	3.6%	-		-
Greenwich Capital Markets, Inc.	10,729,000		2.7%	3,860,000		2.7%	425,000		1.5%
Goldman, Sachs & Co.	12,625,000	(9)	3.2%	1,940,000		1.4%	430,000		1.5%
S.G. Warburg & Co., Inc.	10,533,000		2.7%	4,122,000		2.9%	-		-
Chase Securities, Inc.	11,073,000		2.8%	2,170,000		1.5%	1,303,000	(6)	4.5%
Sanwa-BGK Securities Co., L.P.	8,540,000		2.2%	5,545,000	(7)	3.9%	-		-
Donaldson, Lufkin & Jenrette Securities Corp.	7,241,000		1.8%	4,786,000		3.4%	488,000		1.7%
Morgan Stanley & Co., Inc.	9,018,000		2.3%	3,125,000		2.2%	100,000		0.3%
Eastbridge Capital Inc. (b)	7,775,000		2.0%	3,722,000		2.7%	-		-
Nomura Securities International, Inc.	7,201,000		1.8%	3,123,000		2.2%	30,000		0.1%
Discount Corporation of New York	5,931,000		1.5%	3,423,000		2.4%	500,000		1.7%
Chemical Securities, Inc.	5,075,000		1.3%	953,000		0.7%	1,287,000	(7)	4.5%
Deutsch Bank Government Securities, Inc.	4,131,000		1.1%	1,877,000		1.3%	575,000		2.0%
Salomon Brothers, Inc. (a)(c)	5,110,000		1.3%	1,390,000		1.0%	-		-
Prudential Securities Inc.	4,538,000		1.2%	1,550,000		1.1%	-		-
Kidder, Peabody & Co., Inc.	5,108,000		1.3%	765,000		0.5%	158,000		0.6%
Bank of America N/T & S/A	145,000		0.0%	150,000		0.1%	5,275,000	(1)	18.4%
Harris-Nesbitt Thomson Securities, Inc. (d)	2,548,000		0.6%	2,249,000		1.6%	425,000		1.5%
Dillon, Read & Co., Inc.	3,542,000		0.9%	901,000		0.6%	519,000		1.8%
CRT Government Securities, Ltd.	2,373,000		0.6%	1,293,000		0.9%	1,150,000	(9)	4.0%
Aubrey G. Lanston & Co., Inc.	3,640,000		0.9%	951,000		0.7%	150,000		0.5%
The Nikko Securities Co., Int'l Inc.	3,504,000		0.9%	1,061,000		0.8%	75,000		0.3%
Carroll McEntee & McGinley, Inc.	1,876,000		0.5%	847,000		0.6%	1,617,000	(5)	5.6%
Fuji Securities Inc.	2,775,000		0.7%	1,055,000		0.8%	475,000		1.7%
Merrill Lynch Government Securities, Inc.	2,075,000		0.5%	950,000		0.7%	120,000		0.4%
Dean Witter Reynolds, Inc.	1,283,000		0.3%	851,000		0.6%	588,000		2.1%
Smith Barney, Harris Upham & Co., Inc.	601,000		0.2%	313,000		0.2%	-		-
UBS Securities Inc.	265,000		0.1%	500,000		0.4%	-		-
Subtotal	392,939,000		100%	140,439,000		100%	28,638,000		100%
Foreign & International Institutions	-			-			1,453,828,745		
Total	392,939,000			140,439,000			1,482,466,745		

E-2(Cont'd)

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS - 1992

		Change Effective
(a)	Temporarily removed from list of authorized dealers.	June 1
(b)	Added to the list of authorized dealers.	June 24
(c)	Reinstated to list of authorized dealers.	Aug. 3
(d)	Formerly Harris Government Securities, Inc.	Dec. 31

Additional notes on Outright Transactions:

* Commitment basis. Dealers listed in descending order according to total volume.

Additional notes on Temporary Transactions:

\# This table indicates only the initiation of each type of transaction.
Dealers listed in descending order according to total temporary transactions.
Figures in parentheses indicate rank order for that type of transaction.

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS
IN SYSTEM OPEN MARKET ACCOUNT
(In thousands of dollars)

		Holdings* 12/31/92	Net change since 12/31/91
Treasury Bills		141,794,280	9,159,275
Treasury Notes			
Matured in 1992			(29,939,999)
Issues outstanding			
8.750 %	01/15/93	319,545	–
7.000	01/31/93	882,440	28,000
8.250	02/15/93	52,000	24,000
8.375	02/15/93	3,730,000	–
10.875	02/15/93	780,730	–
6.750	02/28/93	1,225,290	–
7.125	03/31/93	1,656,900	50,000
9.625	03/31/93	944,610	–
7.375	04/15/93	300,000	–
7.000	04/30/93	800,450	223,000
7.625	05/15/93	200,000	–
8.625	05/15/93	1,712,215	10,000
10.125	05/15/93	657,100	100,000
6.750	05/31/93	1,444,460	150,000
7.000	06/30/93	1,652,435	50,000
8.125	06/30/93	500,000	–
7.250	07/15/93	298,200	40,000
6.875	07/31/93	711,970	75,000
8.000	08/15/93	2,686,150	168,000
8.750	08/15/93	68,000	68,000
11.875	08/15/93	1,606,100	–
6.375	08/31/93	966,630	75,000
6.125	09/30/93	1,520,700	120,700
8.250	09/30/93	340,680	25,000
7.125	10/15/93	468,327	–
6.000	10/31/93	1,566,430	80,000
7.750	11/15/93	3,731,310	841,500
9.000	11/15/93	250,000	250,000
11.750	11/15/93	2,128,123	20,000
5.500	11/30/93	1,146,475	75,000
5.000	12/31/93	2,131,910	41,100
7.625	12/31/93	644,752	–
7.000	01/15/94	560,650	256,500
4.875	01/31/94	638730	638,730
6.875	02/15/94	1,877,320	128,000
8.875	02/15/94	200,000	50,000
5.625	03/31/94	762,620	762,620
5.750	03/31/94	2,499,620	2,499,620
8.500	03/31/94	1,040,800	–
7.000	04/15/94	402,200	27,200
5.625	04/30/94	1,394,120	1,394,120
7.000	05/15/94	3,165,795	103,600
9.500	05/15/94	45,000	–
13.125	05/15/94	751,000	–
5.125	05/31/94	895,990	895,990
5.000	06/30/94	1,703,820	1,703,820
8.500	06/30/94	1,175,000	550,000
8.000	07/15/94	285,000	–
4.250	07/31/94	1,327,750	1,327,750
6.875	08/15/94	2,028,340	35,000
8.625	08/15/94	72,000	32,000
12.625	08/15/94	877,000	50,000
4.250	08/31/94	851,480	851,480
4.000	09/30/94	1,505,000	1,505,000
8.500	09/30/94	581,752	50,000
Treasury Notes (cont'd)			
9.500 %	10/15/94	285,500	121,500
4.250	10/31/94	634,315	634,315
6.000	11/15/94	2,634,980	500,000
8.250	11/15/94	31,000	26,000
11.625	11/15/94	1,174,860	–
4.625	11/30/94	369,845	369,845
4.625	12/31/94	1,100,000	1,100,000
7.625	12/31/94	1,167,665	700,000
8.625	01/15/95	425,100	90,000
5.500	02/15/95	2,017,720	2,017,720
7.750	02/15/95	35,000	35,000
11.250	02/15/95	1,453,000	170,000
8.375	04/15/95	262,700	9,000
5.875	05/15/95	3,792,000	3,792,000
8.500	05/15/95	110,000	60,000
11.250	05/15/95	798,000	18,000
8.875	07/15/95	244,120	157,300
4.625	08/15/95	2,811,005	2,811,005
8.500	08/15/95	752,500	727,500
10.500	08/15/95	1,096,728	50,000
8.625	10/15/95	296,475	40,000
5.125	11/15/95	2,945,135	2,945,135
8.500	11/15/95	432,500	413,500
9.500	11/15/95	273,000	–
9.250	01/15/96	687,984	241,354
7.500	01/31/96	1,170,000	670,000
7.875	02/15/96	846,815	446,815
8.875	02/15/96	506,545	23,000
7.500	02/29/96	634,000	334,000
7.750	03/31/96	490,000	190,000
9.375	04/15/96	416,855	301,705
7.625	04/30/96	620,000	420,000
7.375	05/15/96	1,940,709	175,709
7.625	05/31/96	350,000	125,000
7.875	06/30/96	397,000	72,000
7.875	07/15/96	458,752	122,652
7.875	07/31/96	210,000	10,000
7.250	08/31/96	329,500	129,500
7.000	09/30/96	214,000	14,000
8.000	10/15/96	200,500	60,000
6.875	10/31/96	500,000	300,000
7.250	11/15/96	949,035	128,800
6.500	11/30/96	200,000	–
6.125	12/31/96	200,000	–
8.000	01/15/97	177,000	53,000
6.250	01/31/97	100,000	100,000
6.750	02/28/97	222,000	222,000
6.875	03/31/97	353,000	353,000
8.500	04/15/97	270,500	47,500
6.875	04/30/97	718,000	718,000
8.500	05/15/97	371,000	25,000
6.750	05/31/97	269,000	269,000
6.375	06/30/97	380,000	380,000
8.500	07/15/97	493,410	122,000
5.500	07/31/97	300,000	300,000
8.625	08/15/97	462,000	60,000
5.625	08/31/97	510,000	510,000
5.500	09/30/97	400,000	400,000
8.750	10/15/97	378,000	165,000
5.750	10/31/97	250,000	250,000

* Delivery basis. (Includes matched sale–purchase transactions.)

Note: Declines in holdings are shown in parentheses.

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS
IN SYSTEM OPEN MARKET ACCOUNT
(In thousands of dollars)

Treasury Notes (cont'd)		Holdings* 12/31/92	Net change since 12/31/91
8.875 %	11/15/97	360,000	–
6.000	11/30/97	150,000	150,000
6.000	12/31/97	469,880	469,880
7.875	01/15/98	496,800	85,000
8.125	02/15/98	275,000	75,000
7.875	04/15/98	292,500	62,000
9.000	05/15/98	456,000	6,000
8.250	07/15/98	635,140	51,000
9.250	08/15/98	638,000	138,000
7.125	10/15/98	852,193	305,000
8.875	11/15/98	360,000	60,000
6.375	01/15/99	550,545	550,545
8.875	02/15/99	435,000	180,000
7.000	04/15/99	463,700	463,700
9.125	05/15/99	581,500	361,500
6.375	07/15/99	191,000	191,000
8.000	08/15/99	525,000	125,000
6.000	10/15/99	97,215	97,215
7.875	11/15/99	475,000	60,000
8.500	02/15/00	600,000	150,000
8.875	05/15/00	400,000	125,000
8.750	08/15/00	375,000	25,000
8.500	11/15/00	447,000	27,000
7.750	02/15/01	285,000	75,000
8.000	05/15/01	445,000	35,000
7.875	08/15/01	450,000	150,000
7.500	11/15/01	750,000	440,000
7.500	05/15/02	739,009	739,009
6.375	08/15/02	1,500,000	1,500,000
Total Treasury Notes		118,179,154	16,659,435
Treasury Bonds			
Matured in 1992			(602,385)
Issues outstanding			
4.000 %	02/15/93	24,300	–
6.750	02/15/93	69,550	–
7.875	02/15/93	162,000	–
7.500	08/15/93	–	(438,217)
8.625	08/15/93	164,050	–
8.625	11/15/93	214,500	50,000
9.000	02/15/94	175,476	2,000
4.125	05/15/94	76,625	–
8.750	08/15/94	51,605	–
10.125	11/15/94	82,800	2,000
3.000	02/15/95	2,100	–
10.500	02/15/95	151,450	27,300
10.375	05/15/95	65,900	3,900
12.625	05/15/95	372,317	–
11.500	11/15/95	32,000	–
7.000	05/15/98	157,275	–
3.500	11/15/98	30,750	–
8.500	05/15/99	1,085,755	–
7.875	02/15/00	743,490	63,000
8.375	08/15/00	2,120,475	55,100
11.750	02/15/01	160,803	–
13.125	05/15/01	159,726	–

Treasury Bonds (cont'd)		Holdings* 12/31/92	Net change since 12/31/91
8.000 %	08/15/01	498,810	9,600
13.375	08/15/01	199,092	–
15.750	11/15/01	162,904	–
14.250	02/15/02	95,800	–
11.625	11/15/02	172,650	–
10.750	02/15/03	177,250	10,000
10.750	05/15/03	98,000	60,000
11.125	08/15/03	195,000	–
11.875	11/15/03	197,240	50,000
12.375	05/15/04	182,786	–
13.750	08/15/04	11,000	–
11.625	11/15/04	209,200	70,000
8.250	05/15/05	1,492,660	–
12.000	05/15/05	74,476	10,000
10.750	08/15/05	263,000	15,000
9.375	02/15/06	20,000	20,000
7.625	02/15/07	1,389,164	–
7.875	11/15/07	264,500	–
8.375	08/15/08	763,500	10,000
8.750	11/15/08	1,588,500	10,000
9.125	05/15/09	696,205	–
10.375	11/15/09	1,045,939	20,000
11.750	02/15/10	680,400	17,000
10.000	05/15/10	1,168,556	4,000
12.750	11/15/10	1,072,865	100,000
13.875	05/15/11	968,542	13,000
14.000	11/15/11	791,091	102,000
10.375	11/15/12	1,382,441	360,000
12.000	08/15/13	2,475,772	75,000
13.250	05/15/14	414,450	7,400
12.500	08/15/14	654,720	65,000
11.750	11/15/14	955,000	115,000
11.250	02/15/15	908,733	–
10.625	08/15/15	710,000	30,000
9.875	11/15/15	246,500	15,000
9.250	02/15/16	314,000	45,000
7.250	05/15/16	915,000	15,000
7.500	11/15/16	525,000	165,000
8.750	05/15/17	199,000	5,000
8.875	08/15/17	445,000	215,000
9.125	05/15/18	233,600	–
9.000	11/15/18	85,000	65,000
8.875	02/15/19	380,000	120,000
8.125	08/15/19	790,000	355,000
8.500	02/15/20	260,879	35,000
8.750	05/15/20	155,000	5,000
8.750	08/15/20	410,000	10,000
7.875	02/15/21	160,000	20,000
8.125	05/15/21	260,000	60,000
8.125	08/15/21	190,000	5,000
8.000	11/15/21	630,000	480,000
7.250	08/15/22	355,000	355,000
7.625	11/15/22	400,000	400,000
Total Treasury Bonds		35,037,172	2,705,698
Total Treasury Security Holdings		295,010,606	28,524,408

* Delivery basis.

Note: Declines in holdings are shown in parentheses.

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS
IN SYSTEM OPEN MARKET ACCOUNT
(In thousands of dollars)

U.S. Government-Sponsored Agency Issues

		Holdings* 12/31/92	Net Change since 12/31/91
FHLB			
Matured in 1992			(736,400)
Issues outstanding			
8.30 %	01/25/93	12,000	–
9.35	01/25/93	10,000	–
9.50	01/25/93	16,000	–
4.38	02/25/93	35,000	35,000
4.83	03/25/93	40,000	40,000
8.10	03/25/93	1,200	–
7.55	04/26/93	28,000	–
8.125	05/25/93	10,000	–
8.90	05/25/93	10,000	–
9.125	05/25/93	5,000	–
10.75	05/25/93	16,100	–
7.08	06/25/93	22,000	–
7.00	07/26/93	29,000	–
7.75	07/26/93	10,000	–
9.00	07/26/93	6,900	–
11.70	07/26/93	3,000	–
6.22	08/25/93	25,000	–
8.18	08/25/93	60,000	–
11.95	08/25/93	40,000	–
6.21	09/27/93	10,000	–
7.95	09/27/93	2,000	–
8.30	09/27/93	23,000	–
6.09	10/25/93	15,000	–
7.875	10/25/93	5,000	–
8.80	10/25/93	15,000	–
7.375	11/26/93	–	(115,335)
9.125	11/26/93	15,000	–
7.375	12/27/93	10,000	–
7.50	12/27/93	10,000	–
12.15	12/27/93	61,000	–
5.00	01/25/94	15,000	15,000
7.30	01/25/94	5,000	–
7.55	01/25/94	65,000	–
7.45	02/25/94	1,700	–
9.60	02/25/94	20,000	–
12.00	02/25/94	25,000	–
7.58	03/25/94	10,000	–
5.48	04/25/94	10,000	10,000
7.28	04/25/94	35,000	–
9.55	04/25/94	6,000	–
7.20	05/25/94	45,000	–
7.50	06/27/94	22,000	–
8.60	06/27/94	7,000	–
8.625	06/27/94	3,000	–
8.30	07/25/94	20,000	–
6.70	08/25/94	40,000	–
8.60	08/25/94	17,900	–
6.58	09/26/94	11,000	–
8.30	10/25/94	18,000	–
5.89	11/25/94	55,000	–
8.20	11/25/94	15,000	–
8.05	12/26/94	7,000	–
5.45	01/25/95	35,000	35,000
8.40 %	01/25/95	7,000	–
5.94	02/27/95	50,000	50,000
8.60	02/27/95	5,000	–
6.45	03/27/95	48,000	48,000
7.875	03/27/95	15,000	–
9.00	03/27/95	20,000	–
6.04	04/25/95	20,000	20,000
8.875	06/26/95	8,000	–
10.30	07/25/95	18,000	–
4.60	08/25/95	87,000	87,000
4.50	09/25/95	46,000	46,000
5.00	10/25/95	83,000	83,000
5.375	11/27/95	120,000	120,000
9.50	12/26/95	3,000	–
8.10	03/25/96	10,000	–
9.80	03/25/96	3,000	–
7.75	04/25/96	33,000	–
8.25	05/27/96	16,000	–
8.00	07/25/96	15,000	–
8.25	09/25/96	2,000	–
7.10	10/25/96	13,000	–
8.25	11/25/96	10,000	–
6.85	02/25/97	26,700	26,700
7.875	02/25/97	–	(40,730)
7.65	03/25/97	12,000	–
9.15	03/25/97	5,000	–
6.99	04/25/97	14,000	14,000
9.25	11/25/98	5,000	–
9.30	01/25/99	2,000	–
8.60	06/25/99	3,900	–
8.45	07/26/99	5,000	–
8.60	08/25/99	11,000	–
8.375	10/25/99	10,000	–
8.60	01/25/00	6,000	–
Total		1,766,400	(262,765)

Notes appear on the final page of the table.

E–3 (Cont'd)

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS

IN SYSTEM OPEN MARKET ACCOUNT

(In thousands of dollars)

U.S. Government–Sponsored Agency Issues (Cont'd)

		Holdings* 12/31/92	Net Change since 12/31/91
FNMA			
Matured in 1992			(357,030)
Issues outstanding			
7.95 %	02/10/93	75,000	–
7.90	03/10/93	75,000	–
10.95	03/10/93	35,000	–
7.55	04/12/93	13,000	–
10.875	04/12/93	45,000	–
8.80	06/10/93	25,000	–
8.45	07/12/93	15,000	–
7.375	12/10/93	25,000	–
7.65	04/11/94	15,000	–
9.60	04/11/94	100,000	–
9.30	05/10/94	25,000	–
8.60	06/10/94	24,650	–
7.45	07/11/94	5,000	–
8.65	07/11/94	–	(20,000)
8.90	08/10/94	15,000	–
10.10	10/11/94	30,000	–
8.30	12/12/94	–	(46,000)
9.00	01/10/95	15,000	–
11.95	01/10/95	12,000	–
10.50	09/11/95	20,000	–
8.80	11/10/95	100,000	–
7.70	02/12/96	40,000	–
8.00	04/10/96	45,000	–
8.05	06/10/96	25,650	–
8.50	06/10/96	10,000	–
8.75	06/10/96	10,000	–
8.00	07/10/96	31,500	–
8.20	08/12/96	5,000	–
7.70	09/10/96	25,000	–
7.05	10/10/96	100,000	–
6.90	11/12/96	58,000	–
7.70	12/10/96	12,000	–
7.60	01/10/97	160,000	–
6.20	01/10/97	15,000	15,000
7.05	03/10/97	70,000	70,000
7.00	04/10/97	10,000	10,000
9.25	04/10/97	15,000	–
9.20	06/10/97	27,000	–
8.95	07/10/97	10,000	–
9.15	09/10/97	20,000	–
9.55	09/10/97	35,000	–
5.70	09/11/97	45,000	45,000
7.40	10/01/97	–	(49,410)
5.35	10/10/97	4,700	4,700
7.10	12/10/97	–	(26,195)
6.30	12/11/97	55,000	55,000
8.65	02/10/98	10,000	–
9.15	04/10/98	30,000	–
8.20	08/10/98	35,000	–
9.40	08/10/98	50,000	–
7.85	09/10/98	48,000	–
7.05	12/10/98	30,000	–
7.50	03/10/99	50,000	50,000
9.55	03/10/99	25,000	–
8.70	06/10/99	23,000	–
8.45	07/12/99	5,000	–
9.00	10/11/99	44,000	–
8.35	11/10/99	7,000	–
FNMA (Cont'd)			
8.65 %	12/10/99	30,000	–
9.05	04/10/00	10,000	–
9.80	05/10/00	30,000	–
9.15	07/10/00	19,000	–
9.20	09/11/00	10,000	–
9.15	10/10/00	5,000	–
8.50	02/12/01	15,000	–
8.625	04/10/01	35,000	–
8.70	06/11/01	20,000	–
8.875	07/10/01	5,000	–
7.20	01/10/02	10,000	10,000
7.90	04/10/02	10,000	10,000
7.80	06/10/02	40,100	40,100
7.30	07/10/02	12,000	12,000
8.20	07/10/02	–	(34,000)
6.95	09/10/02	35,000	35,000
10.35	12/10/15	10,000	–
8.20	03/10/16	15,000	–
Total		2,166,600	(175,835)
FFCB			
Matured in 1992			(1,247,000)
Issues outstanding			
3.04 %	01/04/93	100,000	100,000
3.86	01/04/93	65,000	65,000
4.48	01/04/93	25,000	25,000
8.125	01/20/93	25,000	–
10.65	01/20/93	40,000	–
3.15	02/01/93	65,000	65,000
3.38	02/01/93	25,000	25,000
4.15	02/01/93	18,000	18,000
4.53	03/01/93	68,000	68,000
3.40	03/01/93	180,000	180,000
3.36	03/01/93	90,000	90,000
3.09	04/01/93	60,000	60,000
4.70	04/01/93	50,000	50,000
4.35	05/03/93	20,000	20,000
3.32	05/03/93	35,000	35,000
3.58	06/01/93	113,000	113,000
4.14	07/01/93	25,000	25,000
3.53	08/02/93	13,000	13,000
3.56	09/01/93	60,000	60,000
3.24	10/01/93	45,000	45,000
11.80	10/20/93	30,000	–
3.48	11/01/93	14,000	14,000
3.80	12/01/93	45,000	45,000
12.35	03/01/94	10,000	–
14.25	04/20/94	3,700	–
7.375	08/01/94	–	(13,000)
8.625	09/01/94	10,000	–
13.00	09/01/94	8,000	–
11.45	12/01/94	7,000	–
8.30	01/20/95	21,710	–
11.90	10/20/97	15,000	–
8.65	10/01/99	10,000	–
Total		1,296,410	(144,000)

Notes appear on the final page of the table.

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS
IN SYSTEM OPEN MARKET ACCOUNT
(In thousands of dollars)

U.S. Government-Sponsored Federal Agency Issues (Cont'd)

	Holdings* 12/31/92	Net Change since 12/31/91
FLB		
Issues outstanding		
7.95 % 10/21/96	49,795	-
7.35 01/20/97	16,650	-
Total	66,445	-

U.S. Government Agency Issues**

U.S. Postal Service		
6.87 % 02/01/97	-	(37,055)
Total	-	(37,055)
Washington Metro Area Transit Auth.		
Issues outstanding		
7.30 % 07/01/12	44,950	-
7.35 07/01/12	35,410	-
8.15 07/01/14	36,410	-
Total	116,770	-
General Service Administration		
7.15 % 12/15/02	-	(12,220)
Total	-	(12,220)
Total Agency Issues	5,412,625	(631,875)
Total Treasury & Agency Issues	300,423,231	27,892,533

* Delivery basis.

** The Federal Reserve is no longer authorized to buy debt of these Government entities because they are eligible to borrow from the Federal Financing Bank.

Note: Declines in holdings are shown in parentheses.

Holdings of Treasury Bills by the System Open Market Account
(In thousands of dollars)

December 31, 1992 Maturity	Holdings*	Percent of the Total Amount Outstanding
1993		
1/ 7#	176,130	23.7%
1/14#	4,864,970	22.9%
1/21	5,842,060	14.7%
1/28	5,234,500	22.2%
2/ 4	5,957,815	25.3%
2/11	8,777,310	24.1%
2/18	5,678,485	24.0%
2/25	5,796,500	24.6%
3/ 4	5,529,730	23.6%
3/11	8,521,655	22.8%
3/18	5,222,380	22.3%
3/25	4,521,810	19.8%
4/ 1	5,439,935	24.0%
4/ 8	5,785,700	23.6%
4/15	2,805,800	25.4%
4/22	2,755,100	23.7%
4/29	2,845,000	24.0%
5/ 6	6,493,300	24.7%
5/13	2,803,100	23.7%
5/20	2,775,000	23.3%
5/27	3,028,000	25.6%
6/ 3	6,091,000	23.3%
6/10	2,800,000	22.8%
6/17	2,800,000	22.9%
6/24	2,450,000	19.3%
7/ 1	6,645,000	24.2%
7/29	3,338,000	22.7%
8/26	3,660,000	25.0%
9/23	3,055,000	20.5%
10/21	3,400,000	23.8%
11/18	3,301,000	23.2%
12/16	3,400,000	23.0%
Total #	141,794,280	21.6%

* Delivery basis.

Holdings were reduced by $5,100,000 thousand of January 7 maturities and $3,324,350 thousand of January 14 maturities that were sold under matched sale-purchase agreements.
The percentages include the amounts that had been sold under matched transactions.

Participation In the System Open Market Account

The following table shows the net change in each Reserve Bank's participation during 1992 as a result of reallocations.

Reallocations of Participation in the System Open Market Account During 1992

	Reallocations	Participations December 31, 1992
Boston	($1,040,000,000)	$19,188,826,354
New York	(1,377,000,000)	116,874,663,049.60
Philadelphia	1,091,000,000	9,144,102,445.41
Cleveland	101,000,000	18,909,198,560.66
Richmond	(246,000,000)	23,491,577,644.46
Atlanta	163,000,000	10,227,600,481.93
Chicago	(491,000,000)	37,207,534,688.35
St. Louis	(548,000,000)	7,350,678,549.33
Minneapolis	722,000,000	4,682,024,789.84
Kansas City	(181,000,000)	8,126,920,234.34
Dallas	(693,000,000)	11,021,239,075.31
San Francisco	2,499,000,000	34,198,865,126.31
	$4,576,000,000	
	($4,576,000,000)	$300,423,231,000

Note: Declines are shown in parentheses.

Reallocation of participation in the System Open Market Account occurs each April and is based on net reserve flows between the districts. Gold certificates are reassigned among the districts according to the balance in each district's interdistrict settlement account. Those districts that are left with a below-average proportion of gold certificates to their Federal Reserve notes outstanding would receive additional gold certificates to return the proportion to the System average by paying for them with securities. A district which loses gold certificates is, in turn, compensated with additional securities. The Federal Reserve Bank of New York carries out the changes in portfolio shares on instruction from the Board of Governors. The resulting percentage of each Bank's participation in the System Account is used throughout the year to apportion the daily SOMA transactions.

System Account Earnings

Earnings from U.S. Government and Federal agency securities held in the System Open Market Account during the calendar year 1992 totaled $17,247,612,987, a decrease of $1,901,588,396 from earnings in 1991.

The average earnings rate was 6.15 percent in 1992, compared with 7.52 percent in 1991. The earnings rate, which was 5.56 percent on January 2, 1992, closed the year at 6.79 percent. Average holdings increased to $280.5 billion in 1992 from $255.0 billion in 1991.

Note: Earnings reflect a 2 basis-point charge to foreign accounts for repurchase agreements.

The System Open Market Account earnings rate and the net daily accrual of earnings based on the holdings at the close of 1992, compared with those at the close of 1991, are shown in the following table:

(In thousands of dollars)

	12/31/92	12/31/91	Net Change
Total Portfolio*	$300,423,231	$272,530,698	$27,892,533
Earnings Rate**	6.15%	6.72%	(.57%)
Net Daily Accrual of Earnings#	$45,846	$50,179	($4,333)
Coupon Issues	$32,019	$32,340	($321)
Treasury Bills	$13,827	$17,839	($4,012)

* Delivery Basis.

** The earnings rate on the last day of each year excludes interest earnings on holdings of most Federal agency issues. Most agency securities accrue interest on a 30-day per month basis. Thus, for accounting purposes, in 31-day months, no interest accrues on the last day and in February, interest earnings on the last day are adjusted to make the month's earnings equivalent to that of a 30-day month.

\# Net after accrual of discount and amortization of premium balances.

Market Value of Portfolio

The net appreciation of System Open Market Account holdings of Treasury notes and bonds and Federal agency issues on December 31, 1992, as measured by the difference between book value and market bid quotations on notes and bonds, is shown below:

(In thousands of dollars)

	Par Value Holdings	Book Value	Market Value	Appreciation or (Depreciation)
Notes	118,179,154	119,131,730	123,063,963	3,932,233
Bonds	35,037,172	36,190,944	42,973,286	6,782,342
Agencies	5,412,625	5,409,947	5,803,551	393,604

Note: Declines are shown in parentheses.

Repurchase Agreements Against U.S. Government and Federal Agency Securities
Federal Reserve Bank of New York
(In thousands of dollars)

	1992	1991	1990
Purchases	392,939,000	332,891,000	261,468,100
Sales	400,743,000	335,347,000	245,231,100
Year-end Balance	8,094,000	15,898,000	18,354,000
Earnings on Repurchase Agreements	1,247,734	113,064	124,561

Matched Transactions
System Open Market Account
(In thousands of dollars)

	1992	1991	1990
Sales	1,482,466,745	1,570,456,490	1,369,052,140
Purchases	1,480,139,820	1,571,534,000	1,363,943,585
Outstanding transactions at year-end	8,424,350	6,097,425	7,174,935

Customer-Related Transactions
(In thousands of dollars)

	1992	1991	1990
Sales	140,439,000	175,759,400	131,760,500
Purchases	140,439,000	175,759,400	128,403,500
Outstanding transactions at year-end	-	-	-

APPENDIX F

ORGANIZATION

In a major reorganization, announced July 17, the Open Market Function, along with three other functions, was made a part of the newly formed Financial Markets Group under William J. McDonough, Executive Vice President. The reorganization was completed following the retirement of Peter D. Sternlight, Executive Vice President and head of the Open Market Group, effective September 30, following 42 years of distinguished service to the Bank.

As of February 28, 1993, there were six officers assigned to the Open Market Function, unchanged from the previous year. (Mr. McDonough was assigned to the Financial Markets Group.) Including officers, there were 67 positions in the Function. Because of the restructuring, direct comparisons between years are difficult. Effectively, the Trading Division has one less person this year; last year it had an extra person in anticipation of turnover. The Automation Staff is being increased by one to handle the expanded volume of projects.

The nonofficial staff of 61 positions included two unfilled slots as of the end of February 1993, both in the process of being filled.[1] Six officers' secretaries were assigned to the Function administration staff, one on a temporary basis.[2] The remaining 55 positions were distributed across the three divisions and the automation area of the Open Market Department as

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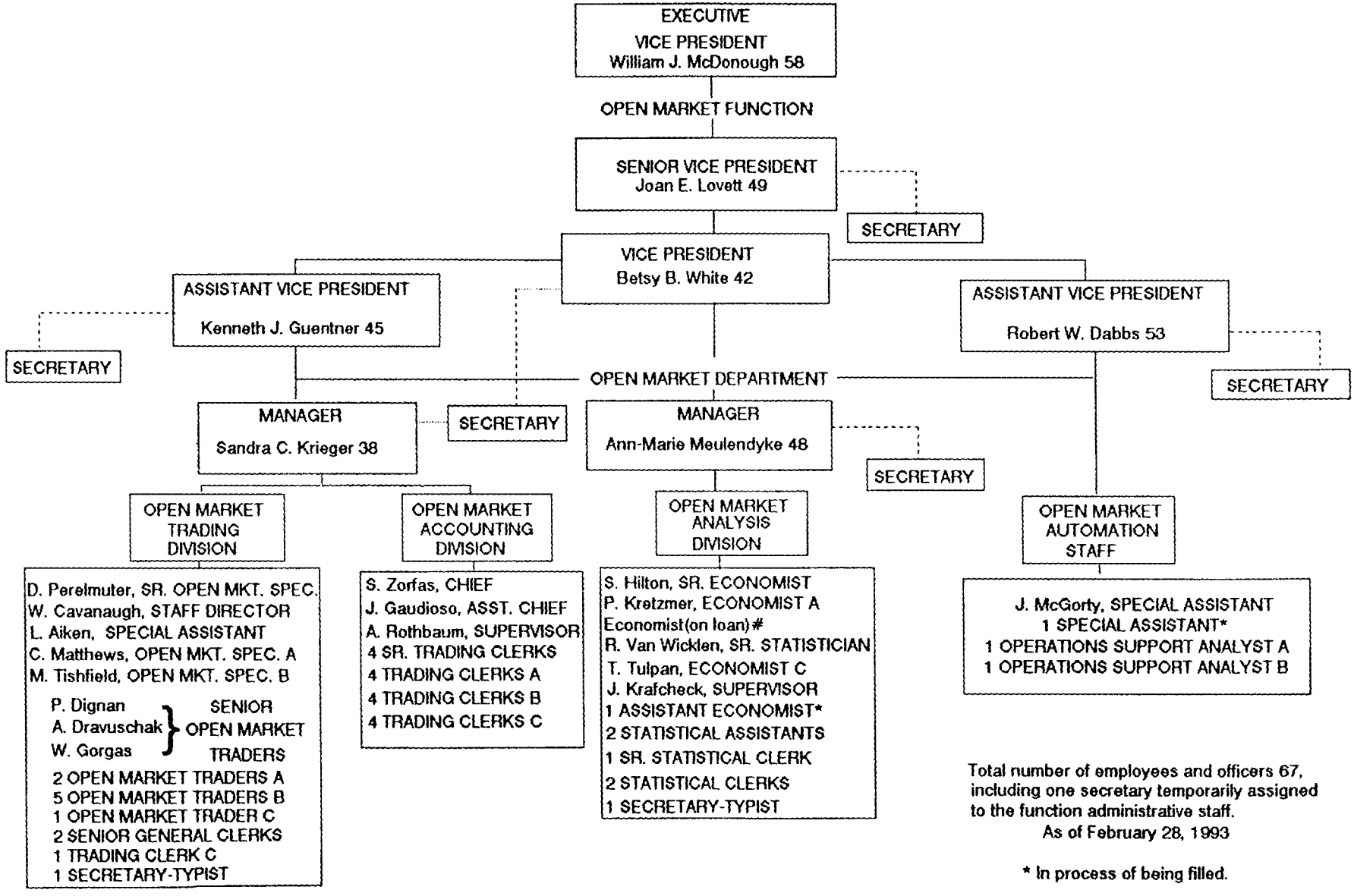
[1]The numbers exclude a person on loan to the Analysis Division from the Research Department under a regular six-month rotation program. The unfilled positions are in the Analysis Division and the Automation Staff.

[2]Mr. Sternlight's retirement left his secretary without a permanent assignment. The position is temporarily maintained within the Function, pending reassignment. Mr. McDonough's secretaries are not included in the Function.

follows: 20 in the Trading Division, 19 in the Accounting Division, 12 in the Analysis Division, and 4 in the Open Market Automation Staff.

During the year ended February 28, 1993, 3 people transferred to the Trading Division from elsewhere in the Bank to replace 4 people who resigned. The Analysis Division hired 2 people from outside the Bank, one of whom moved from the Board. During the year, 3 people resigned from the Analysis Division. The 7 departures from the Function represented a turnover rate of about 10 percent, as compared with 1 percent in the previous year.

CHART F-1
FEDERAL RESERVE BANK OF NEW YORK-OPEN MARKET FUNCTION



Total number of employees and officers 67, including one secretary temporarily assigned to the function administrative staff.
As of February 28, 1993

* In process of being filled.

#not included in the total count.

APPENDIX G

EXPENSE AND BUDGET DATA RELATING TO OPEN MARKET FUNCTION FEDERAL RESERVE BANK OF NEW YORK

The data in Table G-1 indicate charges to the activity budget codes of the Open Market Function that relate directly to transactions for the System Open Market Account. Handling of repurchase agreements on behalf of the account of the Federal Reserve Bank of New York is also included. Not included are services performed by other departments for which the Open Market Function is not billed that are related to processing and recordkeeping for open market transactions.

Actual 1992 expenses were greater than the August estimates largely because software and system development costs associated with automation activities exceeded expectations. Data processing and communications costs ran lower than expected, partially offsetting these higher costs.

The 1993 budget estimates incorporate expenses associated with three major ongoing automation initiatives. Projects for 1993 are as follows:

- Ongoing enhancements to the Securities Trading and Clearing System which produces reports for the Function and handles the accounting for all trades involving the System account.
- Implementing the Treasury Automated Auction Processing System for electronic submission of tenders at Treasury auctions by the primary dealers and other large bidders and the evaluation of these tenders.
  - -- Implementation planned for Spring 1993, with modifications and enhancements continuing over the balance of the year.
- Continuing work on the first phase of the Trading Room Automated Processing System for automating open market operations. (Completion date: year-end 1993 or during 1994).

TABLE G-1

EXPENSES AND BUDGETS FOR OPEN MARKET FUNCTION
OF THE FEDERAL RESERVE BANK OF NEW YORK

	Estimated Expenses 1992 As of August 1992	Actual Expenses 1992	Budgeted Expenses 1993 As of August 1992
Salaries--Employees (a) (b)	1,979,572	2,022,443	2,109,934
Retirement and other benefits (b)	507,133	504,488	610,717
Printing and supplies (b)	75,218	55,374	54,623
Equipment:			
Rentals and Depreciation	264,089	256,055	271,384
Repair & Maintenance	92,360	91,918	53,167
Data Processing/Data Communications	720,709	585,604	795,984
Telephone	51,567	52,646	54,675
Travel	47,706	46,328	55,250
Purchased Information	449,013	446,401	413,128
Software and System Development	2,144,418	2,374,329	2,272,778
Other Expenses	20,690	12,246	16,730
Total	6,352,475	6,447,832	6,708,370
Officers			
Salaries	775,388	774,378	829,515
Retirement and other benefits	193,215	187,939	233,653
Total	968,603	962,317	1,063,168
Grand total	7,321,078	7,410,149	7,771,538

(a) Includes overtime.
(b) Excludes reimbursable expenditures on behalf of the Treasury.