MONETARY POLICY

AND

OPEN MARKET OPERATIONS

DURING 1991

A Report Prepared for the Federal Open Market Committee
by the Open Market Group
of the Federal Reserve Bank of New York
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NOTES TO CHARTS

Chart 1: **Real Gross Domestic Product**

The chart presents growth from the previous quarter in constant-dollar Gross Domestic Product (using the 1987 base year). The growth rates are compounded, seasonally adjusted annual rates. The chart is based on data as of February 28, 1992.

Chart 2: **Measures of Consumer Confidence**

The consumer confidence measures are monthly indexes compiled from survey questions. Both surveys ask questions regarding business conditions in a person's area, his or her job and income situation and future buying plans. The top panel shows the level of the University of Michigan index, which is compiled by the Survey Research Center at the University. The bottom panel shows the level of the index as compiled by the Conference Board.

Chart 3: **Yield Curves for Selected U.S. Treasury Securities**

Yields on issues dated within one year are bond-equivalent yields on Treasury bills, based on offered prices. Longer maturity yields are constant maturity values.

Chart 4: **Long-term and Short-term Interest Rates**

Long-term Interest Rates

Yields are 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).

Chart 5: **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, saving 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 February 6, 1992. The target ranges are for Q4 1989 to Q4 1990 and Q4 1990 to Q4 1991.

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 February 6, 1992. The target ranges are for Q4 1989 to Q4 1990 and Q4 1990 to Q4 1991.

M1: Levels

M1 consists of currency 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 share draft accounts and demand deposits at thrift institutions. The chart is based on seasonally adjusted data as of February 6, 1992.

Chart 6: **Total 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 March 12, 1992. The monitoring ranges are for Q4 1989 to Q4 1990 and Q4 1990 to Q4 1991.

Chart 7: **Yield Spreads**

The top panel shows the spread between Moody's Baa-rated corporate bond index and Moody's Aaa-rated corporate bond index (Thursday weekly averages). The bonds used to derive the indexes have average maturities of 20 years.

The bottom panel shows the spread between the Donaldson, Lufkin & Jenrette index of yields on actively traded, high-yield issues and the firm's index of yields on Treasury securities with seven years to maturity (Friday observations).

Chart 8: **Daily Federal Funds Rate Trading Ranges**

Trading ranges are those reported to the Domestic Trading Desk by the five major Federal funds brokers. Daily effective rates are calculated by the Domestic Trading Desk.

Chart 9: **Borrowing, Federal Funds Rate, and Discount Rate**

Adjustment and seasonal borrowing levels, as well as the Federal funds and discount rates are maintenance-period averages. The data are not seasonally adjusted.

MONETARY POLICY AND OPEN MARKET OPERATIONS DURING 1991

I. Overview

During 1991, monetary policy was directed toward achieving a resumption of a sustainable economic expansion while continuing to make progress toward price stability. The Federal Reserve implemented a series of easing steps early in the year against a backdrop of declining economic activity. Policy was unchanged for a time in late spring and early summer amid signs that activity was picking up. When the recovery faltered during the final months of the year, the Federal Reserve took more aggressive easing steps. At this time, credit demands and the broader monetary aggregates were weak, consumer confidence was dropping, and earlier efforts to reduce inflation were beginning to pay off.

The substantial degree of monetary accommodation brought about a considerable reduction in market interest rates. The Federal Reserve's easing steps lowered both the discount rate and the Federal funds rate by 3 percentage points over the year. Yields on shorter term fixed-income securities fell by about as much, but those on longer term issues declined by much less. Longer term yields were propped up for much of the year by concerns over heavy supplies and by fears that progress against inflation would be stymied as the economy revived.

Lower short-term market rates reduced the opportunity cost of holding liquid types of money and stimulated rapid growth in total reserves and M1, but they failed to provide much of a boost to the broader monetary aggregates. The less liquid components of these aggregates, particularly time deposits, suffered in competition with a variety of alternative market instruments. Depository institutions did not bid aggressively for these deposits because of weak asset growth and continued industry consolidation. The combination of

rapid growth in transactions deposits and declines in time deposits and other managed liabilities meant that M2 and M3 grew only modestly and ended the year near the bottoms of their annual growth ranges.

The large interest rate declines helped reduce the heavy debt service burdens that many households and businesses had accumulated during the 1980s. Low rates and the mild improvement in the economy encouraged many investors to hold lesser rated fixed-income securities as well as equities. In this environment, many firms refinanced costlier outstanding debt. Some of the funds used to retire such debt came from stepped up equity issuance. On balance, the private component of nonfinancial debt grew exceptionally slowly during the year.

Implementation of the Federal Reserve's more accommodative policy stance took place against the background of the cut in reserve requirement ratios that took full effect in January 1991. The steep decline in required reserves brought balances held at the Federal Reserve below the levels many institutions needed to support comfortably their payments and clearing operations. The difficulties that many banks encountered working with low reserve balances were especially acute early in the year when seasonal movements in required reserves and applied vault cash brought reserve balances at the Fed to their annual trough. In structuring its reserve operations around this time, the Desk sought to ensure that reserves would be adequate for banks' clearing needs. Still, depositories' cautious management of reserves early in the day, intended to guard against running overnight overdrafts, sometimes placed temporary intraday pressure in the money market and contributed to a high degree of volatility of the Federal funds rate.

These pressures abated after seasonal movements enlarged reserve balances at the Fed. In addition, required reserves grew rapidly, associated with the expansion of M1, and banks opened or enlarged required clearing

balances on which they earn credits that can be applied to payment for Fed services. Both developments helped maintain total reserves held at the Fed at more comfortable levels over the remainder of the year.

Borrowing from the discount window in 1991 continued to be heavily influenced by concerns that an institution identified as having tapped this facility would be perceived as facing fundamental financial difficulties. Many banks avoided the window for fear of the public scrutiny that could follow. Consequently, adjustment borrowing in 1991 usually hovered around exceptionally low levels, even allowing for the generally narrow spreads between the Fed funds and discount rates. The reluctance to borrow diminished the value of the discount window as a safety valve for alleviating temporary reserve pressures. Moreover, the Desk, which derives its formal objectives for reserves on the presumption of a predictable relationship between the level of borrowing and the spread between the funds and discount rates, had to treat the borrowing assumption incorporated in its reserve objective very flexibly in formulating its operations.

Pressures in the reserve market, as measured by deviations in the funds rate from its expected level, were frequently at variance with the Desk's estimates of reserve availability. These differences often resulted from widespread market expectations of possible easings of monetary policy. On other occasions, faulty reserve estimates--available either to the Desk or to depository institutions--were the cause. Faced with these differences, the Desk frequently gave greater weight to trading conditions prevailing in the morning, rather than to its reserve estimates, when structuring its open market operations. With market participants closely monitoring the funds rate as a key indicator of policy, this approach to reserve management was intended to minimize the possibility that observers would misconstrue the Fed's current policy stance. By waiting to address reserve situations until conditions in

the funds market reflected the estimated need, the Desk sometimes had to arrange very large RP operations late in a period. The dilemma was more severe when the conflict persisted on settlement days. In some instances, the Desk eschewed meeting its formal objectives. As a result, the funds rate sometimes plummeted, or on other occasions it surged and forced heavy borrowing at the discount window.

The Federal Reserve Bank of New York's approach to choosing primary dealers--who act as business counterparties for conducting open market operations--came under scrutiny during the year as a byproduct of admissions of bidding irregularities in Treasury auctions by Salomon Brothers, a major dealer firm. In the wake of these admissions, the Treasury, Securities and Exchange Commission, and Federal Reserve undertook a joint review of various aspects of the U.S. Government securities market, including the Treasury's auction process and the Fed's methods for selecting and monitoring primary dealers. As a result, the Treasury made several changes in auction bidding rules, and the Treasury and Federal Reserve developed procedures to verify the authenticity of large customer bids. In addition, in January 1992, the Federal Reserve announced changes in the administration of its relationships with primary dealers. In order to provide for a more open system of trading relationships, the Fed dropped the requirement that a primary dealer maintain a market share of at least 1 percent of total customer activity reported by all primary dealers. It also discontinued its dealer surveillance activities to help clarify that the Federal Reserve is not the regulator of primary dealer firms. Capital standards were revised to rest essentially on meeting the standards of the dealers' regulators, along with a minimum capital criterion to ensure that counterparties can operate in size terms useful to the Fed. The revised standards still require that the Fed's counterparties

make good markets to the Fed, provide it with useful market information, and participate meaningfully in Treasury auctions.

II. The Setting for Policy

The Economy and Prices

The recession, which had started in mid-1990, gave way to a weak recovery in the spring (Chart 1). The declines in real gross domestic product in the fourth quarter of 1990 and the first quarter of 1991 stemmed from contractions in expenditures for consumer durable goods and investment that were mitigated by increases in net exports and government purchases (Table 1).[1] Consumer expenditures on automobiles were particularly weak over this period. Moreover, the decline in economic activity may have been exacerbated by a slump in consumption around the time of the Persian Gulf war.

Economic activity picked up over the middle of the year, but by historical standards the improvement was anemic for the early stages of a recovery. Consumption and residential construction rose modestly in the second and third quarters, while nonresidential construction continued to shrink. The expansion in the third quarter was limited by a contraction in net exports--as slowing economies overseas depressed demand for U.S. goods--and by a decrease in defense purchases.

The recovery faltered in the fourth quarter in part because of flagging consumption. This weakening likely reflected the dramatic worsening of consumer sentiment. As shown in Chart 2, two commonly cited measures of consumer confidence, the Michigan and Conference Board surveys, dropped off sharply during the fourth quarter. The plunges in these series may have

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[1]Gross domestic product (GDP) replaced gross national product (GNP) as the preferred measure of the nation's output during 1991. GDP excludes goods and services produced abroad by U.S.-owned capital or labor, a component of GNP, and it includes goods and services produced by foreign-owned productive resources located in the U.S., unlike GNP.

Chart 1

Real Gross Domestic Product
(annualized growth rates)

Percent

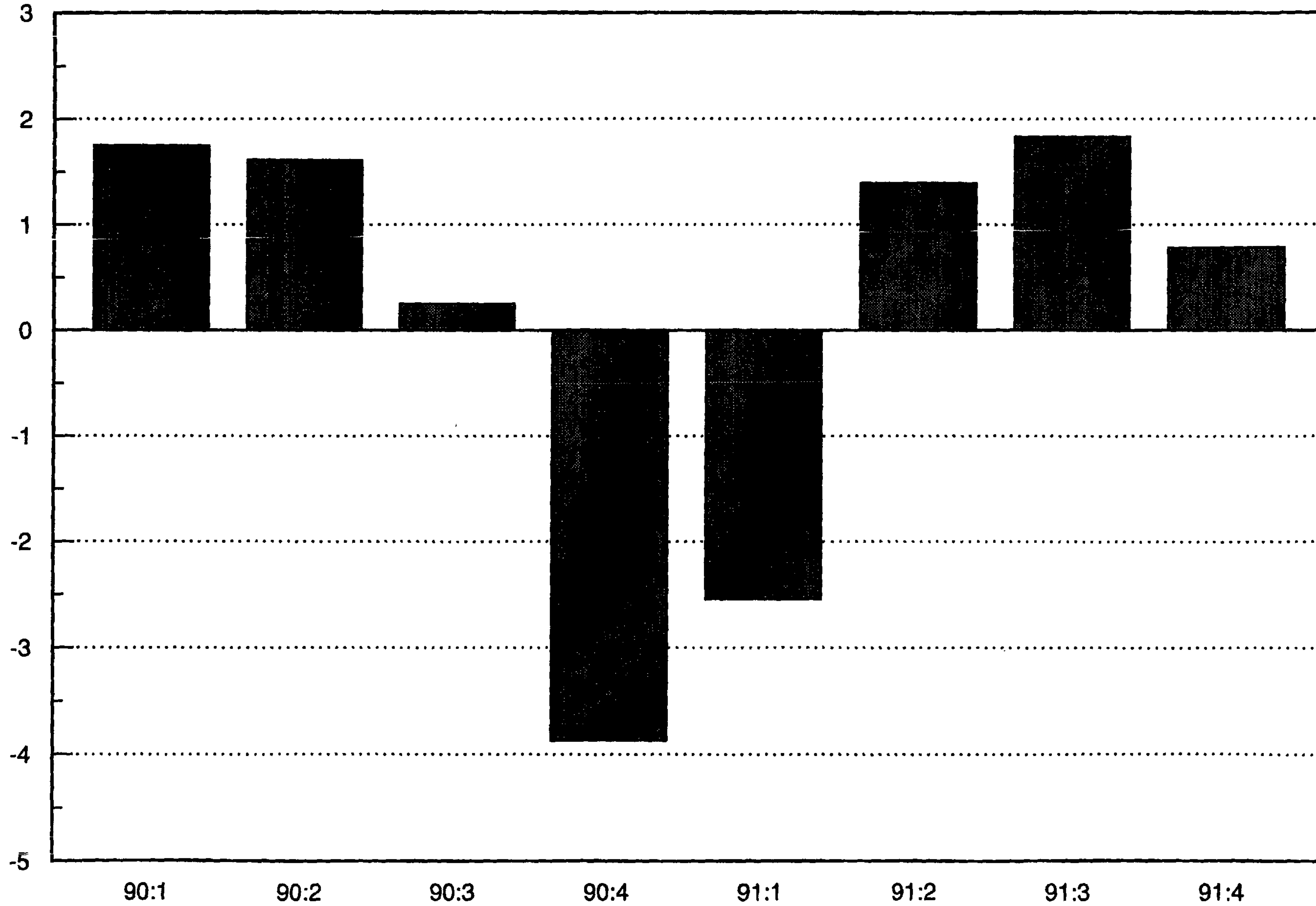


TABLE 1

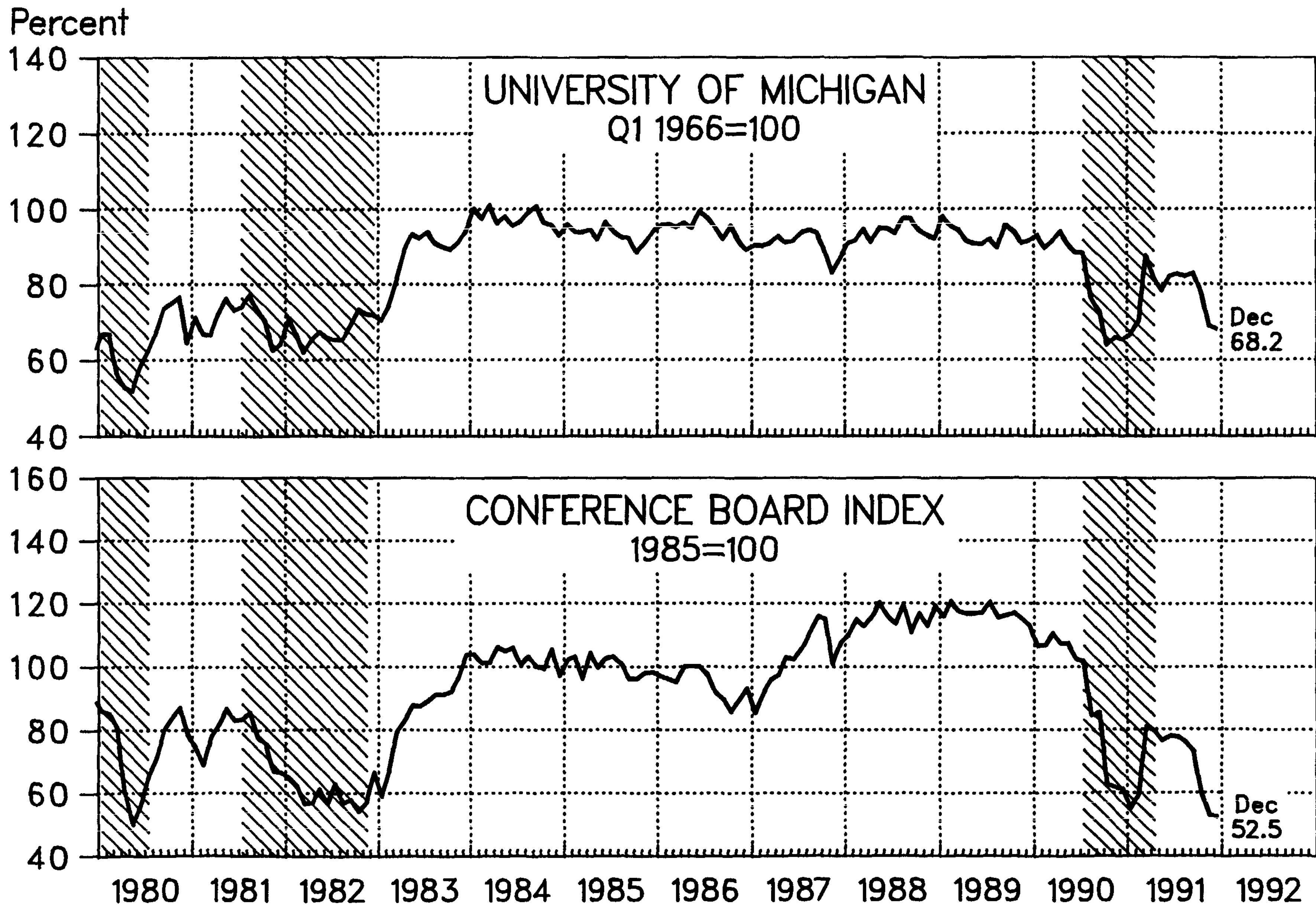
REAL GROSS DOMESTIC PRODUCT AND ITS COMPONENTS
Seasonally Adjusted Annual Growth Rates[1]
(in percent)

	1990	1991				1990	1991
	IV	I	II	III	IV	Q4/Q4	Q4/Q4
Real GDP	-3.9	-2.5	1.4	1.8	0.8	-0.1	0.4
Consumption	-3.5	-1.3	1.4	2.3	-0.2	0.3	0.5
Durables	-14.0	-11.9	-1.8	9.5	-6.0	-2.7	-2.9
Nondurables	-3.4	-0.3	0.9	0.0	-3.2	-1.0	-0.7
Services	-0.9	0.7	2.5	2.2	2.9	1.9	2.1
Fixed Investment	-9.6	-19.3	-1.7	-0.2	-0.2	-2.9	-5.7
Producer Durables	-1.6	-18.1	0.0	6.7	-3.7	3.1	-4.2
Nonresidential Construction	-19.7	-15.7	-10.3	-23.9	-6.3	-4.6	-14.3
Residential Construction	-15.0	-24.8	3.1	10.9	13.1	-11.8	-0.7
Change in Inventories ($ billion)	-31.2	-32.8	-30.4	0.1	10.9	0.8	-52.2
Change in Net Exports ($ billion)	34.5	12.6	6.3	-18.8	13.5	38.8	13.6
Exports	17.7	-7.4	19.4	7.3	13.1	7.6	7.6
Imports	-9.3	-15.4	13.3	22.3	2.5	-0.4	4.7
Government Purchases	4.6	2.8	-0.1	-3.4	-5.4	3.2	-1.6
Real GNP	-2.5	-2.8	0.3	2.0	NA	0.2	NA
<u>Addenda</u>							
Change in Nonfarm Payroll Employment (change, in thousands)	-393	-628	-323	128	-31	-551	-855
Civilian Unemployment Rate	6.0	6.5	6.8	6.8	7.0	0.7*	1.0*

[1]Unless otherwise noted. Data are as of March 6, 1992.
NA: Not available.
* In percentage points.

Chart 2

MEASURES OF CONSUMER CONFIDENCE



captured concerns that a spate of announced layoff plans--which in some cases extended over several years--represented permanent job losses, perhaps signaling a retardation in economic growth and living standards in the years ahead. The slowdown in activity also may have stemmed from an increased propensity of businesses and households to pare debt. While this restructuring of balance sheets was a healthy response to the heavy debt burdens accumulated during the 1980s, it worked against the normal forces of recovery.

The recession and anemic recovery dampened demand pressures on wages and prices during 1991. The reduction in overall inflation pressures also derived from a considerable decline in energy prices. These prices had moved sharply higher in 1990 following the Iraqi invasion of Kuwait. With the resolution of the Persian Gulf conflict, energy prices slumped (Table 2). The implicit GDP deflator and the consumer price index (CPI) registered their smallest advances since 1986. Meanwhile, the producer price index (PPI) edged downward for the first time since 1986. The so-called "core" components of the CPI and PPI, which exclude food and energy, rose at faster rates than the total indexes over 1991; however, these increases were smaller than those of the previous year.

Interest Rates

Most interest rates fell considerably during the year, reflecting the substantial easing of monetary policy, the weakness in the economy, and some moderation in inflation expectations. The Treasury yield curve steepened considerably over the year; the declines in short-term interest rates exceeded those on long-term rates (Chart 3). Short-term rates fell more or less in step with the profile of monetary policy accommodation, but decreases in long-term rates were more grudging (Chart 4). The yield on the 30-year Treasury bond moved in a range between 8 and 8 1/2 percent for much of the year

TABLE 2

PRICE INFORMATION
Seasonally Adjusted Annual Growth Rates[1]
(in percent)

	1990	1991				1990	1991
	IV	I	II	III	IV	Q4/Q4	Q4/Q4
Consumer Price Index:							
Total	6.9	3.2	2.5	2.7	3.6	6.3	3.0
Excluding food and energy	4.4	6.5	3.8	3.9	3.8	5.3	4.5
Energy	41.4	-21.8	-11.6	-0.1	3.6	18.0	-8.0
Producer Price Index:							
Total	10.0	-1.7	-0.9	0.1	2.1	6.4	-0.1
Excluding food and energy	3.3	5.5	2.6	2.0	2.7	3.5	3.2
Energy	93.3	-28.4	-14.5	-0.3	6.4	34.1	-10.2
Implicit GDP Deflator	3.1	4.9	3.2	2.2	1.9	4.2	3.0
Fixed-Weight GDP Index	3.2	5.3	3.5	2.4	2.0	4.4	3.3
Employment Cost Index*	2.6	5.7	4.1	4.8	2.5	4.9	4.3

[1]Data as of February 28, 1992.

* This index is computed for the final month of each quarter. The growth rates therefore represent growth from the final month of the previous quarter; they are not quarterly average rates.

Chart 3

Yield Curves For Selected U.S. Treasury Securities

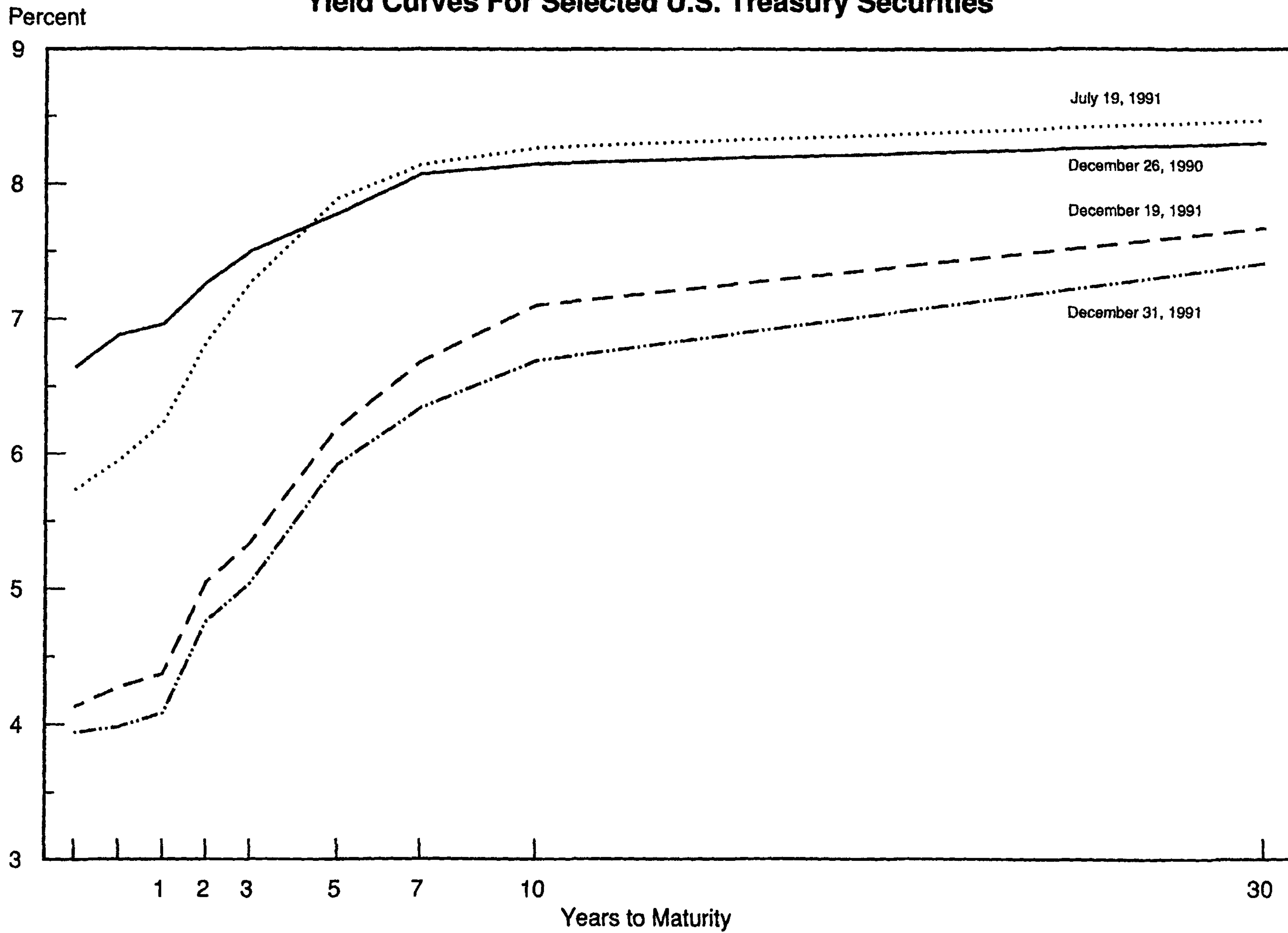
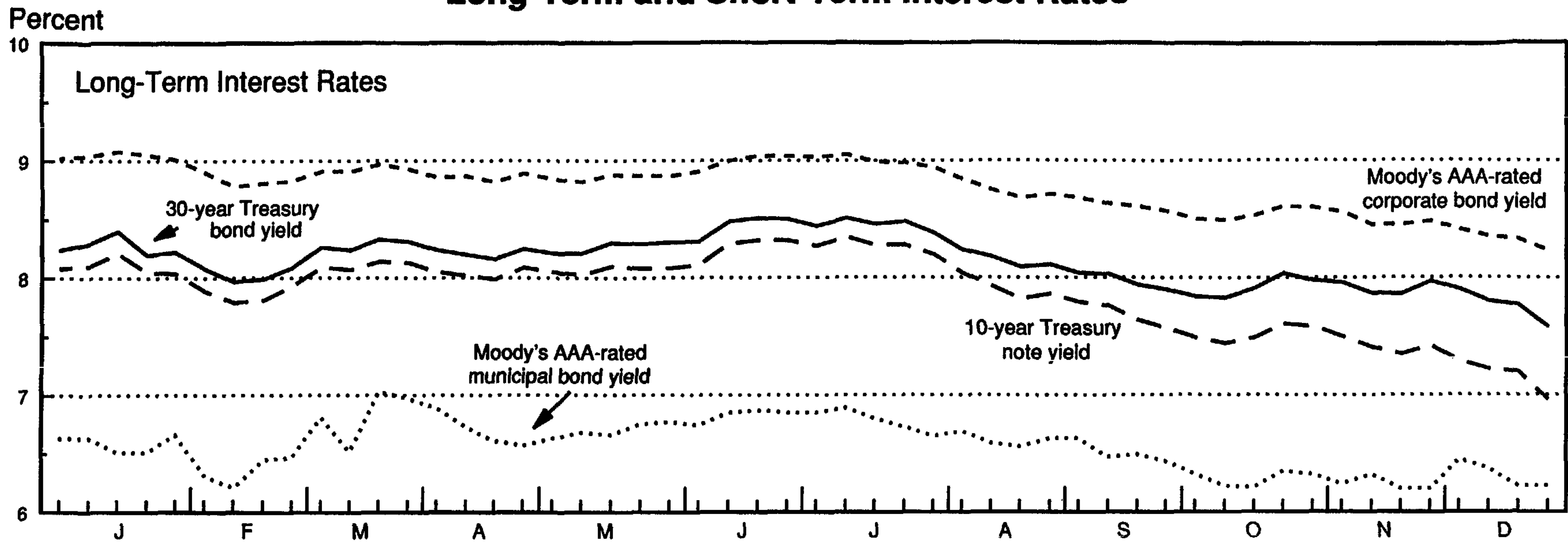
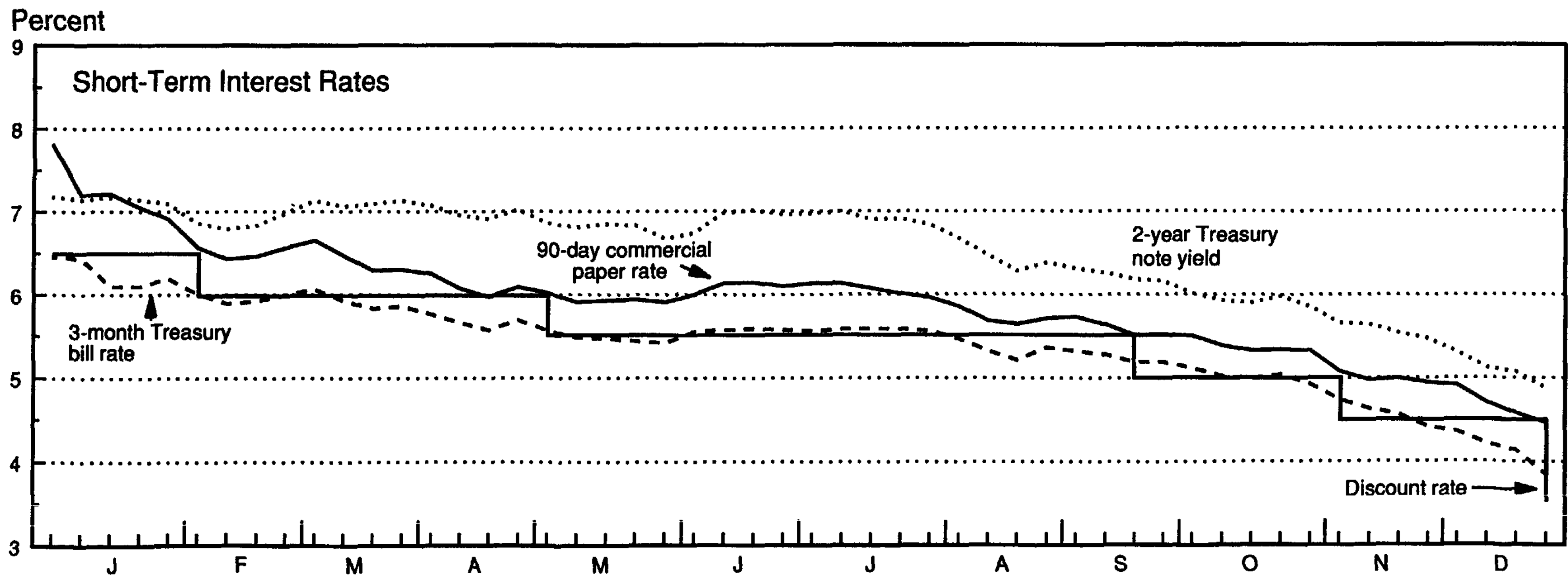


Chart 4
Long-Term and Short-Term Interest Rates





because investors lacked confidence that the reduction in inflation would be sustainable as economic activity recovered. Large ongoing Federal deficits also concerned investors. When the economy showed signs of weakening during the fourth quarter, the long bond yield moved lower, especially in the wake of the December 20 cut in the discount rate. It finished the year about 85 basis points below its year-earlier level (as measured by the constant maturity series).

The Monetary Aggregates

Lower interest rates stimulated M1 growth, but growth in the broader monetary aggregates remained quite weak. Estimates available during the year indicated that the broader aggregates slipped during the summer to the bottoms of their target ranges, where they essentially remained over the rest of the year (Chart 5).[2] From the fourth quarter of 1990 to the fourth quarter of 1991 (Q4 over Q4), M1 surged 7.9 percent, M2 advanced 2.7 percent, and M3 grew 1.3 percent.[3] The decline in market interest rates over the year reduced the opportunity cost of holding non-interest-bearing currency and demand deposits. Moreover, for most of the year, the rates offered on other checkable deposits fell more slowly than other deposit rates in response to the decline in market rates. Consequently, M1 deposits became relatively more attractive.

The growth of the broader monetary aggregates was restrained by weak asset growth at depository institutions and by shifts of funds out of the

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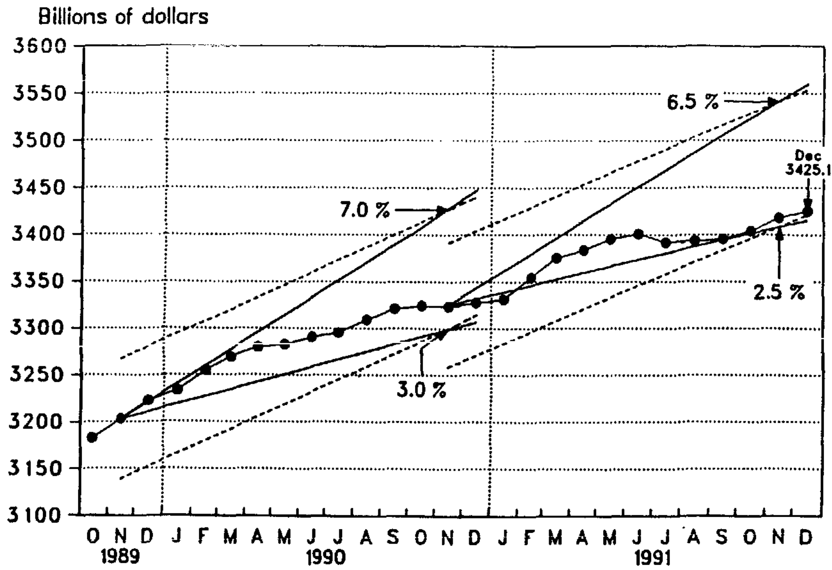
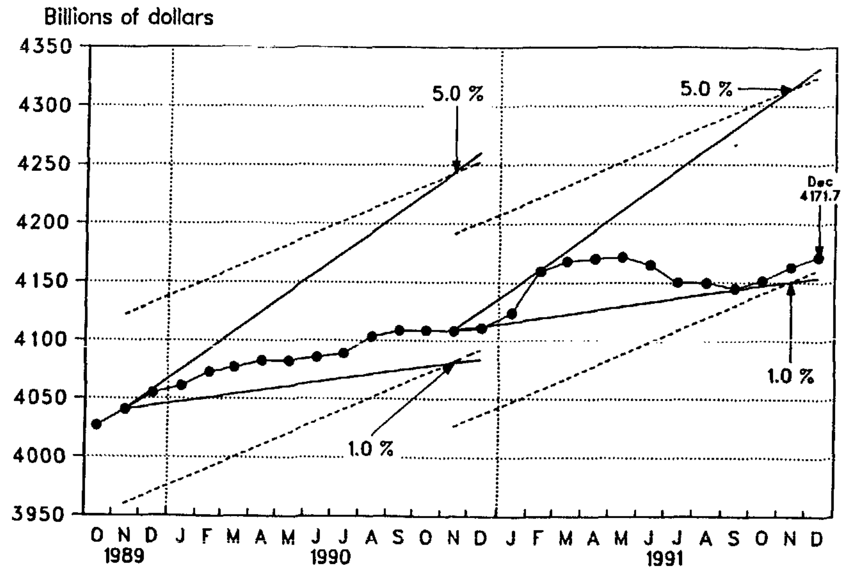
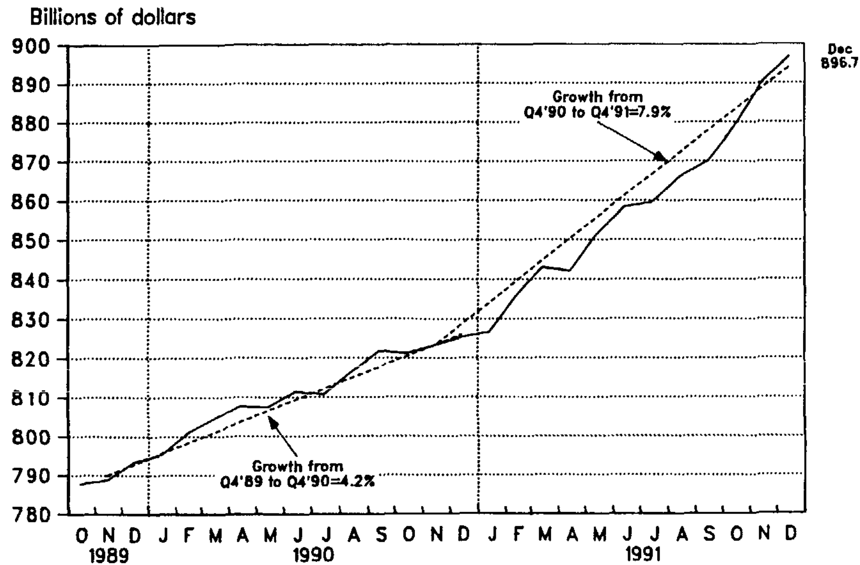
[2]The target ranges were established by the Federal Open Market Committee in February and were reaffirmed in July.

[3]As of February 6, 1992. These data do not incorporate the annual benchmark and seasonal factor revisions of February 12, 1992 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 12, 1992, net revisions have lifted M1 and M2 growth by 0.1 and and 0.2 percentage point, respectively, while they left M3 growth unchanged. Using the March data, growth in the broader aggregates was slightly higher over the second half of the year, but M2 and M3 remained in the lowest quarters of their target ranges.

Chart 5







aggregates and into higher yielding financial instruments. Slow asset growth reflected anemic loan demand in a sluggish economy and the efforts of many banks and thrifts to improve their capital positions in the face of asset quality concerns. With the brisk rise in liquid deposits providing most of the funding for their asset growth, many institutions sought to trim the expansion of their managed liabilities, including the time deposits in M2, by reducing deposit rates, raising fees, or cutting promotional expenditures. Faced with low deposit rates, many depositors shifted funds out of the aggregates and into higher yielding capital market instruments, such as bond or equity mutual funds.[4] Moreover, with loan rates much higher than deposit rates, some depositors used their money balances to pay down consumer credit or to finance spending.

The activity of the Resolution Trust Corporation (RTC) also had a dampening effect on M2 and M3. When the RTC resolved a troubled thrift, it carried some of the thrift's assets on its own balance sheet until disposition. The RTC funded these assets with Treasury securities, unlike the thrift which had mostly used M3 deposits; therefore, RTC-assisted resolutions directly depressed M3. Moreover, depositors at the failed institution may have taken the opportunity to review their banking relationship and to restructure their portfolios, especially if their high-rate CD contracts had been abrogated. This activity likely reinforced the tendency of depositors to substitute nonmonetary financial assets for M2 deposits.

Financial Market Developments

The financial market strains that had emerged or intensified during 1990 began to recede during 1991. These strains stemmed largely from the

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[4]Some depositors decided to hold their balances in the liquid components of M2, rather than shifting the funds completely out of the aggregate. Such shifts do not affect M2 growth, but do affect its composition.

heavy debt burdens accumulated during the 1980s. The overhang of debt proved increasingly difficult, if not impossible, to service when economic activity softened. Consequently, in 1990, "quality spreads," or the differences between yields on higher rated debt and those on lower rated debt of similar maturities, widened considerably, while the ratio of total corporate downgrades to upgrades rose sharply. Companies in "troubled" sectors found their access to the capital markets limited at a time when financial intermediaries, which had financed a large portion of the debt buildup, adopted more restrictive lending practices to help clean up their own troubled balance sheets.

The ebbing of financial market strains during 1991 can be attributed in part to the substantial reduction in overall interest rate levels during the year. This reduction directly improved cash flow by cutting the rates paid on adjustable rate debt. In addition, it encouraged businesses and consumers to decrease debt servicing costs by refinancing or paying off higher rate debt. Moreover, lower rates and the modest pickup in economic activity boosted equity prices, thus prompting a number of corporations to issue new equity to improve their capital positions. The proceeds of the equity issuance were sometimes used to pay down costly outstanding debt.

Despite the propensity of consumers and businesses to pay down debt, total debt of nonfinancial sectors rose 4.5 percent in 1991 (Q4 over Q4), near the lower bound of the FOMC's monitoring range (Chart 6).[5] Much of the growth in debt, however, can be attributed to the Federal government; its debt expanded 11.2 percent. The non-Federal component of debt showed much more

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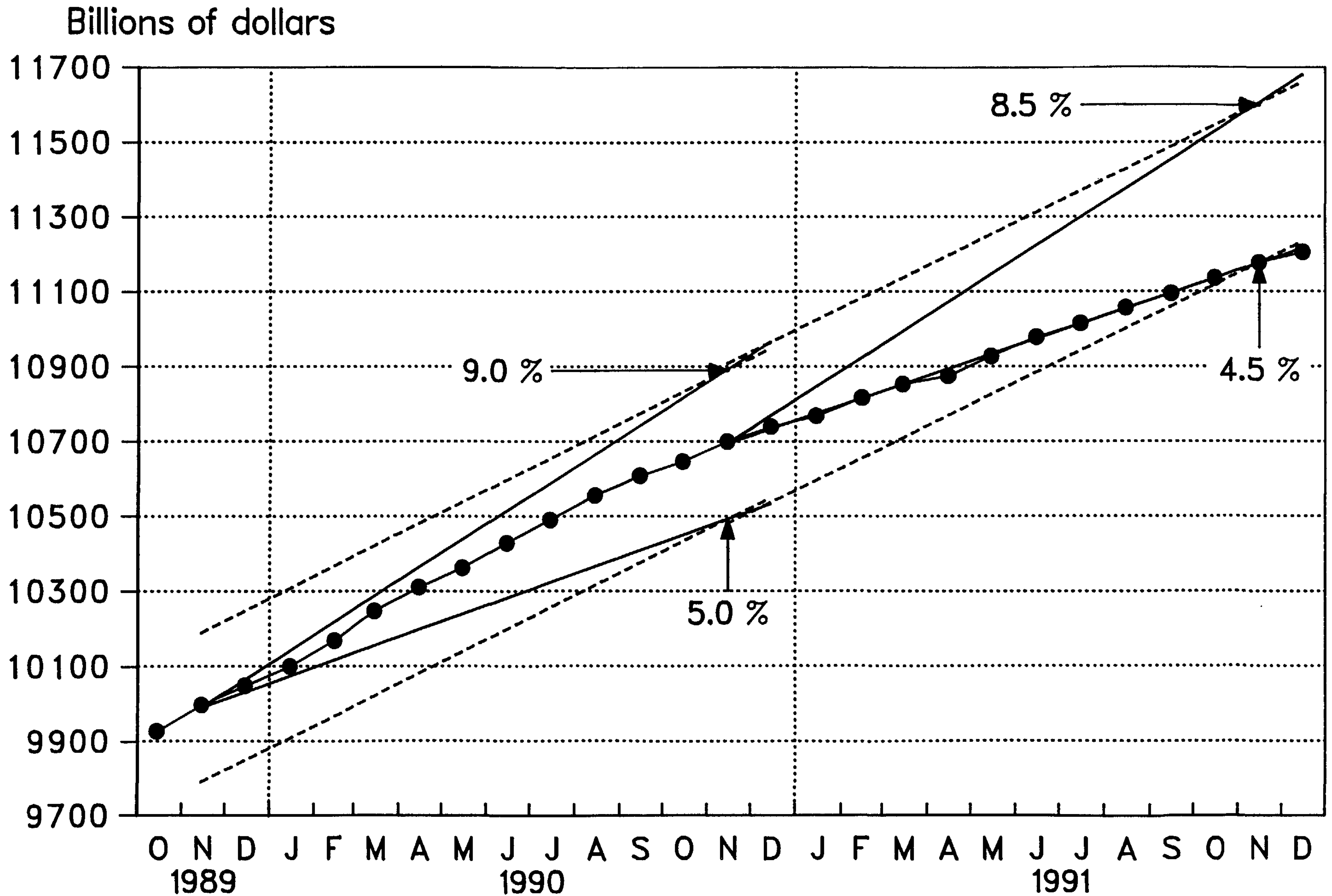
[5]Data are as of March 12, 1992. Continuing a series of reductions, the FOMC lowered the monitoring range for debt growth in 1991. The cut reflected the FOMC's expectation that private credit demands would be limited by the increased caution on the part of borrowers and lenders and that Federal government borrowing would remain robust.

Chart 6



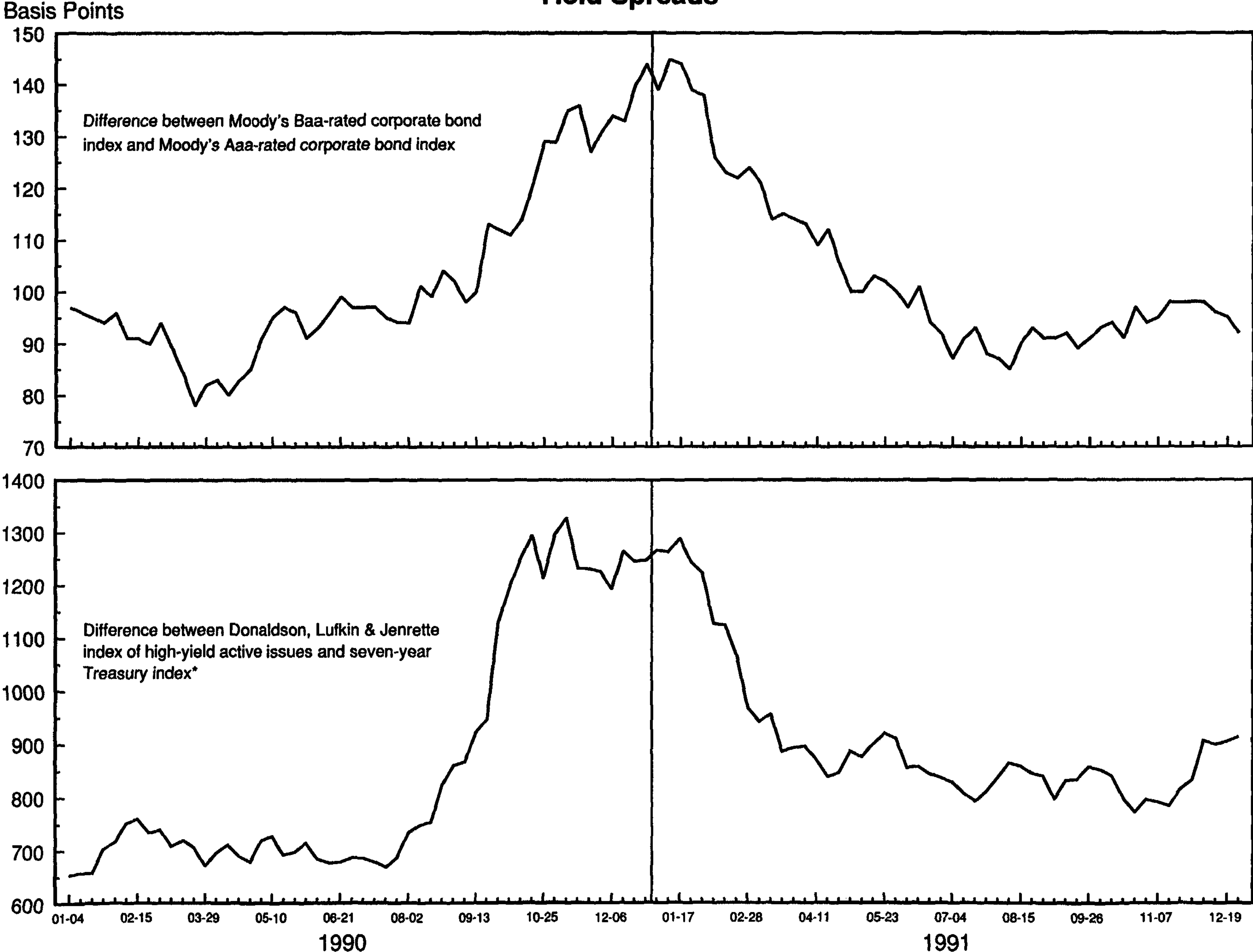
modest growth of 2.4 percent, the slowest rate since the data have been collected.

The restructuring of corporate balance sheets during 1991 and signs of a modest pickup in economic activity soothed concerns about the financial health of many firms. In this environment, some investors were willing to take on additional risk in order to pick up yield. As a result, credit spreads in most sectors narrowed sharply during 1991 (Chart 7). With this narrowing and the improving economic outlook, a number of firms that had experienced curtailed access to the credit markets were able to issue debt once again. Most notably, issuance in the below-investment-grade, or "junk," sector of the corporate bond market rebounded to $8.8 billion, up sharply from only $550 million in 1990. According to Moody's Investor Service, while corporate debt downgrades still outnumbered upgrades during 1991, the ratio of downgrades to upgrades, 2.9 to 1, was appreciably lower than the 4.4 to 1 ratio of 1990, and close to the 2.5 to 1 ratio of 1989.

The financial position of many bank holding companies (BHCs) improved during the year. An indication of this improvement was the decreased pace and volume of loan write-offs and loan-loss provisions during 1991. Yields on most BHC debt relative to those on Treasury issues narrowed during the year, as market participants perceived that the worst was over. The narrowing of spreads prompted many BHCs to sell new debt, while a pickup in their stock prices encouraged some BHCs to offer new equity to enhance their capital positions.

Despite the diminished sense of fragility in most sectors, concerns about the financial health of insurance companies rose during 1991. Many life insurance companies had been hurt by declining real estate values, as banks had been, and by losses on their holdings of below-investment-grade bonds. These difficulties came under the spotlight during the summer, following the

Chart 7
Yield Spreads



*Provided by Donaldson, Lufkin & Jenrette

failure of Mutual Benefit Life Insurance Company. In all, six major life insurance companies failed during 1991, all but one of which experienced runs by policy holders before their failure. Other insurers, meantime, found themselves in weakened capital positions. The difficulties in this sector appeared to be somewhat confined. Unlike banks, life insurers' share of real estate holdings had been roughly unchanged since 1975.[6] Moreover, the exposure of life insurance companies to junk bonds was concentrated among a few firms.

III. Course of Policy

During 1991, the Federal Reserve responded to the weakness in economic activity and the moderation in inflation pressures by continuing the gradual loosening of monetary policy initiated in mid-1989. The Federal Open Market Committee's ten easing steps brought about a substantial cumulative reduction in reserve pressures during 1991, as the Federal funds rate fell 3 percentage points. Consistent with the moves on reserves, the Board of Governors approved five cuts in the discount rate, also producing a cumulative decline of 3 percentage points (Table 3).[7] At the end of the year, the discount rate stood at 3 1/2 percent, the lowest level since November 1964.

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[6]Their share rose from 3 percent in 1970 to a peak of 3.6 percent in 1986. In 1990, it was 3.1 percent. These data were taken from Andrew Yuengert "Empirical Evidence: Life Insurance and Annuities," Federal Reserve Bank of New York, Internal Working Paper, 1991.

[7]During most of the year, the Federal funds rate and the discount rate declined more or less in step. The funds rate generally was slightly above the discount rate, although occasionally, both rates were about the same. Under borrowed reserve targeting--introduced in the early 1980s--the relationship between the amount of borrowing and the funds rate is not stable when the funds rate is below the discount rate. As discussed in Section IV, however, this relationship has not been very dependable in recent years even with the funds rate above the discount rate, and the Federal Reserve has relied less on it. Hence, the Federal Reserve could probably operate with reasonable success even if the funds rate were below the discount rate.

TABLE 3

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

Date of Meeting	Specified Short-term Growth Rates (in percent): Period	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	Prospective Reserve Restraint Modifications: Guidelines for Modifying Reserve Pressure	Prospective Reserve Restraint Modifications: Factors to Consider for Modifications
12/18/90	November to March	4	1	7 6.5 on 12/19 6 on 2/1	100 125 on 12/19* 100 on 1/9† 100‡	7.25 7 6.75 6.25	decrease slightly	A slightly greater degree might be acceptable. A somewhat lesser degree would be acceptable.	These factors did not change materially through November. They were:
2/5 to 2/6/91	December to March	3 1/2-4	3 1/2-4	6	100 75 on 3/8† 125 on 3/21§	6.25 6	maintain	"	(1) Progress toward price stability.
3/26/91	March to June	5 1/2	3 1/2	6 5.5 on 4/30	125 150 on 4/18§ 175 on 4/30* 200 on 5/2§	6 5.75	maintain	A somewhat greater or somewhat lesser degree might be acceptable.	(2) Trends in economic activity.
5/14/91	March to June	4	2	5.5	200 225 on 5/16§ 250 on 6/13§ 275 on 6/20§ 325 on 6/27§	5.75	maintain	"	(3) Behavior of the monetary aggregates.
7/2 to 7/3/91	June to September	5 1/2	3	5.5	325 350 on 7/11§ 400 on 7/25§ 375 on 8/6†	5.75 5.5	maintain	"	(4) Developments in foreign exchange and domestic financial markets. -
8/20/91	June to September	0	-1	5.5 5 on 9/13	375 350 on 9/5§ 300 on 9/12§ 325 on 9/13*	5.5 5.25	maintain	A somewhat greater degree might be acceptable. A somewhat lesser degree would be acceptable.	
10/1/91	September to December	3	1 1/2	5	325 300 on 10/3§ 275 on 10/10§ 250 on 10/17§ 175 on 10/31‖	5.25 5	maintain	A slightly greater degree might be acceptable. A slightly lesser degree would be acceptable.	
11/5/91	September to December	3	1	5 4.5 on 11/6	175 175¶ 150 on 11/7§ 125 on 11/14§ 100 on 11/29§ 75 on 12/6†	5 4.75 4.5	decrease somewhat	"	
12/17/91	November to March	3	1 1/2	4.5 3.5 on 12/20	75 100 on 12/20*	4.5 4	maintain	A slightly greater degree might be acceptable. A somewhat lesser degree would be acceptable.	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.

[1] The Federal funds rate trading area that is expected to be consistent with the borrowing assumption.
* 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 effect 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.
‖ Change in borrowing assumption reflects a change in reserve pressures and a downward technical adjustment.
¶ The assumption was unchanged because an increase to permit only part of the discount rate cut to show through to the market was offset by a downward technical adjustment.

During the winter and early spring, the Federal Open Market Committee (FOMC) reduced reserve pressures through a series of four easing steps that lowered the Federal funds rate by 1 1/4 percentage points. Meanwhile, the Board approved two half-point reductions in the discount rate. Economic activity was observed to be declining over the winter, as production and employment shrank. The threat of oil-related inflation dissipated in February in the wake of Coalition successes in the Persian Gulf war, and broad price measures recorded only modest increases or fell. By late March, however, conditions appeared to be in place for a turnaround in economic activity, in part because of the significant easing of reserve pressures that had taken place since the latter part of 1990.[8] Nonetheless, the Committee remained alert to the possibility that the recovery might falter. Indeed amid signs of continued weakness, especially in the industrial and capital goods areas, the Board approved a half-point cut in the discount rate on April 30, and the FOMC allowed part of the reduction to show through to the funds market.

The FOMC adopted a posture of watchful waiting from mid-spring through midsummer. Economic indicators suggested that a recovery, albeit uneven, was underway, while inflation pressures remained modest. In these circumstances, the Committee felt it prudent to guard against the risk of adding excessive monetary stimulus that might allow inflationary imbalances to develop. By midsummer, however, some data cast doubt about the strength of the recovery at a time of persistent weakness in the broader monetary aggregates. With price pressures abating, the FOMC eased reserve pressures on August 6.

The Federal Reserve stepped up the pace of accommodation over the balance of the year, as various data indicated that the upturn in economic

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[8]The Federal funds rate fell 2 percentage points between mid-October 1990 and late March 1991, with half the decline registered in 1990.

activity had faltered. During the fall, business and consumer sentiment began to erode, bank credit was weak, and the broader monetary aggregates were near the lower bounds of their target ranges. Meantime, price measures supported the notion that the average rate of inflation was coming down. In this environment, the FOMC made monthly reductions in reserve pressures between September and early December, while the Board approved half-point reductions in the discount rate in September and November. By mid-December, the evidence of the downward trend in inflation was clear, and economic activity remained sluggish. Consequently, the System took more forceful steps to ease policy. On December 20, the Board of Governors approved the first 1 percentage point cut in the discount rate since 1981, and the Committee effected a 50 basis-point decline in the funds rate, the second cut of that size during 1991. The Board anticipated that these steps, along with the cumulative effects of earlier actions, would provide the basis for a resumption of sustained economic expansion.

IV. Policy Implementation

Adjustment to the Cut in Reserve Requirements

Policy implementation in the early months of 1991 was heavily influenced by efforts to understand and adapt to the effects of the cut in reserve requirement ratios in December 1990. The reduction in requirements was phased in over two consecutive maintenance periods and became fully implemented in the period ended January 9, 1991. The reserve requirement cut immediately introduced a huge reserve surplus. The Desk absorbed the extra reserves largely through redemptions and outright sales of securities in December 1990.[9] The cut in reserve requirements had a more lasting impact on

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[9]The Desk's operations in late-1990 are discussed at length in last year's report, "Monetary Policy and Open Market Operations During 1990."

the Desk's approach to reserve management because it reduced the level of "required reserve balances" to a range that made reserve management difficult at times for many banks. Required reserve balances consist of all reserves that depository institutions (DIs) hold at Federal Reserve Banks to meet their reserve requirements, and they account for most of the reserves held on deposit at the Fed.[10] Many DIs maintain reserve balances at the Fed not only to meet their reserve requirements, but also to process transactions and to guard against unexpected late-day deposit withdrawals that could send them into overdraft.[11] The cut in reserve requirement ratios lowered required reserve balances for many institutions below the level needed to support their clearing operations.[12]

The difficulties that the drop in reserve balances presented to DIs in managing their reserve positions was especially pronounced early in 1991 for two reasons. Many of the larger banks had little or no experience working with such low operating balances, and so had trouble initially adapting to the new reserve requirement ratios.[13] Furthermore, as a result of seasonal movements in the level of required reserves and applied vault cash, required

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[10]Required reserve balances are defined as required reserves less applied vault cash. Required reserve balances together with required clearing balances, which are discussed later in this section, are termed "required operating balances." Total reserve balances at the Fed, which also include excess reserves, are sometimes termed "operating balances."

[11]DIs are penalized for ending the day overdrawn. They are charged the higher of 2 percentage points over the day's effective Federal funds rate or 10 percent. Moreover, the overdraft amount must be offset by higher reserve balances on other days in the two-week maintenance period in order to meet the average reserve requirement.

[12]The reserve requirement cut lowered required reserve balances by about $11 3/4 billion. The remainder of the $13 1/2 billion in required reserves that were released by the cut had been met with vault cash.

[13]Many small banks and thrifts routinely held more vault cash than they needed to meet their reserve requirements even before the 1990 cut in reserve requirements. Consequently, they were unaffected by the cut.

reserve balances typically drop to an annual low point in late-January and early-February. Coinciding with the implementation of the cut in reserve requirements, these seasonal movements pushed the level of required reserve balances to exceptionally low levels (by recent historical standards) early in 1991.[14]

Banks responded to the low levels of operating balances by managing their reserve positions more cautiously.[15] To guard against inadvertent overdrafts, DIs often held onto their reserves early in the day, sometimes despite an already large accumulated excess position, giving rise to a tendency towards firmness in the funds rate in the morning. In late afternoon trading, as DIs became more confident about their reserve positions for the day, they tended to unload their holdings, sometimes driving the funds rate sharply lower. (The volatility of the funds rate in early 1991 that this behavior engendered is portrayed in Chart 8.) Demand for excess reserves typically ran above normal levels as depositories sought to boost their operating balances, and DIs had greater occasion to turn to the discount window, although adjustment borrowing still remained at relatively low levels.

The Desk's conduct of open market operations during the early part of the year had to adapt to these developments. In setting its objectives for reserves, it took account of higher expected demands for excess reserves, and at the same time, the excess reserve allowance was treated much more flexibly as the size of these elevated demands was very uncertain. Temporary reserve operations on some days were aimed at ensuring that reserves were sufficient

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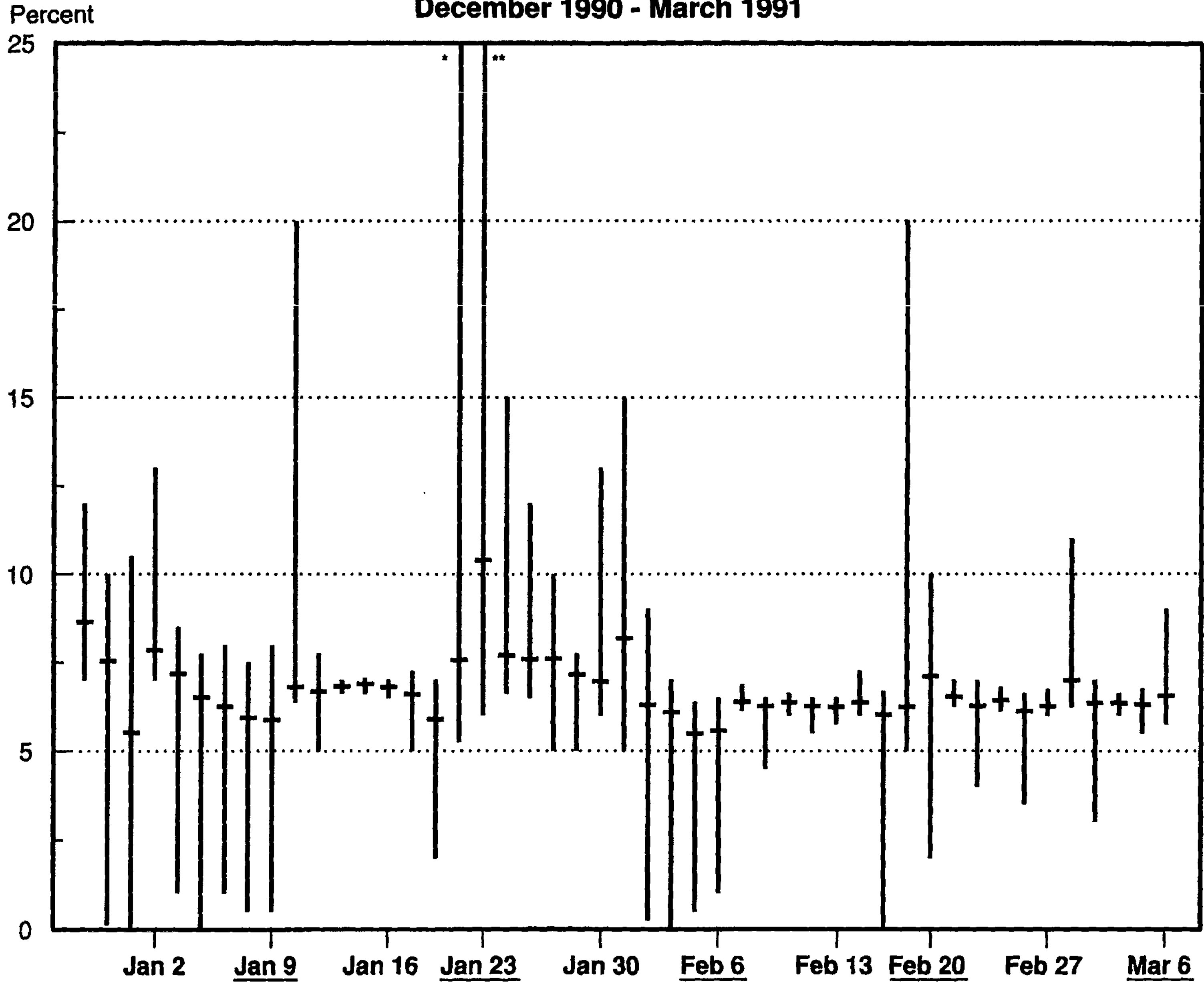
[14]Required reserve balances fell from $33.5 billion in the period ended December 12, 1990--just before the cut in reserve requirements--to $16.1 billion in the period ended February 6, 1991.

[15]Reserve management practices of depositories around this time were also affected by increased worries over the health of many DIs, which prompted some institutions to curb their credit lines. This development was discussed in last year's report.

Chart 8

Daily Federal Funds Rate Trading Ranges
December 1990 - March 1991



Note: Horizontal line within the trading range indicates daily effective rate. Settlement days are underlined.
*** January 22 - The rate reached 30 percent.**
**** January 23 - The rate reached 90 percent.**

to support banks' payments operations that day, even when they were not needed to meet reserve requirements for the two-week maintenance period. The volatility of the Fed funds rate reduced the value of this rate to the Desk as a barometer of the availability of reserves for meeting reserve requirements; firmness in the funds rate was sometimes viewed as an indication that the level of operating balances was not adequate for clearing purposes.

During the first two maintenance periods of the year, the Desk took greater account of the expected level of operating balances when formulating its daily operations. In the days immediately following the turn of the year, however, the focus was on allowing banks to work off in an orderly fashion the huge excess reserve positions accumulated just ahead of the year-end.[16] Conditions in the money market in the following maintenance period, the first full period in the new year, settled down somewhat but still remained relatively volatile. Excess reserves in this period were initially expected to be on the high side, but in fact ran on the low side, thanks to large positive carryins from the period covering the year-end.

Difficulties associated with low levels of operating balances intensified in the next period--ended February 6. Required reserves, which typically peak around the year-end holidays and then quickly fall off early in the new year, dropped sharply in this period. Meanwhile, a large buildup in vault cash around the turn of the year, related to the public's currency demands during the holiday season, became available for meeting reserve

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[16]The success that banks had in running down their excess holdings in the second week of the January 9 period proved somewhat surprising. The level of accumulated excess reserves through the first week of this period was about $10 billion, and excess reserves for the period as a whole were about $3 1/2 billion.

requirements in this period and caused applied vault cash to jump.[17] During this period, conditions in the money market were generally tight in the morning, and the funds rate frequently became volatile in later trading. The Desk provided reserves in an aggressive manner during the first week of this period, arranging six consecutive rounds of System repurchase agreements (RPs) which more than met the period's formal add need, as the Desk kept a close watch on the expected level of operating balances.[18] On one day, the Desk preannounced its operation when the level of operating balances was expected to plunge as a result of a spike in the Treasury's Fed balance.[19] As depositories' excess reserve position gradually accumulated, the Desk raised its formal allowance for excess reserves. Later in the period, when reserve pressures relaxed somewhat, the Desk drained reserves, but it only drained limited amounts on any one day in order to avoid bringing operating balances below the level DIs would need to manage their positions.

Pressures remained strong in the period ended February 20 even though applied vault cash fell back from its seasonal high. The Desk continued to respond to estimates that showed low levels of operating balances on some days and to firmness in the funds rate in the morning. The Desk added a large volume of reserves on the February 20 settlement day to bring balances to a level believed consistent with clearing needs, even though available estimates

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[17]Under existing accounting procedures, vault cash holdings could be applied to meeting reserve requirements two maintenance periods later. When the Board announced a further cut in reserve requirements in February 1992, to take effect in April, it also put out for public comment a proposal to shorten the vault cash lag to one period. Evidence suggests that the shorter lag would lessen the seasonal decline in required reserve balances that occurs in early February.

[18]One of these System RPs was also intended to communicate a policy easing.

[19]Net proceeds from the settlement of the January two- and five-year note auctions on their settlement date lifted the Treasury's total cash holdings well above its total deposit capacity in the private banking sector.

showed that reserves were more than sufficient for meeting reserve requirements and expected excess reserve demands for the period.

In subsequent maintenance periods, a number of developments added to reserve balances, thus reducing the volatility of the funds rate and other pressures in the reserve market. Seasonal movements in reserve requirements and applied vault cash helped to raise operating balances to more comfortable levels. In addition, DIs took measures that raised their reserve balances at the Fed on a permanent basis. A number of banks economized on their holdings of vault cash in order to boost their required reserve balances at the Fed, causing vault cash to grow somewhat more slowly in 1991 than in recent years. Many banks also opened or expanded their required clearing balances (RCBs), lifting the total size of these balances from $1.8 billion in the maintenance period just prior to the cut in reserve requirement ratios to $3.9 billion one year later.[20] Most of this increase in RCBs occurred too late in the year to alleviate reserve pressures in early-1991; by the period ended February 20, required clearing balances had grown to just $2.4 billion.

Despite the above developments, required operating balances (required reserve balances plus RCBs) in early December 1991 were still about $5 billion below the level prevailing one year earlier, just prior to the cut in reserve requirements. A tendency for excess reserves to run above recent historical levels and increased episodes of DIs wasting their positive reserve carryins from previous periods suggested that some banks were still occasionally hampered by low operating balances in managing their reserve positions.

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[20]A DI can establish a clearing balance by specifying an average level of reserves that it will hold at the Federal Reserve for clearing purposes in addition to any balances that it must hold to meet reserve requirements. In exchange, it receives credits on its required clearing balance that it can use to pay for its use of priced services provided by the Fed. Thus, it earns implicit interest on its RCB. The Desk knows the size of RCBs for a given maintenance period at the beginning of that period, but not necessarily the size for future periods.

Operating Procedures

Borrowed reserves

During 1991, the FOMC continued to frame its policy objectives in terms of the desired degree of reserve pressure, a concept that has been associated with a specified amount of adjustment and seasonal borrowing at the discount window. (Anticipated borrowing levels and other reserve measures are presented in Table 4.) The Desk's reserve management procedures are aimed at providing an amount of nonborrowed reserves that together with the intended level of discount window borrowing will just meet the estimated demand for reserves. So long as there is a predictable degree of reluctance to borrow, achieving the specified level of borrowing is expected to be consistent with a predictable spread of the Federal funds rate over the discount rate.

In recent years, the relation between the level of adjustment borrowing and the spread between the Fed funds and discount rates has become less reliable, and DIs have shown an increased reluctance to borrow from the discount window. As a consequence, wider spreads between the Federal funds and discount rates have typically been required to induce banks to turn to the discount window. This development has been linked to concerns about the ongoing difficulties of the financial services sector as a whole, and to the increased public scrutiny placed on those particular institutions rumored to be in financial straits.[21] Banks, fearful of being perceived as facing fundamental liquidity constraints because they were identified as having borrowed from the window, have shied away from using this facility.

This avoidance of the discount window was highlighted in the early part of 1991 when many banks were struggling with seasonally low levels of required reserve balances. Somewhat elevated levels of borrowing did prevail

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[21]Last year's report includes a discussion of this change in behavior of discount window borrowing.

TABLE 4
1991 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
9-Jan-91	51480	51529	3593	3472	55073	274	54779	54727	55997	125	100		2500	4500		22
23-Jan-91	48477	48535	938	653	49415	857	48531	48332	49704	100	100		1800	1300		28
6-Feb-91	46438	46363	2722	2798	49160	161	48970	49000	49703	100	100		1600	3500	a	30
20-Feb-91	46935	46819	1752	1929	48687	153	48508	48594	47882	100	100		1500	1200		27
6-Mar-91	46637	46615	1221	1187	47858	377	47432	47427	47978	100	100		1500	1500		50
20-Mar-91	47616	47611	1007	1068	48622	138	48438	48541	48686	100	75		1200	1200		47
3-Apr-91	47563	47511	1375	1417	48938	151	48726	48778	48587	125	125		1200	1200		62
17-Apr-91	50218	50216	801	907	51019	148	50795	50977	51146	125	125		1200	1000		75
1-May-91	48644	48691	1199	1210	49842	142	49598	49760	49559	150	175		1100	1000		102
15-May-91	48469	48518	970	945	49438	186	49124	49277	49418	200	200		1100	1100		128
29-May-91	47357	47343	1121	1135	48477	240	48178	48238	48336	225	225		1100	1100		59
12-Jun-91	49411	49288	731	815	50142	275	49859	49829	50163	225	225		1100	1100		8
26-Jun-91	49110	49099	1282	1311	50392	307	50078	50105	49825	250	275		1000	1000		7
10-Jul-91	50375	50462	882	806	51256	596	50656	50673	51180	325	325		1000	1000		5
24-Jul-91	49492	49518	941	886	50433	466	49964	49941	50163	350	350		1000	1000		4
7-Aug-91	49393	49432	870	830	50262	704	49371	49557	50027	400	375		1000	1000		188
21-Aug-91	49917	49892	1061	1055	50977	399	50298	50549	50517	375	375		1000	1000		281
4-Sep-91	49058	49045	1273	1346	50331	389	49536	50003	49599	375	375		1000	1000		406
18-Sep-91	51447	51290	732	885	52179	332	51351	51843	51931	350	325	b	1000	1000		496
2-Oct-91	49122	49093	1044	1099	50165	342	49782	49850	49686	325	325		1000	1000		41
16-Oct-91	50908	50904	1016	1163	51924	284	51634	51784	51686	300	275		1000	1000		6
30-Oct-91	50191	50188	1167	1174	51357	211	51133	51151	50938	250	250		1000	1000		13
13-Nov-91	51907	51915	913	917	52820	112	52706	52721	52515	175	150		1000	1000		2
27-Nov-91	52045	51915	934	1039	52979	101	52877	52854	52791	125	125		1000	1000		2
11-Dec-91	53842	53883	605	562	54446	110	54337	54337	54795	125	75		1000	1000		1
25-Dec-91	54483	54459	1203	1233	55687	115	55571	55577	55292	75	100		1000	1000		1
8-Jan-92	56020	55979	1138	1206	57158	521	56637	56666	57098	100	100		1200	1200		1

a temporarily raised to 2500 during the period
b temporarily lowered to 300 during the period

in the early part of the year, but a very high Federal funds rate was sometimes needed to induce banks to turn to the window. This reluctance to borrow diminished the value of the discount window as a safety valve for alleviating the kinds of temporary reserve pressures with which many banks were coping while they adapted to lower reserve requirements. These developments were noted by Chairman Greenspan in his February Humphrey-Hawkins testimony before Congress. In his remarks, the Chairman sought to encourage banks to make greater legitimate use of the borrowing facility, and for a period his comments appeared to have some effect. Nonetheless, a strong reluctance to tap the discount window persisted during the year. Allegations appearing in the press during the year, including some originating from Congressional quarters, that the Fed has used the discount window to lend to banks at subsidized rates in order to prop up, in a discreet manner, technically insolvent institutions may have reinforced banks' reticence about being seen at the window.

Low levels of discount window borrowing were also encouraged by a generally narrow spread between the Federal funds rate and the discount rate in 1991, which reduced the incentive to turn to the window. The discount and Federal funds rates had moved close together in late-1990, and the spread remained narrow throughout 1991. At times the expected Fed funds rate and the discount rate were the same. In one maintenance period the average effective funds rate fell below the discount rate by about 20 basis points. For the year, the average effective Federal funds rate exceeded the discount rate by 24 basis points. In 1990, the spread averaged 112 basis points, and it was 228 basis points in the preceding year.

Reflecting these developments, adjustment credit averaged just $140 million in 1991, compared with levels of $233 million and $243 million in 1990 and 1989, respectively. The level of adjustment borrowing reached

particularly low levels in the autumn; in the period ended November 13, it averaged only $14 million, its lowest maintenance period average since July 1980 (Chart 9).[22] As in other recent years, adjustment credit often remained very low until the final day of the period, when it rose in the face of settlement day pressures. "Special situation" adjustment borrowing by a few banks, which is treated as akin to nonborrowed reserves by the Desk in formulating its reserve objectives, was lower in 1991 than in the previous year. Absent this borrowing, adjustment credit was $123 million in 1991 and $164 million in 1990.[23]

Seasonal borrowing in 1991 followed its usual pattern; it rose slowly at first and more quickly in the early summer, and then it fell off rapidly during the autumn. To keep pace with movements in seasonal borrowing, nine upward technical adjustments were made to the borrowing allowance between March and late July, and afterwards eleven seasonal-related reductions were made to the allowance. Seasonal borrowing peaked at $351 million in the period ended August 7; its lowest average level was $28 million in the period ended January 23.[24] In part reflecting the narrow spread between the Federal funds rate and the discount rate, the level of seasonal borrowing in every maintenance period of 1991 was below that in the corresponding period of the

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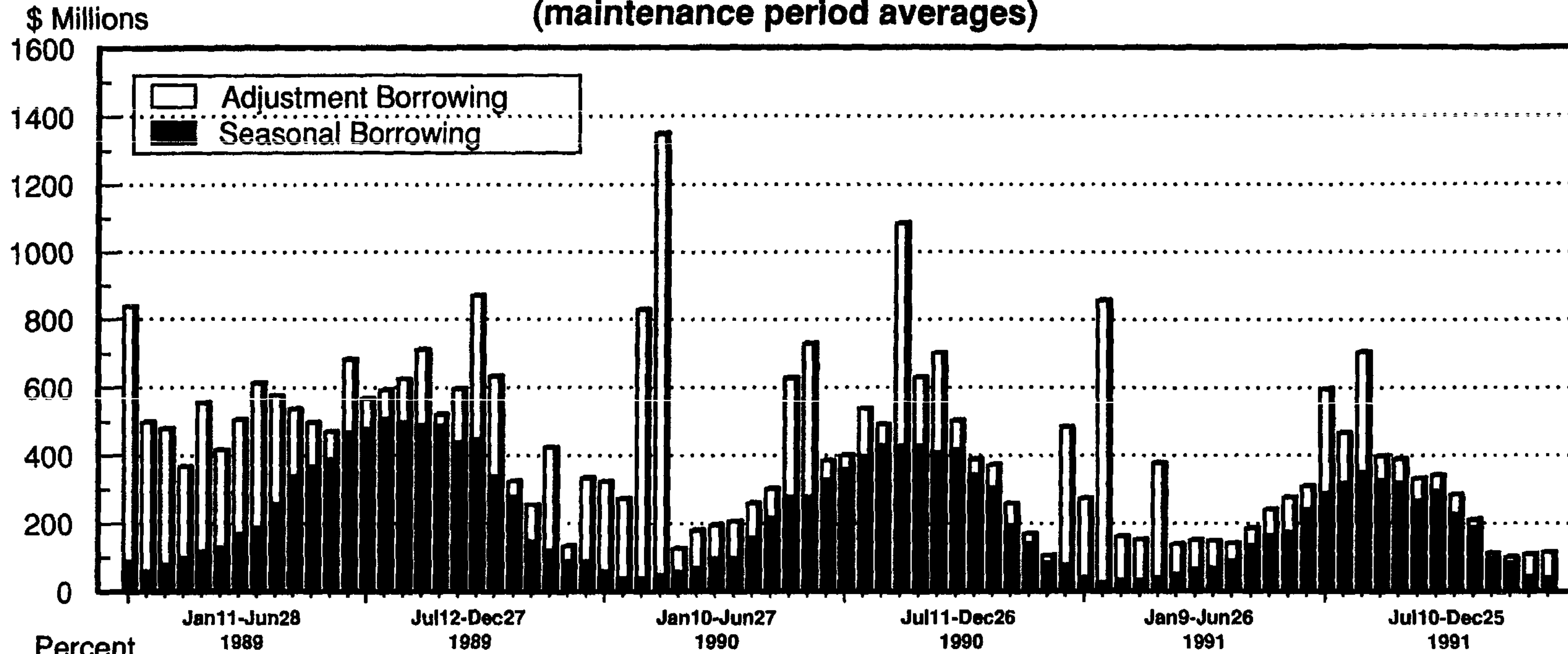
[22]The effective Federal funds rate exceeded the discount rate by just 18 basis points in the November 13 period; it was below the discount rate in the July 9, 1980 week-long maintenance period.

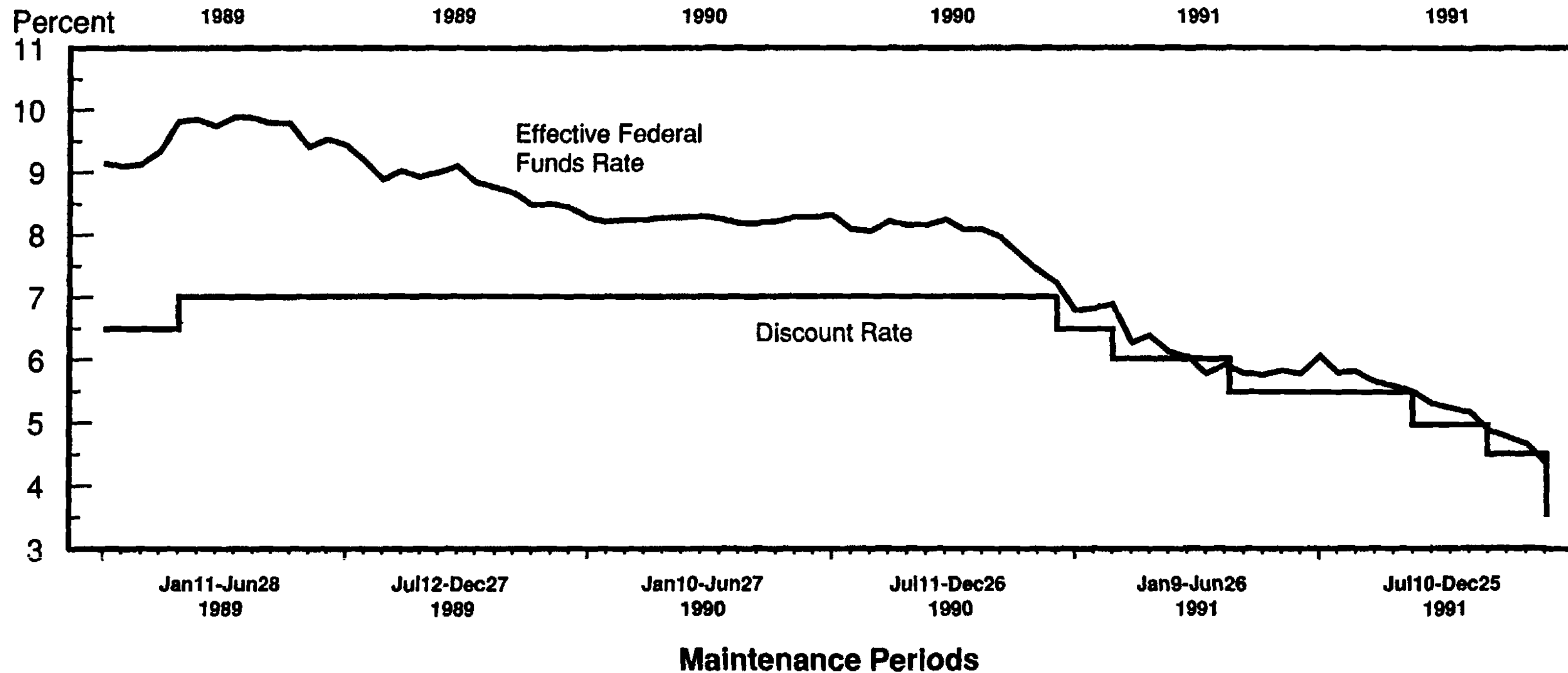
[23]Special situation borrowing in 1990 was elevated by the demands of Bank of New England early in that year. This bank again briefly borrowed under the adjustment credit program early in 1991, but it borrowed much smaller amounts than in the preceding year. Bank of New England was seized by the FDIC in January 1991 and sold to Fleet/Norstar Financial Group Inc. in April.

[24]Seasonal borrowing was $22 million in the period ended January 8, 1992. This period was the last in which the rate charged on seasonal borrowing was equal to the discount rate. Thereafter, the seasonal borrowing rate is being determined by market-related rates: the average of the effective Fed funds rate and the 90-day composite CD rate from the preceding period.

Chart 9

Borrowing, Federal Funds Rate, and Discount Rate
(maintenance period averages)





preceding year. For the year as a whole, seasonal borrowing averaged $155 million, compared with $223 million in 1990 and $275 million in 1989.

Conflicts between the Federal funds rate and reserve estimates

The Desk's open market operations are designed to fill the gap between the objective for nonborrowed reserves and available estimates of nonborrowed reserve supplies.[25] Ideally, an estimated reserve need will be confirmed by tightness in the funds rate relative to expectations, and an estimated reserve surfeit will be accompanied by a soft Federal funds rate. Often, however, the reserve estimates and the funds rate will give inconsistent signals. Conflicts between trading conditions in the reserve market and reserve estimates arose with unusual frequency in 1991. Sometimes, the strong reluctance to borrow contributed to the disparities. Conflicts often resulted from heightened market expectations of an impending easing in monetary policy, which encouraged a deliberate strategy on the part of some DIs to defer meeting part of their reserve needs until late in a maintenance period. At other times, DIs misjudged their reserve positions; they may have had a smaller tolerance for error because of lower reserve balances.

In structuring its temporary operations, the Desk prefers to make needed reserve injections or absorptions gradually, allowing for the possibility of changes to the reserve outlook; it does not want to leave the bulk of the needed reserve adjustment to the end of the period because it may be difficult or impossible to arrange a very large one-day open market operation. Nonetheless, inconsistencies between the reserve forecasts and the funds rate often interfered with this approach. When confronted with a conflict, the Desk frequently gave greater weight to the rate at which Federal

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

funds were trading in the morning than to its reserve projections. With market participants focusing closely on the funds rate as a key indicator of the Federal Reserve's policy stance, the Desk preferred to keep that rate close to its expected trading level so as not to send misleading signals to the market. Also, discrepancies between trading conditions in the funds market and reserve projections were sometimes taken as evidence that the available reserve estimates might be faulty. This approach to formulating open market operations occasionally led the Desk to postpone meeting its estimated reserve objectives until late in the period, aware that it might then have to arrange very large reserve operations or perhaps even fail to meet reserve objectives.

When the Desk did want to communicate a policy shift, its technique was dependent on circumstances, including where the funds rate stood relative to its old and new expected trading levels, the extent to which market participants anticipated a move, and the overall reserve picture. For example, if a modest easing of reserve pressures were intended and funds were still at their old level, an overnight System RP would likely be arranged--a step that would tend to be viewed as registering dissatisfaction with the prevailing funds rate. If the funds rate were already at its new level because an easing move was widely expected, the Desk might signal a modest ease by arranging a customer-related RP--an action generally regarded as "unaggressive," and under the circumstances as accepting the prevailing funds rate. Finally, in a period marked by reserve surpluses of which market participants were generally aware, the Desk might refrain from any market operation rather than arrange a round of matched sale-purchase agreements

(MSPs)--thus providing what might be considered a somewhat inconclusive easing signal.[26]

In 1991, Federal funds frequently traded at rates to the low side of the Committee's expected trading range when market participants saw the possibility of a move to a more accommodative policy. Such episodes often arose following the release of key data that showed an unexpected degree of economic slackness or modest inflationary pressures. The Desk typically responded to these pressures by structuring its actions to clarify or avoid misleading market participants about the Fed's current policy stance. When the policy stance had not changed, the Desk sometimes substituted a customer-related RP in place of a larger System RP that would have been more consistent with the estimated reserve need. In some instances, it postponed addressing an estimated reserve need until late in a period. On several occasions when funds were trading below the expected level, the Desk sought to make a clear policy statement by draining reserves with MSPs even though an estimated reserve shortage was seen at the time.[27] On April 15, it entered the market to drain reserves about one hour ahead of its usual intervention time to emphasize that no easing in policy had taken place when many market

[26]On the October 30 settlement day, the Desk faced a moderate drain need, and just prior to the usual market entry time funds were being exchanged at a rate below the expected rate. At the time, the Committee was in the process of discussing a possible easing. The Desk, in consultation with the Chairman, refrained from draining reserves even though no definite policy decision had been made, recognizing that this lack of action might well be interpreted as signaling a move towards easing. An easing step was formally adopted the following day.

[27]These occasions occurred during the maintenance periods ended April 17, May 29, and October 16.

participants felt that an easing was imminent or even may already have occurred.[28]

Conflicts between the reserve picture and the funds rate occasionally emerged even when market participants were not anticipating an imminent policy change. Sometimes DIs preferred to allow deficiencies to develop so as to ensure against cumulating excess reserve positions that could not be worked off without incurring overdrafts. The Desk at times postponed addressing sizable reserve shortages until very late in a maintenance period because the funds rate was below the expected level. When firm conditions finally emerged, large RP operations were arranged.

Incongruities between the reserve estimates and the morning funds rate remained or emerged on the settlement day on several occasions. Discrepancies at this late stage usually suggested that either the Desk or banks did not have an accurate picture of the reserve situation. The Desk's responses in these cases varied. Knowing that it could not defer meeting reserve needs, the Desk gave careful consideration to the various factors underlying its reserve projections. It recognized that trading conditions in the funds market could be indicating that the reserve estimates were inaccurate, and, as always, the Desk was mindful that its actions could encourage speculation about the stance of policy. At times, reserve operations were formulated with the expectation that in later trading the funds rate could sink and excess reserves exceed desired levels, or that the rate could spike higher and borrowing run heavy.

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[28]In the week preceding this operation, conditions in the funds market had been soft as a result of a weak payroll employment report and favorable inflation data that encouraged expectations of an imminent policy ease. During this week, the Desk arranged four rounds of MSPs in part to communicate that policy remained on hold, but at the time estimated reserves were close to path or showed a modest reserve surplus. These draining operations helped give rise to the estimated reserve shortage that emerged on April 15.

On the August 7 settlement date, the Desk was guided by staff projections which pointed to a very large reserve shortage even though the funds rate was only slightly above the level consistent with the FOMC's policy stance. The Desk attempted to meet the estimated reserve need by arranging a round of overnight System RPs; however, it was hampered by an unexpectedly small volume of propositions. Later in the afternoon, the funds rate touched a high of 30 percent, and borrowing climbed to nearly $5 billion. On the September 4 settlement date, the Desk responded primarily to very firm trading conditions in the funds market rather than to estimates which placed reserves above path. The firmness in the funds rate suggested the possibility of either a maldistribution of reserves or a projection error, and the Desk arranged a large volume of System RPs. Later that day, the Federal funds rate plummeted, closing at 1/8 percent--as it turned out that the Desk's original reserve estimates had been accurate.

The dilemma posed by conflicting indications from reserve estimates on the one hand and Fed funds trading rates on the other is a problem of long-standing to the Domestic Account Management. Often, the Desk has longed for a greater degree of latitude to respond to projected reserve needs, but has felt constrained by the possibility that the market might misinterpret reserve-motivated moves because of the immediate Fed funds rate situation. In borderline cases, doubts have typically been resolved on the side of caution, with the Desk leaning toward making sure that policy intent is not misinterpreted--even when that has entailed an appreciable risk that conditions will tighten up sharply, or ease sharply, at a later point in the day or reserve period. Occasional tight or sloppy settlement nights are not particularly desirable, but their ill-effects are rather transitory. In contrast, a serious market misinterpretion of policy intent could have a more lasting impact. Even granting this, one still could wish for some greater

measure of tolerance to respond to projected reserve situations than the market seems to offer the Desk.

Open Market Operations and Reserve Management

Changes in the System portfolio

In 1991, the System's portfolio of U.S. Government securities expanded by a record $31 billion, more than double the growth in the preceding year and the average annual increase between 1981 and 1988.[29] (The portfolio fell in 1989.) Close to two-thirds of the increase was in Treasury bills, but the Desk also purchased $11 billion of Treasury coupon issues. In contrast to previous years, the Desk acquired a large volume of coupon securities from official foreign accounts, mostly of relatively short maturity, because several accounts were making large sales at times when the Desk wished to add reserves.[30] Some of the foreign account sales raised dollars to pay Desert Shield/Desert Storm obligations, while others were part of portfolio restructuring efforts by these accounts. Sales and redemptions of securities by the Desk in 1991 were negligible.

The rapid growth in the System's portfolio supported strong overall demands for reserves, as M1 grew rapidly and banks established required clearing balances. It also offset changes in operating factors that significantly reduced reserve supplies. In addition to the typical reserve drain from domestic currency, the Federal Reserve continued to reduce its holdings of foreign currencies, working down the unprecedented buildup of 1989.

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[29]Details of portfolio changes in 1991, their causes, and an overview of the Desk's transactions are presented in Appendix A.

[30]The Desk only conducts outright transactions with foreign accounts when the orders are consistent with reserve needs. The size and timing of these purchases also depend on the availability of orders from foreign accounts.

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 a maintenance period usually improved as each 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. (Details of the staffs' forecasting accuracy are presented in Appendix A.)

The accuracy of staff forecasts of required reserves available at the start of a period or at midperiod was about the same in 1991 as in the previous year. Excess reserves, however, were considerably harder to anticipate during the early months of 1991. Some of the deterioration in the excess reserve projections reflected the uncertainties about reserve needs when DIs were operating with sharply reduced required reserve balances. As banks opened required clearing balances and required reserves increased, excess reserves became less volatile and easier to predict.

Operating factors affecting the supply of reserves proved more difficult to forecast in 1991 than in the preceding year. This deterioration mostly reflected a decline in the accuracy of the projections of the Treasury's Fed balance. Large forecast errors were made around major tax dates, with some tendency to underpredict Treasury revenues for the year as a whole. The timing of receipts into the Treasury's Defense Cooperation Account for Desert Shield/Desert Storm contributions was also difficult to anticipate. On the other hand, projections of currency in circulation improved consid-

erably in 1991. The improvement came about as the large shipments overseas that had marked 1990 abated.

V. Primary Dealers

In August 1991, Salomon Brothers, Inc. announced that an internal investigation had uncovered misconduct in connection with certain Treasury auctions. In the wake of these admissions, the Treasury, Securities and Exchange Commission (SEC), and Federal Reserve undertook a thorough review of the U.S. Government securities market that included a reexamination of the primary dealer system. This review, which culminated in the publication of the *Joint Report on the Government Securities Market* in January 1992, prompted several changes to the primary dealer system that are in the process of being implemented.[31]

The review found that while the primary dealer system had worked well for a number of years, the system also had some drawbacks. Most notably, a public misimpression had developed that the Federal Reserve was in effect the regulator of primary dealer firms. Moreover, the primary dealer designation had been viewed as conferring a special status on these firms that carried an element of "franchise value" for the dealer operation and possibly for other aspects of the firm's standing in the market place.

To address these drawbacks and to provide for a more open system of trading relationships, the Federal Reserve Bank of New York (FRBNY) amended its dealer selection criteria in conjunction with the joint agency review.[32] It eliminated the requirement that primary dealers maintain a market share of at least 1 percent of total customer activity reported by all primary dealers.

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[31]This section draws heavily from the *Joint Report on the Government Securities Market* (Washington, D.C.: GPO, January 1992). A more detailed discussion of the *Joint Report* appears in this report's Appendix D.

[32]The new criteria appear in Attachment I of this report's Appendix D.

It also revised the capital requirements for primary dealers, specifying that primary dealers meet the capital standards of the regulators of the firms--in most cases the SEC. While the revised standards define a potential universe of counterparties that would number in the hundreds, it is not at all certain how many firms may be interested in becoming primary dealers. Initially, the number of new primary dealers is expected to be limited by resource constraints on Desk operations. It is anticipated that the number of primary dealers could expand further after an automated system for Desk operations is in place.

Primary dealer performance will be judged by the quality of a firm's market making to the Desk and by the quality of market information provided to the Desk. Under the revised criteria, primary dealers are still expected to participate meaningfully in Treasury auctions.

The FRBNY also indicated that it was discontinuing its dealer surveillance activities, consistent with its lack of formal regulatory authority over the firms designated as primary dealers and consistent as well with the Fed's desire to avoid fostering the public misconception that the designation marks an official "approval rating." The Federal Reserve will continue to evaluate each dealer's performance relative to the specified criteria on an ongoing basis, with a formal review once a year to decide whether a business relationship remains appropriate. In the event that a dealer's primary capital slips below standard, the FRBNY may suspend its trading relationship until the capital position is restored. In making its determination, the Fed will consult with the dealer's primary regulator to assess whether the firm has an acceptable program to restore its capital position.

While discontinuing dealer surveillance, the FRBNY is undertaking an enhanced program of market surveillance to help evaluate anomalous market

conditions that might call for reopening Treasury issues, or official inquiries into possible wrongdoing. The reporting program for primary dealers is expected to undergo revision in conjunction with the FRBNY's enhanced market surveillance activities.

The joint review also prompted the Treasury to consider the treatment that primary dealers receive in bidding at its auctions. During the review, it became clear that there was a perception that primary dealers had an unwarranted advantage over other market participants in bidding at Treasury auctions. Primary dealers were among the group of market participants who could bid on behalf of customers and bid, in note and bond auctions, without guarantee or deposit. To address this perception, the Treasury took steps in October 1991 to broaden potential participation in its auctions. These steps included (1) permitting all SEC-registered broker/dealers in U.S. Government securities to submit bids on behalf of customers at auctions, (2) permitting any bidder to bid without deposit provided the bidder has a so-called "autocharge agreement" with a depository institution to provide payment for securities purchased, and (3) raising the maximum noncompetitive award in note and bond auctions to $5 million, from $1 million.

The joint agency review also examined the question of whether a change in the Treasury's auction technique could further broaden auction participation. The report proposed an open-bid, single-price auction method in place of the current sealed-bid, multiple-price method.[33] Under the proposed approach, bidders should stand less risk of overpaying for an issue, a factor that should encourage nondealer customers to bid on their own rather than through a primary dealer. In addition, successful collusive bidding is expected to be more difficult. The proposed technique, however, is only

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[33]See Section II of Appendix D of this report or the *Joint Report*, pp. 14-16.

feasible with auction automation. The Treasury is currently soliciting views on the technique.

APPENDIX A

DESK ACTIVITY FOR THE SYSTEM OPEN MARKET ACCOUNT

This appendix reviews the Trading Desk's activities undertaken on behalf of the System Open Market Account in 1991. The appendix is divided into five sections. The first examines the outright, or permanent, changes in the System portfolio during the year and the reasons for these transactions. The second section reviews the temporary transactions arranged during the year. The third part discusses the accuracy of staff projections of the supply of and demand for reserves. The fourth section reviews the changes in the group of firms with which the Desk conducts business on behalf of the System Open Market Account. The final section summarizes the System's lending operations.

I. Outright Changes in the System Portfolio

Total System holdings of U.S. Government securities grew by a record $31 billion in 1991, ending the year at $279 billion. (See Tables A-1 and A-2). The rise far exceeded growth in 1990 and the average annual increase of about $14 billion from 1981 through 1988. (The portfolio fell in 1989.) Even so, the rise in the portfolio just kept pace with the rapid expansion of total marketable Treasury debt outstanding as the System's share of that debt remained unchanged.

Composition of the System Portfolio

About two-thirds of the total increase in the System portfolio was in Treasury bills. The $20 billion rise in total bill holdings was a record, although it was not far above the increase in 1986. The growth in total Treasury coupon holdings was also large, nearly $11 billion, but it was exceeded by the $17 billion record purchases in 1987. Almost all of the growth in coupons was in issues maturing within five years. Holdings of five- to ten-year coupons increased modestly, while the System's portfolio of long-

TABLE A-1

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

	Year-End 1991	Change during **	
		1991	1990
Total Holdings:	278.6	+31.0	+12.0
Bills	138.7	+20.0	+11.8
Coupons	133.8	+11.3	+0.4
Agency Issues	6.0	-0.3	-0.2

* 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	
	Total			Under		1–5		5–10		Over 10		Agency	
End of	Portfolio	Bills	%	1 year	%	years	%	years	%	years	%	Securities	%
1960	26,984	2,900	10.7%	11,955	44.3%	10,680	39.6%	1,178	4.4%	271	1.0%	0	0.0%
1965	40,478	9,101	22.5%	15,478	38.2%	14,066	34.7%	1,448	3.6%	385	1.0%	0	0.0%
1970	62,142	25,965	41.8%	10,373	16.7%	19,089	30.7%	6,046	9.7%	669	1.1%	0	0.0%
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%

* 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

Weighted Average Maturity of Federal Reserve Holdings and Marketable Treasury Issues Outstanding (a)

End of	System Account (b) (c)	Total Outstanding	Public Holdings (d)
1960	19.4	55	58
1965	16.1	60	63
1970	24.0	40	41
1975	31.4	33	29
1980	55.2	48	45
1985	48.6	59	60
1986	45.9	62	64
1987	44.0	66	69
1988	42.3	67	70
1989	42.7	69	72
1990	40.5	68	71
1991	37.9	68	72

(a) In months.
(b) System Account holdings are on a commitment basis.
(c) Does not include System RPs and agency issues; weighted by par value of holdings.
(d) Total less System and Government accounts.

term coupon issues edged lower. Holdings of Federal agency issues declined for the tenth consecutive year. With the expansion of the System's portfolio concentrated in bills and short-term coupons, the weighted average maturity of the portfolio fell by 2.6 months, to 37.9 months, the largest yearly decline in five years.

Bank Reserve Behavior

The record expansion of the System's portfolio offset large declines in reserve supplies that arose from movements in operating factors, and supported substantial increases in the overall demand for reserves. Operating factors drained over $31 billion of reserves between the maintenance periods ended January 9, 1991 and January 8, 1992. (See Table A-3 and Table A-8.) Rising currency in circulation accounted for about two-thirds of the drain from factors. The rate of increase in currency was in line with growth during much of the past decade, with the exception of 1990 when currency grew a record $27 billion. Currency growth in 1990 had been raised by heavy shipments overseas following the Iraqi invasion of Kuwait. Shipments abroad remained very strong in the early months of 1991, at the height of the Persian Gulf crisis. They abated thereafter, and some of this currency eventually found its way back to the United States and out of circulation.

The other principal factor affecting reserves was the change in System holdings of foreign currency. The net decline in the System's holdings drained roughly $5 billion of reserves. The decline in these holdings was largely the result of a series of off-market transactions conducted directly between the U.S. and foreign monetary authorities.[1] The first of these operations took place in the summer, and other exchanges occurred at various

[1]These transactions affected the holdings of the Treasury's Exchange Stabilization Fund as well. Details are provided in "Treasury and Federal Reserve Foreign Exchange Operations, May-July 1991," Federal Reserve Bank of New York Quarterly Review, Autumn 1991.

TABLE A-3

BANK RESERVES
(In millions of dollars)

	Maintenance Period Ended 1/8/92	Change during: 1991*	1990**
Nonborrowed Reserves			
Excluding extended credit	56637	1858	-9843
Including extended credit	56638	1838	-9841
Extended Credit Borrowing	1	-21	3
Borrowed Reserves			
Including extended credit	522	226	-44
Adjustment plus Seasonal	521	247	-46
Adjustment	499	266	-29
Seasonal	22	-19	-17
Required Reserves #	56020	4540	-12363
Excess Reserves	1138	-2455	2475

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

	Maintenance Period Ended 1/8/92	Change during: 1991*	1990**
System Portfolio	278.6	31.0	12.0
Operating Factors:			
Foreign Currency ##	22.6	-4.9	1.7
U.S. Currency	307.2	-20.7	-26.7
Treasury Balance	9.6	-2.1	-1.6
Float	0.9	-2.1	1.5
Special Drawing Rights	10.0	-	1.5
Gold Deposits	11.1	-	-
Foreign Deposits	0.5	0.2	0.1
Applied Vault Cash	29.6	0.7	0.6
Other Items	18.8	-2.3	0.3
Foreign RP Pool ###	6.7	-	-1.2

* Change from maintenance period ended January 9, 1991 to that ended January 8, 1992.
** Change from maintenance period ended January 10, 1990 to that ended January 9, 1991.
*** Sign indicates impact 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.

intervals over the remainder of the year.[2] Furthermore, in August, the Treasury's Exchange Stabilization Fund (ESF) "dewarehoused" $2 1/2 billion equivalent of its foreign currency holdings at the Fed.[3] Net intervention in support of the dollar further reduced the Fed's foreign currency portfolio by about $400 million. Together, these transactions reduced the Federal Reserve's foreign currency holdings by about $8 billion equivalent. Partly offsetting the impact of these operations, the Federal Reserve earned $2 1/2 billion of interest on its foreign currency assets, and its foreign currency holdings appreciated a net $350 million.

Depository institutions (DIs) expanded their holdings of required clearing balances (RCBs) during the year by $2 billion in order to raise their reserve balances at the Fed. For operational convenience, the Desk treats these balances as an operating factor, included in the "Other Items" category in Table A-3. A rise in RCBs represents a decline in reserve supplies in this accounting framework. Strictly speaking, however, RCBs are a source of demand for reserves.

Turning to other sources of reserve demand, a fair-sized increase in required reserves was partly offset by a decline in excess reserves. After

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[2]The Federal Reserve sold $3 1/3 billion equivalent of German marks to German authorities on June 25 in a spot and several forward transactions. About $1 1/3 billion settled two days later, and $1/3 billion more settled towards the end of each subsequent month through December. The Fed's holdings of yen fell by $1 1/2 billion equivalent as a result of sales made to Japanese authorities in the middle of July, August, and September. An off-market sale of $200 million equivalent was made to another foreign monetary authority in November. The values of these transactions with foreign authorities are based on the market values rather than the acquisition values of the foreign currency reserves. The book value of all the foreign currency sold by the Federal Reserve--including its intervention sales--was about $500 million less than the market value. Revaluations of the Fed's foreign currency holdings occur monthly, and appear in the "other items" category in the tables.

[3]The Treasury repurchased marks previously warehoused at the Fed in two transactions in August, paying with dollars from its account maintained at the Fed. Bank reserves were drained when the Treasury adjusted its cash holdings at commercial banks to bring its Fed account to the $5 billion "target" level.

the cut in reserve requirements took full effect, required reserves grew substantially over the remainder of the year, even adjusted for their normal seasonal tendency to fall early in the year and rise toward the end of the year. Strong growth of deposits in M1 throughout 1991 boosted required reserves. Meantime, excess reserves returned to more normal levels after having risen to exceptionally high levels around the end of 1990 because of strong year-end funding pressures and the reserve needs of DIs as they adjusted to the cut in reserve requirements.

Borrowed reserves were generally low during 1991 and played a small role in satisfying reserve demands; however, adjustment borrowing in the period covering year-end 1991 was elevated amid settlement day pressures and consequently exceeded borrowing in the equivalent period one year earlier. Over 1991, extended credit borrowing dropped from a low level to virtually zero.[4]

Outright Transactions

The overall volume of outright transactions in 1991 fell below the amounts in the previous two years, but the amount of outright purchases reached a record high. (See Table A-4.) In fact, practically all of the outright System activity during the year consisted of purchases. The almost complete absence of actions to reduce the portfolio in 1991 reflected in part the need for extraordinary portfolio growth as discussed above. In addition, a substantial share of the seasonal reserve overage that typically arises early each year had been addressed in December 1990 when the Desk drained large amounts of reserves at the time of the cut in reserve requirements. The size of the overage was also reduced somewhat by high Treasury balances through February.

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[4]Extended credit borrowing was briefly elevated in the spring and again in the summer.

TABLE A-4

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

	1991	1990
Total Outright	31.8	38.4
By Type of Transaction:		
Purchases	31.4	25.2
Bills	20.2	24.5
Coupons	11.3	0.7
Sales	0.1	7.6
Bills	0.1	7.3
Coupons	0.0	0.3
Redemptions	0.3	5.6
Bills	0.0	5.4
Coupons	0.0	0.0
Agency Issues	0.3	0.2
By Counterparty:		
Total Outright in Market	10.4	19.6
Purchases	10.4	16.6
Bills	8.1	16.6
Coupons	2.3	0.0
Sales	0.0	3.0
Bills	0.0	3.0
Coupons	0.0	0.0
Agency Issues	0.0#	0.0
Total Outright with Foreign Accounts	21.2	13.2
Purchases	21.1	8.6
Bills	12.1	7.9
Coupons	9.0	0.7
Sales	0.1	4.6
Bills	0.1	4.3
Coupons	0.0	0.3

* 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.

The distribution of outright transactions by counterparty and by type of security was unusual in 1991. Purchases from official foreign accounts exceeded levels of past years because several foreign accounts were heavy sellers at times when the Desk wished to add reserves. Purchases from these accounts amounted to about two-thirds of all outright purchases. Several foreign official institutions sold securities to raise dollars to pay for Desert Shield/Desert Storm obligations, and one account sold securities as part of a portfolio restructuring effort. Many of the securities sold by foreign institutions were Treasury notes, and largely for this reason the value of coupon securities purchased by the Desk from foreign accounts rose to unprecedented levels in 1991.[5] Most of these purchases were of relatively short maturity issues. Heavy purchases were made from foreign accounts in February and March, around the time defense cooperation payments were especially strong. As a result, the Desk eschewed the outright purchase of securities in the market that it typically arranges in April. During the year, the Desk conducted three outright purchases of bills and one purchase of coupons, the first such market purchase since April 1989.[6]

The Desk largely restricted its activities in agency securities to rolling over maturing issues if a suitable replacement issue was available, but it redeemed modest amounts when new offerings were smaller in size than the maturing issue. As a result, the System's share of outstanding Federal agency securities continued its downward trend in 1991. For technical reasons, the Desk conducted one outright transaction involving Federal agency

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[5]In the previous ten years, total coupon purchases from foreign accounts exceeded $1 billion only once--$1 1/2 billion in 1985.

[6]The Desk bought $2 1/2 billion of bills on May 29, $3 1/2 billion on August 28, and $2 billion on October 30. It bought $2 1/4 billion of Treasury coupon securities on November 26. For operational convenience, offers in this operation were only considered for securities maturing in July 1992 or later.

securities in the market for the first time since 1981. In September, the Desk sold $5 million of holdings inadvertently acquired as part of a routine exchange of the System's maturing issues. A portion of the issues acquired in the exchange was of an offering that was smaller than the minimum allowable total issue size permitted under the Desk's purchase authorization. Once the error was discovered, the Desk sold the securities.

II. Temporary Transactions

During 1991, the number of temporary transactions providing extra reserves was a little larger than the 1990 total, although their aggregate value was considerably greater. (See Table A-5.) System repurchase agreements (RPs) accounted for about two-thirds of the total value of temporary reserve injections, but for a bit less than one-half of the total number of temporary additions. About half of the System RPs carried maturities of more than one business day, about the same percentage as in 1990. Customer-related RPs were arranged with somewhat greater frequency in 1991 than in the preceding year.

The number and value of matched sale-purchase transactions (MSPs) arranged in the market in 1991 were about 50 percent greater than in the previous year. MSPs were arranged in the market with some frequency during the first few maintenance periods of 1991 when required reserves and currency fell and applied vault cash rose seasonally. A large number of MSPs was also arranged in April and May, after lower-than-expected Treasury balances introduced unanticipated reserve overages. Only four of the MSP transactions conducted in the market in 1991 had maturities exceeding one business day.

The Desk announced routine RP operations outside of the normal 11:30 a.m. intervention time on several occasions during the year. To ensure adequate propositions, it preannounced on three occasions a large overnight System RP on the afternoon prior to days when a spike in the Treasury's Fed

TABLE A-5

SYSTEM TEMPORARY TRANSACTIONS
(In billions of dollars)

	1991		1990	
	Number*	Volume	Number*	Volume
Repurchase Agreements				
System:	63	332.9	61	261.5
Maturing next bus. day	32	167.4	29	128.7
Term	31	165.5	32	132.8
Customer-related	79	175.8	67	128.4
Matched Sale-Purchase Agreements				
In Market:	33	75.3	21	48.3
Maturing next bus. day	29	66.8	11	20.6
Term	4	8.4	10	27.7
With foreign accounts**	251	1495.2	251	1320.7
Total Temporary Transactions	426	2079.1	400	1758.9
In Market	175	583.9	149	438.2

* 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 0 days in 1991 and on 2 days in 1990.

** Volumes exclude amounts arranged as customer-related RPs.

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

balance was expected to lead to an exceptionally large daily deficiency.[7] The Desk also entered the market ahead of its usual intervention time seven times in 1991. On four occasions it did so to ensure adequate propositions on days when the funds rate was firm and a large add need was seen.[8] Late in the year, the Desk also entered the market early twice to add reserves on days when year-end funding pressures were present to assure the market that the Fed stood ready to provide sufficient liquidity to cover year-end needs. It also entered the market ahead of its usual intervention time once to drain reserves to dispel a widespread misperception that a policy easing was underway.

III. Forecasting Reserves and Operating Factors

The estimates of the reserve need for a maintenance period, which are used to help formulate reserve operations, are based on projections of the demand for and supply of reserves. The formulation of an effective strategy for meeting reserve needs can be hampered by faulty estimates, particularly when these occur late in a maintenance period. During 1991, the estimates of reserve demands and of operating factors available to the Desk were less

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[7]The potential for large one-day spikes in the Treasury balance increased in 1991 as a result of changes made in the Treasury's regular auction cycle. The quarterly four-year note was dropped and replaced with a monthly five-year issue. The new notes, like the ones they replaced, settle at the end of each month on the same day as the Treasury's two-year notes. Hence, at the end of two of every three months each quarter, auction proceeds from newly issued five-year notes are not offset by payments on a maturing four-year note. When this occurs, the Treasury's total cash holdings rise sharply, and large spillovers into the Treasury's Fed balance that drain reserves occur on days when the Treasury's holdings in its TT&L accounts are close to capacity. Large outpayments for various government retirement plans usually bring Treasury balances down again early in the next month.

[8]On one of these occasions, December 24, the final day of the maintenance period, the Desk was partly motivated by the fact that financial markets were closing early.

accurate than in the previous year, as shown in Table A-6.[9]

On the demand side, the accuracy of initial and midperiod forecasts for required reserves improved marginally in 1991, perhaps aided by a slight drop in the average absolute period-to-period change in required reserves. Forecasts of required reserves typically improved as each maintenance period unfolded and more data on actual bank deposits became available, and projection misses were sharply lower by the end of the period. A string of sizable initial projection errors (in both directions) occurred in the maintenance periods surrounding the important April tax deadline, a time when reservable deposit flows are often highly uncertain.

Excess reserves were particularly hard to estimate in the early months of 1991 when banks were struggling to learn how to manage reserves in an environment of low reserve balances.[10] Once balances rose somewhat, the behavior of excess reserves returned to a pattern closer to that observed in

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[9]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.

[10]Measurement of forecast errors of the demand for excess reserves is imprecise. As each maintenance period unfolds, the Desk supplements its forecasts of excess reserves with informal adjustments that are based on the observed pattern of estimated excess reserve holdings to date. Forecast misses of reserve supplies occurring on the last day of a period cannot be addressed in the Desk's operations and may be reflected in higher- or lower-than-forecast holdings of excess reserves. Moreover, as discussed in section IV of the text, the Desk sometimes responded to pressures in the funds market on settlement day mornings by deliberately over- or under-providing reserves relative to estimated demands. Any resulting reserve surplus would be directly reflected in higher *ex post* holdings of excess reserves; a shortfall would be reflected in some combination of lower excess reserves and higher borrowing.

TABLE A-6

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

	1991			1990		
	First Day	Midperiod	Final Day	First Day	Midperiod	Final Day
Reserves						
Required	290-320	170-200	70-80	300-320	195	70
Excess	300-340	220-250	n.a.	125-150	115-135	n.a.
Factors	1200-1285	600-820	50-60	1010-1030	530-570	70-95
Treasury	865-890	480-660	40-45	630-670	380-430	45
Currency	330-410	170	15-20	500	210-280	30
Float	230-280	140-150	40-50	190-225	140-170	35-40
Pool	330	115	10	260	120	10

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

n.a. Not applicable

earlier years.[11] After the first couple of months, formal errors in forecasting excess reserves at the start of a period, while still sometimes sizable, were typically much smaller than they were early in the year. Forecasts tended to improve at midperiod when information on excesses or deficits carried into the period was first folded into the forecasts. Higher and more variable excess reserves enlarged both the average level and variability of reserve carryins.[12]

Forecasts of operating factors were less accurate at the beginning and in the middle of maintenance periods in 1991 than in the previous year. By the final day of a period, the size of these projection misses usually had narrowed considerably and, on average, was even somewhat smaller than in recent years. There was a tendency to overstate the available supply of reserves early in maintenance periods in 1991.

Most of the decline in forecast accuracy for total market factors in 1991 can be attributed to a deterioration in projections of the Treasury's Fed balance available at the start and in the middle of a maintenance period. A rise in period-to-period volatility in the Treasury balance most likely contributed to this loss in forecast accuracy. The mean absolute period-to-period change of this factor was $1.8 billion in 1991 and $0.8 billion in 1990; however, volatility in 1991 was not much higher than, and in some cases was well below, variability in other recent years.

As usual, some of the biggest projection misses occurred around dates requiring major payments of individual nonwithheld and corporate taxes. At

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[11]The variability of excess reserves also fell substantially after the first couple of months of the year. The average period-to-period change in excess reserves was $525 million for all of last year, but excluding the first few periods it was about $280 million, about the same as in 1990.

[12]The average carryin at large banks was $72 million, compared with $29 million in 1990.

these times the size of the Treasury's revenue flows often was very uncertain, and the Treasury's total cash holdings frequently exceeded the available capacity of its accounts in the private banking system, causing large spillovers into its Fed balance.[13] A large forecast error for the Treasury's Fed balance in the January 9 period was caused in part by an unexpected decline in the total capacity of the Treasury's accounts in the private banking system.

Estimation of the Treasury balance was at times greatly complicated by foreign official payments into the Treasury's Defense Cooperation Account for Desert Shield/Desert Storm expenses. The Desk was usually notified at least a day in advance of such payments, giving time to adjust forecasts of the Treasury's cash position, but there were a number of instances when payments were received with no advance indication. These payments were especially heavy during March, and led to a large underestimate of the Treasury's Fed balance for the period ended April 3. (The tax and loan accounts were at or near capacity at this time, forcing the flows into the Treasury's Fed account). Also, as in 1990, unexpected delays in deposit insurance spending tied to the resolution of failed financial institutions contributed to forecast errors.

The above factors contributed to a tendency to underestimate the size of the Treasury's Fed balance. On average, the balance was about $500 million higher than expected at the start of each maintenance period; in 1990 the balance exceeded expectations at the beginning of each period by about $100 million. The Treasury's Fed balance was above its $5 billion "target"

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[13]Large forecast errors of the Treasury balance at the Fed occurred during the periods ended February 6, June 26, July 10, September 18, and December 25, each including or beginning soon after an important tax date. Forecast errors for periods following the April 15 tax date were not particularly large in 1991 as they had sometimes been in earlier years.

level because of capacity limitations on about 50 business days in 1991, compared with about 15 days the year before.

Initial errors in forecasting the size of the pool of temporary foreign investments increased modestly in 1991, with the size of the pool typically exceeding expectations. Some large projection misses occurred when foreign official institutions temporarily invested in this facility funds they were assembling to be paid into the Treasury's Defense Cooperation Account or to be used to purchase some of their home currency from the Federal Reserve or the Treasury. By the day the pool increased, the Fed had generally been informed.

Currency projections were much more accurate in 1991 than in 1990, although forecast errors were about in line with those in earlier years. The improvement from 1990 reflected a return to more normal patterns of behavior of this factor as the large unexpected shipments abroad that characterized 1990 subsided after the first quarter. Projection misses remained relatively large early in the year, when these overseas shipments were still quite strong. Currency estimates were also improved by better information on shipments. During 1991, the reserve projectors began to receive information on net overseas currency shipments of a number of major banks operating in this market, as well as more timely data on currency shipments to and from Federal Reserve Banks.

IV. Trading Relationships

During 1991, the Desk transacted business in Treasury and Federal agency securities on behalf of the System Open Market Account with selected primary dealers. The number of primary dealers, and the number of dealers with which the Desk had a trading relationship, totaled 38 at the end of 1991. The number of primary dealers was 41 at the end of 1990, but at that time the Desk did not have a trading relationship with one of them. Three dealers were

deleted from both the primary dealer list and trading relationships, while the Desk commenced a trading relationship with one dealer that was already on the list. In addition, one name change was recognized: Prudential-Bache Securities Inc. changed its name to Prudential Securities, Inc. (The list of reporting primary dealers appears on Table D-1 of Appendix D.)

Two of the primary dealers deleted from the list were removed at their own request as a result of the restructuring efforts of their parent companies, while a third was deleted to reflect the merger of its parent company. On January 14, Security Pacific Corporation announced plans to restructure its primary dealer into a regional nonprimary dealer operation, citing the burdensome costs associated with operating an international primary dealership.[14] On August 30, Continental Bank announced that it was voluntarily ending its primary dealer activities as part of a general restructuring. Finally, Manufacturers Hanover Securities Corporation was deleted from the list on December 31 to reflect its consolidation into Chemical Securities Inc., another primary dealer, as part of the merger of the parent companies.

The Desk began a trading relationship with one dealer during the year. Deutsche Bank Government Securities Inc. (DBGS) was added to the group of authorized dealers effective December 30, 1991. DBGS had originally been added to the list of primary dealers in December 1990, the first German institution granted primary dealer status.

V. System Lending Operations

During the year, the Desk continued to lend Treasury securities to primary dealers from the System portfolio in order to facilitate the delivery of U.S. Government securities. Such loans are collateralized with Government

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[14]The deletion of Security Pacific's primary dealer unit was reflected in the primary dealer list printed in last year's report.

securities of greater value than those borrowed, and a dealer may not borrow in order to cover short sales.[15] Modest changes in overall lending activity masked large shifts in the distribution of lending of bills versus coupon securities.

After having contracted sharply in 1990, System lending of bills fell again last year. (See Table A-7.) Continuing expectations of lower interest rates and heavy Treasury issuance of bills often left dealers holding large inventories of bills, thus reducing instances of delivery failures and depressing the need to borrow them from the Desk.

Lending of coupon securities had also fallen off significantly in 1990 (largely for similar reasons as bills), but rebounded in 1991. The rise came against a background of an increased incidence of issues trading "on special" in the RP market. System lending of securities was heaviest in the spring, coinciding with an upsurge in the recorded number of fails to deliver coupon issues by primary dealers. With some coupon issues difficult to obtain at times in the financing market, dealers had greater occasion to turn to the Desk to borrow coupon securities to avoid a failure to deliver on their commitments.

Reflecting these developments, Treasury bill lending as a share of total lending dropped to 51 percent in 1991 from 79 percent in 1990 and 88 percent in 1989. The average size of each loan also fell in 1991, reflecting the increased share of coupon lending. While dealers can borrow up to $50 million of any bill, they can only borrow a maximum of $10 million of any coupon issue. If total demand for a security exceeds System holdings, the

[15]Typically, a dealer will borrow a security from the Desk when a counterparty to a transaction with the dealer fails to deliver a security that the dealer must have to meet other commitments. The initial term of this borrowing is usually five business days, but a dealer may return the security early and extensions can be granted.

TABLE A-7

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

	1991	1990	PERCENTAGE CHANGE IN TOTAL 1990-1991
Number of Loans	2,477	2,348	5.5%
Amount	$33,895	$38,305	-11.5%
DAILY AVERAGES			
Number of Loans	10	9	11.1%
Amount	$135.6	$153.2	-11.5%
Balance Outstanding	$235.5	$227.7	3.4%
Size of Each Loan	$13.6	$17.0	-20.0%
DISTRIBUTION OF LOANS OUTSTANDING (daily averages)			
Bills	$119.9	$180.4	-33.5%
Coupon Issues	$115.6	$47.3	144.4%
Total	$235.5	$227.7	3.4%

maximum size may be cut back further--a common occurrence with coupons but not with bills.[16]

[16]A dealer's total outstanding borrowing from the Desk may not exceed $150 million.

TABLE A-8

BANK RESERVES
(In millions of dollars*)

	December 1991	Change during**: 1991	1990	Annual Average: 1991	1990
Nonborrowed Reserves					
Excluding extended credit	55340	-3455	-3749	50513	60197
Including extended credit	55341	-3478	-3746	50593	60665
Extended Credit Borrowing	1	-22	3	80	468
Borrowed Reserves					
Including extended credit	192	-134	61	375	924
Adjustment plus Seasonal	191	-112	57	295	456
Adjustment	153	-74	65	140	233
Seasonal	38	-38	-8	155	223
Required Reserves #	54553	-2903	-4431		
On transactions deposits #	54553	5552	889		
On nontransactions deposits #	0	-8454	-5321		
Excess Reserves	979	-685	741	1173	967
Operating Factors (in billions)	-227.9			-212.3	-181.6
Foreign Currency ##	22.8	-4.6	-	26.0	29.2
U.S. Currency	304.7	-21.7	-26.1	292.0	267.1
Treasury Balance	7.8	-2.0	-1.0	6.8	5.5
Float	0.9	-0.8	0.8	0.7	0.9
Special Drawing Rights	10.0	-	1.5	10.0	8.8
Gold Deposits	11.1	-	-	11.0	11.1
Foreign Deposits	0.3	-	-	0.2	0.2
Applied Vault Cash	28.9	-	1.5	27.7	28.2
Other Items	17.1	-4.0	2.9	17.5	18.7
Foreign RP Pool ###	6.5	0.1	-0.8	6.7	5.7

* Unless otherwise noted.
** December over December. Sign indicates impact 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.

TABLE A-9

DOLLAR VOLUME OF TRANSACTIONS EXECUTED BY TRADING DESK 1991 AND 1990 [a]

(In millions of dollars)

Source Account

	Total 1991	Total 1990	System 1991	System 1990	Foreign 1991	Foreign 1990	Treasury Investment Accounts 1991	Treasury Investment Accounts 1990	Member Banks 1991	Member Banks 1990	Retirement System and others 1991	Retirement System and others 1990
Counterparty												
Market	710,235	547,765	418,564	329,421	291,574	218,341	c	c	3	3	94	–
System Account	1,516,328	1,333,925	–	–	1,516,328	1,333,925	–	–	–	–	–	–
Treasury	292	5,583	292 b	5,583 b	–	–	–	–	–	–	–	–
Foreign	1,519,186	1,335,679	1,516,328	1,333,925	2,858	1,754	–	–	–	–	–	–
Total	3,746,041	3,222,952	1,935,184	1,668,929	1,810,760	1,554,020	c	c	3	3	94	–
Outright Transactions												
Purchases												
Treasury Bills	68,993	59,110	20,158	24,539	48,742	34,570	–	–	–	–	93	–
Treas. Coupon Issues	29,710	8,865	11,282	675	18,427	8,187	–	–	2	3	–	–
Agency Issues	831	428	–	–	829	428	–	–	1	–	–	–
Cert. of Deposit	30	200	–	–	30	200	–	–	–	–	–	–
Bankers' Acceptances	1,561	1,155	–	–	1,561	1,155	–	–	–	–	–	–
Total Purchases	101,125	69,758	31,440	25,214	69,589	44,540	–	–	3	3	93	–
Sales and Redemptions												
Treasury Bills:												
Sales	32,444	34,314	100	7,311	32,343	27,003	–	c	–	–	1	–
Redemptions	–	5,400	–	5,400	–	–	–	–	–	–	–	–
Treasury Coupon Issues:												
Sales	16,095	9,061	–	300	16,095	8,761	c	–	–	–	–	–
Redemptions	–	–	–	–	–	–	–	–	–	–	–	–
Agency Issues:												
Sales	5	–	5	–	–	–	–	–	–	–	–	–
Redemptions	292	183	292	183	–	–	–	–	–	–	–	–
Cert. of Deposit	–	–	–	–	–	–	–	–	–	–	–	–
Bankers' Acceptances	109	10	–	–	109	10	–	–	–	–	–	–
Total Sales and Redemptions	48,945	48,968	397	13,194	48,547	35,774	c	c	–	–	1	–
Net Purchases (+) or Sales and Redemptions (–)	+52,180	+20,789	+31,042	+12,020	+21,042	+8,766	c	c	+3	+3	+94	–
Temporary Transactions d												
RPs												
In Market	508,650	389,872	332,891	261,468	175,759	128,404						
With System Account	1,495,177	1,320,709	–	–	1,495,177	1,320,709						
MSPs												
In Market	75,279	48,343	75,279	48,343	–	–						
With Foreign	1,495,177	1,320,709	1,495,177	1,320,709	–	–						
Reverse RPs in Market	49,701	–	–	–	49,701	–						
Fed Funds sales	21,687	24,793	–	–	21,687	24,793						

a Outright transactions are on a commitment basis.

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

c 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

Open market operations during 1991 were conducted under the Authorization for Domestic Open Market Operations. Only one temporary change was made to the Authorization during 1991. The Committee raised the authorized limit on intermeeting-period changes in System Account holdings of U.S. Government and Federal agency securities at the November FOMC meeting to $10 billion. The action, taken on the recommendation of the Manager for Domestic Operations, was made to accommodate anticipated movements in various operating factors and required reserves that might necessitate outright operations in excess of the standard $8 billion intermeeting limit. It turned out that the temporary enlargement was not required as the maximum usage was $7.2 billion.

The Authorization for Domestic Open Market Operations in effect for most of 1991, 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 Board approved a half-point cut in the discount rate on four occasions, actions that brought the rate from 6 1/2 percent at the beginning of the year to 4 1/2 percent by early November. In December, the Board announced a one percentage point cut, to 3 1/2 percent, the lowest level since November 1964.

Changes in the discount rate and reasons for the actions taken, as announced by the Board, are as follows:

1) On February 1, from 6 1/2 percent to 6 percent,[1] in light of further declines in economic activity, continued sluggish growth trends in money and credit, and evidence of abating inflationary pressures, including weakness in commodity prices.
2) On April 30, from 6 percent to 5 1/2 percent,[2] in light of continued weakness in economic activity, especially in the industrial and capital goods areas, and evidence of abating inflationary pressures. In part, the reduction realigned the discount rate with market interest rates.
3) On September 13, from 5 1/2 percent to 5 percent,[3] in light of weakness in the money and credit aggregates, the improving inflation environment, and concerns about the ongoing strength of the economic expansion. In part, the reduction realigned the discount rate with market interest rates.
4) On November 6, from 5 percent to 4 1/2 percent,[4] against a background of sluggish expansion of the monetary and credit aggregates in an environment of abating inflationary pressures. In part, the reduction realigned the discount rate with other short-term market rates.
5) On December 20, from 4 1/2 percent to 3 1/2 percent,[5] on the basis of cumulating evidence, notably monetary and credit conditions, as well as current economic conditions, that point to receding inflationary pressures. Also, together with the cumulative effects already in train from previous actions, this action should provide the basis for a resumption of sustained economic expansion. In part, the reduction realigned the discount rate with short-term market interest rates.

Note: Footnotes appear on page B-5.

[1] The decrease became effective on February 1 at the Federal Reserve Banks of Boston, New York, Philadelphia, Richmond, Chicago, Kansas City, and Dallas. The Board subsequently approved similar requests by the Federal Reserve Banks of Cleveland, Minneapolis and San Francisco, also effective February 1, and the St. Louis and Atlanta banks effective February 4.

[2] The cut became effective on April 30 at the Federal Reserve Banks of Boston, New York, Atlanta, Chicago, and Dallas. The Board subsequently approved similar requests by the Federal Reserve Banks of Philadelphia, Richmond, Minneapolis, Kansas City, and San Francisco, also effective April 30, the Cleveland bank effective May 1, and the St. Louis bank effective May 2.

[3] The decrease took effect on September 13 at the Federal Reserve Banks of Boston, Philadelphia, Cleveland, Atlanta, Chicago, Minneapolis, and Dallas. The Board subsequently approved similar requests by the Federal Reserve Banks of New York, Richmond, Kansas City, and San Francisco, also effective September 13, and the St. Louis bank effective September 17.

[4] The cut was effective on November 6 at the Federal Reserve Banks of Boston, New York, Philadelphia, Cleveland, Atlanta, Chicago and Minneapolis. The Board subsequently approved similar requests by the Federal Reserve Banks of Richmond, Kansas City, Dallas, and San Francisco, also effective November 6, and the St. Louis Bank effective November 7.

[5] The cut took effect on December 20 at the Federal Reserve Banks of New York and Chicago. The Board subsequently approved similar requests by the Federal Reserve Banks of Boston, Philadelphia, Cleveland, Richmond, Atlanta, Minneapolis, Kansas City, Dallas, and San Francisco, also effective December 20, and the St. Louis bank effective December 24.

APPENDIX C

DESK ACTIVITY FOR CUSTOMER ACCOUNTS

The Desk's trading for customer accounts picked up markedly in 1991. Total outright activity for these accounts rose for the second year in a row, while temporary transactions were up for the ninth straight year. Both outright and temporary transactions were boosted by activity associated with the defense cooperation payments in support of Operation Desert Shield/Desert Storm by foreign governments to the United States. In order to make these payments, a number of foreign governments sold Treasury securities, either directly to the System Account or in the market. The proceeds of these sales were often placed in the foreign RP pool until they were transferred to the Treasury.

I. Outright Transactions

Total outright transactions on behalf of customer accounts rose substantially (Table C-1). As usual, the overwhelming majority of outright transactions were conducted on behalf of official foreign and international accounts. The Desk arranged $92.6 billion of these transactions in the market. The Desk also arranged trades that arose from the New York Fed's role as "bailee and depository" for the Board of Governors. The transactions were associated with fines collected by the Federal Reserve as a result of developments involving the Bank of Credit and Commerce International. Activity on behalf of Treasury accounts and member banks remained negligible.

The higher volume of outright transactions reflected increased activity undertaken on behalf of several Asian countries. The accounts with the largest increases were Taiwan and Japan. Taiwan's trades jumped, reflecting the country's reported restructuring of its portfolio. Japan's outright activity rose, primarily because it sold securities in order to make defense cooperation payments. (Japan had the highest volume of sales to the

TABLE C-1

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

	Purchases		Sales		Total		Percentage change in Total
	1991	1990	1991	1990	1991	1990	1990-1991
Total Outright	69,685	44,543	48,548	35,774	118,233	80,317	47
Foreign & Int'l Accounts	69,589	44,540	48,547	35,774	118,136	80,314	47
Treasury bills	48,742	34,570	32,343	27,003	81,085	61,573	32
Treasury coupons	18,427	8,187	16,095	8,761	34,522	16,948	104
Federal agencies	829	428	-	-	829	428	94
Bankers' Acceptances	1,561	1,155	109	10	1,670	1,165	43
Certificates of Deposit	30	200	-	-	30	200	-85
Treasury	-	-	#	#	#	#	
Member Banks	3	3	-	-	3	3	
Other Accounts*	93	-	1	-	94	-	
Repurchase Agreements**							
With System	1,495,177	1,320,709	-	-	1,495,177	1,320,709	13
In Market	175,759	128,404	-	-	175,759	128,404	37
Federal Funds*	-	-	21,687	24,793	21,687	24,793	-13

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.
Includes crosses between accounts, including those with the System Account.
Figures may not add to totals due to rounding.

System Account.) The increases in these two accounts more than offset a sizable drop in transactions on behalf of Canada, although activity for that account remained substantial.

Purchases exceeded sales in 1991, as in most years. Purchases accounted for nearly 60 percent of all outright activity during the year. Total purchases grew 56 percent, while total sales rose 36 percent.

As is typically the case, almost all outright transactions for foreign accounts--about 98 percent--were conducted in Treasury securities. The remaining outright transactions involved bankers' acceptances (BAs), agency issues, and large denomination certificates of deposit (CDs). As in previous years, the bulk of these other transactions were purchases. Purchases of BAs rose sharply, while agency purchases nearly doubled. CD purchases, however, fell considerably, to a very low level, most likely reflecting the low yields on CDs relative to other financial market instruments.

II. Temporary Transactions

The total volume of repurchase agreements arranged on behalf of foreign customers, also known as the foreign RP "pool," increased by 15 percent, to $1,670 billion, in 1991. Customer-related RPs executed in the market accounted for 10 percent of the total, while the remainder was arranged as matched sale-purchase agreements with the System Account. The average daily volume of the foreign RP pool was $6.7 billion, compared with about $5.7 billion in 1990 and $5.0 billion in 1989.[1] Despite the higher volume, total foreign account earnings from repurchase agreements, at $391 million, were somewhat lower than in 1990, reflecting the large decline in market

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[1]The average daily volume is computed by weighting each transaction by the number of calendar days it was outstanding, including weekends and holidays. The unweighted average volume was $6.6 billion.

interest rates during the year. The average daily yield on these RPs was 5.85 percent (bond-equivalent basis), down from 8.14 percent in 1990.

The Desk sold Federal funds on behalf of foreign accounts when the funds arrived too late in the day for investment in the RP pool. Total sales were roughly $22 billion (about $87 million per business day), a fall of about $3 billion from the 1990 level. A total of 71 accounts participated in this activity.

III. Reverse RPs Arranged on Behalf of Saudi Arabia

On February 11, the Board of Governors approved a request by the Federal Reserve Bank of New York to arrange reverse RPs in the market on behalf of Saudi Arabia. Saudi Arabia wished to raise money without selling its holdings of Treasury notes in order to make defense cooperation payments to the U.S. Treasury in connection with Operation Desert Storm. The arrangement was temporary, and it was designed to provide short-term funding until more permanent arrangements could be made. The initial reverse RPs were carried out from February 12 through February 15, and they raised about $3.6 billion. Saudi Arabia made payments of $1.8 billion each to the Treasury on February 15 and 19. Part of the proceeds from these transactions were held in the foreign RP pool for a few days before being paid to the Treasury, thus boosting Saudi Arabia's participation in the pool. The reverse RPs were renewed until May 14. The total volume of the agreements--counting all of the rollovers--was about $50 billion.

TABLE C-2

NUMBER OF TRANSACTIONS PROCESSED FOR CUSTOMER ACCOUNTS*

	1991	1990	PERCENTAGE CHANGE IN TOTAL 1990-1991
Foreign & Int'l Accounts			
Outright	5,668	4,843	17%
Customer-Related RPs	10,690	11,522	-7%
Reverse RPs	974	-	
Treasury	1	2	-50%
Member Banks	16	18	-11%
Other Accounts **	16	-	
Total	17,365	16,385	6%

* 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 1991 BY DEALERS AND BROKERS ON BEHALF OF CUSTOMERS OF THE FEDERAL RESERVE

(In millions of dollars)

Securities Dealers	OUTRIGHT Total Volume	OUTRIGHT Percentage Share	REPURCHASE AGREEMENTS* Total Volume	REPURCHASE AGREEMENTS* Percentage Share
Salomon Brothers, Inc.	4,642	5.0%	10,075	5.7%
The First Boston Corporation	4,178	4.5%	2,551	1.5%
Chemical Securities, Inc.	3,928	4.2%	250	0.1%
Barclays de Zoete Wedd Secs. Inc.	3,877	4.2%	2,650	1.5%
Lehman Government Securities, Inc.	3,335	3.6%	18,167	10.3%
Morgan Stanley & Co., Inc.	3,291	3.6%	4,388	2.5%
J.P. Morgan Securities, Inc.	3,130	3.4%	6,485	3.7%
Discount Corporation of New York	2,970	3.2%	3,830	2.2%
Fuji Securities Inc.	2,895	3.1%	2,530	1.4%
Dean Witter Reynolds, Inc.	2,866	3.1%	1,650	0.9%
Carroll McEntee & McGinley, Inc.	2,805	3.0%	3,456	2.0%
Aubrey G. Lanston & Co., Inc.	2,805	3.0%	2,997	1.7%
Goldman, Sachs & Co.	2,766	3.0%	6,095	3.5%
Chase Securities, Inc.	2,604	2.8%	9,904	5.6%
Prudential Securities Inc. (b)	2,600	2.8%	1,802	1.0%
Harris Government Securities Inc.	2,524	2.7%	1,680	1.0%
Dillon, Read & Co., Inc.	2,516	2.7%	2,234	1.3%
SBC Government Securities, Inc.	2,462	2.7%	2,659	1.5%
S.G. Warburg & Co., Inc.	2,426	2.6%	4,012	2.3%
Kidder, Peabody & Co., Inc.	2,357	2.5%	1,700	1.0%
Sanwa-BGK Securities Co., L.P.	2,342	2.5%	3,524	2.0%
Citicorp Securities Markets, Inc.	2,313	2.5%	6,514	3.7%
Merrill Lynch Government Securities, Inc.	2,293	2.5%	1,610	0.9%
Greenwich Capital Markets, Inc.	2,235	2.4%	4,144	2.4%
UBS Securities Inc.	2,065	2.2%	840	0.5%
BT Securities Corporation	1,959	2.1%	8,306	4.7%
Daiwa Securities America Inc.	1,814	2.0%	9,373	5.3%
Paine Webber Inc.	1,793	1.9%	4,467	2.5%
Bear, Stearns & Co., Inc.	1,726	1.9%	8,901	5.1%
Bank of America N/T & S/A	1,656	1.8%	100	0.1%
Manufacturers Hanover Securities Corp. (e)	1,457	1.6%	9,585	5.5%
The Nikko Securities Co. Int'l, Inc.	1,443	1.6%	1,535	0.9%
Nomura Securities International, Inc.	1,434	1.5%	7,154	4.1%
Smith Barney, Harris Upham & Co., Inc.	1,276	1.4%	415	0.2%
Donaldson, Lufkin & Jenrette Securities Corp.	1,275	1.4%	2,736	1.6%
Continental Bank, N.A.(c)	1,194	1.3%	2,265	1.3%
First Chicago Capital Markets, Inc.	1,028	1.1%	8,876	5.1%
CRT Government Securities, Ltd.	1,006	1.1%	2,970	1.7%
Yamaichi Int'l (America) Inc.	879	0.9%	3,330	1.9%
Deutsche Bank Government Securities, Inc. (d)	363	0.4%	-	-
# Bankers Trust Company	30	**		
Security Pacific National Bank (a)	-	-	-	-
Total	92,556	100%	175,759	100%

CROSSES BETWEEN ACCOUNTS

Between Foreign Accounts and System Open Market Account:	
Outright	21,150
RP's	1,495,177
Other Crosses	2,858
FOREIGN ACCOUNT FEDERAL FUNDS SALES	21,687
GRAND TOTAL	1,540,872

TABLE C-3 (Cont'd)

DOLLAR VOLUME OF TRANSACTIONS IN 1991 BY DEALERS AND BROKERS ON BEHALF OF CUSTOMERS OF THE FEDERAL RESERVE

		Change Effective
(a)	Removed from list of authorized dealers.	Jan. 15
(b)	Formerly Prudential-Bache Securities Inc.	Feb. 25
(c)	Removed from list of authorized dealers.	Aug. 30
(d)	Added to list of authorized dealers.	Dec. 30
(e)	Removed from list of authorized dealers.	Dec. 31

* Includes only the initiation of RP transactions.
** Less than .05 percent.
# Involved transactions in securities other than Treasury issues under instructions from customers.

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

APPENDIX D

DEVELOPMENTS AMONG PRIMARY DEALERS

Significant developments in the U.S. Government securities market and the primary dealer community occurred during 1991. The following sections provide a brief overview of those events, including (1) the bidding improprieties of Salomon Brothers, Inc., (2) the recommendations from the joint agency review of the U.S. Government securities market, (3) the changes to the administration of the Federal Reserve Bank of New York's primary dealer relationships, and (4) dealer profitability.

I. Salomon Brothers' Admissions

On August 9, 1991, Salomon Brothers disclosed that it had discovered irregularities in connection with certain Treasury auctions. In this and in subsequent announcements, the firm admitted that it had submitted unauthorized customer bids in as many as eight Treasury auctions during 1990 and 1991 and that it had failed to report on tender forms net long positions in excess of $200 million. In certain instances, these actions resulted in Salomon Brothers' being awarded more than 35 percent of the auction amount--in violation of Treasury auction rules.[1] Moreover, although Salomon's senior management was informed of one unauthorized customer bid as early as April 1991, the firm failed to report the incident to authorities until August. Salomon also disclosed that it had overstated to certain government-sponsored enterprises the size of its customer orders for the agencies' securities.

Salomon's disclosures appeared to be prompted by Securities and Exchange Commission (SEC) and Justice Department investigations, which were well underway in August, into possible civil and criminal misconduct

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[1]Net long positions counted toward the 35 percent award limit if they were in excess of $200 million.

surrounding a short squeeze in the Treasury's May two-year note.[2] This short squeeze allegedly resulted from a heavy concentration of auction awards in the hands of Salomon and some of its customers. (These customers were so-called "hedge funds.") This squeeze developed shortly after a shortage of April two-year notes became apparent in the financing and secondary markets. (Auction awards for these notes had not been concentrated.)

II. Joint Agency Review

The disclosures by Salomon Brothers prompted an in-depth review of many aspects of the U.S. Government securities market, including the auction process, market practices, the role of primary dealers, and supervision. The review was conducted by the Treasury, the SEC, and the Federal Reserve. It culminated in the *Joint Report on the Government Securities Market*, which was transmitted to the Congress in January 1992. The Federal Reserve Bank of New York (FRBNY) was a full participant in the process.

In the *Joint Report*, the agencies outlined a number of recommendations for the reform of various aspects of the market as summarized below:

1. **Increased access to Treasury auctions**: All U.S. Government security brokers and dealers registered with the SEC were given permission to bid on behalf of customers in auctions. Moreover, all bidders were given the option of submitting bids without deposit in note and bond auctions, provided the bidder had an "autocharge agreement" with a clearing bank. Also, the limitation on noncompetitive bids for note and bond auctions was raised to $5 million from $1 million. (These changes were

[2] The Federal Reserve Bank of New York and the Treasury worked closely with the Department of Justice and the SEC in their investigations.

announced in October 1991, prior to the release of the *Joint Report*.)

2. **Automation of Treasury auctions**: The Federal Reserve and Treasury accelerated the schedule for automating Treasury auctions, with completion of an automated system applicable to major market participants expected by the end of 1992 (announced in September 1991).

3. **Proposed new auction system**: The Treasury proposed implementing a uniform-price, open-auction system after automation is complete. The proposal calls for an iterative auction process in which the Treasury announces successively lower yields and bidders indicate quantities desired at each announced yield. The process continues in successive rounds, in descending yields, until the amount bid for is less than the amount offered. At that point, the auction is declared over. All bidders who bid at the lowest yield receive awards equal to the total volume of their bids, but at the immediately prior (higher) yield. The balance of the auction amount is filled through partial awards to those bids at the prior yield that were not submitted in the ultimate round. This type of auction should remove the risk of winning bids that are above market consensus and should discourage manipulative or collusive behavior.

4. **Publication and clarification of Treasury bidding rules**: The Treasury published for comment a proposed uniform offering circular to clarify auction rules at the same time as the *Joint Report*. The circular included slightly revised guidelines for determining related bidders for the purposes of the 35 percent

rule and for bidding noncompetitively.

5. **Stronger enforcement of auction rules:** On behalf of the Treasury, the Federal Reserve Bank of New York initiated spot checks of customer bids in Treasury auctions to verify the authenticity of those bids and tightened monitoring of noncompetitive bids. A system for confirming large customer awards was also instituted by all Reserve Banks. In addition, the agencies supported legislation to make the use of false or misleading information in connection with new issuance of U.S. government securities an explicit violation of the Securities Exchange Act of 1934.

6. **Changes to Treasury auction policies:** The Treasury changed several aspects of its bidding guidelines. It no longer permits a bidder to submit both noncompetitive and competitive bids in the same auction. It also will not accept a noncompetitive bid from a bidder who has a position (prior to the auction) in the security being auctioned in the when-issued, futures, or forward markets. The Treasury changed the standard for reporting net long positions as well. A competitive bidder must report its net long position (as of 30 minutes prior to the auction deadline) if the sum of its net long position and its bid exceeds a specified threshold level. This threshold level will be $2 billion, unless otherwise specified.

7. **Improved surveillance of the Treasury market:** A working group of the agencies was formed to improve surveillance and strengthen interagency coordination. Consequently, the FRBNY has established a new Market Surveillance Function to help evaluate

anomalous market conditions that might call for Treasury reopenings or official inquiries into possible wrongdoing. The Bank discontinued its dealer surveillance program.

8. **Reopening of issues to combat short squeezes**: The Treasury announced that it would provide additional quantities of securities to the marketplace when an acute, protracted shortage develops. The technique for such provision could be through standard auctions, "tap" issues, issuance window, or by lending securities to market participants.

III. Changes to the Primary Dealer System

As part of the *Joint Report*, the FRBNY announced changes to the administration of its relationships with primary dealers to provide for a more open system of trading relationships (Attachment I). The Salomon Brothers incident had highlighted two drawbacks of the primary dealer system: (1) the FRBNY was perceived as being the regulator of primary dealer firms because of its standards for selecting and monitoring counterparties, and (2) the primary dealer designation had been viewed as conferring a special status on these firms that carried with it elements of "franchise value" for the dealer operations.

To address these drawbacks and provide for a more open system, the FRBNY eliminated the 1 percent market share requirement, made its capital requirements more objective, and disbanded its <u>dealer</u> surveillance program. The last change will clarify that the Bank's relationship with primary dealers is purely of a business nature, thereby removing the false impression that the FRBNY somehow regulates or takes responsibility for the conduct of primary dealers. To retain their primary dealer status, dealers must meet minimum capital standards, demonstrate their ability to make reasonably good markets

to the FRBNY in open market operations, provide it with market information, and continue to bid in Treasury auctions. Finally, any primary dealer that is convicted of, pleads guilty to, or pleads *nolo contendere* to felony charges will face punitive action, possibly including suspension of its primary dealer designation.

IV. Dealer Profitability

Primary dealers earned record aggregate pretax profits of $2 billion in 1991, surpassing the previous earnings record of $1.46 billion set in 1990.[3] The record earnings in 1991 are largely attributable to declining interest rates, which boosted earnings on dealers' inventories of securities. Much of the increase in dealer profits came from the mortgage-backed securities market. Primary dealers reported profits in this market of just under $800 million in 1991, compared with about $420 million during 1990. Profits earned in the market for U.S. Treasury securities increased more moderately, to just over $1 billion in 1991 from about $815 million in the prior year.

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[3]The number of primary dealers fell from 41 to 38 during the year. The reasons for this decline are discussed in Appendix A.

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
The First Boston Corporation
First Chicago Capital Markets, Inc.
Fuji Securities Inc.
Goldman, Sachs & Co.
Greenwich Capital Markets, Inc.
Harris Government 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-Bache 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.

January 3, 1992

ATTACHMENT I

Federal Reserve Bank of New York
January 22, 1992

Administration of Relationships with Primary Dealers

The Federal Reserve Bank of New York (FRBNY) is adopting certain changes in the administration of its relationship with primary dealers in U.S. Government securities. The primary dealer system has been developed for the purpose of selecting trading counterparties for the Federal Reserve in its execution of market operations to carry out U.S. monetary policy. The designation of primary dealers has also involved the selection of firms for statistical reporting purposes in compiling data on activity in the U.S. Government securities market. These changes in the administration of these relationships have been developed after consultation with the Federal Reserve Board, the Federal Open Market Committee, the Treasury and the Securities and Exchange Commission.

The changes announced today have been prompted by two related factors:

First, decisions have been made to accelerate the automation of Treasury auctions and Federal Reserve open market operations with a view toward increasing the efficiency of the auction process and open market operations, and providing the potential for further broadening the base of direct participation in these operations. These automation initiatives are major undertakings, as they must be planned and executed with extreme care to ensure operating and communications systems of the highest level of reliability and integrity. They will require back-up systems comparable to

those now in place for the Fed's funds and securities transfer systems. Planning for automation of the existing Treasury auction format is well underway and automation is scheduled for completion by the end of this year. Automation planning for Federal Reserve open market operations is just getting started, and completion of this automation will probably take about two years.

Second, and more important, while the system of designating primary dealers on the whole has served the Federal Reserve, the Treasury, and the nation well for many years, there also have been some drawbacks to the existing arrangements. Prominent among these is the public impression that, because of the Federal Reserve Bank's standards for selecting and maintaining these relationships, the Fed is in effect the regulator of the primary dealer firms. Moreover the primary dealer designation has been viewed as conferring a special status on these firms that carries with it elements of "franchise value" for the dealer operation and possibly for other aspects of the firm's standing in the marketplace.

The net result of these interrelated factors is that the Federal Reserve is amending its dealer selection criteria to begin providing for a more open system of trading relationships, while still exercising the discretion that any responsible market participant would demand to assure itself of creditworthy counterparties who are prepared to serve its needs.

For the most part, the changes in the administration of the primary dealer relationships will have no immediate effect on existing primary dealers--recognizing, of course, that they will, over time, be subject to the requirements noted below for maintaining a counterparty relationship with the Fed. However, existing as well as any new primary dealers will no longer be required to maintain a one percent share of the total customer activity reported by all primary dealers in the aggregate; this requirement is no

longer deemed necessary given the active and liquid state of development now achieved in the U.S. Government securities market, and its retention could be an obstacle to achieving more open trading desk relationships. In addition, while continuing to seek creditworthy counterparties, and while continuing to exercise market surveillance, the FRBNY will discontinue its own dealer surveillance activities relating to primary dealer firms' financial characteristics.

New firms will be added on the basis of criteria listed below. As in the past, all primary dealers will be expected to (1) make reasonably good markets in their trading relationships with the Fed's trading desk; (2) participate meaningfully in Treasury auctions and; (3) provide the trading desk with market information and analysis that may be useful to the Federal Reserve in the formulation and implementation of monetary policy. Primary dealers that fail to meet these standards in a meaningful way over time will have their designation as a primary dealer discontinued by the FRBNY. It is contemplated that each dealer firm's performance relative to these requirements will be reviewed on an ongoing basis and evaluated annually beginning in June 1993. If a firm's relationship with the FRBNY is discontinued because of shortfalls in meeting these standards, the action by the FRBNY will be made strictly on a business relationship basis. As such, any decision by the FRBNY will carry no implication as to the creditworthiness, financial strength or managerial competence of the firm.

In evaluating a firm's market-making performance with the trading desk, the FRBNY will look to the amount of business of various types actually transacted and the quality of the firm's market-making and market commentary. Dealers that do little business with the Fed over a period of time, that repeatedly provide propositions that are not reasonably competitive, and that fail to provide useful market information and commentary, add little to the

Fed's ability to operate effectively and will be dropped as counterparties for at least six months.

In evaluating participation in Treasury auctions, the Fed will expect a dealer to bid in reasonable relationship to that dealer's scale of operations relative to the market, and in reasonable price relationship to the range of bidding by other auction participants. Any decision to suspend a primary dealer designation because of inadequate auction bidding will be taken in close consultation with the Treasury.

Finally, consistent with the Omnibus Trade & Competitiveness Act of 1988, a foreign-owned primary dealer may not be newly designated, or continue to be designated, in cases where the Federal Reserve concludes that the country in which a foreign parent is domiciled does not provide the same competitive opportunities to U.S. companies as it does to domestic firms in the underwriting and distribution of Government debt.

I. Criteria for Accepting New Dealers

New primary dealers must be commercial banking organizations that are subject to official supervision by U.S. Federal bank supervisors or broker/dealers registered with the Securities and Exchange Commission. The dealer firms or the entities controlling the dealer firms must meet certain capital standards as follows:

-- commercial banking institutions must--taking account of relevant transition rules--meet the minimum Tier I and Tier II capital standards under the Basle Capital Accord. In addition, commercial banks must have at least $100 million of Tier I capital as defined in the Basle Capital Accord.

-- Registered broker/dealers must have capital in excess of the SEC's or Treasury's regulatory "warning levels" and have at

least $50 million in regulatory capital. Where such capital standards do not apply to a consolidated entity controlling a primary dealer--consistent with the treatment of banks under the Basle Accord--the FRBNY will also look to the capital adequacy of the parent organization.

The minimum absolute levels of capital specified above (i.e., $100 million for commercial banks and $50 million for broker/dealers) are designed to help insure that primary dealers are able to enter into transactions with the Fed in sufficient size to maintain the efficiency of trading desk operations.

A bank or a broker/dealer wishing to become a primary dealer, must inform the FRBNY in writing. As a part of that notification a prospective dealer must also provide appropriate financial data demonstrating that it meets the capital standards outlined above. The FRBNY will consult with the applicable supervisory body to ensure that the firm in question is in compliance with the appropriate capital standards. When new firms are accepted as primary dealers, the nature and extent of the Bank's trading relationship with the firm will, as under current practices, evolve over time. As a result of this change and the elimination of the one percent market share criterion, there will no longer be any need for individual firms to be considered by the market as "aspiring dealers."

Of necessity, at least for the time being, the number of additional primary dealers will be relatively limited, because of resource constraints on trading desk operations. The selection of this limited number will be dependent on how many can be added without adverse impact on the efficiency of Federal Reserve trading desk operations. Applications received by March 31, 1992, will be evaluated in relation to the foregoing capital standards. If it is not feasible to add all of the qualifying firms as primary dealers, a

selection will be made among those firms in a manner that gives primary consideration to their relative capital positions. Following the implementation of automated communications for trading purposes, further expansion in the number of primary dealers will be feasible, and further changes in the criteria for selection also could be considered, although there is no preconception at this time as to what, if any, further changes would be made.

II. Maintenance of Capital Standards

As a result of the adoption of the capital standards for accepting primary dealers, all primary dealers will be expected to maintain capital positions that meet the standards described above on an ongoing basis. Should a firm's capital position fall below these minimum standards, the FRBNY may suspend its trading relationship until the firm's capital position is restored to levels corresponding to these minimum standards. In making such determinations, the FRBNY will look to the firm's primary Federal regulator for guidance as to whether the firm has in place an acceptable plan to restore its capital position in a reasonable period of time. However, in no circumstances will the Bank maintain a trading relationship with a primary dealer that is unable to restore its capital position to the stipulated minimum level within a year. Over time, the maximum grace period of one year may be shortened and would not apply in any event if a firm's capital position were seriously impaired.

III. Elimination of Dealer Surveillance

While the Federal Reserve Bank of New York will continue to seek creditworthy counterparties--and will continue, or enhance, its market surveillance--it is planning to discontinue the "dealer surveillance" now exercised over primary dealers through the monitoring of specific Federal

Reserve standards and through regular on-site inspection visits by Federal Reserve dealer surveillance staff. Rather, the FRBNY will seek to act as any reasonably well-informed and responsible firm might behave in evaluating the creditworthiness of its counterparties. Accordingly, the Federal Reserve will expect to receive periodic reports on the capital adequacy of primary dealers, just as any other responsible market participant should expect to receive such reports.

The elimination of the Bank's dealer surveillance activities should be viewed merely as confirmation of the long-standing reality that the Bank does not have--nor has it ever had--formal regulatory authority over the Government securities market or authority over the primary dealers in their capacity as such. The Bank is satisfied that the existing regulatory apparatus over the market and the regulatory apparatus as it applies to dealer firms is adequate--especially in light of changes outlined in the joint Treasury-SEC-Federal Reserve study--and it is satisfied that it can protect itself against financial loss without reliance on formal dealer surveillance.

IV. Sanctions of Primary Dealers for Wrongdoing

The Federal Reserve Bank of New York does not have civil or criminal enforcement authority over primary dealers in their capacity as primary dealers. This consideration and the dictates of fairness and due process require that the disposition of allegations of wrongdoing lies with the Government bodies having such authority--including the U.S. Treasury, the Federal bank supervisor, the Securities and Exchange Commission and the U.S. Department of Justice.

In the future, if a primary dealer firm itself is convicted of a felony under U.S. law or pleads guilty or _nolo contendere_ to felony charges under U.S law for activities that relate directly or indirectly to its

business relationship with the Federal Reserve, the firm will be subject to punitive action, possibly including suspension as a primary dealer for six months. Depending on the nature of the wrongdoing the penalty could be more severe, including permanent revocation of a trading relationship.

V. Statistical Reports on Government Securities Activities

The current statistical reporting program is expected to continue unchanged for the time being, but a review is being undertaken to determine how best to adapt this program to an environment in which market surveillance is receiving greater emphasis and a statistical reporting relationship is not necessarily tied to a trading relationship with the Federal Reserve. This review will take into account the needs of the Federal Reserve, the Treasury and the SEC as well as the burden of statistical reporting on dealer firms.

Summary

Taken as a whole, these changes are designed to facilitate an orderly and gradual move to a more open system of primary dealer relationships with the FRBNY while at the same time preserving certain key characteristics of the current system that have been beneficial to the Federal Reserve and the Treasury over the years. Over time, the successful implementation of highly automated systems for Treasury auctions and Federal Reserve open market operations will provide the room and the opportunity for still further changes. However, the desirability of further changes will have to be evaluated against the experience with these modest changes and the need to preserve both the efficiency and flexibility of Federal Reserve monetary policy operations, and the liquidity and efficiency of the market for U.S. Government securities.

Operations in United States Government Securities and Federal Agency Securities

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, 1991, together with changes from holdings on December 31, 1990, are summarized in the following table on a delivery basis.

System Open Market Account	Purchases	Sales	Redemptions	Exchanges	Net Changes	Holdings 12/31/91	Holdings 12/31/90
Government Securities							
Treasury Bills:				(277,313,720)		132,835,005	112,519,895
Outright	20,157,600	(120,000)	(1,000,000)	277,313,720	19,037,600		
Matched Transactions	1,571,534,000	(1,570,456,490)	-	-	1,077,510		
Market	75,279,000	(75,279,000)	-	-	-		
Foreign official	1,496,255,000	(1,495,177,490)	-	-	1,077,510		
Treasury Notes and Bonds maturing:							
Within 1 year	3,053,400	-	-	(28,087,858)	(25,034,458) #	30,542,384	25,962,858
1 to 5 years	6,672,700	-	-	24,594,225	31,266,925 #	64,299,367	58,749,166
5 to 10 years	1,180,000	-	-	2,893,633	4,073,633 #	14,469,423	13,121,315
Over 10 years	375,400	-	-	600,000	975,400 #	24,540,019	24,736,354
Total Notes and Bonds	11,281,500	-	-	-	11,281,500	133,851,193	122,569,693
Total Govt. Secs.							
Incl. Matched Trans.	1,602,973,100	(1,570,576,490)	(1,000,000)	-	31,396,610	266,486,198	235,089,588
(Excl. Matched Trans.	31,439,100	(120,000)	(1,000,000)	-	30,319,100	272,583,623	242,264,523
Federally Sponsored Agency Issues maturing:				2,696,700			
Within 1 year	-	-	(292,056)	(3,618,350)	(1,213,706) ##	2,340,430	2,57[illegible],406
1 to 5 years	-	(5,000) *	-	703,650	698,650 ##	2,508,140	2,5[illegible],925
5 to 10 years	-	-	-	218,000	218,000 ##	1,007,940	1,022,235
Over 10 years	-	-	-	-	-	187,990	187,990
Total Agency Issues	-	(5,000)	(292,056)	-	(297,056)	6,044,500	6,341,556
Total System Account							
Incl. Matched Trans.	1,602,973,100	(1,570,581,490)	(1,292,056)	-	31,099,554	272,530,698	241,431,144
(Excl. Matched Trans.	31,439,100	(125,000)	(1,292,056)	-	30,022,044	278,628,123	248,606,079
F.R.B. of New York							
Repurchase Agreements for System	332,891,000	(335,347,000)	-	-	(2,456,000)	15,898,000	18,354,000
Customer-Related RPs passed through to the market	175,759,400	(175,759,400)	-	-	-	-	-

* An exchange of Federal agency issues on August 1, 1991 inadvertantly included a purchase of $5 million of a new issue which was ineligible for exchange under FOMC quidelines. Once this was discovered, the issue was sold in the market.

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
#	29,613,984	(25,716,724)	(2,725,525)	(1,171,735)
##	977,730	(745,435)	(232,295)	-

Declines appear in parentheses.

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS – 1991

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

Securities Dealers	Outright Transactions: Dollar Volume: Treasury Bills	Dollar Volume: Treasury Coupon Issues	Dollar Volume: Total Treasury Issues	Percentage Share: Treasury Bills	Percentage Share: Treasury Coupon Issues	Percentage Share: Total Treasury Issues
Morgan Stanley & Co., Inc.	1,055,500	233,500	1,289,000	13.1%	10.1%	12.4%
Salomon Brothers, Inc.	745,000	460,000	1,205,000	9.2%	19.9%	11.6%
J.P. Morgan Securities, Inc.	598,600	127,600	726,200	7.4%	5.5%	7.0%
Daiwa Securities America Inc.	450,000	38,100	488,100	5.6%	1.6%	4.7%
Goldman, Sachs & Co.	295,000	168,000	463,000	3.7%	7.3%	4.5%
Merrill Lynch Government Securities, Inc.	283,800	142,000	425,800	3.5%	6.1%	4.1%
Paine Webber Inc.	306,000	105,000	411,000	3.8%	4.5%	4.0%
Citicorp Securities Markets, Inc.	400,000	–	400,000	5.0%	–	3.9%
The First Boston Corporation	320,000	35,000	355,000	4.0%	1.5%	3.4%
Aubrey G. Lanston & Co., Inc.	307,000	27,700	334,700	3.8%	1.2%	3.2%
Greenwich Capital Markets, Inc.	75,000	253,000	328,000	0.9%	10.9%	3.2%
Discount Corporation of New York	318,000	–	318,000	3.9%	–	3.1%
Chemical Securities, Inc.	261,000	26,000	287,000	3.2%	1.1%	2.8%
Fuji Securities Inc.	260,600	7,000	267,600	3.2%	0.3%	2.6%
Dean Witter Reynolds, Inc. **	169,800	74,400	244,200	2.1%	3.2%	2.4%
Nomura Securities International, Inc.	225,000	–	225,000	2.8%	–	2.2%
Kidder, Peabody & Co., Inc.	200,000	19,000	219,000	2.5%	0.8%	2.1%
Continental Bank, N.A.(c)	217,000	–	217,000	2.7%	–	2.1%
Chase Securities, Inc.	112,000	105,000	217,000	1.4%	4.5%	2.1%
Lehman Government Securities, Inc.	178,000	34,000	212,000	2.2%	1.5%	2.0%
Carroll McEntee & McGinley, Inc.	158,000	35,000	193,000	2.0%	1.5%	1.9%
SBC Government Securities, Inc.	91,000	100,000	191,000	1.1%	4.3%	1.8%
The Nikko Securities Co. Int'l, Inc.	180,000	10,000	190,000	2.2%	0.4%	1.8%
Barclays de Zoete Wedd Secs. Inc.	101,100	75,000	176,100	1.3%	3.2%	1.7%
Harris Government Securities Inc.	150,000	10,000	160,000	1.9%	0.4%	1.5%
Bank of America N/T & S/A	83,000	54,000	137,000	1.0%	2.3%	1.3%
UBS Securities Inc.	112,000	15,000	127,000	1.4%	0.6%	1.2%
Sanwa-BGK Securities Co., L.P.	100,000	–	100,000	1.2%	–	1.0%
Manufacturers Hanover Securities Corp. (e)	75,000	16,400	91,400	0.9%	0.7%	0.9%
S.G. Warburg & Co., Inc.	65,000	25,000	90,000	0.8%	1.1%	0.9%
Dillon, Read & Co., Inc.	37,000	50,000	87,000	0.5%	2.2%	0.8%
Prudential Securities Inc. (b)	75,000	–	75,000	0.9%	–	0.7%
Donaldson, Lufkin & Jenrette Securities Corp.	33,000	36,800	69,800	0.4%	1.6%	0.7%
BT Securities Corporation	5,000	34,000	39,000	0.1%	1.5%	0.4%
Yamaichi Int'l (America) Inc.	24,000	–	24,000	0.3%	–	0.2%
CRT Government Securities, Ltd.	6,000	–	6,000	0.1%	–	0.1%
First Chicago Capital Markets, Inc.	–	–	–	–	–	–
Smith Barney, Harris Upham & Co., Inc.	–	–	–	–	–	–
Security Pacific National Bank (a)	–	–	–	–	–	–
Bear, Stearns & Co., Inc.	–	–	–	–	–	–
Deutsche Bank Government Securities, Inc. (d)	–	–	–	–	–	–
Total	8,072,400	2,316,500	10,388,900	100%	100%	100%

Notes appear on the final page of the table.

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS – 1991

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 Dealers
Lehman Government Securities, Inc.	32,115,000 (1)	9.6%	18,167,000 (1)	10.3%	6,300,000 (3)	8.4%
Goldman, Sachs & Co.	18,195,000 (4)	5.5%	6,095,000	3.5%	22,110,000 (1)	29.4%
BT Securities Corporation	20,039,000 (2)	6.0%	8,306,000 (8)	4.7%	3,340,000 (6)	4.4%
Manufacturers Hanover Securities Corp. (e)	17,742,000 (5)	5.3%	9,585,000 (4)	5.5%	300,000	0.4%
Nomura Securities International, Inc.	19,108,000 (3)	5.7%	7,154,000 (9)	4.1%	300,000	0.4%
Daiwa Securities America Inc.	14,379,000 (6)	4.3%	9,373,000 (5)	5.3%	1,475,000	2.0%
Bear, Stearns & Co., Inc.	14,213,000 (7)	4.3%	8,901,000 (6)	5.1%	250,000	0.3%
First Chicago Capital Markets, Inc.	10,407,000	3.1%	8,876,000 (7)	5.1%	3,255,000 (7)	4.3%
Chase Securities, Inc.	10,282,000	3.1%	9,904,000 (3)	5.6%	860,000	1.1%
Salomon Brothers, Inc.	8,650,000	2.6%	10,075,000 (2)	5.7%	1,750,000 (10)	2.3%
Morgan Stanley & Co., Inc.	12,325,000 (9)	3.7%	4,388,000	2.5%	1,625,000	2.2%
Greenwich Capital Markets, Inc.	13,463,000 (8)	4.0%	4,144,000	2.4%	200,000	0.3%
J.P. Morgan Securities, Inc.	8,500,000	2.6%	6,485,000	3.7%	1,565,000	2.1%
Discount Corporation of New York	4,055,000	1.2%	3,830,000	2.2%	8,195,000 (2)	10.9%
Citicorp Securities Markets, Inc.	7,987,000	2.4%	6,514,000 (10)	3.7%	1,056,000	1.4%
S.G. Warburg & Co., Inc.	9,972,500	3.0%	4,012,000	2.3%	1,335,000	1.8%
The First Boston Corporation	11,110,000 (10)	3.3%	2,551,000	1.5%	1,175,000	1.6%
Fuji Securities Inc.	6,610,000	2.0%	2,530,000	1.4%	5,063,000 (4)	6.7%
Paine Webber Inc.	9,576,000	2.9%	4,467,000	2.5%	100,000	0.1%
Sanwa–BGK Securities Co., L.P.	8,023,000	2.4%	3,524,000	2.0%	1,185,000	1.6%
SBC Government Securities, Inc.	8,839,000	2.7%	2,659,000	1.5%	205,000	0.3%
Aubrey G. Lanston & Co., Inc.	5,336,000	1.6%	2,996,900	1.7%	3,035,000 (8)	4.0%
Donaldson, Lufkin & Jenrette Securities Corp.	6,600,000	2.0%	2,736,000	1.6%	350,000	0.5%
Continental Bank, N.A.(c)	4,985,000	1.5%	2,265,000	1.3%	2,305,000 (9)	3.1%
Prudential Securities Inc. (b)	6,784,000	2.0%	1,802,000	1.0%	775,000	1.0%
Barclays de Zoete Wedd Secs. Inc.	6,050,000	1.8%	2,650,000	1.5%	560,000	0.7%
The Nikko Securities Co. Int'l, Inc.	6,349,000	1.9%	1,534,500	0.9%	240,000	0.3%
Yamaichi Int'l (America) Inc.	4,185,000	1.3%	3,330,000	1.9%	120,000	0.2%
Dillon, Read & Co., Inc.	5,010,000	1.5%	2,234,000	1.3%	360,000	0.5%
Kidder, Peabody & Co., Inc.	5,530,000	1.7%	1,700,000	1.0%	225,000	0.3%
Carroll McEntee & McGinley, Inc.	2,863,000	0.9%	3,456,000	2.0%	–	–
Merrill Lynch Government Securities, Inc.	3,660,000	1.1%	1,610,000	0.9%	590,000	0.8%
CRT Government Securities, Ltd.	2,490,000	0.7%	2,970,000	1.7%	–	–
Bank of America N/T & S/A	635,000	0.2%	100,000	0.1%	3,855,000 (5)	5.1%
Dean Witter Reynolds, Inc.	2,191,000	0.7%	1,650,000	0.9%	420,000	0.6%
Harris Government Securities Inc.	1,671,000	0.5%	1,680,000	1.0%	440,000	0.6%
UBS Securities Inc.	1,011,500	0.3%	840,000	0.5%	325,000	0.4%
Chemical Securities, Inc.	1,500,000	0.5%	250,000	0.1%	–	–
Smith Barney, Harris Upham & Co., Inc.	450,000	0.1%	415,000	0.2%	15,000	##
Security Pacific National Bank (a)	–	–	–	–	20,000	##
Deutsche Bank Government Securities, Inc. (d)	–	–	–	–	–	–
Subtotal	332,891,000	100%	175,759,400	100%	75,279,000	100%
Foreign & International Institutions	–		–		1,495,177,490	
Total	332,891,000		175,759,400		1,570,456,490	

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS - 1991

		Change effective
(a)	Removed from list of authorized dealers.	Jan. 15
(b)	Formerly Prudential-Bache Securities Inc.	Feb. 25
(c)	Removed from list of authorized dealers.	Aug. 30
(d)	Added to list of authorized dealers.	Dec. 30
(e)	Removed from list of authorized dealers.	Dec. 31

Additional notes on Outright Transactions:

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

** This table does not reflect a sale of $5 million of a new Federal agency issue inadvertantly purchased in an exchange on August 1, 1991. The issue was ineligible for exchange under FOMC guidelines and subsequently was sold to Dean Witter Reynolds, Inc. Otherwise, there were no market transactions for Federally sponsored agency securities during 1991.

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.

Less than .05 percent.

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

	Holdings* 12/31/91	Net change since 12/31/90
Treasury Bills	132,635,005	20,115,110
Treasury Notes		
Matured in 1991		(25,962,858)
Issues outstanding		
11.625% 01/15/92	450,545	-
8.125% 01/31/92	538,730	-
6.625% 02/15/92	454,000	300,000
9.125% 02/15/92	1,161,005	150,000
14.625% 02/15/92	214,500	-
8.500% 02/29/92	912,620	-
7.875% 03/31/92	761,720	100,000
8.500% 03/31/92	1,750,000	-
11.750% 04/15/92	378,700	-
8.875% 04/30/92	1,484,120	50,000
6.625% 05/15/92	402,065	400,000
9.000% 05/15/92	1,525,660	-
13.750% 05/15/92	2,486,284	-
8.500% 05/31/92	810,990	50,000
8.250% 06/30/92	526,000	-
8.375% 06/30/92	1,327,820	-
10.375% 07/15/92	191,000	22,000
8.000% 07/31/92	1,477,750	-
7.875% 08/15/92	2,533,620	-
8.250% 08/15/92	350,000	60,000
8.125% 08/31/92	1,131,480	-
8.125% 09/30/92	1,300,000	-
8.750% 09/30/92	605,000	-
9.750% 10/15/92	97,215	-
7.750% 10/31/92	884,315	245,000
7.750% 11/15/92	3,680,145	50,000
8.375% 11/15/92	114,500	-
10.500% 11/15/92	300,490	-
7.375% 11/30/92	519,845	25,000
7.250% 12/31/92	925,000	25,000
9.125% 12/31/92	644,880	-
8.750% 01/15/93	319,545	-
7.000% 01/31/93	854,440	854,440
8.250% 02/15/93	28,000	-
8.375% 02/15/93	3,730,000	-
10.875% 02/15/93	780,730	-
6.750% 02/28/93	1,225,290	1,225,290
7.125% 03/31/93	1,606,900	1,606,900
9.625% 03/31/93	944,610	123,000
7.375% 04/15/93	300,000	225,000
7.000% 04/30/93	577,450	577,450
7.625% 05/15/93	200,000	100,000
8.625% 05/15/93	1,702,215	-
10.125% 05/15/93	557,100	-
6.750% 05/31/93	1,294,460	1,294,460
7.000% 06/30/93	1,602,435	1,602,435
8.125% 06/30/93	500,000	100,000
7.250% 07/15/93	258,200	200,000
6.875% 07/31/93	636,970	636,970
8.000% 08/15/93	2,518,150	-
11.875% 08/15/93	1,606,100	-
6.375% 08/31/93	891,630	891,630
6.125% 09/30/93	1,400,000	1,400,000
8.250% 09/30/93	315,680	-
7.125% 10/15/93	468,327	370,000
6.000% 10/31/93	1,486,430	1,486,430
7.750% 11/15/93	2,889,810	70,000
11.750% 11/15/93	2,108,123	150,000
5.500% 11/30/93	1,071,475	1,071,475
5.000% 12/31/93	2,090,810	2,090,810
7.625% 12/31/93	644,752	10,000
7.000% 01/15/94	304,150	150,000
6.875% 02/15/94	1,749,320	1,749,320
8.875% 02/15/94	150,000	150,000
8.500% 03/31/94	1,040,800	144,400
7.000% 04/15/94	375,000	200,000
7.000% 05/15/94	3,062,195	3,062,195

	Holdings* 12/31/91	Net change since 12/31/90
Treasury Notes (Cont'd)		
9.500% 05/15/94	45,000	45,000
13.125% 05/15/94	751,000	-
8.500% 06/30/94	625,000	125,000
8.000% 07/15/94	285,000	120,000
6.875% 08/15/94	1,993,340	1,993,340
8.625% 08/15/94	40,000	40,000
12.625% 08/15/94	827,000	-
8.500% 09/30/94	531,752	-
9.500% 10/15/94	164,000	69,000
6.000% 11/15/94	2,134,980	2,134,980
8.250% 11/15/94	5,000	5,000
11.625% 11/15/94	1,174,860	200,000
7.625% 12/31/94	467,665	-
8.625% 01/15/95	335,100	297,000
11.250% 02/15/95	1,283,000	200,000
8.375% 04/15/95	253,700	-
8.500% 05/15/95	50,000	50,000
11.250% 05/15/95	780,000	-
8.875% 07/15/95	86,820	-
8.500% 08/15/95	25,000	25,000
10.500% 08/15/95	1,046,728	-
8.625% 10/15/95	256,475	-
8.500% 11/15/95	19,000	19,000
9.500% 11/15/95	273,000	-
9.250% 01/15/96	446,630	235,000
7.500% 01/31/96	500,000	500,000
7.875% 02/15/96	400,000	400,000
8.875% 02/15/96	483,545	100,000
7.500% 02/29/96	300,000	300,000
7.750% 03/31/96	300,000	300,000
9.375% 04/15/96	115,150	4,900
7.625% 04/30/96	200,000	200,000
7.375% 05/15/96	1,765,000	-
7.625% 05/31/96	225,000	225,000
7.875% 06/30/96	325,000	325,000
7.875% 07/15/96	336,100	50,000
7.875% 07/31/96	200,000	200,000
7.250% 08/31/96	200,000	200,000
7.000% 09/30/96	200,000	200,000
8.000% 10/15/96	140,500	15,000
6.875% 10/31/96	200,000	200,000
7.250% 11/15/96	820,235	105,000
6.500% 11/30/96	200,000	200,000
6.125% 12/31/96	200,000	200,000
8.000% 01/15/97	124,000	8,000
8.500% 04/15/97	223,000	-
8.500% 05/15/97	346,000	52,000
8.500% 07/15/97	371,410	100,000
8.625% 08/15/97	402,000	200,000
8.750% 10/15/97	213,000	-
8.875% 11/15/97	360,000	-
7.875% 01/15/98	411,800	411,800
8.125% 02/15/98	200,000	50,000
7.875% 04/15/98	230,500	230,500
9.000% 05/15/98	450,000	50,000
8.250% 07/15/98	584,140	584,140
9.250% 08/15/98	500,000	175,000
7.125% 10/15/98	547,193	547,193
8.875% 11/15/98	300,000	-
8.875% 02/15/99	255,000	55,000
9.125% 05/15/99	220,000	20,000
8.000% 08/15/99	400,000	-
7.875% 11/15/99	415,000	15,000
8.500% 02/15/00	450,000	-
8.875% 05/15/00	275,000	25,000
8.750% 08/15/00	350,000	-
8.500% 11/15/00	420,000	20,000
7.750% 02/15/01	210,000	210,000
8.000% 05/15/01	410,000	410,000
7.875% 08/15/01	300,000	300,000
7.500% 11/15/01	310,000	310,000
Total Treasury Notes	101,519,719	10,113,200

* 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 Bonds		Holdings* 12/31/91	Net change since 12/31/90
Matured in 1991			-
Issues outstanding			
4.250%	08/15/92	509,200	-
7.250%	08/15/92	93,185	1,400
4.000%	02/15/93	24,300	-
6.750%	02/15/93	69,550	-
7.875%	02/15/93	162,000	25,000
7.500%	08/15/93	438,217	-
8.625%	08/15/93	164,050	-
8.625%	11/15/93	164,500	-
9.000%	02/15/94	173,476	73,500
4.125%	05/15/94	76,625	-
8.750%	08/15/94	51,605	-
10.125%	11/15/94	80,800	10,000
3.000%	02/15/95	2,100	-
10.500%	02/15/95	124,150	78,000
10.375%	05/15/95	62,000	5,000
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	680,490	-
8.375%	08/15/00	2,065,375	-
11.750%	02/15/01	160,803	-
13.125%	05/15/01	159,726	-
8.000%	08/15/01	489,210	-
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	167,250	20,000
10.750%	05/15/03	38,000	-
11.125%	08/15/03	195,000	10,000
11.875%	11/15/03	147,240	-
12.375%	05/15/04	182,786	-
13.750%	08/15/04	11,000	-
11.625%	11/15/04	139,200	30,000
8.250%	05/15/05	1,492,660	-
12.000%	05/15/05	64,476	-
10.750%	08/15/05	248,000	-
7.625%	02/15/07	1,389,164	-
7.875%	11/15/07	264,500	-
8.375%	08/15/08	753,500	-
8.750%	11/15/08	1,578,500	-
9.125%	05/15/09	696,205	-
10.375%	11/15/09	1,025,939	-
11.750%	02/15/10	663,400	-
10.000%	05/15/10	1,164,556	-
12.750%	11/15/10	972,865	-
13.875%	05/15/11	955,542	-
14.000%	11/15/11	689,091	1,800
10.375%	11/15/12	1,022,441	-

Treasury Bonds(cont'd)		Holdings* 12/31/91	Net change since 12/31/90
12.000%	08/15/13	2,400,772	10,000
13.250%	05/15/14	407,050	-
12.500%	08/15/14	589,720	19,000
11.750%	11/15/14	840,000	-
11.250%	02/15/15	908,733	-
10.625%	08/15/15	680,000	-
9.875%	11/15/15	231,500	65,000
9.250%	02/15/16	269,000	1,000
7.250%	05/15/16	900,000	-
7.500%	11/15/16	360,000	25,000
8.750%	05/15/17	194,000	-
8.875%	08/15/17	230,000	-
9.125%	05/15/18	233,600	33,600
9.000%	11/15/18	20,000	-
8.875%	02/15/19	260,000	50,000
8.125%	08/15/19	435,000	35,000
8.500%	02/15/20	225,879	-
8.750%	05/15/20	150,000	-
8.750%	08/15/20	400,000	-
7.875%	02/15/21	140,000	140,000
8.125%	05/15/21	200,000	200,000
8.125%	08/15/21	185,000	185,000
8.000%	11/15/21	150,000	150,000
Total Treasury Bonds		32,331,474	1,168,300
Total Treasury Security Holdings		266,486,198	31,396,610

* 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

FHLB		Holdings* 12/31/91	Net Change since 12/31/90
Matured in 1991			(804,700)
Issues outstanding			
6.05 %	01/27/92	15,700	15,700
6.75	01/27/92	40,000	40,000
7.00	01/27/92	10,000	-
5.43	02/25/92	50,000	50,000
6.25	02/25/92	20,000	20,000
8.35	02/25/92	10,000	-
11.45	02/25/92	31,700	-
6.55	03/25/92	15,000	15,000
7.10	03/25/92	40,000	-
8.85	03/25/92	30,000	-
10.00	03/25/92	3,000	-
8.30	04/27/92	5,000	-
9.65	04/27/92	8,000	-
11.70	04/27/92	31,000	-
8.60	05/26/92	10,000	-
8.60	05/26/92	30,000	-
9.15	05/26/92	5,000	-
8.40	06/25/92	5,000	-
8.45	06/25/92	4,000	-
8.25	07/27/92	15,000	-
5.625	08/25/92	65,000	65,000
8.60	08/25/92	5,000	-
10.35	08/25/92	17,000	-
5.68	09/25/92	40,000	40,000
8.25	09/25/92	6,000	-
5.55	10/26/92	15,000	15,000
8.00	10/26/92	33,000	-
8.15	10/26/92	16,000	-
10.85	10/26/92	4,000	-
7.65	11/25/92	53,000	-
8.00	11/25/92	30,000	-
8.80	11/25/92	17,000	-
11.10	11/25/92	20,000	-
7.375	12/28/92	14,000	-
7.95	12/28/92	20,000	-
9.40	12/28/92	3,000	-
8.30	01/25/93	12,000	-
9.35	01/25/93	10,000	-
9.50	01/25/93	16,000	-
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	22,000
7.00	07/26/93	29,000	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	25,000
8.18	08/25/93	60,000	-
11.95	08/25/93	40,000	-
6.21	09/27/93	10,000	10,000
7.95	09/27/93	2,000	-

FHLB (Cont'd)		Holdings* 12/31/91	Net Change since 12/31/90
8.30 %	09/27/93	23,000	-
6.09	10/25/93	15,000	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	-
7.30	01/25/94	5,000	-
7.55	01/25/94	65,000	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	10,000
7.28	04/25/94	35,000	35,000
9.55	04/25/94	6,000	-
7.20	05/25/94	45,000	45,000
7.50	06/27/94	22,000	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	40,000
8.60	08/25/94	17,900	-
6.58	09/26/94	11,000	11,000
8.30	10/25/94	18,000	-
5.89	11/25/94	55,000	55,000
8.20	11/25/94	15,000	-
8.05	12/26/94	7,000	-
8.40	01/25/95	7,000	-
8.60	02/27/95	5,000	-
7.875	03/27/95	15,000	15,000
9.00	03/27/95	20,000	-
8.875	06/26/95	8,000	-
10.30	07/25/95	18,000	-
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	13,000
8.25	11/25/96	10,000	-
7.875	02/25/97	40,730	-
7.65	03/25/97	12,000	-
9.15	03/25/97	5,000	-
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		2,029,165	(132,000)

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 Agency Issues (Cont'd)

FNMA		Holdings* 12/31/91	Net Change since 12/31/90
Matured in 1991			(495,615)
Issues outstanding			
8.50 %	01/10/92	25,000	–
7.00	03/10/92	42,030	–
7.00	03/10/92	78,000	–
12.00	04/10/92	20,000	–
7.05	06/10/92	31,100	–
10.125	06/10/92	9,000	–
8.45	07/10/92	12,200	–
9.15	09/10/92	80,000	–
10.60	10/12/92	4,700	–
9.875	12/10/92	55,000	–
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	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	40,000
8.00	04/10/96	45,000	45,000
8.05	06/10/96	25,650	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	5,000
7.70	09/10/96	25,000	25,000
7.05	10/10/96	100,000	100,000
6.90	11/12/96	58,000	58,000
7.70	12/10/96	12,000	–
7.60	01/10/97	160,000	–
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	–
7.40	10/01/97	49,410	–
7.10	12/10/97	26,195	–
8.65	02/10/98	10,000	–
9.15	04/10/98	30,000	–
8.20	08/10/98	35,000	35,000
9.40	08/10/98	50,000	–
7.85	09/10/98	48,000	48,000
7.05	12/10/98	30,000	30,000
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	–

Notes appear on the final page of the table.

FNMA (Cont'd)		Holdings* 12/31/91	Net Change since 12/31/90
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	15,000
8.625	04/10/01	35,000	35,000
8.70	06/11/01	20,000	20,000
8.875	07/10/01	5,000	5,000
8.20	07/10/02	34,000	–
10.35	12/10/15	10,000	–
8.20	03/10/16	15,000	–
Total		2,342,435	(3,965)
FFCB			
Matured in 1991			(1,234,901)
Issues outstanding			
5.42 %	01/02/92	95,000	95,000
6.10	01/02/92	50,000	50,000
7.05	01/02/92	30,000	30,000
11.50	01/20/92	7,000	–
15.20	01/20/92	28,000	–
5.30	02/03/92	50,000	50,000
6.00	02/03/92	29,000	29,000
6.70	02/03/92	29,000	29,000
4.70	03/02/92	135,000	135,000
5.65	03/02/92	95,000	95,000
6.30	03/02/92	53,000	53,000
5.50	04/01/92	50,000	50,000
6.60	04/01/92	50,000	50,000
5.35	05/01/92	30,000	30,000
6.30	05/01/92	15,000	15,000
4.80	06/01/92	90,000	90,000
6.15	06/01/92	51,000	51,000
6.55	07/01/92	60,000	60,000
13.75	07/20/92	15,000	–
8.40	07/23/92	50,000	–
6.40	08/03/92	18,000	18,000
5.80	09/01/92	65,000	65,000
8.25	09/01/92	15,000	–
8.60	09/01/92	10,000	–
5.625	10/01/92	35,000	35,000
5.50	11/02/92	19,000	19,000
4.90	12/01/92	53,000	53,000
7.625	12/01/92	20,000	–
8.125	01/20/93	25,000	–
10.65	01/20/93	40,000	–
11.80	10/20/93	30,000	–
12.35	03/01/94	10,000	–
14.25	04/20/94	3,700	–
7.375	08/01/94	13,000	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		1,440,410	(119,901)

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 Federal Agency Issues (Cont'd)

		Holdings* 12/31/91	Net Change since 12/31/90
FLB			
Matured in 1991			(41,190)
Issues outstanding			
7.95 %	10/21/96	49,795	-
7.35	01/20/97	16,650	-
Total		66,445	(41,190)

U.S. Government Agency Issues**

		Holdings* 12/31/91	Net Change since 12/31/90
U.S. Postal Service			
6.875 %	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		6,044,500	(297,056)
Total Treasury & Agency Issues		272,530,698	31,099,554

* 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, 1991 Maturity	Holdings*	Percent of the Total Amount Outstanding
1991		
1/ 2	5,202,535	24.1%
1/ 9 #	110,710	23.8%
1/16 #	6,820,015	23.3%
1/23	4,952,960	22.9%
1/30	5,169,000	24.7%
2/ 6	5,439,515	25.8%
2/13	8,399,910	25.0%
2/20	5,421,885	26.2%
2/27	5,451,000	26.3%
3/ 5	5,241,430	24.7%
3/12	7,529,855	23.1%
3/19	4,813,380	23.0%
3/26	4,238,810	20.2%
4/ 2	2,513,000	22.5%
4/ 9	5,015,000	22.6%
4/16	2,585,000	22.9%
4/23	2,914,000	10.9%
4/30	2,533,000	24.0%
5/ 7	5,668,000	24.9%
5/14	2,550,000	24.0%
5/21	2,650,000	25.8%
5/28	2,700,000	26.3%
6/ 4	5,620,000	24.3%
6/11	2,350,000	22.5%
6/18	2,350,000	22.9%
6/25	2,100,000	20.6%
7/ 2	3,178,000	25.1%
7/30	3,165,000	25.0%
8/27	3,393,000	26.9%
9/24	2,630,000	20.9%
10/22	3,930,000	30.1%
11/19	3,150,000	25.7%
12/17	2,850,000	21.3%
Total #	132,635,005	22.5%

* Delivery basis.

Holdings were reduced by $5,032,520 thousand of January 9 maturities and $1,064,905 thousand of January 16 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 1991 as a result of reallocations.

Reallocations of Participation in the System Open Market Account During 1991

	Reallocations	Participations December 31, 1991
Boston	$127,000,000	$18,450,142,391.89
New York	6,119,000,000	107,404,357,873.19
Philadelphia	(662,000,000)	7,201,098,811.92
Cleveland	653,000,000	17,052,310,239.06
Richmond	(3,427,000,000)	21,557,205,220.60
Atlanta	(362,000,000)	9,114,575,522.43
Chicago	906,000,000	34,245,396,039.04
St. Louis	(616,000,000)	7,217,731,850.76
Minneapolis	(747,000,000)	3,523,322,803.82
Kansas City	(1,206,000,000)	7,553,885,665.95
Dallas	869,000,000	10,692,904,744.42
San Francisco	(1,654,000,000)	28,517,766,836.92
	$8,674,000,000	
	($8,674,000,000)	$272,530,698,000.00

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 1991 totaled $19,149,201,383 a decrease of $720,746,052 from earnings in 1990.

The average earnings rate was 7.52 percent in 1991, compared with 8.44 percent in 1990. The earnings rate, which was 8.04 percent on January 2, 1991, closed the year at 6.72 percent. Average holdings increased to $255.0 billion in 1991 from $234.9 billion in 1990.

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 1991, compared with those at the close of 1990, are shown in the following table:

(In thousands of dollars)

	12/31/91	12/31/90	Net Change
Total Portfolio*	$272,530,698	$241,431,144	$31,099,554
Earnings Rate**	6.72%	8.04%	(1.32%)
Net Daily Accrual of Earnings#	50,179	$53,211	($3,032)
Coupon Issues	32,340	$31,290	$1,050
Treasury Bills	17,839	$21,921	($4,082)

* 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, 1991, 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	101,519,719	103,746,304	107,020,465	3,274,161
Bonds	32,331,474	33,785,911	39,695,939	5,910,028
Agencies	6,044,500	6,157,737	6,586,832	429,095

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)

	1991	1990	1989
Purchases	332,891,000	261,468,100	168,354,200
Sales	335,347,000	245,231,100	173,098,400
Year-end Balance	15,898,000	18,354,000	2,117,000
Earnings on Repurchase Agreements	113,064	124,561	113,338

Matched Transactions
System Open Market Account

(In thousands of dollars)

	1991	1990	1989
Sales	1,570,456,490	1,369,052,140	1,323,479,615
Purchases	1,571,534,000	1,363,943,585	1,326,541,010
Outstanding transactions at year-end	6,097,425	7,174,935	2,066,380

Customer-Related Transactions

(In thousands of dollars)

	1991	1990	1989
Sales	175,759,400	131,760,500	104,843,500
Purchases	175,759,400	128,403,500	108,200,500
Outstanding transactions at year-end	-	-	3,357,000

APPENDIX F

PERSONNEL CHANGES

As of January 31, 1992, there were seven officers assigned to the Open Market Group, unchanged from the previous year. Effective July 1, 1991, Joan E. Lovett was promoted to Senior Vice President; her assignment to the Open Market Group continued.

Including officers, there were 68 positions in the Open Market Group, unchanged from the previous year. The nonofficial staff of the Open Market Function consisted of 61 positions, all of which were filled at the end of January 1992.[1] Six officers' secretaries were assigned to the Group administration staff. The remaining 55 positions were distributed across the three divisions and automation area of the Open Market Department as follows: 21 in the Trading Division, 19 in the Accounting Division, 12 in the Analysis Division, and 3 in the Open Market Automation Staff. The total number of Accounting Division positions fell by one from the previous year, while the number on the Automation Staff increased by one.

During the year ended January 31, 1992, one person transferred from the Accounting Division to the Automation Staff to replace a person who had resigned. One person from outside the Bank was hired by the Automation Staff, because of the increased demands being placed on this staff by the Group's automation objectives. The one departure represented a turnover rate of about 1 percent, down from about 6 percent in the previous year.

(Effective February 21, 1992, a Market Surveillance Function was established within the Open Market Group. At the same time, the Bank's Dealer Surveillance Function was discontinued. The new Market Surveillance Function

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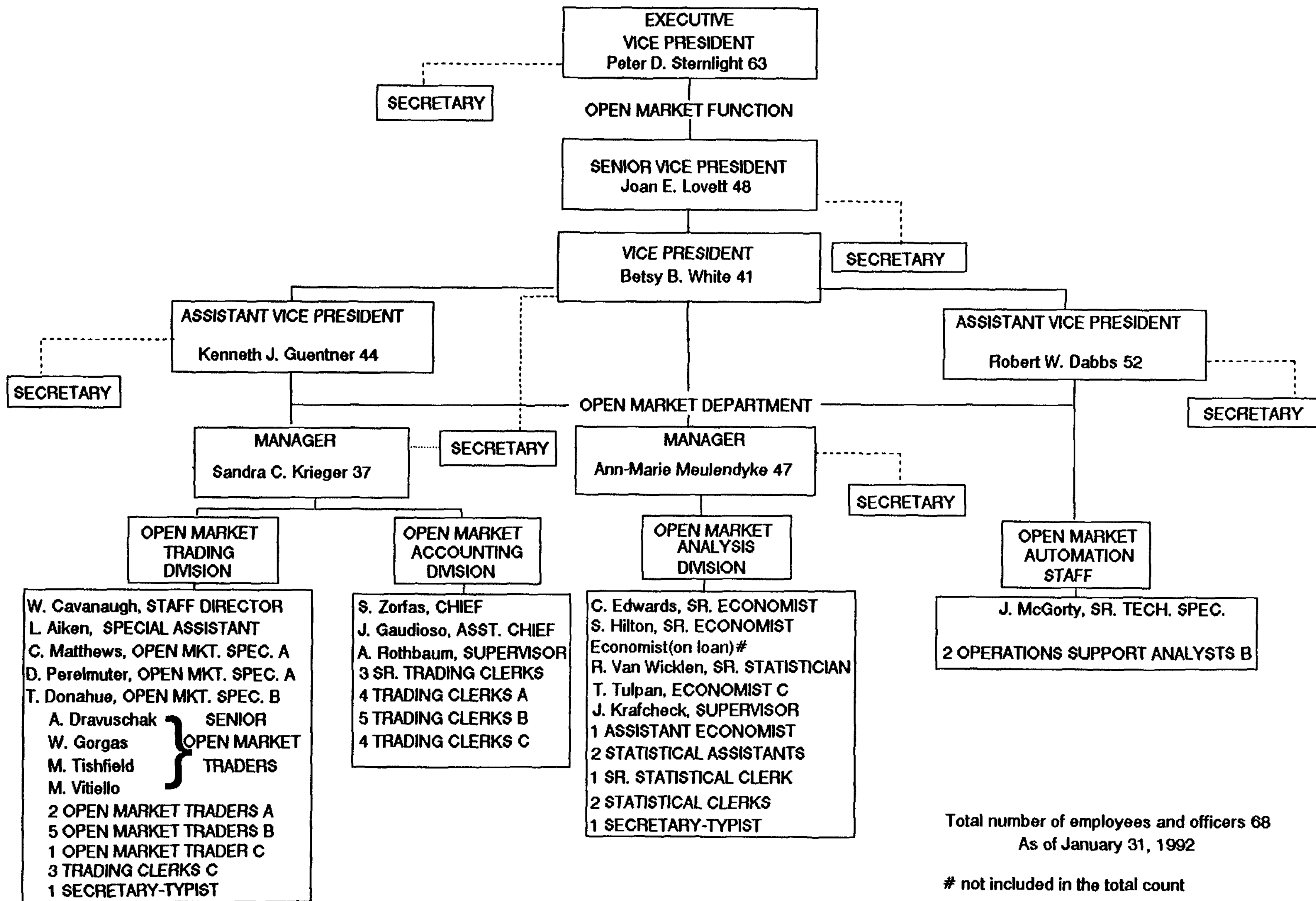
[1]This number, and all others cited, exclude a person on loan to the Analysis Division from the Research Department under a regular six-month rotation program.

is headed by Mary Clarkin, Vice President. Other officers include MarySue Fisher, Assistant Vice President, and Edward Ozog, Assistant Vice President. Initially, there are 4 professional staff positions and 2 support staff.)

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



APPENDIX G

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

The data in Table G-1 indicate charges to the activity budget codes of the Open Market Group 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 Group is not billed that are related to processing and recordkeeping for open market transactions.

Actual 1991 expenses were greater than the August estimates largely because data processing and communications costs associated with the Securities Trading and Clearing System exceeded expectations. Absent experience with running this system, the Group's estimate of such costs were highly tentative and, as it turned out, much too low. (The budgeted expense for 1992 will have to be increased in the August review.)

The 1992 budget estimates incorporated expenses associated with two major automation initiatives. In August, the 1992 projects were (1) automating the electronic submission and processing of auction bids by primary dealers and (2) defining a system to automate Trading Room operations. Following the Salomon scandal and the findings of the *Joint Report on the Government Securities Market*, the scope of the Treasury auction automation process was modified, and anticipated completion dates were accelerated. The current projects for 1992 are:

- Implementing a system for electronic submission of tenders at U.S. Treasury security auctions by less aggressive and noncompetitive bidders. (Completion date: June 1992).

- Developing and implementing a system for electronic submission of tenders at Treasury auctions by aggressive large competitive

bidders and the evaluation of these tenders. (Completion date: year-end 1992).

Automating open market operations. (Completion date: tentatively 1993).

The costs associated with these initiatives may not be fully reflected in Table G-1. Moreover, the 1992 budget estimates do not capture the expenses that will be incurred by the Group's new Market Surveillance Function.

TABLE G-1

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

	Estimated Expenses 1991 As of August 1991	Actual Expenses 1991	Budgeted Expenses 1992 As of August 1991
Salaries--Employees (a) (b)	2,166,878	2,002,562	2,033,302
Retirement and other benefits (b)	474,929	479,473	512,961
Printing and supplies (b)	68,000	54,660	76,500
Equipment:			
Rentals and Depreciation	229,617	268,663	274,265
Repair & Maintenance	87,040	67,449	121,184
Data Processing/Data Communications	184,570	635,518	224,090
Telephone	69,500	64,150	68,750
Travel	27,500	19,212	26,450
Purchased Information	342,138	337,953	352,072
Software and System Development	1,237,443	1,198,278	1,287,815
Other Expenses	43,783	11,772	33,654
Total	4,931,398	5,139,690	5,011,043
Officers			
Salaries	738,356	739,925	797,069
Retirement and other benefits	176,006	176,869	201,085
Total	914,362	916,794	998,154
Grand total	5,845,760	6,056,484	6,009,197

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

Please replace page 21 (Table 3) of the report "Monetary Policy and Open Market Operations During 1991" with the attached corrected page. The symbol in the sixth line of footnotes was incorrect.