MONETARY POLICY

AND

OPEN MARKET OPERATIONS

DURING 1993

A Report Prepared for the Federal Open Market Committee
by the Open Market Function
of the Federal Reserve Bank of New York
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M2 consists of M1, overnight (and continuing contract) repurchase agreements (RPs) issued by all depository institutions and overnight Eurodollars issued to U.S. residents by foreign branches of U.S. banks worldwide, savings deposits (including money market deposit accounts), small-denomination time deposits (those in amounts less than $100,000), retail RPs, and balances in both taxable and tax-exempt general purpose and broker/dealer money market mutual funds. M2 excludes individual retirement accounts and Keogh balances at depository institutions and at money market funds. It also excludes all balances held by U.S. commercial banks, money market funds (general purpose and broker/dealer), foreign governments and commercial banks, and the U.S. Government. The chart is based on seasonally adjusted data as of January 27, 1994. The target ranges are for Q4 1991 to Q4 1992 and Q4 1992 to Q4 1993.

M3: Levels and Targets

M3 consists of M2, large-denomination time deposits (those in amounts of $100,000 or more), term RP liabilities issued by all depository institutions, term Eurodollars held by U.S. residents at foreign branches of U.S. banks worldwide and at all banking offices in the United Kingdom and Canada, and balances in both taxable and tax-exempt institution-only money market mutual funds. M3 excludes amounts held by depository institutions, the U.S. Government, money market funds, and foreign banks and official institutions. Also subtracted is the estimated amount of overnight RPs and Eurodollars held by institution-only money market mutual funds. The chart is based on seasonally adjusted data as of January 27, 1994. The target ranges are for Q4 1991 to Q4 1992 and Q4 1992 to Q4 1993.

M1: Levels

M1 consists of currency held outside the U.S. Treasury, Federal Reserve Banks, and the vaults of depository institutions; travelers checks; demand deposits at all commercial banks other than those due to depository institutions, the U.S. Government, and foreign banks and official institutions, less cash items in the process of collection and Federal Reserve float; and other checkable deposits, consisting of negotiable order of withdrawal (NOW) and automatic transfer service (ATS) accounts at depository institutions, credit union share draft accounts and demand deposits at thrift institutions. The chart is based on seasonally adjusted data as of January 27, 1994.

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 3, 1994. The monitoring ranges are for Q4 1991 to Q4 1992 and Q4 1992 to Q4 1993.

Chart 2: **MBA Mortgage Application Indexes**

The chart presents two indicators of activity in the mortgage market from the Mortgage Bankers Association: the index level of mortgages written for initial purchases and the index level of mortgages written for purposes of refinancing.

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Long-Term Interest Rates

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

Short-Term Interest Rates

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

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TEXT

MONETARY POLICY AND OPEN MARKET OPERATIONS
DURING 1993

I. Overview

During 1993, monetary policy was directed towards sustaining the economic expansion begun two years earlier while keeping inflationary pressures well contained. During the preceding few years, the pace of economic activity had been held back by several forces, such as business and household efforts to improve their financial position, including cutbacks in defense spending, a struggling real estate sector, and slow employment growth. To combat these influences, the Federal Open Market Committee had substantially eased reserve pressures between 1989 and 1992 in a series of gradual steps. The factors that had been restraining economic activity in recent years continued to be felt in 1993, but their intensity appeared to diminish as the year progressed. Meanwhile, the stimulative effects of the accommodative stance of monetary policy and declining long-term interest rates were becoming increasingly apparent, and after falling back sharply in the first quarter, the pace of economic activity steadily improved over 1993. Chairman Greenspan indicated during the year that policy at some stage would have to be adjusted towards a more neutral position as the economy overcame the "headwinds" which had been impeding its advance. But with the underlying momentum of the expansion still in doubt during much of the past year, monetary policy remained unchanged, as measured by the prevailing degree of pressure on reserve positions.

Long-term interest rates fell dramatically in 1993, driven by disinflationary trends, a modest pace of economic expansion, and improved prospects for credible fiscal restraint. These yields declined fitfully over the first three quarters of the year, falling by mid-October to levels not reached in two decades. Declines in short-term rates during this time were tempered by the steady stance of monetary policy. Over the final months of the year, most interest rates retraced a portion of their earlier declines in response to a steady stream of statistics that indicated economic growth was accelerating and that unused productive capacity was diminishing. Even with this partial backup in yields, the net decline in longer term interest rates over the year was substantial and was accompanied by a significant flattening of the yield curve.

Falling interest rates had far-reaching effects on investment flows and credit market conditions. Corporate and municipal borrowers issued record amounts of new debt to lock in reduced funding costs. Meanwhile, the combination of lower yields and an improving economy further eased lingering financial market strains. Debt-servicing burdens of borrowers were directly alleviated, and corporate profitability rose. The trend toward improved financial conditions was particularly apparent in the banking sector. Also during the year, the Treasury took steps to shorten the average maturity of its debt in an effort to realize savings in its borrowing costs.

Recent trends in the performance of the monetary aggregates persisted in 1993. The expansion of the broader measures of money continued to lag far behind income growth, and these aggregates grew only very slowly over the year. The Federal Open Market Committee (FOMC) explicitly downgraded M2 for use in guiding monetary policy because of the deterioration in the relationship between this measure of money and income. Meanwhile, M1 posted its third consecutive strong yearly advance in 1993, boosted by heavy shipments of currency abroad and record levels of mortgage refinancing activity.

The Trading Desk continued to frame its procedures for achieving the desired degree of reserve pressures with reference to the amount of seasonal and adjustment borrowing from the discount window believed to be consistent with Federal funds trading around a given level. In practice, the relationship has not been very dependable for a number of years, and the Desk has treated the borrowing allowance very flexibly. While banks appeared to have become less reluctant recently to tap the discount facility because of their improving financial condition, routine borrowing remained very low. It was held down because sufficient reserves were generally provided to meet demands, and the spread between the Federal funds rate and the discount rate was usually slight. Consequently, banks had little incentive to borrow.

The Desk continued to face large needs to add reserves in 1993, primarily because of the rapid growth of currency and transactions deposits. Consequently, the Desk purchased a record $37 billion of securities during the year while selling none. The purchases were about equally divided between Treasury coupon securities and bills. The Desk also arranged a substantial volume of repurchase agreements during the year to address short-term variations in reserve availability.

In formulating its reserve strategy within a two-week maintenance period, the Desk sometimes faced inconsistencies between forecasts of the reserve need, based on staff estimates of required reserves and operating factors, and the behavior of the Federal funds rate. In these circumstances, it had to judge which indicator was giving the more reliable reflection of the reserve picture. On those occasions when the Desk had reasonable confidence that a reserve need existed, it preferred to meet at least a portion of the estimated need, even without confirmation from the Federal funds rate. For instance, reserve management practices at banks often caused the funds rate to be soft early in a maintenance period and on Fridays even when reserves were scarce. Banks attempted to avoid building up large excess reserve positions before the final days for fear that they might not be able to eliminate them without risking an overnight overdraft in their account and the associated stiff penalties charged. When the Desk anticipated that the funds rate might fall below the expected level on a subsequent day despite a reserve shortage, it often executed fixed-term multiday repurchase agreements, rather than the standard withdrawable type, to ensure that the reserves stayed in place.

At times when the forecasts were believed to be more subject to error than usual, the Desk gave more weight to the Federal funds rate in planning its operations. Operating factors affecting reserves were especially difficult to forecast during periods following major Treasury tax collection dates or with exceptionally bad weather. The Desk also was likely to respond to the behavior of the funds rate if a failure to do so could have misled observers as to the stance of Federal Reserve policy. That risk was mitigated somewhat in 1993, however, because market participants generally did not expect an imminent policy move.

II. The Setting for Policy

Economic Activity and Inflation

In 1993, many of the same factors that had restrained the economic expansion during the preceding few years continued to exert some influence, but their intensity diminished over the year. Business and household efforts to restore their financial health, defense cutbacks, and an overbuilt commercial real estate sector remained a drag on the economy. Moreover, the slow pace of job formation that has characterized the current expansion, partially the outgrowth of ongoing corporate restructuring efforts, continued to weigh on consumer attitudes and to dampen household spending. As the year progressed, however, the impact of these restraining elements seemed to fade. Meanwhile, the effects of monetary policy accommodation in place during the last few years and of lower interest rates became more apparent. As the pace of activity quickened over the second half of the year, the economic expansion appeared to have gained more solid footing.

For the year as a whole, real GDP grew nearly 3 1/4 percent, about 3/4 of a percentage point below the previous year's increase.[1] Economic growth fell back to under 1 percent in the first quarter of 1993 following a burst of activity in the final quarter of the preceding year (Table 1). Consumer spending almost came to a standstill, and net exports deteriorated sharply as many of the country's major trading partners remained mired in recession. Household spending rebounded in the following quarter; however, net exports continued to shrink, and businesses aggressively pared their inventories, leaving GDP growth at just under 2 percent. In the final two quarters of the year, consumer spending continued to climb, particularly for more durable items. Meanwhile, residential construction boomed as mortgage rates sank, investment in equipment remained robust, and businesses gradually switched from drawing down to building up their inventories by the end of the year. Even a slight improvement in the U.S. net export position was registered in

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[1]This growth rate, and all annual increases reported in this section, are measured from the fourth quarter of 1992 to the fourth quarter of 1993. Quarterly growth rates reported in this section are seasonally adjusted and annualized.

TABLE 1

Real Gross Domestic Product And Its Components
Seasonally Adjusted Annual Rates of Change
(except as noted)

	1992 IV	1993 I	1993 II	1993 III	1993 IV	1991-IV to 1992-IV	1992-IV to 1993-IV
Real GDP	5.7	0.8	1.9	2.9	7.5	3.9	3.2
Change in inventory accumulation*	-0.9	20.6	-16.3	-6.5	6.9	1.6	4.7
Final Sales	5.8	-0.8	3.2	3.4	6.9	3.8	3.1
Consumption	5.6	0.8	3.4	4.4	4.6	4.0	3.3
Durables	13.2	-1.3	10.8	7.6	15.4	9.7	8.0
Nondurables	7.3	-2.1	2.7	3.7	3.6	3.6	1.9
Services	2.9	3.1	2.1	3.9	2.4	2.8	2.9
Producers' durable equipment	11.5	19.9	19.8	10.0	24.9	11.4	18.5
Nonresidential structures	-2.1	0.5	8.1	0.3	14.2	-2.0	5.6
Residential construction	32.8	1.5	-9.5	11.9	31.0	17.6	7.7
Change in net exports*	3.7	-21.1	-15.3	-11.1	2.2	-22.4	-45.3
Government purchases	-1.4	-6.4	4.3	0.3	0.1	1.1	-0.5
Addenda							
Savings Rate (% disposable income)	6.0	3.9	4.4	3.8	4.1	1.1**	-1.9**
Index of industrial production	6.3	5.4	2.2	2.9	6.5	3.2	4.2
Capacity utilization rate (level)	80.4	81.1	81.2	81.4	82.3	1.1**	1.9**
Change in nonfarm payroll employment (thousands)	298	517	547	389	503	786	1955
Change in manufacturing payrolls	-91	28	-121	-95	2	-358	-186
Civilian unemployment rate (level)	7.3	7.0	6.9	6.7	6.5	0.3**	-0.8**

* Billions of 1987 dollars.
** Change in rate.

Data are as of March 4, 1994.

the final quarter. As a result, GDP growth picked up to about 3 percent in the third quarter and then surged to 7 1/2 percent in the fourth quarter.[2]

While economic activity steadily improved over the year, inflation continued to subside in 1993, as measured by most aggregate price indicators (Table 2). Excluding the more volatile food and energy components, consumer price inflation slipped in 1993, and the level of producer prices was nearly unchanged on balance.[3] However, the monthly performance of these price measures was uneven. Several discomforting price increases were reported early in 1993, followed by generally modest rises, and even several declines at the producer price level, over the remainder of the year.[4]

The improvement in inflation in 1993 largely reflected past monetary policy efforts and the persistence of unutilized productive resources in the economy. However, evidence accumulated over the year that upward pressures on prices could be coalescing. For one thing, increases in employment compensation showed no tendency towards further moderation. Moreover, faster output growth spurred greater hiring over the second half of the year, and the slack in labor markets diminished, as reflected in a falling unemployment rate. Excess capacity in product markets also dwindled, and by the end of the year capacity utilization rates in industry were nearing levels historically associated with firming price pressures.

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[2]The recorded third quarter growth rate was reduced modestly by the effects of summer flooding in the Midwest and drought in the Southeast.

[3]Movements in the total consumer and producer price series were affected by extremes of weather in various agricultural areas that caused some distortion to commodity prices, and by falling energy prices late in the year.

[4]A number of analysts felt this uneven pattern partly reflected measurement problems, including faulty seasonal adjustment factors, that exaggerated the reported increases early in the year, particularly at the consumer price level.

TABLE 2

Price Information
Seasonally Adjusted Annual Rates of Change

	1992 IV	1993 I	1993 II	1993 III	1993 IV	1991-IV to 1992-IV	1992-IV to 1993-IV
Consumer price index							
Total	3.3	3.0	3.1	1.9	3.0	3.1	2.7
Excluding food and energy	3.5	3.6	3.4	2.5	2.9	3.5	3.1
Producer price index							
Total	1.6	1.4	3.7	-3.6	-0.1	1.6	0.3
Excluding food and energy	4.6	2.6	1.2	-4.7	2.2	2.0	0.3
Implicit GDP deflator	3.3	3.6	2.3	1.6	1.3	2.8	2.2
Fixed-weight GDP index	3.3	4.3	2.6	2.2	2.2	3.3	2.8
Employment cost index*	3.9	3.8	3.5	3.4	3.4	3.4	3.5

* This index covers civilian workers and is computed for the final month of each quarter. The growth rates represent annualized changes from the final month of the previous quarter.

Data are as of March 4, 1994.

Monetary Aggregates

Over the past several years, the broader monetary aggregates have steadily lagged behind total spending growth in the economy, a pattern that persisted in 1993. Both M2 and M3 actually fell in the early months of the past year, spurted briefly in the spring, then lapsed into a sluggish growth pattern over the remainder of the year. For the year as a whole, M2 increased only 1.4 percent, and M3 advanced a mere 0.6 percent (Chart 1).[5] Ongoing structural adjustments at depository institutions, changes in prevailing attitudes towards debt, and the expanding array of borrowing and investment options available to businesses and consumers all help to explain why the broader aggregates have continually been so weak.[6] The Committee took the potential impact of these factors into account when it set relatively low growth ranges for M2 and M3 at the beginning of 1993.[7] By the time of the mid-year review of the aggregates, the strength of the forces depressing M2 and M3 appeared to have been underestimated to some extent, and staff analysis

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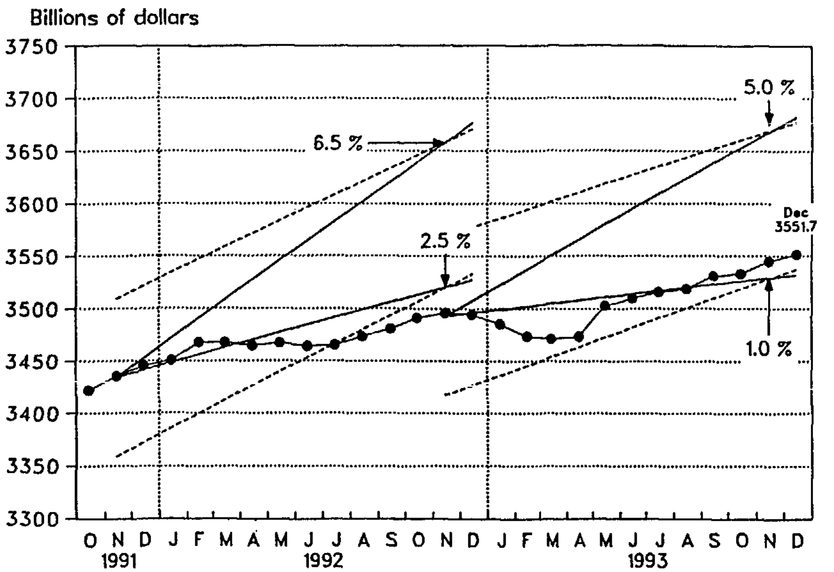
[5]The data on all the monetary aggregates are as of January 27, 1994, before the annual seasonal and benchmark revisions of February 3. The earlier data better represent the information available to the Committee when it was conferring. The revisions available as of February 3 had little impact on total growth over the year. On balance, the revisions for all the aggregates tended to redistribute some of the growth from the last three quarters of the year into the first quarter. All annual changes of the monetary aggregates reported in this section are measured on a fourth quarter to fourth quarter basis. The data on nonfinancial debt appearing in Chart 1 and reported in the following section are as of March 3, 1994.

[6]These financial market developments have been described in some detail in previous editions of this report. The weakness in M2 prior to 1993 came despite a decline in the opportunity cost of holding these deposits using traditional measures. In 1993, the opportunity cost of holding M2 deposits turned up, which could explain some of the continued weakness in that aggregate during the year.

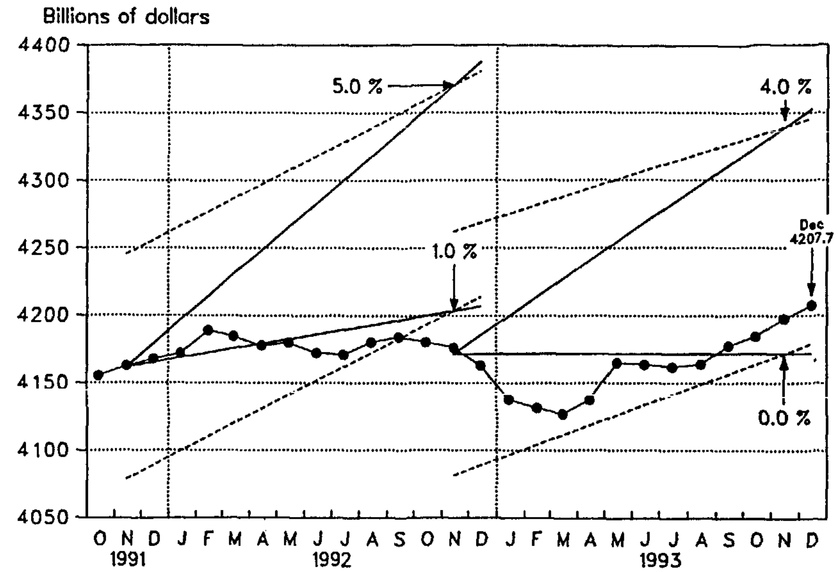
[7]The range for M2 set in February was 2 to 6 percent, and the range for M3 was 1/2 to 4 1/2 percent. Both ranges were 1/2 percentage point lower than the provisional ranges for 1993 set the previous July.

CHART 1

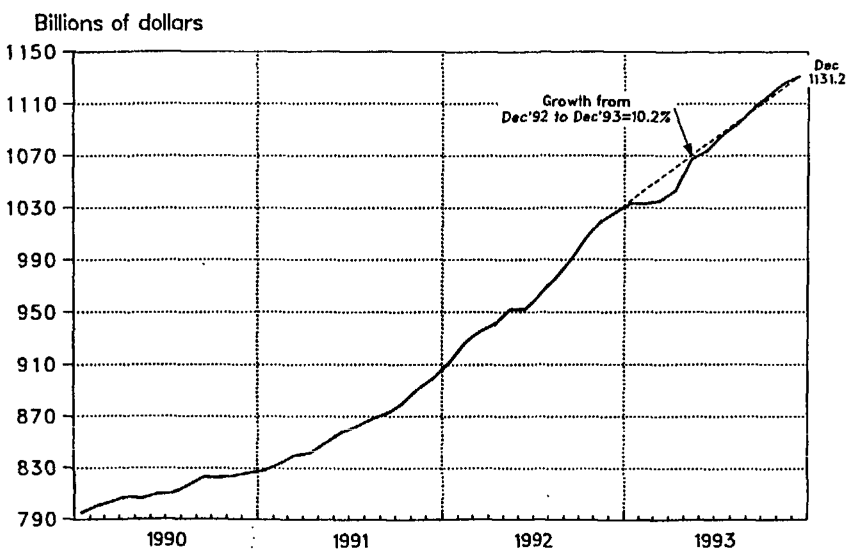
M2 : LEVELS AND TARGETS



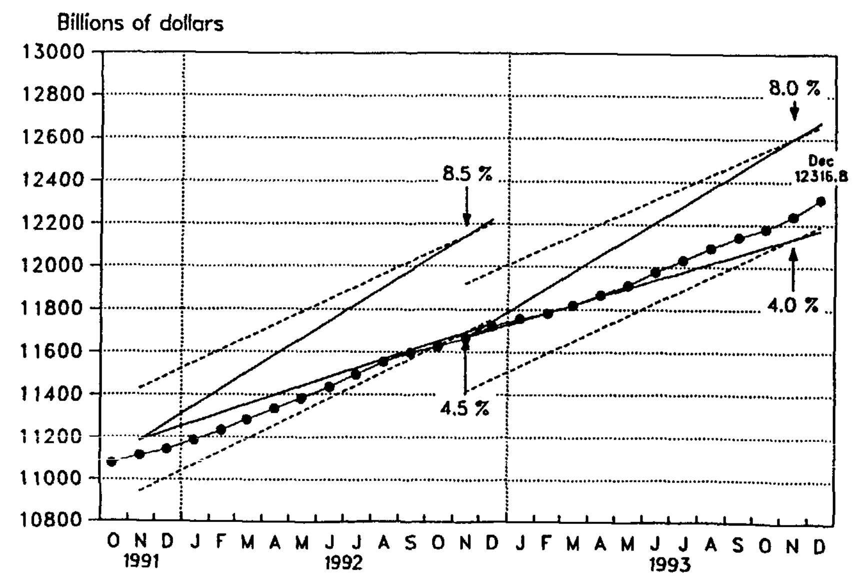
M3 : LEVELS AND TARGETS



M1 LEVELS



DOMESTIC NONFINANCIAL DEBT :
LEVELS AND MONITORING RANGES



suggested that velocity would continue to grow strongly over the balance of the year. In particular, stock and bond mutual funds, widely viewed as a readily available investment alternative to these aggregates, experienced strong growth.[8] In response to these developments, the ranges were lowered in July, in what was designed to be solely a technical adjustment.[9] Around that time, the Chairman also indicated that M2 had been downgraded for use in guiding monetary policy because of the breakdown of the historical relationships between this measure of money and income.

In sharp contrast to the performance of the broader aggregates, M1 grew rapidly in 1993 for a third consecutive year. M1 rose 10.5 percent over 1993, and all the major components increased significantly.[10] The extraordinary pace at which households refinanced mortgages in response to plunging mortgage rates, captured in Chart 2, led to rapid growth in demand deposits in many months and explains some of the strength in demand deposits over the year.[11]

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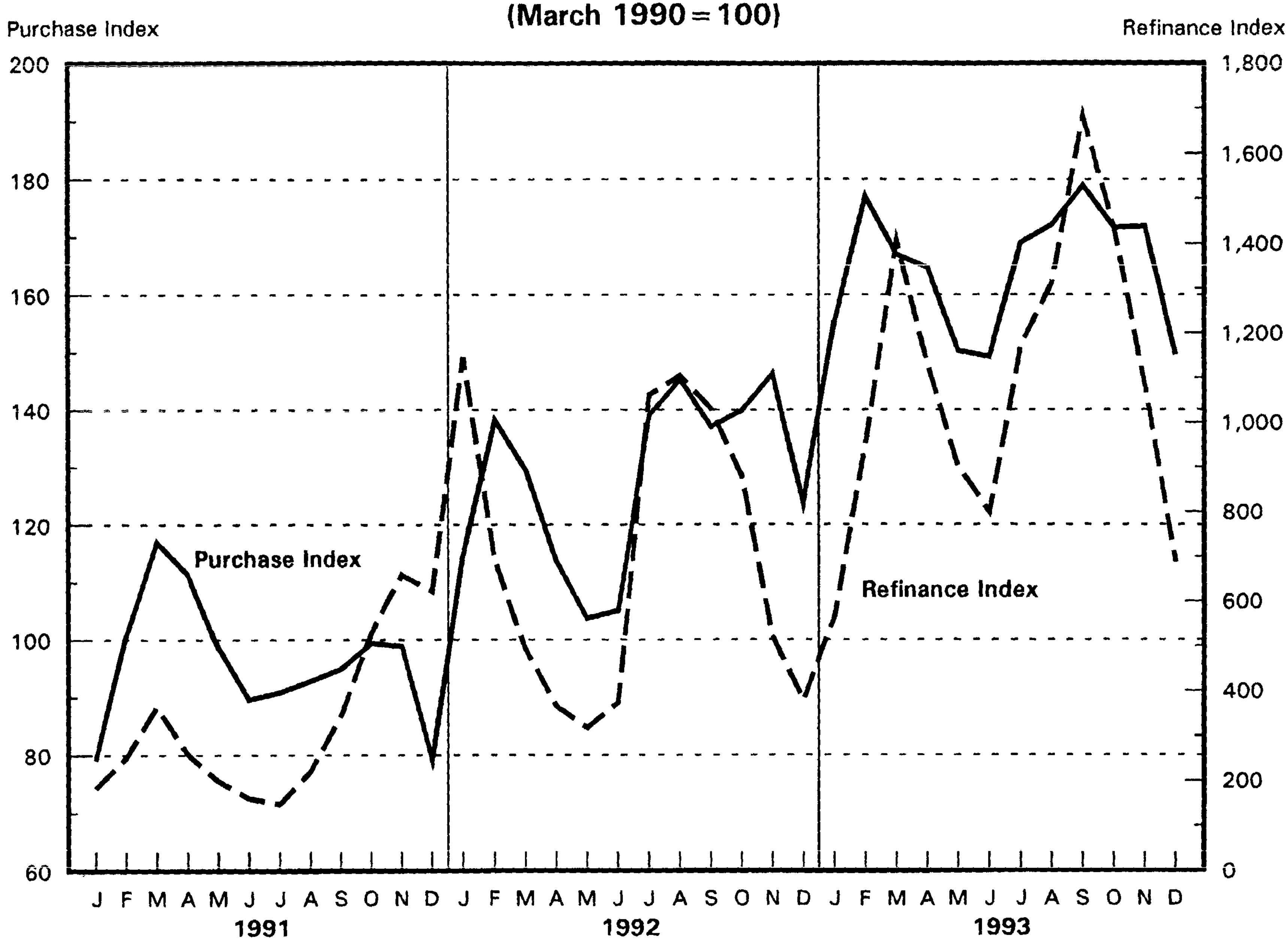
[8]The popularity of these mutual funds was enhanced by the steepness of the yield curve and hopes that capital gains in the bond and stock markets could be sustained. For 1993 as a whole, M2 plus stock and bond mutual funds grew by an estimated 5 1/2 percent.

[9]The range for M2 was reduced by 1 percentage point in July, and the M3 range was lowered by 1/2 percentage point. The monitoring range for domestic nonfinancial debt was also lowered by 1/2 percentage point in July.

[10]The strength in demand and other checkable deposits came despite a slight increase in the opportunity cost of holding these deposits, following several years of decline. The effective rate paid on interest-bearing checkable accounts slipped in 1993 while market rates on other short-term instruments were fairly flat.

[11]Prepayment activity raises demand deposits with a short lag because servicers of refinanced mortgages typically hold the prepayments in these accounts prior to disbursing funds to holders of mortgage-backed securities. However, the effect on M1 is eventually reversed, and the impact of this activity on M1 growth for the entire year was believed to be limited as refinancing activity was heavy in the final quarter of both 1992 and 1993. Estimates made by the Monetary Projections Staff indicate that prepayment activity elevated M1 growth by about 3/4 percentage point.

Chart 2
MBA Mortgage Application Indexes
(March 1990 = 100)



For currency, shipments abroad were again an important source of growth, with much of the currency believed destined for Eastern Europe.

Financial Developments

Yield movements

In 1993, a powerful rally in securities markets drove interest rates on intermediate- and long-term debt down to levels not seen in twenty years. A sustained downward move in these yields began late in 1992 and extended into the final quarter of this past year, although it was punctuated by periods of consolidation and back-up in rates (Chart 3). By mid-October, yields on many longer term Treasury coupon securities had fallen some 150 basis points from where they stood at the start of 1993.[12]

Several developments supported this market rally. Recent disinflationary trends in product and labor markets, and perceptions that the underlying pace of economic expansion remained subdued dampened inflationary expectations. Negotiation and passage of what was perceived as a credible package of fiscal restraint also played a part. In addition, some analysts felt that the Treasury's decision to reduce its reliance on longer term debt, a development discussed below, may have been a contributing factor.

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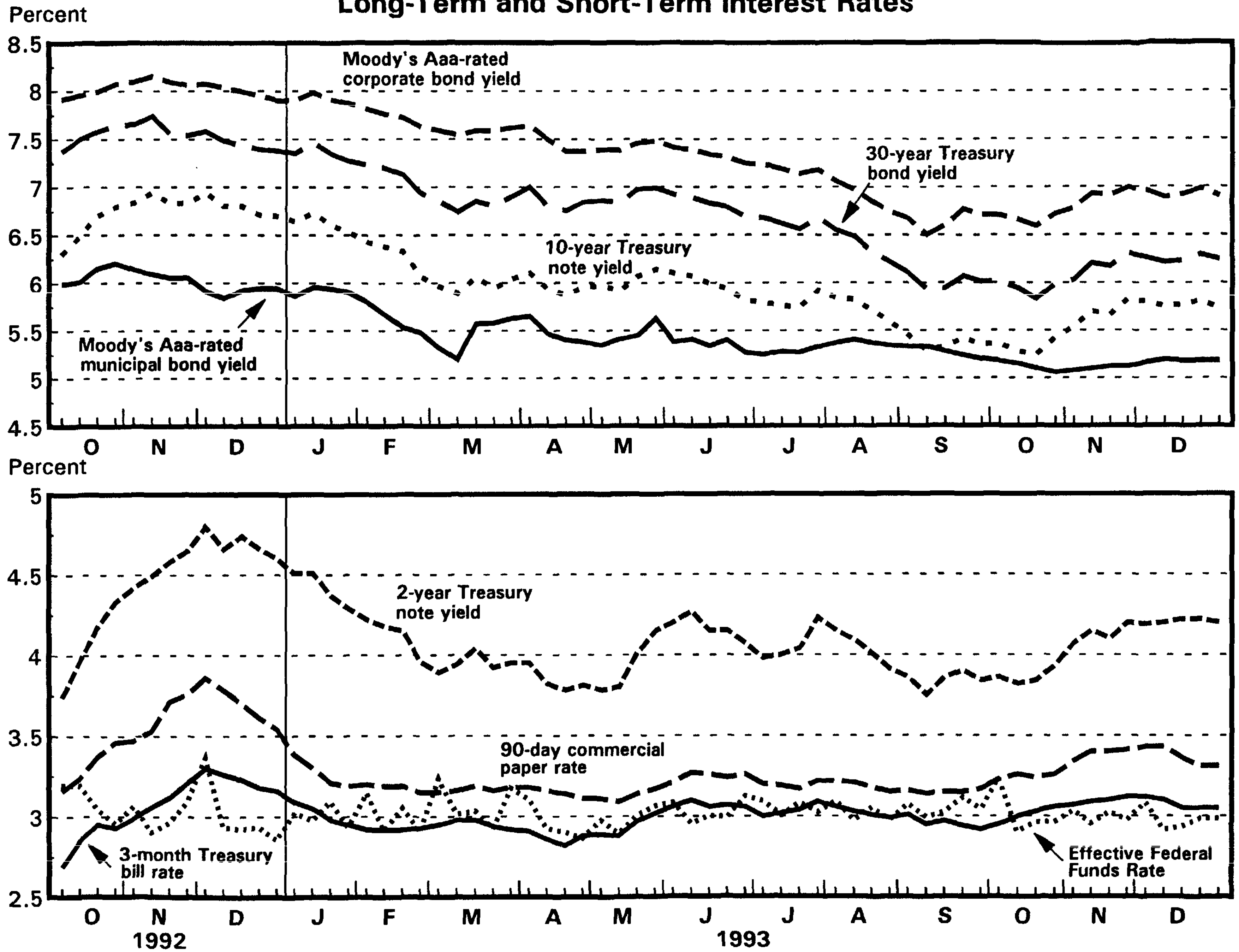
[12]Between the end of 1992 and mid-October, the yield on the newest 30-year bond fell over 160 basis points, reaching 5.78 percent on October 15, the lowest yield since the Treasury began its regular issuance of 30-year bonds in 1977.

Bond yields had been much lower prior to the mid-1960s, at which time a legal prohibition of Treasury bonds with coupons above 4 1/4 percent forced the Treasury to discontinue bond issuance. For instance, in the 1940s, the Treasury sold a number of long-term bonds at yields of 2.50 percent. In the early to mid-1950s, yields set on the handful of long-term bonds sold were between 3 and 3.25 percent. Between 1958 and 1963, the Treasury sold long-term bonds at yields of 3.25 to 4.25 percent. The Treasury gained a partial exemption from the 4 1/4 percent ceiling in 1971. Bonds sold between that date and 1976--mostly with maturities of about 20 to 25 years--had yields in a range of about 6.8 to 8.6 percent.

Chart 3

Long-Term and Short-Term Interest Rates



Meanwhile, declines in short-term interest rates were limited by the steady stance of monetary policy that effectively anchored these yields, so the yield curve flattened substantially (Chart 4).

Most interest rates rose abruptly early in the fourth quarter as evidence accumulated that an upsurge in economic activity was underway. Participants questioned whether the lower yields reached during the extended market rally were justified by economic fundamentals, and many investors took action to protect accrued profits, which added upward momentum to the backup in rates. Yields then moved erratically over the final month or two of the year as investors reassessed economic and policy prospects.

Despite the partial retracement late in the year, yields on intermediate- and long-term Treasury securities still fell by some 80 to 100 basis points over the year as a whole.[13] The two- to thirty-year coupon yield curve flattened by about 75 basis points on balance, although it still remained relatively steep by historical standards.

Financial Market Conditions

Borrowers flooded the major credit markets with debt in 1993 in response to lower interest rates. Investment-grade corporate offerings jumped about 25 percent to a record $314 billion.[14] Below-investment-grade issuance climbed by over 50 percent to $50 billion, surpassing even the highest levels reached in the 1980s. Municipalities also sold an unprecedented amount of tax-exempt debt, up about 25 percent to $290 billion, with two-thirds of it

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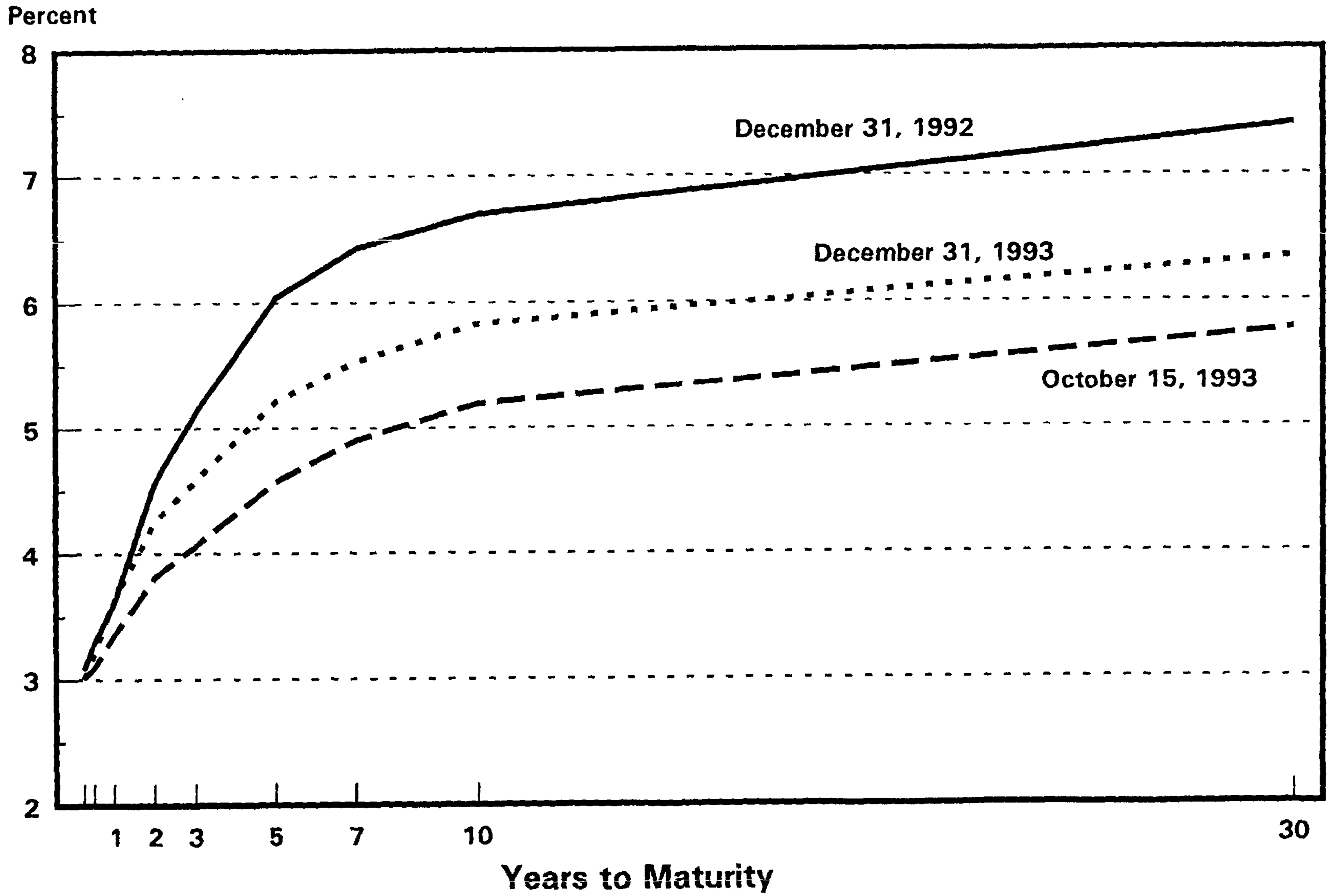
[13]At the end of 1993, the yield on the latest bond was 6.35 percent, compared with a rate of 7.39 percent on the most recent bond outstanding one year earlier. But as discussed in the section on Treasury finance, scarcity considerations may have exaggerated the implied decline in 30-year yields.

[14]This total excludes all mortgage-backed, asset-backed, and convertible debt.

Chart 4

Yield Curves for Selected U.S. Treasury Securities



intended to refinance outstanding issues. The defeasance-related purchases of Treasury securities generated by this refinancing activity were an important source of demand in the Treasury debt market at times during the year. Meanwhile, falling mortgage rates induced homeowners to refinance mortgages at an extraordinary pace, coming in several waves during the year. This prepayment activity made mortgage-backed instruments less attractive to investors and reportedly led many investors to divert funds at least temporarily from the mortgage-backed market into longer dated Treasury issues.

The lower yield environment, combined with the continued forward momentum in the economy, helped financial market conditions to improve further in 1993. Corporate profitability was up substantially. Meanwhile, corporate debt upgrades outnumbered downgrades for the first time in nearly a decade.[15] These positive developments were pronounced in the Bank Holding Company (BHC) sector. Many banks reported sharply higher profits in 1993, and ratings upgrades far exceeded downgrades.[16] Despite the improved financial health of many banks and their borrowers, depository lending showed few signs of revitalization.[17] Lending to consumers did pick up over the year, but borrowing by businesses remained flat. The continued restrained pace of lending by depositories reflected changed attitudes towards credit by many

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[15]According to Moody's Investor Service, upgrades in 1993 exceeded downgrades for the first time in nine years, by 163 to 154. According to Standard & Poor's, corporate upgrades exceeded downgrades for the first time since 1980, by 343 to 263.

[16]Moody's upgraded 50 banks and downgraded only 4, while S&P's upgraded 36 banks and downgraded 5.

[17]Total depository lending rose about 2 3/4 percent measured on a fourth quarter over fourth quarter basis.

borrowers, lingering caution on the part of bankers, and the availability of alternative sources of business credit.

As a direct result of lower interest rates, the debt servicing capabilities of consumers and businesses improved markedly in 1993, easing the financial burdens that have weighed on the economy in recent years. Households began to take on new debt at a somewhat accelerated pace in the latter half of 1993, so their ratio of debt to income actually edged higher on balance over the year. In contrast, net business indebtedness was little changed as corporations continued to hold the line on new borrowing, either by deferring spending, by financing a greater portion of purchases with improved cash flow, or through equity issuance. For the economy as a whole, growth of private domestic nonfinancial debt accelerated moderately to about 3 3/4 percent in 1993.

Treasury finance

In May, the Treasury announced an important shift in the pattern of its borrowing. After a review of the issue, the Treasury concluded that it would reduce its real interest costs over time by modestly shortening the average maturity of its debt. The Treasury indicated that, henceforth, it would issue 30-year debt semiannually, rather than quarterly, with bonds to be sold only in February and August.[18] Moreover, the quarterly issuance of seven-year notes was discontinued. The Treasury planned to offer more bills and coupon

[18]Although the frequency of bond issuance was halved, the amount of bonds to be sold was cut somewhat less, by about 40 percent.

securities with maturities of three years or less to make up for reduced issuance of longer term debt.[19]

This modification to the Treasury's borrowing cycle had some impact on trading in the secondary market in 1993. Some analysts felt that the decision to pare issuance of bonds may have been a contributing factor to the flattening of the yield curve. The trading of certain specific issues was more clearly affected by the change in financing pattern. Most notably, the August 2023 bond, the last bond issued in 1993, traded at an unusually large premium relative to other long-term debt.[20] This issue was relatively scarce in the financing market soon after it was first issued, and it became much more so following the midquarter refunding auctions in November, the first to exclude a 30-year bond under the Treasury's new financing regime.[21] Many market participants viewed the February 2023 bond as a better indicator of long-term debt yields and maintained its use as the benchmark for comparing yields in other markets.

In other Treasury auction developments, the Treasury decided to extend for a second year, through August 1994, its experiment with a uniform-price auction format for its monthly two- and five-year note sales. In April, the

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[19]Partly reflecting this development, the average maturity of the Treasury's total outstanding debt slipped by 2 months in 1993 to end the year at 65 months, as shown in Appendix A, Table A-3.

[20]The spread in interest rates between this issue and the February 2023 bond, the previously issued bond, widened to 28 basis points at one point. At year-end, the yield on the older issue, at 6.49 percent, was 14 basis points above the rate on the newest issue.

[21]There were other notable instances when certain Treasury issues were scarce in the financing market. The February 2023 bond and 2003 ten-year note were very scarce until both issues were reopened at the May refunding. The August 2003 ten-year note was also very scarce until reopened in November. All three issues were close enough to par at the time they were reopened so as to require no special tax considerations.

Treasury first began using the Treasury Automated Auction Processing System (TAAPS), the electronic bidding system. Since that time, most major market participants have been using TAAPS routinely to bid at Treasury auctions. Further enhancements to the system are underway.

III. The Course of Policy

The degree of reserve pressure was not changed in 1993, although the Committee adopted asymmetric directives biased toward tightening in May and July in response to inflation worries. During the rest of the year, directives were unbiased since inflation pressures were contained and economic growth was moderate. In the latter part of the year, a firming move was considered the probable next step, but it was not thought to be imminent.

As the year began, evidence suggested that a moderate expansion was underway, with inflation still trending lower. Against this background, the Committee initially left reserve pressures unchanged and retained a symmetric directive with no presumption about the likely direction of any adjustment to policy over the intermeeting period (Table 3). Over the first few months of the year, evidence accumulated that the expansion was slowing somewhat. At the same time, consumer and producer price increases were larger early in the year than those reported during most months of 1992. Nonetheless, continuing favorable trends in labor costs tempered concerns. Most Committee members felt that maintaining the existing degree of reserve pressure most appropriately balanced the opposing risks of faltering economic expansion and a resurgence of inflation.

During the second quarter, evidence of both a slowing expansion and a pickup in inflation continued to accumulate. Although temporary anomalies, including distorted seasonal factors and measurement problems, seemed to be

TABLE 3

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

Date of Meeting	Anticipated Short-term Growth of M2 and M3	Discount Rate (Percent)	Borrowing Assumption for Deriving NBR Path (Millions of Dollars)	Associated Federal Funds Rate[1] (Percent)	Effect on Degree of Reserve Pressure	Guidelines for Modifying Reserve Pressure between Meetings[2]
12/22/92	M2 growth of 1 1/2 percent and M3 about unchanged from November through March	3	50	3	Maintain	Slightly greater reserve restraint or slightly lesser reserve restraint would be acceptable.
2/2 to 2/3/93	Little change over January to March	3	50	3	Maintain	"
3/23/93	Moderate growth over the second quarter	3	50 75 on 4/22* 100 on 5/13*	3	Maintain	"
5/18/93	Appreciable growth over the second quarter	3	100 125 on 5/20* 150 on 6/10* 200 on 6/24*	3	Maintain	Slightly greater reserve restraint would or slightly lesser reserve restraint might be acceptable.
7/6 to 7/7/93	Modest growth over the third quarter	3	200 225 on 7/8* 250 on 7/22*	3	Maintain	"
8/17/93	Modest growth in M2 and little net change in M3 over the balance of the third quarter	3	250	3	Maintain	Slightly greater reserve restraint or slightly lesser reserve restraint might be acceptable.
9/21/93	Modest growth over the balance of the year	3	250 225 on 10/14* 200 on 10/28* 150 on 11/4* 100 on 11/11*	3	Maintain	"
11/16/93	Modest growth over coming months	3	100 75 on 11/26* 50 on 12/9*	3	Maintain	"
12/21/93	Moderate growth over coming months	3	50	3	Maintain	"

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

2 Modifications to reserve pressures are evaluated "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."

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

involved in the increases registered by various price measures, the Committee also became concerned that inflationary expectations might be reemerging. In the discussion at the May meeting, the majority of Committee members felt that recent developments warranted positioning policy for a move toward restraint, to be exercised in the event that signs of intensifying inflation continued to multiply. Consequently, the Committee adopted an asymmetric directive with a bias toward tightening. In view of the special nature of the inflation concerns and the attendant uncertainties, it decided that an intermeeting discussion would be appropriate before making a tightening move.

Inflation reports for May, released near midyear, were encouraging, though the impression remained that progress toward price stability had been at least interrupted. Consequently, at the July meeting, the Committee retained the bias toward tightening adopted at the previous meeting since the next move was seen as more likely to be in that direction. Moreover, a return to symmetry could have been misinterpreted as an indication of worries about the sustainability of the expansion or as a wavering in the commitment to fight inflation. The Chairman's semiannual Humphrey-Hawkins testimony before Congress later in July emphasized that short-term interest rates would have to rise at some point. The Chairman characterized monetary policy as accommodative when judged by the low level of real short-term interest rates and indicated that this posture, while appropriate in recent years in helping the economy overcome its "headwinds," would need to change as the recovery progressed.

Later in the summer, a combination of influences, including the relatively slow rate of expansion in the first half of the year, the impression that the deficit-reduction legislation would continue to restrain the economy, and the release of more favorable inflation data, weakened the case for a near-term policy adjustment. While the FOMC continued to view a firming move as the likely next step, it no longer considered such a move to be imminent. The Committee reflected this posture in its return to an unbiased directive at the August meeting. Over the remainder of the third quarter, the economy appeared to be expanding at a moderate pace, price developments remained favorable, and the Committee continued to leave reserve pressures unchanged.

During the final months of the year, evidence accumulated that the pace of economic expansion was accelerating. Numerous reports indicated robust economic growth during the fourth quarter. However, a return to more moderate growth seemed likely in early 1994 and beyond, in part stemming from still-forthcoming adjustments by individuals to recent, retroactive tax law changes, as well as continuing weakness abroad.

In the discussion at the December meeting, the Committee again recognized that, at some point, policy most likely would need to be adjusted from its quite accommodative stance to a more neutral stance to contain inflation and to continue to provide a sound basis for sustained economic expansion. While it was felt that such a move might have to be made sooner rather than later, sufficient slack remained in the economy and enough uncertainties surrounded the outlook to make existing policy acceptable. Furthermore, since any tightening action would represent a turn in policy, following a long period of declining and steady interest rates, there was some concern that it might have a greater effect than usual on financial markets. This prospect argued for taking an action at a meeting, with the benefit of a

Committee review, rather than between meetings based on an asymmetric directive. Consequently, the FOMC voted to maintain its symmetric posture.

IV. Implementation of Policy

Operating Procedures

Borrowed reserves and the Federal funds rate

In 1993, the FOMC continued to express its formal policy objectives in terms of the "desired degree of reserve pressure," specifying an assumed amount of adjustment plus seasonal borrowing from the discount window. (These anticipated levels of borrowing and other reserve measures for 1993 are presented in Table 4.) A stable relationship between the level of borrowing and the spread between the Federal funds rate and the discount rate would lead the borrowing allowance to be associated with Federal funds trading within a band surrounding an expected level. For a number of years, however, the demand for borrowed reserves has not been sufficiently dependable to serve as a primary guide to reserve pressures. Consequently, the Desk, in its day-to-day implementation of policy, has used staff estimates of the demand for and supply of reserves, along with the behavior of the Federal funds rate, as guides to determining the reserves needed to achieve the desired degree of reserve pressure.

A series of developments beginning around the middle of the 1980s made the relationship between borrowing and the Federal funds rate less reliable. As was discussed in more detail in earlier issues of this report, increases in financial stress in the banking system led the public to associate a bank's use of the discount window with the possibility that it was experiencing difficulties. Banks responded by making extraordinary efforts to avoid borrowing at the discount window. They often bid the interbank Federal funds

TABLE 4
1993 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	Assumed ER	Extended Credit Borrowing
6-Jan-93	56289	56253	1385	1437	57674	269	57405	57422	57254	50	50	1000	0
20-Jan-93	55657	55675	1229	1188	56886	202	56685	56662	56704	50	50	1000	1
3-Feb-93	52740	52749	1230	1250	53970	62	53906	53938	53752	50	50	1000	3
17-Feb-93	52875	52895	1495	1585	54370	33	54337	54447	53956	50	50	1000	0
3-Mar-93	52666	52546	571	748	53237	56	53181	53238	53451	50	50	1000	0
17-Mar-93	53683	53656	1290	1334	54973	93	54880	54896	54594	50	50	1000	0
31-Mar-93	52572	52630	1273	1280	53845	98	53747	53811	53600	50	50	1000	0
14-Apr-93	55763	55789	844	832	56607	38	56569	56584	56761	50	50	1000	0
28-Apr-93	55160	55147	1387	1386	56546	99	56447	56435	56111	50	75	1000	1
12-May-93	55217	55203	828	919	56044	142	55902	55981	56133	75	75	1000	1
26-May-93	54649	54659	1202	1181	55851	105	55746	55736	55596	100	125	1000	0
9-Jun-93	56109	56098	824	911	56933	118	56815	56890	56985	125	125	1000	0
23-Jun-93	56477	56467	772	791	57248	158	57091	57100	57241	150	150	1000	0
7-Jul-93	56311	56497	1299	1244	57610	311	57300	57430	57159	200	200	1000	0
21-Jul-93	57294	57219	967	1040	58260	220	58041	58039	57998	225	225	1000	0
4-Aug-93	56021	56022	1112	1115	57133	232	56902	56906	56729	250	250	1000	0
18-Aug-93	57673	57741	750	712	58422	431	57992	58023	58420	250	250	1000	0
1-Sep-93	56136	56181	1121	1080	57257	305	56952	56956	56945	250	250	1000	0
15-Sep-93	58845	58827	874	878	59718	544	59175	59162	59579	250	250	1000	0
29-Sep-93	57318	57362	1300	1344	58618	322	58297	58386	58101	250	250	1000	0
13-Oct-93	58985	59053	1137	1089	60121	420	59702	59723	59900	250	250	1000	0
27-Oct-93	58692	58705	1052	1061	59744	205	59539	59563	59510	225	225	1000	0
10-Nov-93	59722	59754	1062	1031	60783	132	60652	60654	60610	200	150	1000	0
24-Nov-93	60205	60215	1102	1027	61307	74	61233	61169	61102	100	100	1000	0
8-Dec-93	60962	60902	1162	1211	62123	56	62068	62057	61838	75	75	1000	0
22-Dec-93	61880	61928	891	838	62771	60	62712	62706	62815	50	50	1000	0
5-Jan-94	62405	62403	1241	1301	63646	142	63505	63563	63401	50	50	1000	0

rate to very high levels when reserves were scarce.[22] This unusual reluctance of banks to borrow appeared to have eased somewhat in the last two years, helped by the improved financial condition of U.S. banking institutions. On those occasions when reserves were scarce relative to bank demands, the spikes in the Federal funds rate required to encourage the necessary increase in borrowing were somewhat more modest than they were a few years earlier.

Nonetheless, other factors continued to keep routine borrowing at relatively low levels. Banks rarely had much interest rate incentive to borrow in 1993. On most days, reserve levels were sufficient to keep the Federal funds rate very close to the 3 percent discount rate, in contrast to the patterns that prevailed for a number of years before September 1992 when the funds rate routinely exceeded the discount rate.[23] In addition, improved information about reserve balances in recent years has reduced the risk that a reserve shortage would not be discovered until after the Federal funds wire closed, when the discount window would be the only remaining source of reserves. Finally, large holdings of securities and low loan demand kept many banks very liquid during the year.

These factors combined to make adjustment borrowing in 1993 very low on most days. It averaged only $72 million for the year, slightly below the 1992 level. Meanwhile, total reserves averaged $57.8 billion over the year, making adjustment borrowing a very small fraction of reserves. The "frictional"

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[22]If aggregate reserve levels were insufficient to meet the demand for reserves, eventually some banks would have to borrow because the banking system as a whole cannot create reserves in other ways. For more information see, Ann-Marie Meulendyke *U.S. Monetary Policy and Financial Markets*, Federal Reserve Bank of New York, 1990, Chapter 6, pages 124-39.

[23]The effective Federal funds rate averaged 3.02 percent for the year.

levels of adjustment borrowing, a range typically experienced when banks had no interest rate incentive to borrow and large banks had no unusual internal or wire problems--seemed to be in the range of $10 to $20 million, somewhat lower than during 1992. Some exceptionally low levels of adjustment borrowing occurred during the year. In the period ended November 24, adjustment borrowing averaged only $6 million, a record low since two-week maintenance periods were introduced in 1984 (and the lowest since the $5 million average for the one-week maintenance period ended April 9, 1975). For the week ended December 8, adjustment borrowing averaged $1 million, a record low for any post-World War II week.[24] (Actual levels of borrowing and the effective Federal funds and discount rates are presented in Chart 5.)

The pattern and level of seasonal borrowing continued to respond primarily to demands for agricultural loans rather than to the degree of reserve pressure. The change in the pricing of seasonal borrowing in early 1992 from the basic discount rate to a market-based rate has reduced the incentive for the banks to use seasonal borrowing to offset aggregate reserve shortages. In most maintenance periods in 1993, seasonal borrowing was very similar to its levels in 1992 (Chart 5). An exception occurred in October when seasonal borrowing fell more slowly than at this time in past years; severe summer floods in the Midwest delayed crop planting and harvesting, leading to extensions of some seasonal credit lines.

For the year, seasonal borrowing averaged $109 million, compared with $97 million in 1992. It peaked at $246 million in the periods ended September 1 and 29, and it reached its lowest average level of $10 million in the periods ended January 20 and February 3. To keep pace with the movements

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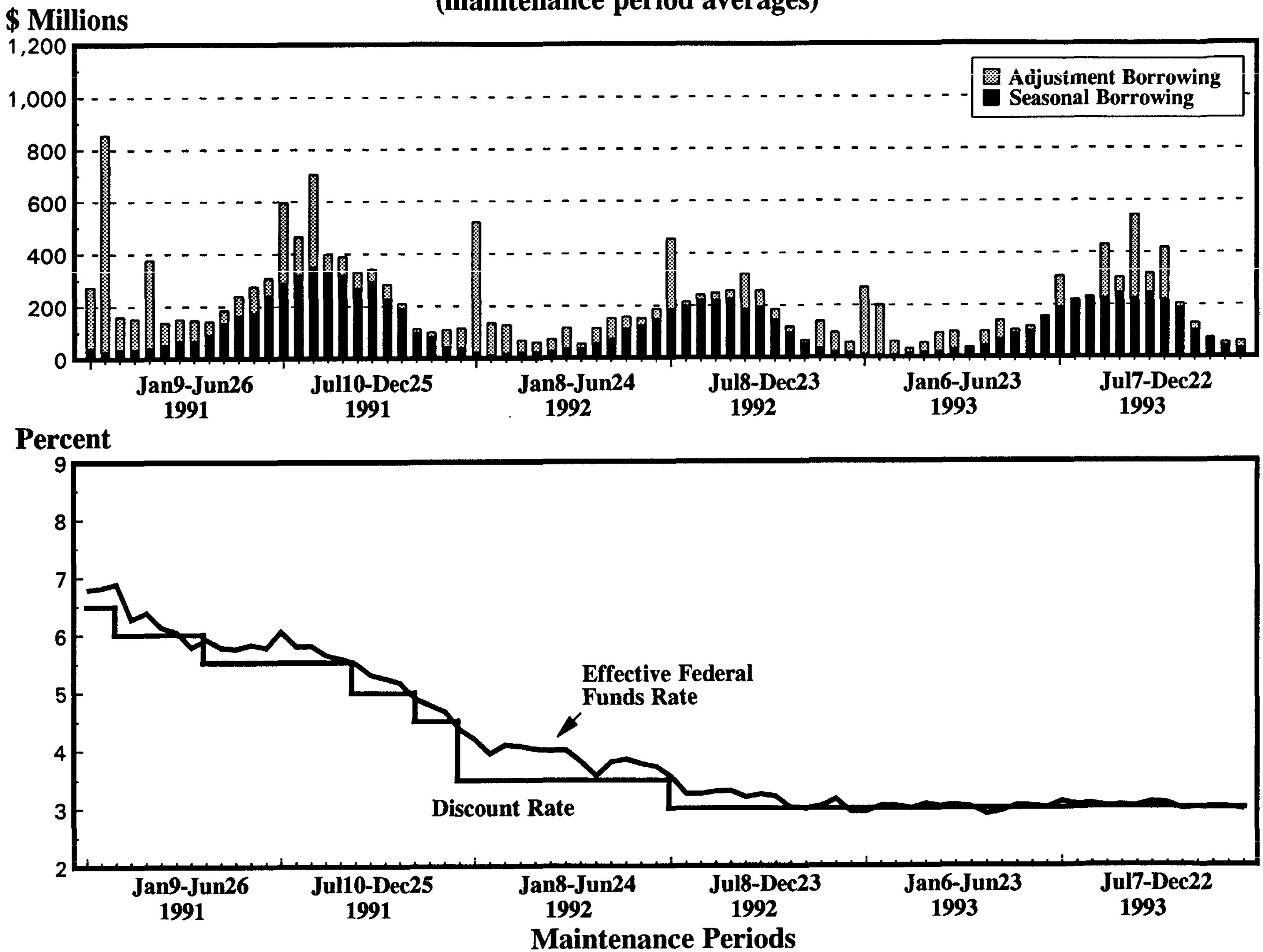
[24]Borrowing also averaged $1 million in the week ended January 13, 1943.

Chart 5
Borrowing, Federal Funds Rate, and Discount Rate
(maintenance period averages)



in seasonal borrowing, the Desk made seven upward technical adjustments to the borrowing allowance between April and July, and afterwards made six technical reductions to the allowance.

The Desk's Approach to Reserve Management

During the year, the Desk often faced sizable reserve needs which it addressed with a mix of outright and temporary transactions. Outright market purchases were made when staff forecasts suggested that a large need for reserves would persist for several maintenance periods. Temporary transactions addressed remaining reserve needs and were used to deal with shorter term variability and uncertainty about the reserve picture.

Outright operations

The System's portfolio of U.S. Government securities expanded by a record $35.4 billion in 1993 (delivery basis), primarily because of the rapid growth in currency and required reserves against transactions deposits described above.[25] Other operating factors combined to add a modest amount of reserves.[26] As is typical, the Desk's outright purchases were concentrated in the market, although the Desk also purchased a sizable amount of securities from foreign accounts. Meanwhile, no securities were sold in 1993, though $1.7 billion of securities were redeemed.[27]

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[25]Details of outright and temporary transactions in 1993 are presented in Appendix A.

[26]Specifically, growth in the demand for currency in circulation drained almost $32 billion of reserves during 1993. All other operating factors combined to add about $1 billion of reserves. Required reserves rose by about $6 billion for the year.

[27]All redemptions took place when there were no suitable replacement securities for a maturing Treasury or agency issue, or when issues were called.

The Committee had concluded in 1992, following a review of the System's portfolio management strategy, that the desired increase in the liquidity of the System's holdings had been achieved.[28] As a consequence, the Desk's outright operations during 1993 were designed to maintain or lengthen slightly the portfolio's average maturity. As it turned out, about half of the increase in the portfolio over the year reflected purchases of Treasury bills and about half reflected purchases of coupon issues. The weighted average maturity of the Federal Reserve's holdings of marketable Treasury debt rose by roughly two months.

Temporary operations

Because reserve needs were growing over most of the year and were usually permitted to run ahead of the outright purchases, most temporary transactions consisted of repurchase agreements (RPs). The Desk arranged $510.5 billion of RPs over the year in operations for the System Account and another $117.1 billion that were customer-related. The Desk relied to a greater degree than in past years on multiday System operations. There were very few instances of draining operations, with only $10.9 billion of matched sale-purchase agreements arranged in five market entries during the year.

Managing reserves within a maintenance period

For each two-week reserve maintenance period, the Trading Desk developed a strategy to bring the estimated supply of reserves into balance with the estimated demand for reserves, consistent with achieving the desired degree of reserve pressure, expressed as an objective for nonborrowed

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[28]The review had been undertaken, partly in response to a discussion during 1992 as to whether the Treasury should shorten the average maturity of its debt. Both Treasury debt management and the composition of the System portfolio were discussed in last year's report.

reserves. In planning for the period, the Desk also gave some attention to day-to-day reserve excesses or shortages, in consideration of banks' limited scope for managing short or long reserve positions. It also recognized bank strategies for managing reserves and allowed for potential revisions to operating factors and required reserves as the period progressed.

In meeting the estimated reserve need, the Desk looked to conditions in the money market for confirmation of its reserve estimates. On many occasions, the money market reflected the size of the reserve need or surplus, with a large need resulting in tight conditions and a surplus leading to softness. It was not uncommon, however, to experience discrepancies between reserve estimates and conditions in the Federal funds market. These occasions usually reflected the reserve management strategies of depositories or incorrect estimates of the reserve need on the part of either the Desk or bank reserve managers.

In many years, market expectations of an imminent change in policy also have influenced reserve demands. In 1993, however, expectations of such a change were largely absent, which assisted the Desk in dealing with discrepancies between the Federal funds rate and estimated reserve needs. With an easing move regarded as unlikely, market participants were less likely than in recent years to interpret a soft funds rate as a potential sign of easing. When the funds rate was slightly to the soft side, the Desk was able to refrain from draining reserves, and even to add reserves on a number of occasions.[29]

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[29]For example, in the maintenance period ended January 20, the Desk arranged three customer-related RPs with the funds rate at 2 15/16 percent. On May 20, the Desk arranged a four-day RP with the funds rate again at this level.

Strategies used by depository institutions to meet reserve requirements on a two-week average basis and to avoid overnight overdrafts in their accounts at the Federal Reserve often contributed to discrepancies between reserve estimates and conditions in the money market in 1993. Depository institutions continued to use similar techniques to those adopted following the cuts in reserve requirements in 1990 and 1992, despite what appeared to be a reduced need for them.[30] The cuts in reserve requirements, by lowering required reserve balances at the Fed, had increased the risk that a depository institution would be unable to work off excess reserves accumulated early in a period without running an unacceptable risk of an overnight overdraft.[31] To minimize that risk, depositories often concentrated more of their reserve holdings late in the period.

By 1993, reserve balances had risen considerably above the levels that prevailed shortly after the cuts in reserve requirements. During the previous two years, reserve balances had been increased because rapid growth in transactions deposits raised required reserves, and large banks opened and expanded required clearing balances.[32] In 1993, strong expansion in transactions deposits continued to lift required reserves. By December,

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[30]Discussions of the effects of the cuts in reserve requirements on reserve management practices appeared in the 1990, 1991, and 1992 reports.

[31]Overnight overdrafts are costly because the Fed imposes a steep penalty charge. The cost of holding excess reserves is the loss of interest that could have been earned if the reserves had been invested.

[32]A depository can establish a clearing balance by specifying an average level of reserves that it will hold at the Fed for clearing purposes. In exchange, it receives credits that it can use to pay for priced services provided by the Federal Reserve at a rate determined by the effective funds rate. At the end of 1992, total required clearing balances had reached $5.9 billion, an increase from $1.8 billion in December 1990. The level of clearing balances rose only slightly during 1993, ending the year at $6.3 billion.

required operating balances--a measure that consists of required clearing balances and the portion of required reserves that must be met with reserve balances--averaged about $34 billion, similar to the level that had prevailed in December 1990, before reserve requirement ratios were reduced (Chart 6).

The growth in required operating balances would suggest that the pressures leading banks to avoid a buildup in reserve levels early in the period should have dissipated somewhat. Yet, in 1993, depositories continued to concentrate their demand for reserves late in the period.[33] One reason that this behavior may have persisted was that the volume of daily transactions between banks has risen somewhat since 1990, increasing the need for reserve balances for processing daily transactions. Because depositories remained reluctant to accumulate reserves early in the period, reserve needs often failed to show through to the Federal funds market until after the second weekend. To some degree, the Desk accommodated this intra-maintenance period pattern in the banking system's demand for reserves, keeping cumulative excess reserves low during the early part of the period.

The Federal funds market was especially likely to be soft on Fridays, even when reserve needs were substantial, as banks were cautious about holding excess reserves over the weekend when they would count for three days. If the Desk arranged its standard type of multiday RP on Thursday, permitting the

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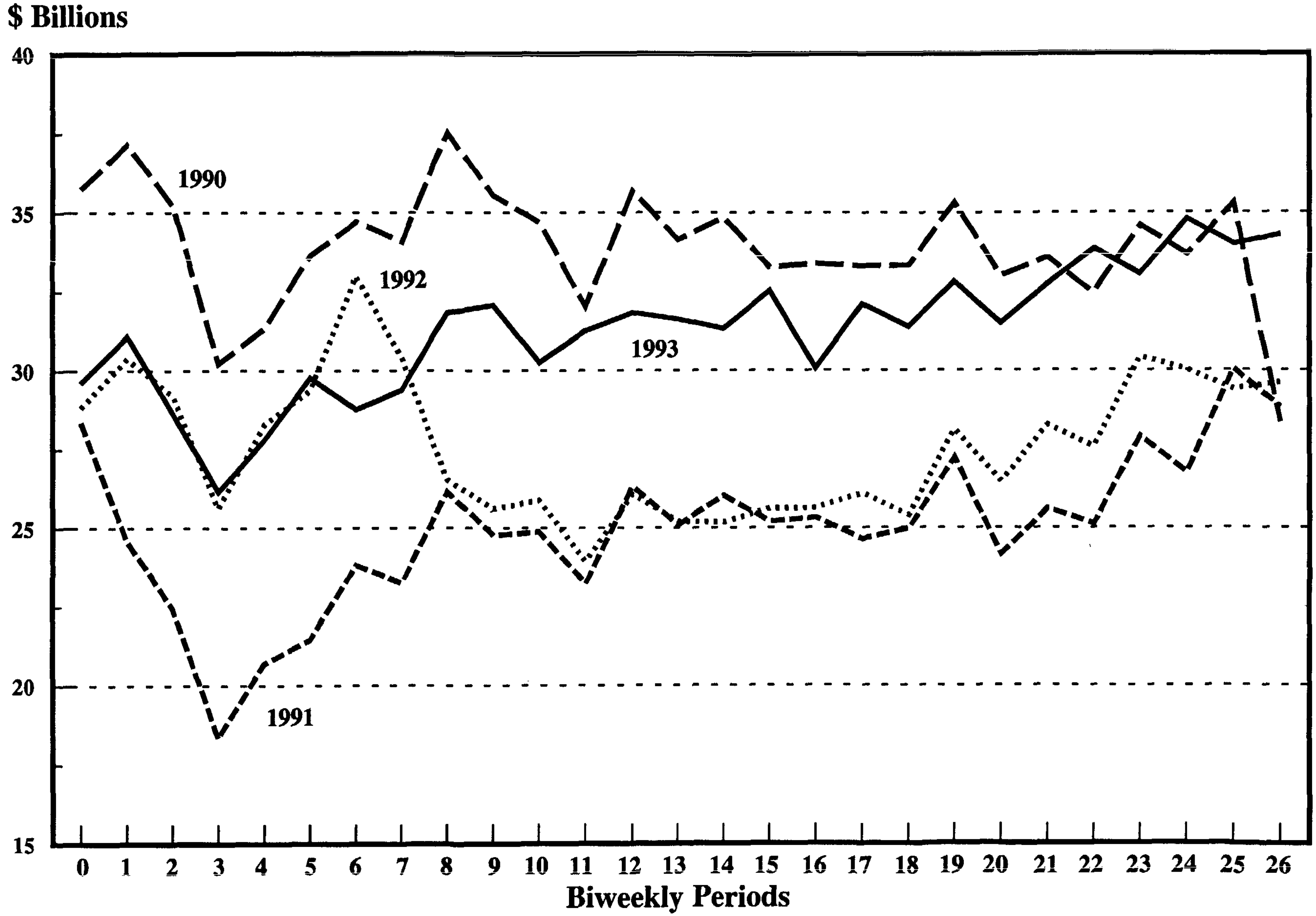
[33]As described in the 1992 report, the distribution of excess reserves within the maintenance period was reasonably uniform until December 1990. Thereafter, the distribution became decidedly skewed toward the second week of the maintenance period. After the second round of reserve requirement cuts in April 1992, the average levels in the first and second weeks of periods from that month through December 1992 were $280 million and $1,740 million, respectively. During 1993, the corresponding averages were $170 million and $1,980 million.

Chart 6
Required Operating Balances
(maintenance period averages)



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

dealers to withdraw their collateral each morning during the period of the RP, it was likely to face heavy early withdrawals when the funds rate softened on Friday. Most often, the RP rate has moved with the funds rate, and lower RP rates have given the dealers an incentive to withdraw their collateral and to finance it elsewhere. The Desk might find it difficult to replace all of the reserves withdrawn on Friday if the funds rate were below the level associated with the desired degree of reserve pressure, although a small reserve injection was sometimes feasible.

The Desk often found it advantageous during 1993 to address the problem of such early withdrawals by making use of fixed-term multiday RPs. It arranged 31 such operations during the year, a significant increase from the 9 fixed-term multiday RPs that had been arranged in 1992. Of those arranged in 1993, 23 of them extended over a weekend.[34] When fixed-term RPs were put in place on a Thursday to span the weekend, the Desk no longer had to worry that the RPs would be withdrawn, diminishing reserve supplies on Friday.[35]

The Desk also remained alert in 1993 to the possibility that an inconsistency between reserve estimates and the funds rate could reflect an

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[34]For example, in the maintenance period ended July 21, the Desk arranged three fixed-term multiday RPs, with two of them arranged on Thursdays and extending over the two weekends of the period. The funds market did in fact display its characteristic softness on both Fridays, suggesting that dealers would likely have withdrawn collateral early if the option had been available.

[35]The pricing of fixed-term RPs would reflect the expected course of overnight RP rates over the full term of the contract. For more discussion of the use of multiday RPs in reserve management and some analysis of their pricing, see "Multiday Repurchase Agreements and Reserve Management," Ann-Marie Meulendyke, October 1, 1993, and "Pricing of Fixed and Withdrawable Multiday System RPs," Peter Kretzmer, September 15, 1993, internal memoranda, Federal Reserve Bank of New York.

error in the estimates of the demand for or the supply of reserves. Forecasts of the demand for reserves are based on estimates of required reserves and the projected demand for excess reserves. Projections of the supply of reserves depend upon forecasts of the various operating factors. At times, revisions have been large.[36] When a large error seemed especially likely, for example around tax dates when Treasury's deposits at the Federal Reserve were particularly uncertain, or when bad weather made Federal Reserve float difficult to forecast, the Desk allowed itself to be guided to an increased extent by conditions in the funds market.

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[36]Appendix A reviews the accuracy of the available forecasts for reserve supply and demand.

APPENDIX
A

DESK ACTIVITY FOR THE SYSTEM ACCOUNT

APPENDIX A

DESK ACTIVITY FOR THE SYSTEM OPEN MARKET ACCOUNT

This appendix reviews the activities of the Open Market Trading Desk undertaken on behalf of the System Open Market Account during 1993. The first section details outright changes in the portfolio and the reasons for these changes. The second part discusses the temporary transactions arranged during the year. The third section reviews the accuracy of staff estimates of the supply and demand for reserves. The last section briefly discusses the System's lending activity.

I. Outright Changes in the System Portfolio

Total System holdings of U.S. Government securities expanded by a record $35.3 billion during 1993, exceeding the increase of $30.2 billion in 1992 and the previous record of $31.0 billion in 1991 (Tables A-1 and A-2). At the end of the year, the total par value of the System's holdings was just above $344 billion. The System's share of the Treasury's total marketable debt ended the year slightly above where it ended the previous three years. About half of the increase in the System portfolio occurred in bills and about half in coupons, with the five-to-ten-year sector experiencing the strongest rate of growth. As a consequence, the weighted average maturity of the System's holdings was lengthened by about two months (Table A-3).

Bank Reserve Behavior

The expansion of the portfolio was prompted primarily by changes in operating factors, which drained almost $30 billion of reserves between the maintenance periods ended January 6, 1993 and January 5, 1994 (Table A-4). Currency growth of $31.5 billion accounted for more than the full amount of the reserve drain from factors. Rapid growth in transactions deposits also led to a $6.1 billion expansion of required reserves during the year. Excess

TABLE A-1

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

	Year-End 1993	Change during ** 1993	1992
Total Holdings:	344.1	35.3	+30.2
Bills	167.9	17.7	+11.5
Coupons	171.6	18.4	+19.4
Agency Issues	4.5	-0.9	-0.6

* 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)

End of	Total Portfolio	Treasury Securities: Bills	%	Coupon Issues: Under 1 year	%	1-5 years	%	5-10 years	%	Over 10 years	%	Federal Agency 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%
1992	308,848	150,219	48.6%	37,758	12.2%	68,750	22.3%	18,903	6.1%	27,805	9.0%	5,413	1.8%
1993	344,105	167,936	48.8%	35,423	10.3%	79,826	23.2%	24,659	7.2%	31,739	9.2%	4,522	1.3%

* 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

End of	Total Treasury Issues	Within 1 year: Bills	Within 1 year: Coupons	Within 1 year: Total	1-5 years	5-10 years	Over 10 years
1960	14.3	7.4	34.8	20.1	14.8	6.3	1.1
1965	18.9	15.1	46.6	26.3	23.2	4.2	1.5
1970	25.1	29.5	29.2	29.4	23.2	26.8	3.4
1975	24.0	23.9	20.7	23.3	27.0	24.3	16.5
1980	19.7	21.7	15.7	20.1	17.5	21.7	22.4
1985	12.8	22.4	10.2	18.4	7.7	8.2	11.8
1986	12.6	25.4	9.0	20.0	6.9	7.1	10.3
1987	13.1	28.9	9.4	21.3	8.2	6.4	9.9
1988	13.2	28.5	10.1	21.4	9.1	5.1	9.5
1989	11.9	24.8	10.5	19.2	8.5	4.7	8.3
1990	11.1	22.5	9.2	17.9	8.0	4.6	7.0
1991	11.1	23.5	9.6	18.6	7.5	5.0	6.5
1992	11.1	22.8	10.3	18.4	7.1	5.9	6.4
1993	11.4	23.5	9.1	18.4	7.3	7.8	6.9

TABLE A-3

Weighted Average Maturity of Marketable Treasury Debt
(in months)

End of	Federal Reserve Holdings*	Total Outstanding
1960	19.3	55
1965	16.1	60
1970	23.9	40
1975	31.2	33
1980	53.7	48
1985	47.3	59
1986	43.7	62
1987	42.6	66
1988	40.5	67
1989	41.2	69
1990	38.7	68
1991	35.3	68
1992	36.2	67
1993	38.0	65

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

TABLE A-4

BANK RESERVES
(In millions of dollars, not seasonally adjusted)

	Maintenance Period Ended 1/5/94	Change during: 1993*	1992**
Nonborrowed Reserves	5		
Excluding extended credit	63505	6100	768
Including extended credit	63505	6100	767
Extended Credit Borrowing	0	0	-1
Borrowed Reserves			
Including extended credit	142	-127	-253
Adjustment plus Seasonal	142	-127	-252
Adjustment	126	-131	-242
Seasonal	16	4	-10
Required Reserves ***	62405	6116	269
Excess Reserves	1241	-144	247

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

System Portfolio ##	353.8	36.2	29.9
Operating Factors:			
Foreign Currency ###	19.5	0.7	-3.2
U.S. Currency	365.8	-31.5	-27.1
Treasury Balance	8.5	-1.1	2.2
Float	1.3	-1.2	1.7
Special Drawing Rights	8.0	0.0	-2.0
Gold Deposits	11.1	-0.0	-0.0
Foreign Deposits	0.3	0.1	-0.3
Applied Vault Cash	33.3	0.0	0.0
Other Items	18.7	1.3	-1.4
Foreign RP Pool +	7.7	-0.2	-0.6

* Change from maintenance period ended January 6, 1993 to that ended January 5, 1994.
** Change from maintenance period ended January 8, 1992 to that ended January 6, 1993.
*** Not adjusted for changes in required reserve ratios.
\# Sign indicates impact of changes in operating factors on bank reserves. All items are biweekly averages.
\## Includes MSPs with foreign.
\### 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.

reserves averaged $1,080 million for the year, modestly above the $1 billion formal allowance but close to the previous year's average level.

A few other operating factors also influenced reserves over the year. Net premia on the securities purchased outright in the market over the year added $2.5 billion to the level of reserves. Required clearing balances, which are included as a drain on reserves in the "other items" category when they expand, rose by only $430 million in 1993 after jumping sharply in the previous year. The net reserve impact of all foreign currency operations in 1993 was to add a modest $0.8 billion.[1] Several other factors had sizable impacts on reserves in individual maintenance periods but had no effect on the trends.[2]

Adjustment borrowing at the end of 1993 was well below the elevated level of the previous year-end while seasonal borrowing was little changed. There was no extended credit or special situation borrowing during the year.

Outright Transactions

The Trading Desk conducted outright operations at those times when reserve projections showed a large, persistent need to add reserves. The overall volume of outright operations in 1993 was slightly higher than in 1992, as purchases of Treasury bills during the year were about $3 billion above the previous year's total, while there were no outright sales of securities during 1993 (Table A-5). On four of the six occasions that the Desk entered the market to conduct outright purchases, it purchased Treasury

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[1]Interest earnings on foreign currency assets added about $1.25 billion over the year, while currency revaluations added another $0.25 billion. Sales of Japanese yen through five rounds of intervention drained just over $0.7 billion of reserves.

[2]For example, the Treasury balance drained a small amount of reserves in the final maintenance period of 1993 relative to the final period of 1992.

TABLE A-5

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

	1993	1992
Total Outright	38.6	37.9
By Type of Transaction:		
Purchases	36.9	34.1
Bills	17.7	14.7
Coupons	19.2	19.4
Sales	0	1.6
Bills	0.0	1.6
Coupons	0.0	0.0
Redemptions	1.7	2.2
Bills	0.0	1.6
Coupons	0.8	0.0
Agency issues	0.9	0.6
By Counterparty:		
Total Outright in Market	25.4	21.9
Purchases	25.4	21.9
Bills	8.6	9.7
Coupons	16.8	12.3
Sales	0.0	0.0
Bills	0.0	0.0
Coupons	0.0	0.0
Agency issues	0.0	0.0
Total Outright with Foreign Accounts	11.5	13.8
Purchases	11.5	12.2
Bills	9.1	5.1
Coupons	2.4	7.1
Sales	0.0	1.6
Bills	0.0	1.6
Coupons	0.0	0.0

*Commitment basis

coupon securities.[3] In 1992, three of the six outright market operations had been purchases of coupon securities, while in 1991, only one such operation involved coupon securities. The Desk had to redeem about $800 million of coupon securities on two occasions when there were no replacement issues for maturing seven-year notes. It did not redeem securities as a deliberate means of draining reserves during the year because reserve forecasts never called for an extended period of absorption.

The Desk also arranged transactions with foreign accounts when orders were compatible with estimated reserve needs. With fewer purchases and no sales in 1993, the volume of these transactions was down $2.3 billion from 1992. More than three-quarters of the transactions with foreign accounts in 1993 (about $9 billion) were bill purchases, although the Desk also purchased $2.4 billion of coupon securities from this source.

The Desk managed its holdings of Federally-sponsored agency securities by rolling over maturing issues into replacements, or by redeeming maturing securities when suitable new issues were not offered or when issues were called. In particular, during 1993, the Desk redeemed almost all of its maturing Federal Home Loan Bank (FHLB) issues (Appendix E).[4] In all, about $0.9 billion of the $2.1 billion of maturing agency issues were redeemed, and the amount of these securities in the System portfolio declined for the thirteenth year in a row.

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[3]Using par values, the Desk bought $3.1 billion of coupon securities on March 16, $5.0 billion of coupons on April 14, $5.1 billion of Treasury bills on June 2, $4.0 billion of coupons on August 31, $3.5 billion of bills on November 3, and $4.6 billion of coupons on November 30.

[4]In order for the Desk to roll over a maturing security into a new agency issue, the new issue must satisfy criteria relating to both size and security-type, as well as having an issue date that matches the maturity date of the old security. In 1993, most new FHLB debt had issue dates that did not match the maturity dates of their old securities.

II. Temporary Transactions

The Desk arranged self-reversing transactions in the market during the year in order to meet temporary reserve needs. While the total number of temporary transactions was almost unchanged from a year earlier, the volume of such transactions in the market exceeded the level during 1992 by almost 14 percent, totaling almost $640 billion (Table A-6). The Desk continued its recent trend toward increased usage of multiday System RPs during 1993, arranging considerably more of these transactions than it had in 1992.[5] It also arranged about the same number of overnight System RPs as it had in 1992 and continued to reduce its usage of customer-related RPs.

The number and dollar volume of matched sale-purchase transactions (MSPs) arranged in the market in 1993 fell sharply from earlier years. The Desk arranged only five rounds of reserve-draining operations during the year, two of them for maturities exceeding one business day. In contrast, the Desk arranged a total of twenty such draining operations in 1992.

The Desk typically announced any intention to add or drain reserves with a temporary operation at about 11:30 a.m. However, on several occasions during the year, the Desk announced its intended reserve operation earlier than usual in order to encourage adequate propositions.[6]

III. Forecasting Reserves and Operating Factors

In meeting reserve needs during the year, the Desk took into account potential revisions to the demand for and supply of reserves. Large revisions

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[5]The number of multiday System RPs arranged in 1992 had also represented a large increase from the total arranged in 1991. Although the number of multiday RPs has grown considerably, the average transaction size did fall somewhat in 1993.

[6]Twice during the year, on June 24 and on December 23, it arranged RPs that had been preannounced on the prior afternoon. In both cases, these were maintenance periods with particularly large reserve needs. The Desk also announced RP operations earlier in the day than usual on two other occasions (September 30 and December 31).

TABLE A-6

SYSTEM TEMPORARY TRANSACTIONS
(In billions of dollars)

	1993 Number*	1993 Volume	1992 Number*	1992 Volume
Repurchase Agreements				
System:	109	510.5	80	392.9
Maturing next bus. day	29	149.5	27	117.1
Term	80	361.0	53 #	275.9
Fixed term	31	127.2	9	40.8
Withdrawable	49	233.8	45	235.0
Customer-related	54	117.1	64	140.4
Matched Sale-Purchase Agreements				
In Market:	5	10.9	20	28.6
Maturing next bus. day	3	7.2	17	23.0
Term	2	3.8	3	5.7
With foreign accounts**	252	1464.1	253	1453.8
Total Temporary Transactions	420	2102.7	417	2015.8
In Market	168	638.6	164	562.0

* 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 2 days in 1993 and on 1 day in 1992.

\# Two term RPs arranged on 9/24/92 are counted separately as one withdrawable and one fixed term.

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

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

to projections can complicate reserve management, especially late in a maintenance period. During 1993, the accuracy of staff forecasts of required reserves and excess reserves improved modestly relative to 1992, and revisions to beginning-of-period net operating factor estimates declined substantially, although forecasts of some individual operating factors deteriorated (Table A-7).

On the demand side, the forecast errors for required reserves were smaller at each stage of the maintenance period in 1993 relative to 1992, helped by unchanged reserve requirement ratios during the year. Meanwhile, the model-based projections for excess reserves also improved somewhat, and actual excess reserves were less volatile than the year before.[7] Although the Desk often made informal allowances for either above- or below-path demand for excess reserves, the formal allowance remained at $1 billion for each of the maintenance periods during the year.[8]

On balance, the beginning-of-period forecasts for net operating factors were better than in 1992, but the forecast accuracy fell off somewhat from the previous year in the middle of maintenance periods. The accuracy of forecasts on the final day was about unchanged from the previous year.

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[7]While an increase in the average absolute level of carryins at large banks from $107 million in 1992 to $158 million in 1993 would have seemed likely to have contributed to greater excess reserve volatility, the average absolute period-to-period change in excess reserves actually fell from $366 million to $300 million. It was more common for large money center banks to waste positive carryins in 1993, accounting for some of this discrepancy.

[8]Forecast errors for excess reserves are calculated using model projections of the demand for excess reserves from the New York and Board staffs. The measurement of the forecast errors is not precise because the projections are compared with actual holdings of excess reserves, which can be affected by last-day changes in reserve supplies or by the Desk's decision to over- or under-provide reserves in response to other considerations. Finally, the forecast error calculation does not take into account informal adjustments to the model forecasts that the Desk often makes based on the observed pattern or distribution of excess reserve holdings in a period to date.

TABLE A-7

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

	1993			1992		
	First Day	Midperiod	Final Day	First Day	Midperiod	Final Day
Reserves						
Required	290-335	160-180	55-65	350-365	245-270	80
Excess**	170-220	160-175	n.a.	220-245	210	n.a.
Factors	785-885	420-470	55-70	1005-1095	385-465	60-85
Treasury	725-760	365-485	40-45	700-830	240-330	45-50
Currency	330-400	160-210	10-20	355-430	140-215	20-40
Float	240-245	150-180	35-65	180-190	135	35-45
Pool	270	111	15	245	140	10

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

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

n.a. Not applicable.

As in past years, the Treasury's Fed balance experienced the largest forecast errors, especially following major individual and corporate tax dates. The Treasury's total cash holdings during these periods often exceeded the capacities of banks' Treasury tax and loan accounts. Under these circumstances, higher- or lower-than-expected revenues or expenditures were fully passed through to the Treasury's balance at the Federal Reserve, sometimes resulting in large daily and period-average forecast misses. As in 1992, the largest first-day miss was in September, when higher-than-expected tax receipts led to a period-average error of just over $3 billion. To guard against an inadvertent overdraft, the Desk and the Treasury continued the practice begun in 1992 of raising the "targeted" level of the Treasury balance to $7 billion for about two weeks after major tax dates while continuing to target a $5 billion balance at other times.

Forecasts of float, particularly at the outset of maintenance periods, deteriorated somewhat during 1993 relative to the previous year. There was an especially large weather-related float revision in the first maintenance period ending in 1993, and inclement winter weather also made the task of forecasting float more uncertain than usual at other times.

Another factor affecting forecast errors in 1993 was the continued hefty premiums associated with RP transactions arranged by the Desk. The formal measure of the reserve impact of any open market operation is based on the par value of the securities involved. The difference between the par value and the cash amount is treated as a forecast miss in the "other items" component of nonborrowed reserves. In the case of RPs, the dealers, rather than the Fed, choose the collateral. Depending on their choices, which are not known to the Desk until after the operation is completed, the premium can vary considerably. The Desk made informal allowances for the expected amount of the premia in choosing the size of its operations, and thus some portion of these premia was anticipated.

In 1993, the continued decline in interest rates lifted the prices of many issues further above par and consequently increased the average premia on reserve operations. During the year, net premia on securities held under RP averaged about 8 percent of the par value of the operations, compared with about 5 percent the year before, and ranged from a high of 32 percent to a low of 0.01 percent.

IV. System Lending Operations

The Desk lends U.S. Treasury securities from the System Open Market Account to primary dealers in order to facilitate the delivery of transactions in the U.S. Treasury market. The loans are collateralized with securities which are of greater market value than those borrowed; no loans are made against short sales. After declining dramatically in 1992, both the number and value of the Desk's loans continued to move somewhat lower during 1993 (Table A-8). Data on the daily average of outstanding loans show that the decline occurred in the lending of coupon securities. As a result, the share of coupons in total lending volume fell to about 65 percent, from over 75 percent in the previous year. System lending of bills stabilized during the year following a large decline in 1992 and even increased a bit from previous low levels.

TABLE A–8

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

	1993	1992	PERCENTAGE CHANGE IN TOTAL 1992–1993
Number of Loans	1,130	1,443	–21.7 %
Amount	$17,667	$19,640	–10.0

DAILY AVERAGES

	1993	1992	PERCENTAGE CHANGE IN TOTAL 1992–1993
Number of Loans	5	6	–16.7 %
Amount	$70.7	$78.2	– 9.6
Balance Outstanding	$137.8	$179.9	–23.4
Size of Each Loan	$14.1	$13.0	+ 8.5

DISTRIBUTION OF LOANS OUTSTANDING
(daily averages)

	1993	1992	PERCENTAGE CHANGE IN TOTAL 1992–1993
Bills	$47.8	$41.9	+14.1 %
Coupon Issues	$90.0	$138.0	–34.8
Total	$137.8	$179.9	–23.4

TABLE A-9

DOLLAR VOLUME OF TRANSACTIONS EXECUTED BY TRADING DESK 1993 AND 1992
(In millions of dollars)

Source Account

	Total		System		Foreign		Treasury Investment Accounts		Member Banks [d]		Retirement System and others	
	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992
Counterparty												
Market	810,863	729,833	546,894	443,502	263,406	285,995	c	c	–	1	563	335
System Account	1,475,616	1,467,611	–	–	1,475,616	1,467,611	–	–	–	–	–	–
Treasury	1,541	2,232	1,541 [a]	2,232 [b]	–	–	–	–	–	–	–	–
Foreign	1,483,445	1,477,212	1,475,616	1,467,611	7,822	9,601	–	–	–	–	7	–
Total	3,771,465	3,676,887	2,024,051	1,913,345	1,746,844	1,763,207	c	c	–	1	570	335
Outright Transactions												
Purchases												
Treasury Bills	101,334	85,221	17,717	14,714	83,105	70,171	–	–	–	–	511	335
Treas. Coupon Issues	28,625	35,292	19,198	19,365	9,427	15,927	–	c	–	1	–	–
Federal Agency Issues	1,171 [e]	931 [e]	–	–	1,113 [e]	931 [e]	–	–	–	–	58 [e]	–
Cert. of Deposit	–	–	–	–	–	–	–	–	–	–	–	–
Bankers' Acceptances	891	2,072	–	–	891	2,072	–	–	–	–	–	–
Total Purchases	132,021	123,516	36,915	34,079	94,536	89,101	–	c	–	1	570	335
Sales and Redemptions												
Treasury Bills:												
Sales	49,229	46,371	–	1,628	49,229	44,743	–	–	–	–	–	–
Redemptions	–	1,600	–	1,600	–	–	–	–	–	–	–	–
Treasury Coupon Issues:												
Sales	4,015	16,217	–	–	4,015	16,217	c	c	–	–	–	–
Redemptions	767	c	767	c	–	–	–	–	–	–	–	–
Federal Agency Issues:												
Sales	6 [e]	–	–	–	6 [e]	–	–	–	–	–	–	–
Redemptions	774	632	774	632	–	–	–	–	–	–	–	–
Cert. of Deposit	–	–	–	–	–	–	–	–	–	–	–	–
Bankers' Acceptances	21	134	–	–	21	134	–	–	–	–	–	–
Total Sales and Redemptions	54,812	64,954	1,541	3,860	53,272	61,094	c	c	–	–	–	–
Net Purchases (+) or Sales and Redemptions (–)	+77,208	+58,562	+35,374	+30,219	+41,264	+28,007	c	c	–	+1	+570	+335
Temporary Transactions [f]												
RPs												
In Market	627,655	533,378	510,510	392,939	117,145	140,439						
With System Account	1,464,141	1,453,829	–	–	1,464,141	1,453,829						
MSPs												
In Market	10,944	28,638	10,944	28,638	–	–						
With Foreign	1,464,141	1,453,829	1,464,141	1,453,829	–	–						
Reverse RPs in Market	–	–	–	–	–	–						
Fed Funds sales	17,757	18,744	–	–	17,757	18,744						

[a] Incorporates redemptions of called Treasury notes and maturing Federal agency securities.
[b] Incorporates redemptions of maturing Treasury bills and Federal agency securities.
[c] Less than $0.5 million.
[d] Trading terminated effective October 1992.
[e] Includes Federal agency and non-Treasury securities.
[f] Repurchase agreements are on a delivery basis.

Outright transactions are on a commitment basis.
Includes only the initiation of the matched transactions and repurchase agreements.
Figures may not add to totals due to rounding.

APPENDIX
B

SUMMARY OF POLICY GUIDES AND ACTIONS

APPENDIX B

SUMMARY OF POLICY GUIDES AND ACTIONS

Open market operations during 1993 were conducted under the Authorization for Domestic Open Market Operations. Only one temporary change was made to the Authorization during 1993. 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 $11 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 $6.8 billion.

The Authorization for Domestic Open Market Operations in effect for 1993, 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.

Note: No new policy actions affecting the primary tools of monetary policy were taken by the Board of Governors in 1993. The discount rate of 3 percent, approved by the Board on July 2, 1992, was unchanged.

APPENDIX
C

DESK ACTIVITY FOR CUSTOMER ACCOUNTS

APPENDIX C

DESK ACTIVITY FOR CUSTOMER ACCOUNTS

The volume of the Desk's total outright trading activity on behalf of customer accounts declined slightly in 1993 after a large jump in 1992. This was the first decline since 1989. Meanwhile, temporary transactions were little changed after declining a bit in 1992.

I. Outright Transactions

Total outright transactions on behalf of customer accounts declined very slightly to just over $148 billion (Table C-1). Of this total, $128 billion was arranged in the market, just a bit higher than the prior year's total (Table C-3). As usual, almost all of the outright transactions were arranged for foreign and international accounts and involved Treasury securities. While total transactions were about the same, the distribution of individual account activity changed markedly. In 1992, Thailand and Taiwan had been the largest participants, while Canada had increased its activity greatly. In 1993, Taiwan's participation fell off sharply, and Thailand and Canada also decreased their participation. Meanwhile, the Government of Japan increased its participation dramatically, and Argentina also increased its activity significantly.

Almost all of the outright transactions were for Treasury securities, mostly bills. For a second consecutive year, there were no transactions in certificates of deposit; there was also a decline in transactions involving bankers' acceptances.

TABLE C-1

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

	Purchases		Sales		Total		Percentage Change in Total
	1993	1992	1993	1992	1993	1992	1992-1993
Total Outright	95,106	89,437	53,271	61,094	148,377	150,531	- 1 %
Foreign & Int'l Accounts	94,536	89,101	53,271	61,094	147,807	150,195	- 2
Treasury bills	83,105	70,171	49,229	44,743	132,334	114,914	+ 15
Treasury coupons	9,427	15,927	4,015	16,217	13,442	32,144	- 58
Federal agencies #	1,113	931	6	0	1,119	931	+ 20
Bankers' Acceptances	891	2,072	21	134	912	2,206	- 59
Certificates of Deposit	0	0	0	0	0	0	
Treasury	0	##	##	##	##	##	
Depository Institutions*	--	1	--	0	--	1	-100
Other Accounts**	570	335	0	0	570	335	+ 70
Repurchase Agreements***							
With System	1,464,141	1,453,829	0	0	1,464,141	1,453,829	+ 1
In Market	117,145	140,439	0	0	117,145	140,439	- 17
Federal Funds	0	0	17,757	18,744	17,757	18,744	- 5

Includes Federal agency, zero-coupon and CD securities.
Less than $0.5 million.
* Federal Reserve Bank of New York discontinued purchases and sales for Second District Banks effective October 1992.
** Includes retirement system and other accounts.
*** Transacted on behalf of foreign and international accounts only.

Notes: The above table includes only the initiation of RPs.
Includes transactions between two different foreign accounts, and between foreign accounts and the System Account.

II. Temporary Transactions

The total volume of repurchase agreements arranged on behalf of foreign official accounts through the foreign RP "pool" facility was about $1.6 trillion. The average daily volume of the foreign RP pool was around $6.2 billion, unchanged from the level in 1992.[1] Argentina added several accounts to the pool total and was the largest participant, while Venezuela increased its participation markedly and became the second largest participant. Saudi Arabia and Kuwait also made heavy use of the RP facility. The Government of Japan substantially increased its participation in the pool to become the fourth largest overall participant, although it only invested funds in the pool for 36 days. Meanwhile, Poland, the largest participant in 1992, dramatically cut its volume in 1993.

Customer-related RPs arranged in the market made up about 7 percent of the total volume of all RPs arranged on behalf of foreign customers; the remainder was executed as matched sale-purchase transactions with the System Account. Total gross earnings on all foreign account transactions were $196 million, down somewhat from $231 million the prior year. This result reflected lower market interest rates; the daily yield on these RPs was 3.12 percent, down from 3.62 percent in the previous year.

The Desk continued its practice of placing funds for foreign accounts in the market on those occasions when the funds arrived too late in the day for inclusion in the overnight investment pool. Total sales were about $18 billion, compared with about $19 billion in the prior year. A total of 68 accounts participated in this activity during 1993.

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[1]All such RPs are arranged to mature on the following business day. 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 about $6.3 billion.

TABLE C-2

NUMBER OF TRANSACTIONS PROCESSED FOR CUSTOMER ACCOUNTS IN THE MARKET*

	1993	1992	PERCENTAGE CHANGE IN TOTAL 1992-1993
Foreign & Int'l Accounts			
Outright	6,788	7,060	- 4%
Customer-Related RPs	5,898	7,548	- 22
Treasury	2	2	
Member Banks**	0	12	-100
Other Accounts ***	66	51	+ 29
Total	12,754	14,673	- 13

* Excludes transactions with System Account.
** Trading terminated effective October 1992.
*** Includes retirement system and other accounts.

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

TRANSACTIONS IN 1993 ON BEHALF OF CUSTOMERS OF THE FEDERAL RESERVE
(In millions of dollars)

WITH BROKERS AND DEALERS

Securities Dealers	OUTRIGHT Total Volume	OUTRIGHT Percentage Share	REPURCHASE AGREEMENTS* Total Volume	REPURCHASE AGREEMENTS* Percentage Share
Lehman Government Securities, Inc.	7,317	5.7%	30,875	26.4%
Aubrey G. Lanston & Co., Inc.	5,640	4.4%	2,993	2.6%
Morgan Stanley & Co. Inc.	5,605	4.4%	2,525	2.2%
UBS Securities Inc.	5,047	3.9%	–	–
SBC Government Securities, Inc.	4,542	3.5%	741	0.6%
Merrill Lynch Government Securities, Inc.	4,406	3.4%	400	0.3%
Harris Nesbitt Thomson Securities Inc.	4,212	3.3%	5,483	4.7%
Salomon Brothers Inc.	4,122	3.2%	50	0.0%
Daiwa Securities America Inc.	4,066	3.2%	3,450	2.9%
Barclays de Zoete Wedd Secs. Inc.	4,060	3.2%	1,400	1.2%
Chemical Securities Inc.	4,030	3.1%	280	0.2%
Dean Witter Reynolds Inc.	4,027	3.1%	772	0.7%
BT Securities Corporation	4,008	3.1%	3,450	2.9%
Citicorp Securities, Inc. (b)	3,603	2.8%	1,033	0.9%
Carroll McEntee & McGinley Inc.	3,529	2.8%	1,088	0.9%
Dillon, Read & Co., Inc.	3,434	2.7%	1,365	1.2%
CS First Boston Corporation (g)	3,428	2.7%	1,875	1.6%
Fuji Securities Inc.	3,325	2.6%	920	0.8%
Goldman, Sachs & Co.	3,293	2.6%	4,365	3.7%
Chase Securities Inc.	3,258	2.5%	1,723	1.5%
Prudential Securities Inc.	3,162	2.5%	380	0.3%
Paine Webber Inc.	3,153	2.5%	3,450	2.9%
J.P. Morgan Securities, Inc.	3,141	2.5%	5,085	4.3%
Eastbridge Capital Inc.	3,130	2.4%	1,470	1.3%
Deutsche Bank Securities Corporation (f)	2,965	2.3%	1,901	1.6%
Sanwa–BGK Securities Co., L.P.	2,823	2.2%	4,513	3.9%
Nomura Securities International, Inc.	2,697	2.1%	2,281	1.9%
Smith Barney Shearson Inc. (c)	2,404	1.9%	593	0.5%
Bank of America NT & SA	2,341	1.8%	250	0.2%
Greenwich Capital Markets, Inc.	2,338	1.8%	3,591	3.1%
Bear, Stearns & Co., Inc.	2,325	1.8%	1,204	1.0%
First Chicago Capital Markets, Inc.	2,232	1.7%	5,583	4.8%
NationsBanc Capital Markets, Inc. (a)(e)	1,840	1.4%	4,440	3.8%
Kidder, Peabody & Co., Inc.	1,819	1.4%	3,885	3.3%
Zions First National Bank (d)	1,784	1.4%	1,777	1.5%
The Nikko Securities Co. International Inc.	1,706	1.3%	550	0.5%
Donaldson, Lufkin & Jenrette Securities Corp.	1,517	1.2%	8,450	7.2%
Yamaichi International (America), Inc.	959	0.7%	1,510	1.3%
S.G. Warburg & Co., Inc.	770	0.6%	1,444	1.2%
#Societe Generale Bank	100	0.1%	–	–
Total	128,155	100%	117,145	100%

CROSSES BETWEEN ACCOUNTS

Between Foreign Accounts and System Open Market Account:	
Outright	11,475
RP's	1,464,141
Other Crosses	7,835
FOREIGN ACCOUNT FEDERAL FUNDS SALES	17,757
GRAND TOTAL	1,501,208

TABLE C-3 (Cont'd)

TRANSACTIONS IN 1993 ON BEHALF OF CUSTOMERS OF THE FEDERAL RESERVE

	Change Effective
(a) Formerly CRT Government Securities, Ltd.	July 6
(b) Formerly Citicorp Securities Markets, Inc.	July 15
(c) Formerly Smith Barney, Harris Upham & Co., Inc.	August 2
(d) Formerly Discount Corporation of New York	August 11
(e) Formerly NationsBank of North Carolina, N.A.	October 1
(f) Formerly Deutsche Bank Government Securities, Inc.	October 1
(g) Formerly The First Boston Corporation	October 12

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

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

APPENDIX
D

DEVELOPMENTS AMONG PRIMARY DEALERS

APPENDIX D

DEVELOPMENTS AMONG PRIMARY DEALERS

List of Primary Dealers

The number and general composition of firms on the list of primary dealers remained constant in 1993, despite the changes made in early 1992 to the administration of the Federal Reserve Bank of New York's primary dealer relationships that were designed to make it easier to qualify.[1] Among the thirty-nine dealers on the list in 1993, seven name changes were recorded. The new names are as follows:

Harris Nesbitt Thomson Securities Inc. (formerly Harris-Nesbitt Thomson Securities, Inc.)[2];

Citicorp Securities, Inc. (formerly Citicorp Securities Markets, Inc.);

Smith Barney Shearson Inc. (formerly Smith Barney, Harris Upham & Co., Inc.);

Zions First National Bank (formerly Discount Corporation of New York);

NationsBanc of North Carolina, N.A. (formerly CRT Government Securities, Ltd.);

Deutsche Bank Securities Corporation (formerly Deutsche Bank Government Securities, Inc.);

CS First Boston Corporation (formerly The First Boston Corporation).

Three of the name changes reflected major structural reorganizations, two of them acquisitions and one a merger. Effective July 6, CRT Government

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[1]The modifications made to the primary dealer relationships are described in the *Joint Report on the Government Securities Market*, published in January 1992.

[2]Harris Government Securities, Inc. had been renamed Harris-Nesbitt Thomson Securities, Inc. effective December 31, 1992.

Securities, Ltd. was acquired by NationsBank of North Carolina, N.A.[3] On August 2, Smith Barney, Harris Upham & Co., Inc., the primary dealer, acquired the domestic retail brokerage and asset management business of Shearson Lehman Brothers, Inc.; and the dealer was renamed Smith Barney Shearson Inc.[4] Effective August 11, Zions First National Bank acquired Discount Corporation of New York, a strained primary dealer, which now operates as a bank dealer.

Primary Dealer Activity

Primary dealers' aggregate pretax profits slipped in 1993 to $1.8 billion from $2.3 billion the previous year. Swings in the profitability of individual dealers were mostly offsetting, but much of the overall decline in dealer profits can be traced to a deterioration in the net profits of Salomon Brothers on its mortgage-backed operations. Aggregate dealer profits for operations in U.S. Treasury and non-mortgage-backed agency debt were $1.3 billion in 1993, up about $125 million from the preceding year.

Since the elimination of the one percent market share requirement for customer business in early 1992, the number of primary dealers whose volume has fallen short of this mark has steadily increased. In 1993, the customer business of eleven dealers was below this old standard, compared to seven in the previous year.[5] Only one dealer failed to meet the one percent requirement in 1991, the last year it was in effect.

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[3]When NationsBank of North Carolina N.A. initially acquired CRT, the dealer was folded into the bank's activities as a bank dealer. As of October 1, the dealer operation was restructured as a Section 20 subsidiary of the bank holding company and renamed NationsBanc Capital Markets, Inc.

[4]The primary dealer Lehman Government Securities Inc. was not affected by this acquisition.

[5]All seven dealers that fell short of this old requirement in 1992 again fell short in 1993.

Status of Daiwa Securities as a Counterparty for Open Market Operations

Effective March 1 through March 31, Daiwa Securities America, Inc. was removed from the list of authorized dealers and brokers with whom the Open Market Trading Division could transact business for the System Open Market Account and for other accounts. This action followed a settlement Daiwa reached with the Securities and Exchange Commission concerning its bidding for Treasury notes in 1989. Daiwa allegedly made a $3.5 billion bid without disclosing that $3 billion of that amount was actually for Salomon Brothers. As a consequence, the amount Salomon received exceeded Treasury's auction limit. Without admitting or denying wrongdoing, Daiwa agreed to pay a monetary penalty, and the head of its government securities trading operation was suspended from the industry for three months.

APPENDIX
E

STATISTICAL SUMMARY

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, Inc.
CS First Boston Corporation
Daiwa Securities America Inc.
Dean Witter Reynolds Inc.
Deutsche Bank Securities Corporation
Dillon, Read & Co. Inc.
Donaldson, Lufkin & Jenrette Securities Corporation
Eastbridge Capital Inc.
First Chicago Capital Markets, Inc.
Fuji Securities Inc.
Goldman, Sachs & Co.
Greenwich Capital Markets, Inc.
Harris Nesbitt Thomson Securities Inc.
Kidder, Peabody & Co., Incorporated
Aubrey G. Lanston & Co., Inc.
Lehman Government Securities, Inc.
Merrill Lynch Government Securities Inc.
J. P. Morgan Securities, Inc.
Morgan Stanley & Co. Incorporated
NationsBanc Capital Markets, Inc.
The Nikko Securities Co. International, Inc.
Nomura Securities International, Inc.
Paine Webber Incorporated
Prudential Securities Incorporated
Salomon Brothers Inc.
Sanwa-BGK Securities Co., L.P.
Smith Barney Shearson Inc.
SBC Government Securities, Inc.
UBS Securities Inc.
S.G. Warburg & Co., Inc.
Yamaichi International (America), Inc.
Zions First National Bank

December 31, 1993

APPENDIX
E

STATISTICAL SUMMARY

Operations in United States Government Securities and Federal Agency Securities

(In thousands of dollars)

The total of United States Government securities and Federal agency securities held by the Federal Reserve System at the close of business on December 31, 1993, together with changes from holdings on December 31, 1992, are summarized in the following table on a delivery basis.

System Open Market Account	Purchases	Sales	Redemptions	Exchanges	Net Changes	Holdings 12/31/93	Holdings 12/31/92
Government Securities							
Treasury Bills:				337,907,499		160,367,594	141,794,280
Outright	17,717,114	–	–	(337,907,499)	17,717,114		
Matched Transactions	1,475,941,201	1,475,085,001	–	–	856,200		
Market	10,944,000	10,944,000	–	–	–		
Foreign official	1,464,997,201	1,464,141,001	–	–	856,200		
Treasury Notes and Bonds maturing:							
Within 1 year	946,300	–	766,527	(37,295,805)	(37,116,032)#	35,423,233	37,758,332
				30,580,160			
1 to 5 years	11,126,800	–	–	(76,625)	41,630,335 #	79,826,078	68,749,893
				5,644,545			
5 to 10 years	3,767,800	–	–	(157,275)	9,255,070 #	24,659,409	18,903,132
Over 10 years	3,357,000	–	–	1,305,000	4,662,000 #	31,738,979	27,804,969
Total Notes and Bonds	19,197,900	–	766,527	–	18,431,373	171,647,699	153,216,326
Total Govt. Secs.							
Incl. Matched Trans.	1,512,856,215	1,475,085,001	766,527	–	37,860,887	332,015,293	295,010,606
(Excl. Matched Trans.	36,915,014	–	766,527	–	36,148,487	339,583,443	303,434,956)
Federally Sponsored Agency Issues maturing:				2,411,000			
Within 1 year	–	–	750,200	(2,609,000)	(948,200)##	1,822,950	2,064,200
1 to 5 years	–	–	–	43,000	43,000 ##	2,104,705	2,510,655
5 to 10 years	–	–	24,000	155,000	131,000 ##	569,000	696,000
Over 10 years	–	–	–	–	–	141,770	141,770
Total Agency Issues	–	–	774,200	–	(774,200)	4,638,425	5,412,625
Total System Account							
Incl. Matched Trans.	1,512,856,215	1,475,085,001	1,540,727	–	37,086,687	336,653,718	300,423,231
(Excl. Matched Trans.	36,915,014	–	1,540,727	–	35,374,287	344,221,868	308,847,581)
F.R.B. of New York							
Repurchase Agreements for System	510,509,900	505,391,900	–	–	5,118,000	13,212,000	8,094,000
Customer-Related RPs passed through to the market	117,145,000	117,145,000	–	–	–	–	–

\# Does not include the following maturity shifts:
\##

(In thousands of dollars)

	Within 1 year	1 to 5 years	5 to 10 years	Over 10 years
#	34,780,933	(30,554,150)	(3,498,793)	(727,990)
##	706,950	(448,950)	(258,000)	–

Declines appear in parentheses.

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS – 1993

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

	Outright Transactions					
	Dollar Volume			Percentage Share		
Securities Dealers	Treasury Bills	Treasury Coupon Issues	Total Treasury Issues	Treasury Bills	Treasury Coupon Issues	Total Treasury Issues
Salomon Brothers Inc.	1,013,100	4,992,000	6,005,100	11.7%	29.7%	23.6%
Morgan Stanley & Co. Inc.	676,900	1,671,200	2,348,100	7.8%	9.9%	9.2%
Aubrey G. Lanston & Co., Inc.	970,350	373,100	1,343,450	11.2%	2.2%	5.3%
Merrill Lynch Government Securities, Inc.	310,800	1,009,000	1,319,800	3.6%	6.0%	5.2%
Greenwich Capital Markets, Inc.	–	1,239,300	1,239,300	–	7.4%	4.9%
Paine Webber Inc.	166,000	934,000	1,100,000	1.9%	5.6%	4.3%
Lehman Government Securities, Inc.	300,000	670,000	970,000	3.5%	4.0%	3.8%
CS First Boston Corporation (g)	547,500	357,000	904,500	6.3%	2.1%	3.6%
Daiwa Securities America Inc.	575,000	218,500	793,500	6.7%	1.3%	3.1%
Barclays de Zoete Wedd Secs. Inc.	459,800	243,000	702,800	5.3%	1.4%	2.8%
Fuji Securities Inc.	267,500	405,000	672,500	3.1%	2.4%	2.6%
Smith Barney Shearson Inc. (c)	370,000	239,000	609,000	4.3%	1.4%	2.4%
NationsBanc Capital Markets, Inc. (a)(e)	100,000	440,000	540,000	1.2%	2.6%	2.1%
Citicorp Securities, Inc. (b)	280,000	242,000	522,000	3.2%	1.4%	2.1%
Deutsche Bank Securities Corporation (f)	121,500	382,500	504,000	1.4%	2.3%	2.0%
UBS Securities Inc.	384,800	72,700	457,500	4.5%	0.4%	1.8%
BT Securities Corporation	299,300	113,000	412,300	3.5%	0.7%	1.6%
Eastbridge Capital Inc.	364,600	45,000	409,600	4.2%	0.3%	1.6%
J.P. Morgan Securities, Inc.	208,000	188,000	396,000	2.4%	1.1%	1.6%
Bank of America NT & SA	50,000	334,000	384,000	0.6%	2.0%	1.5%
Goldman, Sachs & Co.	149,000	225,000	374,000	1.7%	1.3%	1.5%
Sanwa–BGK Securities Co., L.P.	273,000	87,000	360,000	3.2%	0.5%	1.4%
Nomura Securities International, Inc.	200,000	149,000	349,000	2.3%	0.9%	1.4%
Donaldson, Lufkin & Jenrette Securities Corp.	10,000	328,000	338,000	0.1%	2.0%	1.3%
Chemical Securities Inc.	133,000	198,700	331,700	1.5%	1.2%	1.3%
SBC Government Securities, Inc.	105,000	194,000	299,000	1.2%	1.2%	1.2%
Dillon, Read & Co., Inc.	25,000	270,000	295,000	0.3%	1.6%	1.2%
Bear, Stearns & Co., Inc.	–	291,500	291,500	–	1.7%	1.1%
Kidder, Peabody & Co., Inc.	–	169,000	169,000	–	1.0%	0.7%
Carroll McEntee & McGinley Inc.	87,000	80,000	167,000	1.0%	0.5%	0.7%
Harris Nesbitt Thomson Securities Inc.	–	164,000	164,000	–	1.0%	0.6%
Chase Securities Inc.	70,000	61,000	131,000	0.8%	0.4%	0.5%
First Chicago Capital Markets, Inc.	50,000	71,100	121,100	0.6%	0.4%	0.5%
Prudential Securities Inc.	15,000	99,000	114,000	0.2%	0.6%	0.4%
Yamaichi International (America), Inc.	50,000	60,300	110,300	0.6%	0.4%	0.4%
Zions First National Bank (d)	–	80,000	80,000	–	0.5%	0.3%
S.G. Warburg & Co., Inc.	–	75,000	75,000	–	0.4%	0.3%
The Nikko Securities Co. International Inc.	9,800	15,000	24,800	0.1%	0.1%	0.1%
Dean Witter Reynolds Inc.	–	12,000	12,000	–	0.1%	0.0%
Total	8,641,950	16,797,900	25,439,850	100%	100%	100%

Notes appear on the final page of the table.

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS – 1993

	Change Effective
(a) Formerly CRT Government Securities, Ltd.	July 6
(b) Formerly Citicorp Securities Markets, Inc.	July 15
(c) Formerly Smith Barney, Harris Upham & Co., Inc.	August 2
(d) Formerly Discount Corporation of New York	August 11
(e) Formerly NationsBank of North Carolina, N.A.	October 1
(f) Formerly Deutsche Bank Government Securities, Inc.	October 1
(g) Formerly The First Boston Corporation	October 12

Additional notes on Outright Transactions:

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

Additional notes on Temporary Transactions:

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

TRANSACTIONS BETWEEN FEDERAL RESERVE AND GOVERNMENT SECURITY DEALERS – 1993

Temporary Transactions#
(In thousands of dollars)

Securities Dealers	Repurchase Agreements	Percentage Share Securities Dealers	Customer Related	Percentage Share Securities Dealers	Matched Transactions	Percentag Share Securities De
Lehman Government Securities, Inc.	83,449,000 (1)	16.3%	30,875,000 (1)	26.4%	1,100,000 (3)	10.1%
BT Securities Corporation	37,560,000 (2)	7.4%	3,450,000	2.9%	600,000 (7)	5.5%
CS First Boston Corporation (g)	36,783,000 (3)	7.2%	1,875,000	1.6%	–	–
NationsBanc Capital Markets, Inc. (a)(e)	33,785,000 (4)	6.6%	4,440,000 (7)	3.8%	–	–
Goldman, Sachs & Co.	27,980,000 (5)	5.5%	4,365,000 (8)	3.7%	1,525,000 (1)	13.9%
Daiwa Securities America, Inc.	24,318,000 (6)	4.8%	3,450,000	2.9%	100,000	0.9%
Harris Nesbitt Thomson Securities Inc.	18,306,000 (7)	3.6%	5,483,000 (4)	4.7%	150,000	1.4%
First Chicago Capital Markets, Inc.	16,463,600 (10)	3.2%	5,583,000 (3)	4.8%	1,484,000 (2)	13.6%
J.P. Morgan Securities, Inc.	17,230,000 (9)	3.4%	5,085,000 (5)	4.3%	525,000 (8)	4.8%
Sanwa–BGK Securities Co., L.P.	16,255,000	3.2%	4,513,000 (6)	3.9%	410,000	3.7%
Morgan Stanley & Co. Inc.	17,894,000 (8)	3.5%	2,525,000	2.2%	750,000 (5)	6.9%
Donaldson, Lufkin & Jenrette Securities Corp.	10,510,000	2.1%	8,450,000 (2)	7.2%	–	–
Nomura Securities International, Inc.	15,490,000	3.0%	2,281,000	1.9%	900,000 (4)	8.2%
Eastbridge Capital Inc.	15,789,000	3.1%	1,470,000	1.3%	475,000 (10)	4.3%
Greenwich Capital Markets, Inc.	12,088,000	2.4%	3,591,000 (10)	3.1%	200,000	1.8%
Kidder, Peabody & Co., Inc.	9,767,000	1.9%	3,885,000 (9)	3.3%	–	–
Merrill Lynch Government Securities, Inc.	12,663,000	2.5%	400,000	0.3%	–	–
Aubrey G. Lanston & Co., Inc.	8,964,000	1.8%	2,993,000	2.6%	500,000 (9)	4.6%
S.G. Warburg & Co., Inc.	10,695,600	2.1%	1,444,000	1.2%	300,000	2.7%
Paine Webber Inc.	8,755,000	1.7%	3,450,000	2.9%	–	–
Chase Securities Inc.	8,313,000	1.6%	1,723,000	1.5%	700,000 (6)	6.4%
Bear, Stearns & Co., Inc.	7,889,000	1.5%	1,204,000	1.0%	–	–
SBC Government Securities, Inc.	7,427,000	1.5%	741,000	0.6%	–	–
Barclays de Zoete Wedd Secs. Inc.	6,001,000	1.2%	1,400,000	1.2%	100,000	0.9%
Citicorp Securities, Inc. (b)	6,108,000	1.2%	1,033,000	0.9%	100,000	0.9%
Fuji Securities Inc.	5,726,000	1.1%	920,000	0.8%	100,000	0.9%
Yamaichi International (America), Inc.	4,517,000	0.9%	1,510,000	1.3%	250,000	2.3%
Deutsche Bank Securities Corporation (f)	4,271,000	0.8%	1,901,000	1.6%	100,000	0.9%
Zions First National Bank (d)	3,909,000	0.8%	1,777,000	1.5%	200,000	1.8%
Salomon Brothers Inc.	5,050,000	1.0%	50,000	–	–	–
Dillon, Read & Co., Inc.	3,519,000	0.7%	1,365,000	1.2%	–	–
Dean Witter Reynolds Inc.	3,106,000	0.6%	772,000	0.7%	–	–
Carroll McEntee & McGinley Inc.	2,203,000	0.4%	1,088,000	0.9%	100,000	0.9%
The Nikko Securities Co. International Inc.	2,146,000	0.4%	550,000	0.5%	–	–
Chemical Securities Inc.	2,055,000	0.4%	280,000	0.2%	–	–
Smith Barney Shearson Inc. (c)	1,610,000	0.3%	593,000	0.5%	25,000	0.2%
Prudential Securities Inc.	1,200,000	0.2%	380,000	0.3%	–	–
Bank of America NT & SA	275,000	0.1%	250,000	0.2%	250,000	2.3%
UBS Securities Inc.	439,700	0.1%	–	–	–	–
Subtotal	510,509,900	100%	117,145,000	100%	10,944,000	100%
Foreign & International Institutions	–		–		1,464,141,001	
Total	510,509,900		117,145,000		1,475,085,001	

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

		Holdings* 12/31/93	Net change since 12/31/92
Treasury Bills		160,367,594	18,573,314
Treasury Notes			
Matured in 1993			(40,373,552)
Issues outstanding			
7.000 %	01/15/94	615,650	55,000
4.875	01/31/94	638,730	–
6.875	02/15/94	1,966,320	89,000
8.875	02/15/94	225,000	25,000
5.375	02/28/94	762,620	–
5.750	03/31/94	2,549,620	1,508,820
8.500	03/31/94	1,055,100	1,055,100
7.000	04/15/94	440,200	38,000
5.625	04/30/94	1,559,620	165,500
7.000	05/15/94	3,240,795	75,000
9.500	05/15/94	136,000	91,000
13.125	05/15/94	751,000	–
5.125	05/31/94	895,990	–
5.000	06/30/94	1,875,820	172,000
8.500	06/30/94	1,316,000	141,000
8.000	07/15/94	302,000	17,000
4.250	07/31/94	1,626,750	299,000
6.875	08/15/94	2,080,340	52,000
8.625	08/15/94	112,000	40,000
12.625	08/15/94	949,000	72,000
4.250	08/31/94	876,480	25,000
4.000	09/30/94	1,602,000	97,000
8.500	09/30/94	601,752	20,000
9.500	10/15/94	919,500	634,000
4.250	10/31/94	835,315	201,000
6.000	11/15/94	2,991,980	357,000
8.250	11/15/94	66,000	35,000
11.625	11/15/94	1,174,860	–
4.625	11/30/94	489,845	120,000
4.625	12/31/94	1,225,000	125,000
7.625	12/31/94	1,204,665	37,000
8.625	01/15/95	511,000	85,900
4.250	01/31/95	737,440	737,440
5.500	02/15/95	2,372,720	355,000
7.750	02/15/95	53,000	18,000
11.250	02/15/95	1,453,000	–
3.875	02/15/95	1,145,290	1,145,290
3.875	03/31/95	1,936,510	1,936,510
8.375	04/15/95	287,700	25,000
3.875	04/30/95	652,750	652,750
5.875	05/15/95	3,792,000	–
8.500	05/15/95	219,500	109,500
11.250	05/15/95	798,000	–
4.125	05/31/95	1,009,460	1,009,460
4.125	06/30/95	1,272,435	1,272,435
8.875	07/15/95	275,020	30,900
4.250	07/31/95	511,970	511,970
4.625	08/15/95	2,911,005	100,000
8.500	08/15/95	773,100	20,600
10.500	08/15/95	1,096,728	–
3.875	08/31/95	621,630	621,630
3.875	09/30/95	961,380	961,380
8.625	10/15/95	399,475	103,000
3.875	10/31/95	816,430	816,430
5.125	11/15/95	3,080,135	135,000
8.500	11/15/95	642,500	210,000
9.500	11/15/95	273,000	–
4.250	11/30/95	646,475	646,475

		Holdings* 12/31/93	Net change since 12/31/92
Treasury Notes (Cont'd)			
4.250 %	12/31/95	1,550,000	1,550,000
9.250	01/15/96	1,019,484	331,500
7.500	01/31/96	1,243,000	73,000
4.625	02/15/96	3,688,580	3,688,580
7.875	02/15/96	1,097,015	250,200
8.875	02/15/96	591,545	85,000
7.500	02/29/96	1,163,000	529,000
7.750	03/31/96	1,021,000	531,000
9.375	04/15/96	750,855	334,000
7.625	04/30/96	899,000	279,000
4.250	05/15/96	1,878,215	1,878,215
7.375	05/15/96	1,968,909	28,200
7.625	05/31/96	393,000	43,000
7.875	06/30/96	407,000	10,000
7.875	07/15/96	580,752	122,000
7.875	07/31/96	210,000	–
4.375	08/15/96	2,924,300	2,924,300
7.250	08/31/96	439,500	110,000
7.000	09/30/96	338,000	124,000
8.000	10/15/96	314,800	114,300
6.875	10/31/96	625,000	125,000
4.375	11/15/96	4,214,933	4,214,933
7.250	11/15/96	996,035	47,000
6.500	11/30/96	210,000	10,000
6.125	12/31/96	200,000	–
8.000	01/15/97	234,000	57,000
6.250	01/31/97	140,000	40,000
6.750	02/28/97	382,000	160,000
6.875	03/31/97	428,000	75,000
8.500	04/15/97	405,500	135,000
6.875	04/30/97	865,000	147,000
8.500	05/15/97	429,000	58,000
6.750	05/31/97	269,000	–
6.375	06/30/97	380,000	–
8.500	07/15/97	550,410	57,000
5.500	07/31/97	300,000	–
8.625	08/15/97	472,000	10,000
5.625	08/31/97	554,000	44,000
5.500	09/30/97	400,000	–
8.750	10/15/97	431,000	53,000
5.750	10/31/97	285,000	35,000
8.875	11/15/97	545,000	185,000
6.000	11/30/97	206,700	56,700
6.000	12/31/97	500,780	30,900
7.875	01/15/98	596,800	100,000
5.625	01/31/98	374,000	374,000
8.125	02/15/98	279,000	4,000
5.125	02/28/98	454,000	454,000
5.125	03/31/98	1,295,000	1,295,000
7.875	04/15/98	409,500	117,000
5.125	04/30/98	370,000	370,000
9.000	05/15/98	478,000	22,000
5.625	05/31/98	665,000	665,000
5.625	06/30/98	1,041,000	1,041,000
8.250	07/15/98	786,140	151,000
5.250	07/31/98	345,000	345,000
9.250	08/15/98	663,000	25,000
4.750	08/31/98	509,000	509,000
4.750	09/30/98	900,000	900,000
7.125	10/15/98	891,593	39,400
4.750	10/31/98	750,000	750,000
8.875	11/15/98	488,000	128,000
5.125	11/30/98	600,000	600,000
5.125	12/31/98	1,359,662	1,359,662

* Delivery basis. (Includes matched sale–purchase transactions.)
Note: Declines in holdings are shown in parentheses.

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS IN SYSTEM OPEN MARKET ACCOUNT

(In thousands of dollars)

Treasury Notes (Cont'd)		Holdings* 12/31/93	Net change since 12/31/92
6.375 %	01/15/99	775,545	225,000
8.875	02/15/99	616,000	181,000
7.000	04/15/99	603,700	140,000
9.125	05/15/99	761,500	180,000
6.375	07/15/99	207,000	16,000
8.000	08/15/99	625,000	100,000
6.000	10/15/99	272,215	175,000
7.875	11/15/99	615,000	140,000
6.375	01/15/00	534,545	534,545
8.500	02/15/00	630,000	30,000
5.500	04/15/00	300,000	300,000
8.875	05/15/00	480,000	80,000
8.750	08/15/00	520,000	145,000
8.500	11/15/00	647,000	200,000
7.750	02/15/01	493,000	208,000
8.000	05/15/01	652,000	207,000
7.875	08/15/01	642,000	192,000
7.500	11/15/01	893,000	153,991
7.500	05/15/02	907,009	907,009
6.375	08/15/02	1,695,000	195,000
6.250	02/15/03	1,715,000	1,715,000
5.750	08/15/03	3,400,000	3,400,000
Total Treasury Notes		132,076,127	13,896,973

Treasury Bonds		Holdings* 12/31/93	Net change since 12/31/92
Matured in 1993			(634,400)
Issues outstanding			
9.000 %	02/15/94	175,476	–
4.125	05/15/94	–	(76,625)
8.750	08/15/94	71,605	20,000
10.125	11/15/94	90,200	7,400
3.000	02/15/95	2,100	–
10.500	02/15/95	182,350	30,900
10.375	05/15/95	125,900	60,000
12.625	05/15/95	417,317	45,000
11.500	11/15/95	62,000	30,000
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	763,490	20,000
8.375	08/15/00	2,155,975	35,500
11.750	02/15/01	160,803	–
13.125	05/15/01	165,726	6,000
8.000	08/15/01	505,810	7,000
13.375	08/15/01	231,092	32,000
15.750	11/15/01	162,904	–
14.250	02/15/02	125,800	30,000
11.625	11/15/02	282,650	110,000
10.750	02/15/03	384,250	207,000
10.750	05/15/03	171,000	73,000
11.125	08/15/03	232,400	37,400
11.875	11/15/03	247,240	50,000
12.375	05/15/04	212,786	30,000
13.750	08/15/04	46,000	35,000
11.625	11/15/04	324,200	115,000
8.250	05/15/05	1,492,660	–
12.000	06/15/05	104,476	30,000
10.750	05/15/05	453,000	190,000
9.375	02/15/06	20,000	–
7.625	02/15/07	1,389,164	–
7.875	11/15/07	278,500	14,000
8.375	08/15/08	788,500	25,000
8.750	11/15/08	1,588,500	–
9.125	05/15/09	706,205	10,000

Treasury Bonds (Cont'd)		Holdings* 12/31/93	Net change since 12/31/92
10.375 %	11/15/09	1,050,939	5,000
11.750	02/15/10	705,400	25,000
10.000	05/15/10	1,171,556	3,000
12.750	11/15/10	1,235,865	163,000
13.875	05/15/11	968,542	–
14.000	11/15/11	845,091	54,000
10.375	11/15/12	1,506,741	124,300
12.000	08/15/13	2,795,772	320,000
13.250	05/15/14	434,450	20,000
12.500	08/15/14	654,720	–
11.750	11/15/14	1,110,000	155,000
11.250	02/15/15	1,020,733	112,000
10.625	08/15/15	775,000	65,000
9.875	11/15/15	286,500	40,000
9.250	02/15/16	459,000	145,000
7.250	05/15/16	965,000	50,000
7.500	11/15/16	955,000	430,000
8.750	05/15/17	199,000	–
8.875	08/15/17	450,000	5,000
9.125	05/15/18	241,900	8,300
9.000	11/15/18	106,000	21,000
8.875	02/15/19	425,000	45,000
8.125	08/15/19	1,081,900	291,900
8.500	02/15/20	420,879	160,000
8.750	05/15/20	355,000	200,000
8.750	08/15/20	445,000	35,000
7.875	02/15/21	210,000	50,000
8.125	05/15/21	360,000	100,000
8.125	08/15/21	310,000	120,000
8.000	11/15/21	690,000	60,000
7.250	08/15/22	370,000	15,000
7.625	11/15/22	400,000	–
7.125	02/15/23	805,000	805,000
6.250	08/15/23	525,000	525,000
Total Treasury Bonds		39,571,572	4,534,400
Total Treasury Security Holdings		332,015,293	37,004,687

* Delivery basis.
Note: Declines in holdings are shown in parentheses.

E-3 (Cont'd)

U.S. TREASURY AND FEDERAL AGENCY SECURITY HOLDINGS IN SYSTEM OPEN MARKET ACCOUNT

(In thousands of dollars)

U.S. Government-Sponsored Agency Issues

FHLB		Holdings* 12/31/93	Net change since 12/31/92
Matured in 1993			(545,200)
Issues outstanding			
5.000 %	01/25/94	15,000	–
7.300	01/25/94	5,000	–
7.550	01/25/94	65,000	–
7.450	02/25/94	1,700	–
9.600	02/25/94	20,000	–
12.000	02/25/94	25,000	–
7.580	03/25/94	10,000	–
5.480	04/25/94	10,000	–
7.280	04/25/94	35,000	–
9.550	04/25/94	6,000	–
7.200	05/25/94	45,000	–
7.500	06/27/94	22,000	–
8.600	06/27/94	7,000	–
8.625	06/27/94	3,000	–
8.300	07/25/94	20,000	–
6.700	08/25/94	40,000	–
8.600	08/25/94	17,900	–
6.580	09/25/94	11,000	–
8.300	10/25/94	18,000	–
5.890	11/25/94	55,000	–
8.200	11/25/94	15,000	–
8.050	12/26/94	7,000	–
5.450	01/25/95	35,000	–
8.400	01/25/95	7,000	–
5.940	02/27/95	50,000	–
8.600	02/27/95	5,000	–
6.450	03/27/95	48,000	–
7.875	03/27/95	15,000	–
9.000	03/27/95	20,000	–
6.040	04/25/95	20,000	–
8.875	06/26/95	8,000	–
10.300	07/25/95	18,000	–
4.600	08/25/95	87,000	–
4.500	09/25/95	46,000	–
5.000	10/25/95	83,000	–
5.375	11/27/95	120,000	–
9.500	12/26/95	3,000	–
8.100	03/25/96	10,000	–
9.800	03/25/96	3,000	–
4.360	04/25/96	14,000	14,000
7.750	04/25/96	33,000	–
8.250	05/27/96	16,000	–
8.000	07/25/96	15,000	–
8.250	09/25/96	2,000	–
7.100	10/25/96	13,000	–
8.250	11/25/96	10,000	–
6.850	02/25/97	26,700	–
7.650	03/25/97	12,000	–
9.150	03/25/97	5,000	–
6.990	04/25/97	14,000	–
5.260	04/27/98	14000	14,000
9.250	11/25/98	5,000	–
9.300	01/25/99	2,000	–
8.600	06/25/99	3,900	–
8.450	07/26/99	5,000	–
8.600	08/25/99	11,000	–
8.375	10/25/99	10,000	–
8.600	01/25/00	6,000	–
Total		1,249,200	(517,200)

FNMA		Holdings* 12/31/93	Net change since 12/31/92
Matured in 1993			(308,000)
Issues outstanding			
7.650 %	04/11/94	15,000	–
9.600	04/11/94	100,000	–
9.300	05/10/94	25,000	–
8.600	06/10/94	24,650	–
7.450	07/11/94	5,000	–
8.900	08/10/94	15,000	–
10.100	10/11/94	30,000	–
9.000	01/10/95	15,000	–
11.950	01/10/95	12,000	–
10.500	09/11/95	20,000	–
8.800	11/10/95	100,000	–
7.700	02/12/96	40,000	–
8.000	04/10/96	45,000	–
8.050	06/10/96	25,650	–
8.500	06/10/96	10,000	–
8.750	06/10/96	10,000	–
8.000	07/10/96	31,500	–
8.200	08/12/96	5,000	–
7.700	09/10/96	25,000	–
7.050	11/12/96	100,000	–
6.900	10/10/96	58,000	–
7.700	12/10/96	12,000	–
7.600	01/10/97	160,000	–
6.200	01/10/97	15,000	–
7.050	03/10/97	70,000	–
7.000	04/10/97	10,000	–
9.250	04/10/97	15,000	–
9.200	06/10/97	27,000	–
8.950	07/10/97	10,000	–
9.150	09/10/97	20,000	–
9.550	09/10/97	35,000	–
5.700	09/11/97	45,000	–
5.350	10/10/97	4,700	–
6.300	12/11/97	55,000	–
8.650	02/10/98	10,000	–
5.300	03/10/98	50,000	50,000
9.150	04/10/98	30,000	–
8.200	08/10/98	35,000	–
9.400	08/10/98	50,000	–
7.850	09/10/98	48,000	–
5.300	12/10/98	15,000	15,000
7.050	12/10/99	30,000	–
7.500	03/10/99	50,000	–
9.550	03/10/99	25,000	–
8.700	06/10/99	23,000	–
8.450	07/12/99	5,000	–
9.000	10/11/99	44,000	–
8.350	11/10/99	7,000	–
8.650	12/10/98	30,000	–
6.100	02/10/00	25,000	25,000
9.050	04/10/00	10,000	–
9.800	05/10/00	30,000	–
9.150	07/10/00	–	(19,000)
9.200	09/11/00	10,000	–
9.150	10/10/00	–	(5,000)
8.500	02/12/01	15,000	–
8.625	04/10/01	35,000	–
8.700	06/11/01	20,000	–

* 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 (Cont'd)

		Holdings* 12/31/93	Net change since 12/31/92
FNMA (Cont'd)			
Issues outstanding			
8.875 %	07/10/01	5,000	–
7.200	01/10/02	10,000	–
7.900	04/10/02	10,000	–
7.800	06/10/02	40,100	–
7.300	07/10/02	12,000	–
6.950	09/10/02	35,000	–
6.625	04/10/03	30,000	30,000
6.450	06/10/03	25,000	25,000
6.200	07/10/03	15,000	15,000
5.800	07/10/03	10,000	10,000
10.350	12/10/15	10,000	–
8.200	03/10/16	15,000	–
Total		2,004,600	(162,000)
FFCB			
Matured in 1993			(1,211,000)
Issues outstanding			
3.000 %	01/03/94	115,000	115,000
3.300	01/03/94	65,000	65,000
3.210	01/02/94	55,000	55,000
3.360	01/02/94	30,000	30,000
3.430	02/01/94	20,000	20,000
3.190	03/01/94	95,000	95,000
3.210	03/01/94	130,000	130,000
3.340	03/01/94	83,000	83,000
12.350	03/01/94	10,000	–
3.330	04/01/94	50,000	50,000
3.150	04/04/94	60,000	60,000
14.250	04/20/94	3,700	–
3.310	05/02/94	20,000	20,000
3.320	05/02/94	20,000	20,000
3.370	06/01/94	60,000	60,000
3.560	06/01/94	56,000	56,000
3.600	07/01/94	35,000	35,000
3.640	08/01/94	16,000	16,000
3.400	09/01/94	57,000	57,000
8.625	09/01/94	10,000	10,000
6.625	09/01/94	10,000	–
13.000	09/01/94	8,000	–
3.430	10/03/94	45,000	45,000
3.480	11/01/94	19,000	19,000
3.620	12/01/94	75,000	75,000
11.450	12/01/94	7,000	–
8.300	01/20/95	21,710	–
11.900	10/20/97	15,000	–
8.650	10/01/99	10,000	–
Total		1,201,410	(95,000)
FLB			
Issues outstanding			
7.950 %	10/21/96	49,795	–
7.350	01/20/97	16,650	–
Total		66,445	–

		Holdings* 12/31/93	Net change since 12/31/92
U.S. Government Agency Issues**			
Washington Metro Area Transit Auth.			
Issues outstanding			
7.300 %	07/01/12	44,950	–
7.350	07/01/12	35,410	–
8.150	07/01/14	36,410	–
Total		116,770	–
Total Agency Issues		4,638,425	(774,200)
Total Treasury & Agency Issues		336,653,718	36,230,487

* Delivery basis.

**The Federal Reserve is no longer authorized to buy debt of this Government entity because it is 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, 1993 Maturity	Holdings*	Percent of the Total Amount Outstanding
1994		
1/06 #	129,630	24.6%
1/13 #	8,516,970	24.9%
1/20	6,467,660	16.3%
1/27	6,303,900	24.9%
2/03	6,415,815	24.8%
2/10	10,042,510	24.4%
2/17	6,070,385	23.2%
2/24	6,180,164	23.6%
3/03	6,131,330	24.0%
3/10	9,313,655	23.4%
3/17	5,673,180	23.2%
3/24	5,373,310	22.0%
3/31	5,999,635	24.2%
4/07	6,538,000	25.0%
4/14	3,222,700	24.8%
4/21	3,227,500	25.0%
4/28	3,279,000	25.1%
5/05	6,550,000	23.6%
5/12	3,250,000	23.3%
5/19	3,250,000	23.1%
5/26	3,300,000	23.5%
6/02	6,889,250	24.3%
6/09	3,100,000	23.0%
6/16	3,000,000	22.9%
6/23	2,900,000	22.1%
6/30	6,880,000	24.2%
7/28	3,828,000	25.1%
8/25	3,850,000	25.2%
9/22	3,785,000	24.7%
10/20	3,550,000	22.4%
11/17	3,650,000	22.6%
12/15	3,700,000	22.8%
Total #	160,367,594	22.4%

* Delivery basis.

Holdings were reduced by $6,000,000 thousand of January 6 maturities and $1,568,150 thousand of January 13 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 1993 as a result of reallocations.

Reallocations of Participation in the System Open Market Account During 1993

	Reallocations	Participations December 31, 1993
Boston	($1,508,000,000)	$19,865,592,024.69
New York	(13,551,000,000)	116,255,990,977.50
Philadelphia	2,313,000,000	12,758,296,650.27
Cleveland	1,312,000,000	22,614,169,511.11
Richmond	(60,000,000)	26,259,471,135.28
Atlanta	2,058,000,000	13,695,586,092.77
Chicago	(2,368,000,000)	39,123,543,893.24
St. Louis	3,361,000,000	11,886,497,091.79
Minneapolis	2,265,000,000	7,705,982,746.35
Kansas City	3,372,000,000	12,768,295,781.00
Dallas	1,904,000,000	14,417,724,371.07
San Francisco	902,000,000	39,302,567,724.93
	$17,487,000,000	
	($17,487,000,000)	$336,653,718,000.00

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 1993 totaled $16,776,974,585, a decrease of $470,638,402 from earnings in 1992.

The average earnings rate was 5.29 percent in 1993, compared with 6.15 percent in 1992. The earnings rate, which was 5.56 percent on January 2, 1993, closed the year at 5.07 percent. Average holdings increased to $316.3 billion in 1993 from $280.5 billion in 1992.

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 1993 compared with those at the close of 1992, are shown in the following table:

(In thousands of dollars)

	12/31/93	12/31/92	Net Change
Total Portfolio*	$336,653,718	$300,423,231	$36,230,487
Earnings Rate**	5.29%	6.15%	(.86%)
Net Daily Accrual of Earnings#	$46,475	$45,846	$629
Coupon Issues	$31,725	$32,019	($294)
Treasury Bills	$14,750	$13,827	$923

* 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, 1993, 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	132,076,127	133,480,972	137,119,048	3,638,076
Bonds	39,571,572	41,926,669	51,435,449	9,508,780
Agencies	4,638,425	4,632,166	4,817,055	184,889

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)

	1993	1992	1991
Purchases	510,509,900	392,939,000	332,891,000
Sales	505,391,900	400,743,000	335,347,000
Year-end Balance	13,212,000	8,094,000	15,898,000
Earnings on Repurchase Agreements	113,746	88,737 *	113,064

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

	1993	1992	1991
Sales	1,475,085,001	1,482,466,745	1,570,456,490
Purchases	1,475,941,201	1,480,139,820	1,571,534,000
Outstanding transactions at year-end	7,568,150	8,424,350	6,097,425

Customer-Related Transactions
(In thousands of dollars)

	1993	1992	1991
Sales	117,145,000	140,439,000	175,759,400
Purchases	117,145,000	140,439,000	175,759,400
Outstanding transactions at year-end	0	0	0

* Correction.