



BOARD OF GOVERNORS  
OF THE  
**FEDERAL RESERVE SYSTEM**  
WASHINGTON, D.C. 20551

**STRICTLY CONFIDENTIAL (FR)**  
**CLASS II - FOMC**

June 30, 1989

TO: Federal Open Market Committee

FROM: Donald L. Kohn *DLK*

Attached is a memo discussing the factors affecting growth of the monetary aggregates in the first half of this year. An appendix to the memo summarizes the results of the recent Senior Financial Officer Survey on the behavior of transaction deposits. Please note that the survey write-up is still in draft form and will be distributed at a later date in revised form for forwarding to respondents.

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# Office Correspondence

To Federal Open Market Committee  
From Division of Monetary Affairs  
(Paul O'Brien)

Date June 30, 1989

Subject: The Behavior of the Monetary  
Aggregates During the First Half of 1989

## I. Summary.

All three monetary aggregates have run below staff expectations through the first half of 1989. This weakness owes in part to somewhat higher nominal interest rates and slower nominal spending than had been envisioned. In addition, several special factors--the thrift crisis, outsized individual federal tax payments, and changes in the organization of banks' U.S. government securities operations--have contributed to the below-path growth. Together, these factors account for a significant portion of the shortfall in the aggregates, though unexplained weakness, particularly in demand deposits, remains.

## II. Developments in the First Half of 1989.

Slow growth in the monetary aggregates in 1989 had been expected. In the February bluebook, growth of M2 was projected at a 3-1/4 percent annual rate over the first half of this year, to leave this aggregate just above the lower limit of its 3 to 7 percent annual target range. Growth of M3 was expected to be at around a 4-1/2 percent pace through June, in the lower half of its 3-1/2 to 7-1/2 percent range, and M1 was expected to decline slightly. These projections were based on the sizable increases in interest rates that had occurred, as well as expectations that rates would rise further. In addition, the staff projections assumed that the restraining effects of these higher interest rates would be reinforced by continued sluggish adjustment of deposit rates--partly as a result of

administrative pressures on thrift institutions to hold down their deposit rates--so that deposit opportunity costs would continue to run higher than established pricing relationships would imply.

In the event, growth of the monetary aggregates this year has fallen well short of even these expectations, as can be seen from the first three charts. M2 has expanded at only a 1-3/4 percent annual rate from the fourth quarter of last year through June, and this aggregate has tracked well below its target range all year. M1 has also been weak, with a particularly sharp decline in May. By June M1 had fallen at a 4 percent annual rate from the fourth quarter of 1988. M3 has remained near the lower limit of its target cone, and stands in June about 3-1/2 percent at an annual rate above its fourth quarter 1988 base. This aggregate has registered the smallest shortfall relative to expectations, as depository institutions have tapped managed liabilities in M3 at rates above those projected in order to offset weakness in core deposits.

A portion of this shortfall in money growth can be attributed to paths of income and interest rates that have differed from those expected at the start of the year. It now appears that nominal spending is running a little below levels expected in February. In addition, market interest rates turned out to be higher in the first quarter than had been anticipated, and deposit offering rates lower, resulting in opportunity costs of M2 well above expectations. In order to get some notion of the quantitative effects of these deviations from expectations, the table below compares the predictions made by the staff quarterly aggregate M2 model prior to the February FOMC meeting with simulations of M2 growth

Chart 1

## M2

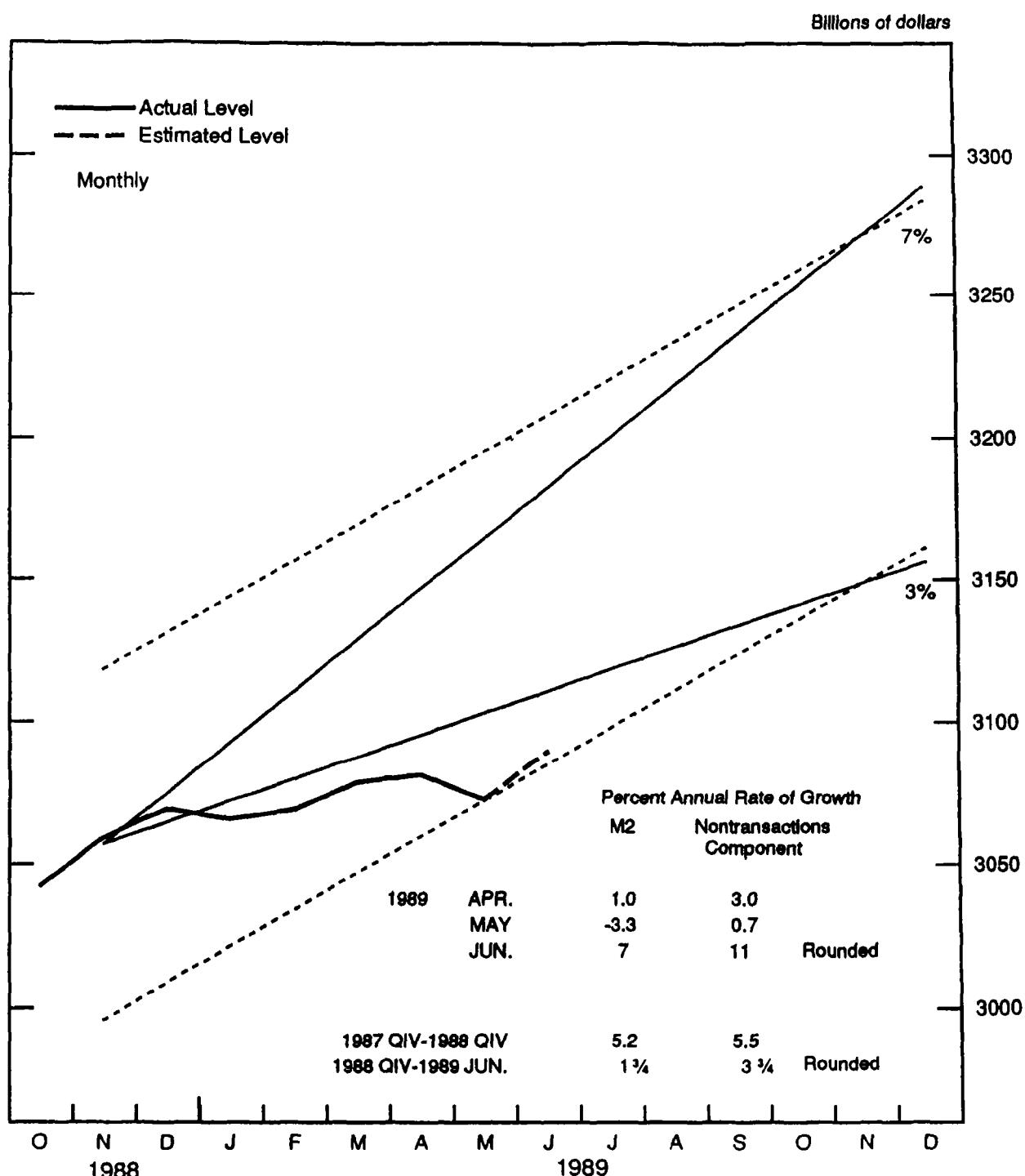


Chart 2

## M3

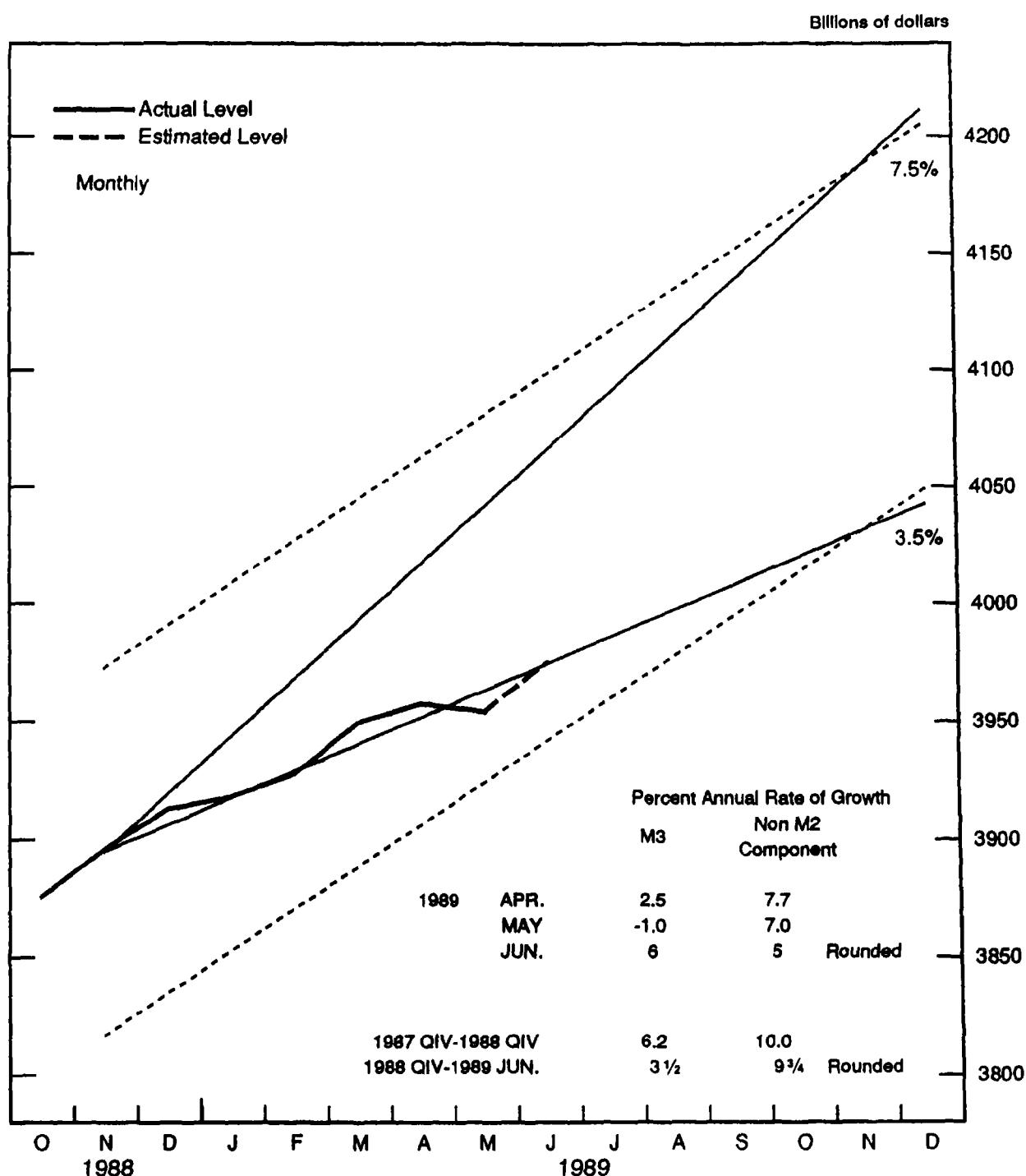
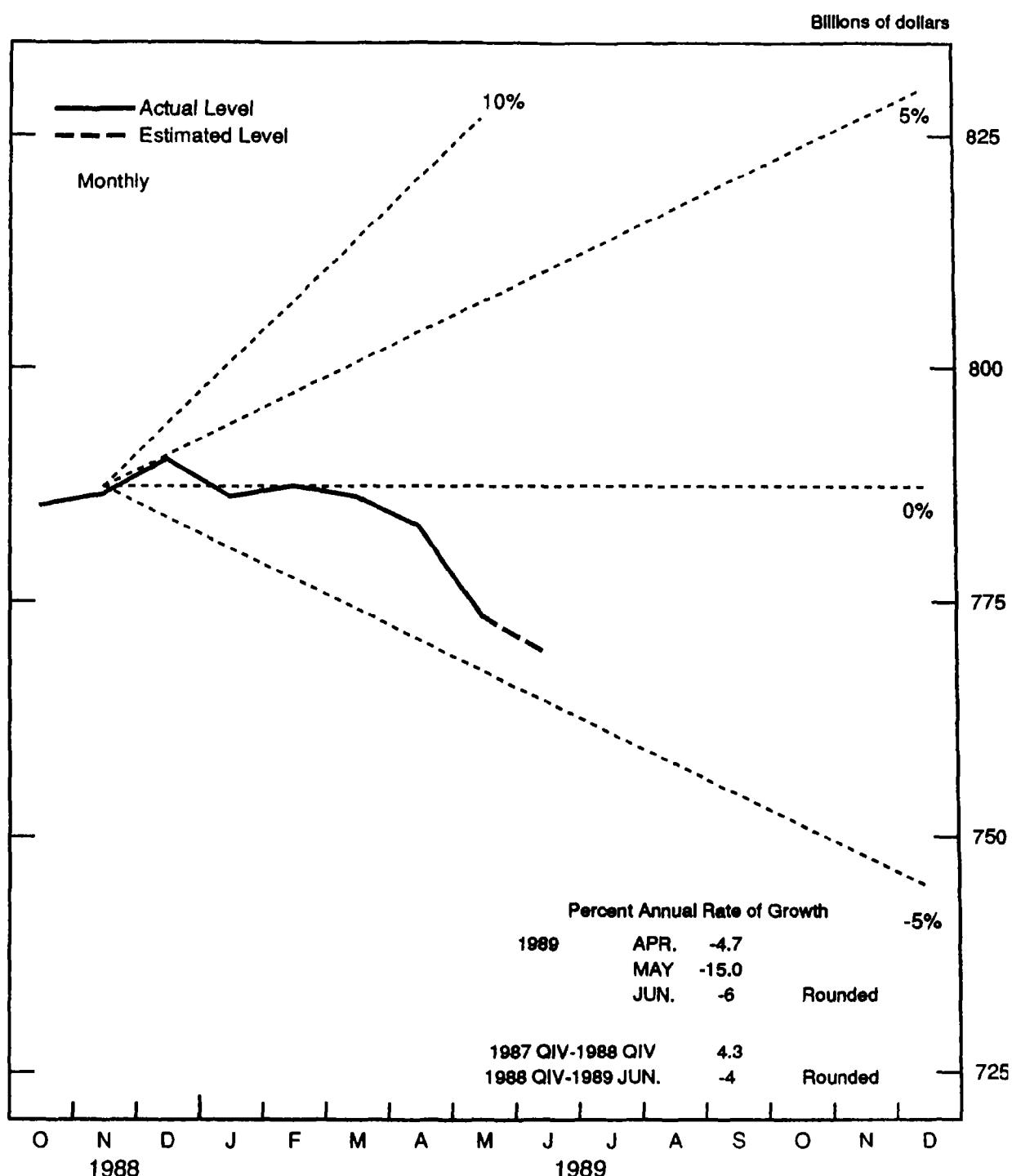
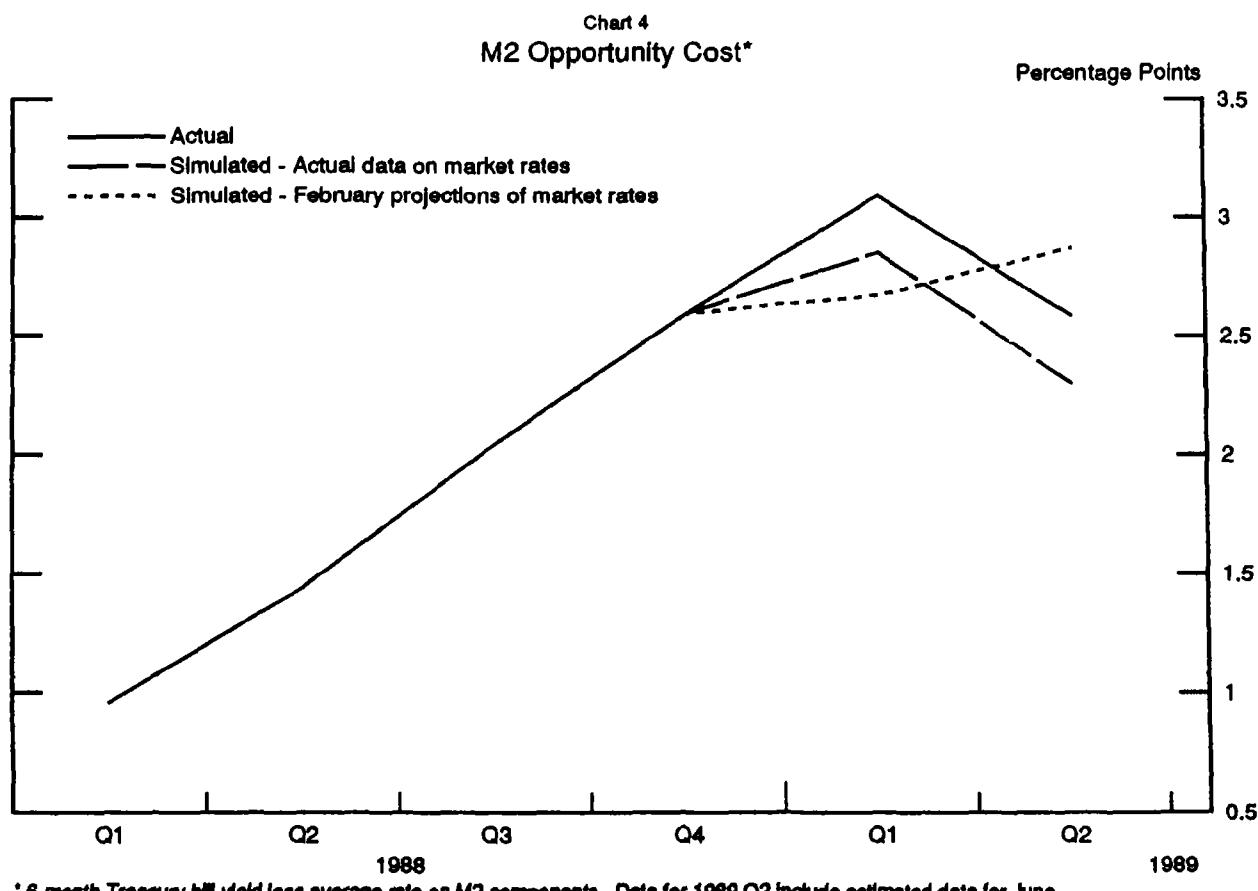


Chart 3

## M1





made using realized data for income, deposit offering rates and market interest rates.<sup>1</sup> The model forecast made in February incorporated the staff judgmental projection of GNP and interest rates, and an econometric model forecast of deposit offering rates. Relative to the February forecast, the current data lower the model's predicted growth of M2 by about 3/4 of a percentage point in the first quarter of 1989 and by about 1/4 percentage point in the second quarter. The forecast revisions are decomposed into the contributions of the updated paths of opportunity costs and nominal GNP. Higher opportunity costs shaved about 1/2 percentage point from the model's expected M2 growth in the first quarter, but was not a factor in the second quarter.<sup>2</sup> Lower nominal GNP subtracted about 1/4 percentage point in both quarters.

**Comparisons of February and June Model Simulations of M2 Growth  
(percent annual rates)**

<u>Simulations as of:</u>			<u>Contribution of:</u>			<u>Memo: Actual</u>
	<u>February</u>	<u>June</u>	<u>Difference</u>	<u>Opportunity Costs</u>	<u>GNP</u>	<u>M2 Growth</u>
1989-Q1	3.5	2.8	-0.7	-0.5	-0.2	1.9
-Q2	3.9	3.7	-0.2	0.0	-0.2	1.3

Staff quarterly aggregate M2 model

1. The simulation for the second quarter of 1989 uses the staff greenbook forecast of GNP and incorporates judgmental projections of deposit opportunity costs in June to compute the second-quarter deposit opportunity cost.

2. In preparing the February judgmental projection of M2 growth, an allowance was made for somewhat lower deposit offering rates, and hence higher opportunity costs, than forecast by the deposit-rate sector of the staff M2 model. Thus, this half-point difference between the two econometric model simulations probably is an upper limit on the impact of unforeseen rate movements on the staff's February judgmental projection of first quarter M2 growth of 2.9 percent.

Chart 4 indicates the extent to which lagging deposit rates contributed to the unexpected rise in opportunity costs. The chart compares the realized path of the average opportunity cost of M2 with simulations based on both actual interest rates and the path of interest rates given in the February staff outlook. The gap between the solid line and the long-dashed line represents the extent to which the realized average opportunity cost of M2 exceeded the predictions of the staff model, even using actual values of market interest rates. Market rates ran well above staff projections in February and March, and the adjustment of deposit interest rates continued to be far more sluggish than indicated by model simulations, boosting opportunity costs. While the staff had expected opportunity costs to track somewhat above the February model projections, the actual outcome exceeded even this judgmental forecast. More recently, market interest rates have dropped sharply, averaging well below their first-quarter levels, so that even though deposit rates have remained below the levels that had been expected in February, the average opportunity cost of M2 in the second quarter fell a bit below the level projected by the staff model using data available at the time of the February bluebook. On balance, however, unanticipated movements in opportunity costs have had a net depressive effect on the growth of M2 in the first half of 1989.

### **III. Special Factors Affecting the Aggregates.**

Other than income and interest rates, several specific events contributed to the weakness of the monetary aggregates in the first half of 1989. First there was the thrift crisis, which burst into public

attention late last year, and appears to have had a moderately depressing effect on the aggregates in the first quarter. Second, net individual tax remittances to the Treasury far exceeded staff estimates, including those estimates implicit in the seasonal factors for the aggregates. Finally, marked weakness in demand deposits and overnight RPs can be traced, at least in part, to particular institutional developments.

The thrift crisis. FSLIC-insured thrift institutions lost roughly \$14 billion in deposits between November 1988 and May 1989, about 3 percent at an annual rate, with the bulk of these losses concentrated in the first quarter of this year. A connection between these deposit outflows and the adverse publicity surrounding the savings and loan industry and its insurance fund is suggested by the fact that deposits increased at a 5-1/2 percent annual rate over this period at those thrift institutions insured by the FDIC and at a 6 percent annual rate at commercial banks. However, the staff believes that most of the funds withdrawn from FSLIC-insured thrift institutions were repositioned in other M2 assets, primarily deposits at other types of depository institutions and shares in money market mutual funds. Both of these categories of assets are close substitutes for deposits at FSLIC-insured thrifts, and both saw their growth rates pick up as outflows deepened at the FSLIC-insured institutions.

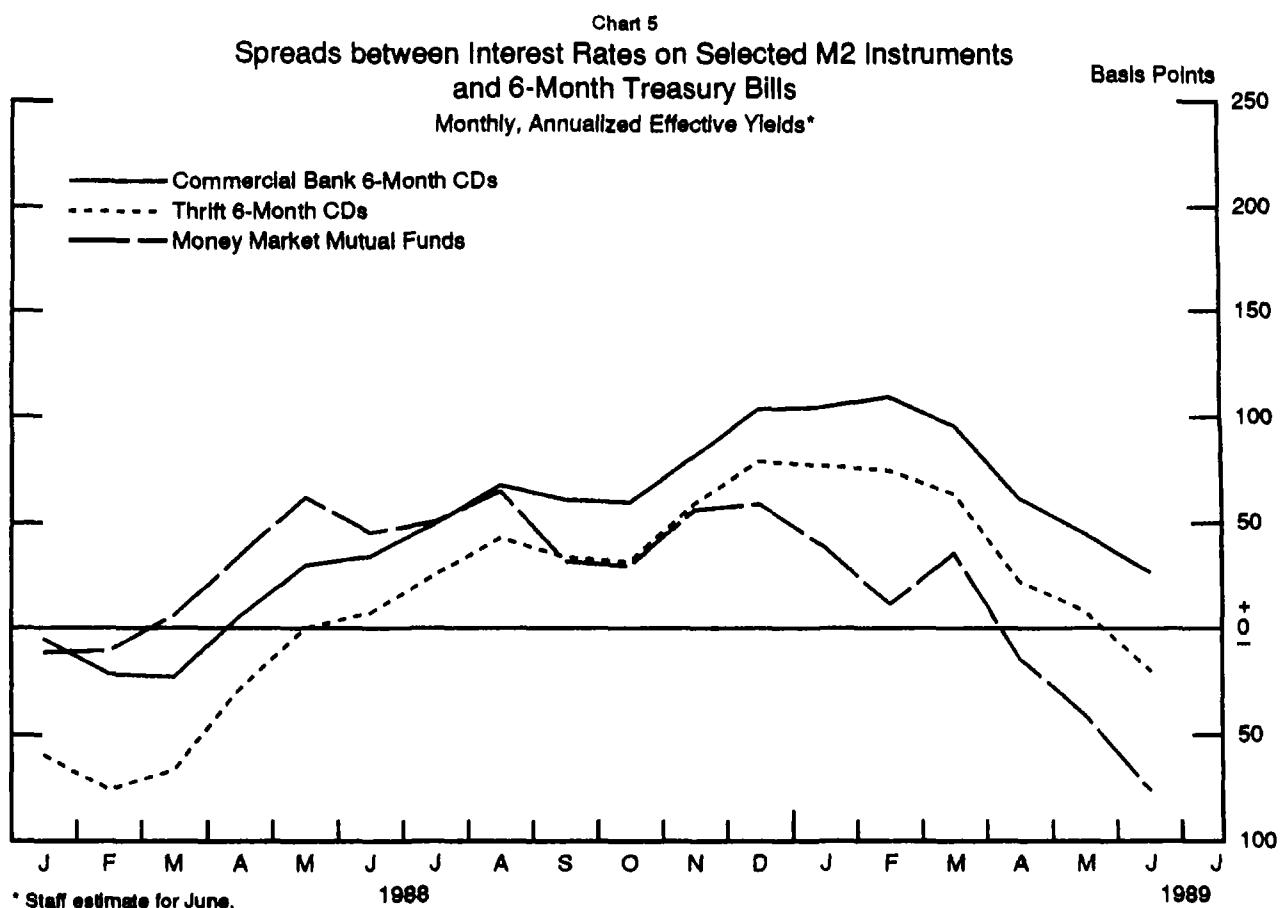
Evidence for some effect of the thrift situation at the M2 level can be found in two areas, though. First, the public stepped up its net acquisitions of Treasury debt through noncompetitive tenders at auctions during the first quarter by far more than would seem warranted by the

prevailing interest rate relationships. Treasury securities would be a logical haven for those depositors concerned about the safety of insured deposits. Based on a staff model of the public's demand for noncompetitive tenders, this increase was more than should have been associated with the rise in market interest rates, by roughly \$2 billion in both January and February.<sup>3</sup> These flows are far smaller than the aggregate amount withdrawn from FSLIC-insured thrifts, and are equivalent to about a 1/2 percentage point reduction in the annualized growth rate of M2 in the first quarter.

In addition, the interest rates offered by thrifts on M2 deposits tended rise less rapidly than did rates at banks and money market funds, both late last year and in early 1989. Chart 5 shows the spreads between interest rates on 6-month small time deposits at both commercial banks and FSLIC-insured thrifts and the yield on 6-month Treasury bills, as well as the money market fund-Treasury bill spread. Relatively low thrift rates late last year pushed this spread up to higher than normal levels, though it has fallen sharply in recent months. Several explanations were given for the lower deposit rates, including regulatory pressures on thrifts to restrain their interest rates, thrifts' belief that higher rates would fail to retain depositors who were determined to withdraw their funds, and a shift towards nondeposit sources of funds, such as advances from Federal Home Loan Banks, to counter prospective increases in deposit insurance premiums. In any event, the lower rates on deposits at thrifts likely had

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3. Since March, the level of noncompetitive tenders has been roughly in line with the model's projections.



a depressive effect on deposit rates generally, contributing to the greater M2 opportunity costs noted above for the first quarter of this year.

Incoming data over the past several weeks indicate that deposit inflows at FSLIC-insured thrift institutions are running at rates a bit above those at commercial banks and other thrifts. As chart 5 shows, abnormal deposit pricing by thrift institutions may be abating, as the opportunity costs of thrift deposits have tended to fall faster than have opportunity costs of deposits at commercial banks. In addition, net increases in Treasury securities acquired through noncompetitive tenders have receded to levels that are in line with historical relationships. Thrifts, therefore, do not now seem to be retarding M2 growth and their impact is expected to be about neutral over the next few months. However, uncertainties about the ultimate resolution of the thrift situation cloud this outlook. Should thrifts attempt to rebuild their deposit levels through more aggressive pricing, M2 growth could be boosted. On the other hand, a revivified and well-funded thrift regulator could clamp down on aggressive pricing to stem losses, especially at insolvent institutions, holding down deposit rates generally and restraining M2.

The thrift crisis also depressed M3, again largely in the first quarter.<sup>4</sup> FSLIC-insured institutions trimmed their asset expansion and turned to FHLB advances. Asset growth at thrifts fell to only a 3-1/2 percent annual rate during the first four months of this year, in contrast

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4. M1 was little affected by the problems of FSLIC-insured institutions, as their M1 liabilities make up only about 10 percent of that aggregate.

to the 6 percent rate of expansion expected in the February bluebook projections and a 6-1/4 percent expansion in 1988. Between November 1988 and March 1989, outstanding FHLB advances surged by nearly \$6 billion per month, on average, while RPs and large time deposits stagnated. More recently, thrifts' M3 liabilities have resumed expanding, along with core deposits, and advances are being paid down.<sup>5</sup>

Individual Tax Payments. Net individual tax payments to the Treasury in April and May--the difference between individual nonwithheld payments and individual refunds--ran about \$20 billion above the projections implicit in the seasonal factors used to adjust the monetary aggregates, resulting in sizable outflows in the seasonally adjusted data. A key element in interpreting these outflows is whether the public was surprised by the size of its net tax liabilities. If the public was not surprised, but had anticipated its payment needs, then households may have built up balances to pay taxes prior to April, and the May levels of the aggregates could be close to equilibrium values. In this circumstance, while tax payments may have lowered the April and May growth rates, there likely would have been offsetting effects in earlier months, and growth rates from the fourth quarter of 1988 to May would not have been significantly distorted. Alternatively, if the public had been surprised, then the higher tax payments would have drawn M2 balances below their desired levels. In this case there would not have been a buildup earlier

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5. Part of the paydown of advances can be attributed to new lending procedures at certain Home Loan Banks. Nonetheless, the bulk of the change in the behavior in advances appears to reflect a true shift in the funding choices of FSLIC-insured thrifts.

in 1989 and long-run growth rates to May would be temporarily depressed. In view of the absence of any noticeable buildup of M2 balances prior to April, relative to staff projections, and the absence of abnormally large inflows in the January 1989 estimated tax payments, the staff believes that the low levels of M2 in early May did represent a runoff relative to households' desired levels.

To the extent that tax payments did lead households to draw down their M2 balances below their desired levels, one would expect them over time to restore these balances to equilibrium.<sup>6</sup> It is not clear how long this rebuilding process would take; certainly households would be constrained by their ability to divert income from other uses, or by the transactions costs that could accompany rapid shifting of funds from non-M2 assets. Were there to be a smooth replacement of the entire \$20 billion over 6 months, M2 growth would be boosted by about 1/2 a percentage point per month. While this is only an estimate, it is consistent with the 5-1/2 percent growth in M2 from mid-May to mid-June, relative to roughly 5 percent trend growth suggested by the staff's M2 models.

The table below summarizes staff estimates of how these tax effects influenced the monetary aggregates during the second quarter. Because April 15 fell on a weekend, tax receipts were collected relatively later than usual and the greatest impact of these flows on month-average growth rates of the monetary aggregates came in May. The estimated

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6. This analysis ignores any effect of higher-than-expected tax liabilities on households permanent income or wealth, and hence on desired M2 holdings, as these likely would be relatively small.

impacts on M3 are consistent with larger government deposits substituting for M3 liabilities.

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Effects of Unexpected Tax Flows on the Monetary Aggregates  
(percent changes at annual rates)

	<u>April</u>	<u>May</u>	<u>June</u>	<u>Q2</u>
M1	-1 to 0	-3 to -5	0 to +2	-1
M2	-1 to -2	-3 to -5	0 to +1	-1
M3	-1 to -2	-3 to -5	0 to +1	-1

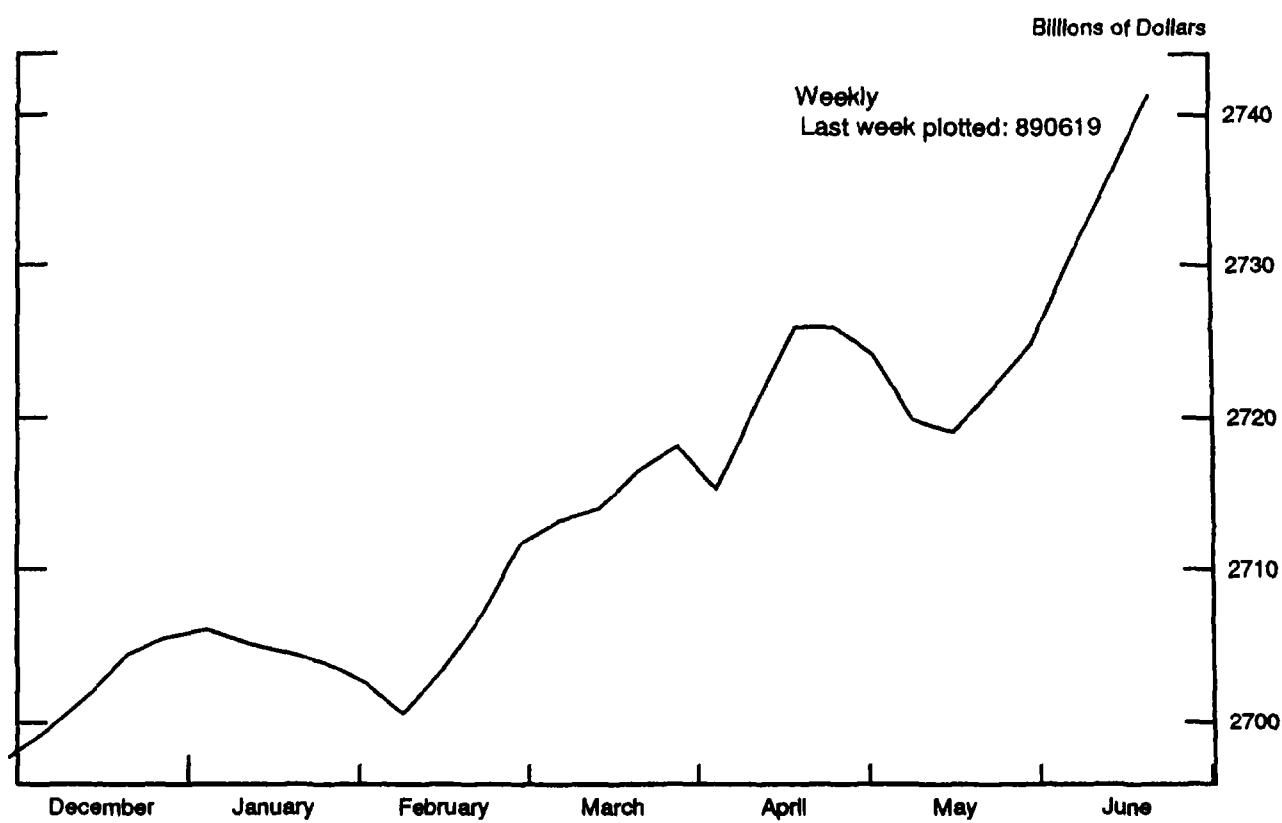
Staff estimates

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The combined effects of the thrift crisis and the oversized tax payments may be seen on chart 6, which plots the seasonally adjusted sum of the "household" components of M2: currency, OCDs, savings deposits and MMDAs, small time deposits, and M2-type money fund shares. Based on weekly data, two extended intervals of decline are evident: the first corresponding to the runoffs from FSLIC-insured thrifts and inflows into Treasury securities in January and February, and the second to tax payments in late April and early May.

Nonhousehold Components. The importance of outflows from thrifts and tax payments should not obscure the fact that the weakness in M2 so far in 1989 also owes importantly to steep runoffs in demand deposits and overnight managed liabilities at commercial banks. Demand deposits have been particularly weak: four of the first six months of 1989 showed declines at double digit annual rates, and their June level is nearly \$14 billion below their fourth-quarter 1988 average. Demand deposits have

Chart 6  
Household Component of M2<sup>1</sup>



1. Consists of currency, OCDs, savings deposits, MMDAs, general purpose and broker/dealer money fund shares, and small time deposits.

tracked well below the growth rates indicated by the staff quarterly model since 1987, though the most recent shortfall is by far the largest. The most recent weakness has no geographic concentration, though it has taken place almost entirely at large commercial banks.<sup>7</sup>

Results of a mid-June survey of senior financial officers of 60 large commercial banks indicated that higher market interest rates, operating through declines in compensating balance requirements and wider opportunity costs, were an important cause of the weakness in demand deposits. (The results of this survey are discussed more fully in an appendix to this memorandum.) The majority of these banks had experienced unusual weakness in their demand deposits, with about four fifths of the respondents who noticed such weakness specifying business demand deposits as a cause. Most of these banks cited lower compensating balance requirements, because of higher interest rates in the first quarter of 1989, as contributing to lower levels of business demand deposits. Compensating balances could be responsible for the declines seen in demand deposits; in simple cases these balances can have an interest rate elasticity of as much as minus unity.<sup>8</sup> However, this year's decline in demand deposits has been far deeper than predicted by the demand-deposit equation of the staff money demand model, which should take this factor into account. Still, it may be that the unusually rapid rise in interest

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7. A portion of this decline, roughly a tenth, has occurred at one money center bank and one of its affiliates, in connection with a securities-clearing operation.

8. For example, to keep the implicit dollar earnings of a compensating balance equal to a constant service charge amount as interest rates change, the balance requirement must fall by the same percentage amount as interest rates rise.

rates late last year into early this year caught some cash managers with significant excess balances, which they offset more rapidly than past behavior might suggest. Of course, should compensating balances explain this recent weakness in demand deposits, the lower market interest rates seen in the second quarter should soon staunch, or even reverse, the declines. Indeed, most of the financial officers who cited interest rate-induced changes in compensating balances as a factor lowering demand deposits believed that the recent lower levels of interest rates, if maintained, would cause a levelling off of demand deposits or even some increase.

The level of overnight RPs also has fallen, by about \$2-1/2 billion or 7 percent at an annual rate, from the fourth quarter of last year. This decline is comparable to the magnitude of a drop in reported RPs that occurred in early April, when two large commercial banks reclassified their primary dealer operations in U.S. government securities from operating units of the bank to nonbank subsidiaries of the bank holding company.<sup>9</sup> These reclassifications also lowered term RPs reported in the monetary aggregates, by about \$1 billion. Both M2 and M3 were affected by these actions because the liabilities of nonbank affiliates of commercial banks, unlike those of banks themselves, are not included in

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9. The operations were transferred to so-called 'Section 20' subsidiaries that have been set up by bank holding companies to engage in underwriting certain securities--such as commercial paper, municipal revenue bonds, and corporate bonds--that have been authorized by the Board. Government securities business provides volume to dilute these activities down to the mandated maximum of 5 percent of the subsidiary's volume of business.

the monetary aggregates.<sup>10</sup> Further such effects on the monetary aggregates are not likely, however, as only three primary dealerships, all relatively small, remain as departments of commercial banks.

#### IV. Conclusions.

The following table summarizes staff estimates of the net effects of the above factors on the growth of M2 during the first half of this year. Given all of the uncertainties involved, the magnitudes on the table should be viewed as indicative rather than definitive. Nevertheless, these factors arguably can explain most, though not all, of the shortfall of M2 from the staff's February projections. The remaining gap relative to the staff's earlier projections can be associated with the sharp, and as yet unexplained, declines in demand deposits.

**Summary of Estimated Effects of Macroeconomic and Special Factors on M2  
(percent growth at an annual rate)**

	<u>O1</u>	<u>O2</u>	<u>H1</u>
Income and interest rates	-0.7	-0.2	-0.5
Thrift outflows/Noncompetitive tenders	-0.5	-	-0.2
Taxes	-	-1.0	-0.5
Primary dealer reclassifications	-	-0.2	-0.1
Total	-1.2	-1.4	-1.3
Actual M2 growth	1.9	1.3	1.6
'Adjusted' M2 growth	3.1	2.8	2.
Memo: February bluebook path	2.9	3.4	3.

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10. These reclassifications took about 3/4 percentage point off the April growth rate of M2, and the growth rate of M3 in April likely was depressed by about 1 percentage point.

While depository institutions did step up their reliance on managed liabilities to offset the shortfall in their M2 funding, M3 also fell short of expectations because some of these managed liabilities were not components of M3 and depositories' asset accumulation turned out to be less than had been anticipated. Thrift institutions borrowed heavily through FHLB advances, and commercial banks were insulated from tax-related withdrawals, at least initially, by government deposits. Lending ran below expectations primarily at thrift institutions, largely in association with supervisory and market pressures on FSLIC-insured institutions, and thrift credit is now expected to expand at a 3-1/4 percent annual rate in the first half of 1989, versus a February projection of 6 percent. Asset growth at commercial banks also has fallen marginally short of expectations, at 6-1/4 percent instead of 7 percent. Together, these factors are more than sufficient to explain the roughly 1 percentage point slower M3 growth than in the February projection.

**APPENDIX: Results of the June Senior Financial Officer Survey on Weakness in Demand Deposits and OCDs and MMDA Pricing<sup>1</sup>**

**DRAFT - NOT FOR DISTRIBUTION TO RESPONDENTS**

**Summary**

To obtain additional information about the declines in transaction accounts over April and May and about the sluggish adjustment of rates paid on MMDAs over the past year, a Senior Financial Officer Survey was conducted in mid-June.<sup>2</sup> Overall, the respondents saw the increase in interest rates earlier in the year as the major explanation for the behavior of transaction accounts over April and May, with large personal tax payments also having some depressing effect on balances in household accounts. The effects of the earlier rise in interest rates on business demand deposits were cited as operating primarily through downward adjustments to required compensating balances and increased vigilance on the part of cash managers; some leveling off or reversal of these effects was expected by most respondents as a result of the recent declines in market interest rates. Increased opportunity costs were seen as the primary cause of weakness in household transactions deposits -- both DDAs and OCDs -- with large tax payments cited as the next most important explanation.

Because rates paid on MMDAs have fallen below their historical relationships with market rates, the senior financial officers also were

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1. Prepared by Patrick Mahoney of the Division of Monetary Affairs. Doug Carpenter and Mary Beth Wittekind provided research assistance.

2. The respondent panel to this survey consists of the same 60 banks covered by the Senior Loan Officer Opinion Survey on Bank Lending Practices. As of December 31, 1988, 28 respondents had domestic assets of \$10 billion or more; combined assets of these banks totaled \$678 billion, compared to \$879 billion for the entire panel of 60 banks, and \$2.74 trillion dollars for all federally-insured commercial banks.

asked about the adjustment of MMDA rates at their institutions relative to movements in market rates over the past year. Approximately 80 percent of the respondents indicated that their institutions had moved MMDA rates up by less relative to increases in market interest rates over the past year than in previous periods of rising interest rates. This appears to have been the result primarily of an evolution in the strategy of pricing liquid accounts in the deregulated environment. A preference for competing for savings-type balances with yields on small time deposits and increased use of tiering were the major reasons given for the change in observed MMDA pricing behavior.<sup>3</sup> Reduced competition from thrift institutions was cited as a factor by a little less than one-fifth of those reporting more sluggish MMDA pricing.

#### **Demand Deposit Activity in the April-May Period**

Approximately two-thirds of the respondents reported that demand deposit growth at their institutions was below normal or very weak over April and May. Only a few reported above-normal demand deposit growth, and none experienced very strong growth. Nearly a quarter of smaller institutions reported very weak growth, while only one large institution did. Of those respondents with lower-than-normal DDA growth, 80 percent experienced weakness in business deposits while half saw weakness in household accounts. Nearly all large institutions and about 70 percent of smaller institutions reported weakness in business deposits. In contrast,

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3. Tiering refers loosely to the practice of paying higher rates on accounts in which depositors agree to maintain larger balances. This practice allows banks to attract yield-sensitive funds while minimizing interest expense. It also serves to increase the stability of MMDA balances.

weakness in household demand deposits was much more prevalent at smaller respondents.

**Sources of weakness in business demand deposits.** The increase in market interest rates earlier in the year was cited as the overriding factor in the weakness in business demand deposits, manifested through reduced required compensating balances and more careful cash management. Slightly more than 85 percent of respondents reporting weak business deposits cited reduced compensating balances owing to the earlier increase in interest rates. About two-thirds indicated that more careful cash management in light of higher rates was a factor damping business demand deposit growth. Changes in cash management practices were cited by about one-third of the banks replying to this question, although several of these indicated they were referring to the continued spread of sophisticated cash management practices rather than to specific events. A few respondents indicated that reductions in balances by firms to offset earlier overages, given the rapid increase in rates and thus earnings-credit ratios, contributed to the weakness in balances. Of the institutions that cited reductions in required compensating balances or more careful cash management practices as factors, about three-quarters expected to see a leveling off or reversal of these effects in light of the recent declines in interest rates.<sup>4</sup>

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4. The majority of respondents to this question (3.ii.) did not specify whether they expected a reversal or a leveling off of these effects. About two-thirds of banks that did respond to this part of the question indicated that a leveling off rather than a reversal of these effects was more likely.

Slowing in business or financial activity did not appear to be major contributors to the weakness in business demand deposits. Just three banks pointed to decreased mortgage activity, and other explanations, such as lower required compensating balances resulting from reduced use of bank services or a slowing in business and financial activity, each were cited by even fewer respondents. The survey did not yield sufficient data to determine if the weakness in business deposits was concentrated at particular types of firms; two-thirds of the respondents indicated they did not have enough information available to allow them to answer the question. The majority of those that did respond indicated the slowing was not concentrated at specific types of businesses. In terms of account structure, nearly all of the banks surveyed reported that the weakness in business demand deposits was evidenced in lower average balances; only three while had seen a reduction in the number of accounts.

**Sources of weakness in household demand deposits.** Respondents indicated that the earlier rise in market interest rates and, to a somewhat lesser extent, large tax payments were the major factors accounting for the weakness in household demand deposits. Slightly more than 60 percent of surveyed banks responding to this question cited greater economizing on balances because of the earlier increase in rates, and half indicated that large tax payments were a factor. Changes in minimum balance or fee requirements and slowing transaction activity each were given as explanations by about ten percent of relevant respondents.

**The Behavior of Other Checkable Deposits in May**

About 60 percent of respondents experienced weaker than normal growth of other checkable deposits (OCDs) in May, and this proportion was roughly the same for large and small institutions. Only a handful of institutions reported above normal OCD growth in May and none cited very strong growth. The weakness was overwhelmingly concentrated in household balances, as opposed to those held by other eligible entities -- nonprofit organizations and state and local governments..

As with household demand deposits, the earlier increase in interest rates was seen as the major reason behind weak OCD growth in May, followed by tax payments. Over 85 percent of respondents with weak OCD growth cited shifts to small time deposits or other instruments, owing to higher yields, while somewhat more than half indicated tax payments were important. A handful banks reported that changes in minimum balance and fee structures or slowing transaction activity were important. The weakness in OCDs was manifested in lower average account balances at nearly all respondents; only three indicated that they had seen a decline in the number of accounts.

**Pricing of MMDAs Relative to Market Interest Rates**

The survey results indicate that the slower-than-expected adjustment of MMDA rates to increases in market interest rates over the past year largely reflects the evolution of pricing strategies by depository institutions in a deregulated environment. About 80 percent of the institutions surveyed indicated they that they had moved MMDA rates up

by less relative to the increase in market rates than in earlier periods of rising rates. This proportion was roughly the same for large and small banks.

Of the respondents indicating slower movement in MMDA rates, nearly half cited a preference to channel savings-type balances into small time deposits rather than liquid accounts. Nearly the same proportion indicated that the sluggish movement in "average" or entry-level rates reflected increased use of tiering or more aggressive pricing of upper tiers. About a quarter of the respondents to this question indicated that overall strong retail deposit growth had obviated the need to raise MMDA rates by more. This factor was more important at smaller institutions than at the large ones. Only about 17 percent of the respondents cited reduced competition from thrift institutions as an element in the change in their MMDA pricing strategy. Individual responses in the "other" category were varied, including less competition from other banks and the introduction of new deposit products.

**SENIOR FINANCIAL OFFICER OPINION SURVEY  
AT SELECTED LARGE BANKS IN THE UNITED STATES  
(Status of policy as of June 14, 1989)  
(Number of banks and percent of banks answering question)  
(By volume of total domestic assets, in \$ billions, as of December 31, 1988)**

1. Adjusting for normal seasonal variation, please characterize demand deposit growth at your bank over April and May on a monthly average basis.

	Very strong				Above normal				About normal				Below normal				Very weak				Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Total		
All Respondents	0	0	3	5.5	16	29.1	28	50.9	8	14.5	55										
\$10.0 and Over	0	0	2	7.7	9	34.6	14	53.8	1	3.8	26										
Under \$10.0	0	0	1	3.4	7	24.1	14	48.3	7	24.1	29										

2. If you characterized recent growth as "below normal" or "very weak", was the weakness in:  
(more than one may apply)

	Business accounts			Household accounts			Other accounts			Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Total
All Respondents	29	80.6	18	50.0	2	5.6	36			
\$10.0 and Over	15	93.8	6	37.5	1	6.3	16			
Under \$10.0	14	70.0	12	60.0	1	5.0	20			

3. Source of weakness in business demand deposits - please complete this question only if you cited weakness in business demand deposits in question 2.

- i. To what would you attribute the weakness in business demand deposits?  
(more than one may apply)

- a. Reduced required compensating balances because of increases in interest rates earlier this year.
- b. Reduced compensating balances to make up for overages relative to requirements earlier in the year.
- c. Reduced required compensating balances because of decreased use of credit services.
- d. Reduced required compensating balances because of decreased use of operational services.
- e. More careful cash management owing to earlier increases in interest rates.
- f. Changes in cash management practices.
- g. Slowing of business transactions and activity, evidenced, for example, by lower deposit turnover.
- h. Reduced financial activity associated with LBOs and merger financing.
- i. Reduced financial activity associated with real estate lending or other mortgage-related activities.
- j. Other (please explain).

	Reduced c.b. on higher rates	Reduced c.b. on earlier overages	Reduced c.b. on less credit use	Reduced c.b. on less service use	More careful cash management	Changes in business activity	Slowing and merger activity	Reduced LBO and merger activity										
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct
All Respondents	24	89.9	4	14.8	2	7.4	19	70.4	9	33.3	1	3.7	1	3.7				
\$10.0 and Over	11	78.6	2	14.3	2	14.3	1	7.1	9	64.3	5	35.7	1	7.1	0	0.0		
Under \$10.0	13	100.0	2	15.4	0	0.0	1	7.7	10	76.9	4	30.8	0	0.0	1	7.7		

c.b. -- compensating balances

	Reduced real estate activity		Other		Total
	Banks	Pct	Banks	Pct	Banks
All Respondents	3	11.1	5	18.5	27
\$10.0 and Over	1	7.1	2	14.3	14
Under \$10.0	2	15.4	3	23.1	13

- ii. If you cited reasons a (reduced compensating balances owing to increases in interest rates), b (reduced compensating balances owing to overages), or e (more careful cash management), do you expect a reversal or leveling off of the effects of these factors in light of the recent declines in short-term interest rates?

	Yes		No		Reversal		Leveling off		Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks
All Respondents	17	77.3	4	18.2	3	13.6	8	36.4	22
\$10.0 and Over	7	77.8	2	22.2	1	11.1	3	33.3	9
Under \$10.0	10	76.9	2	15.4	2	15.4	5	38.5	13

If so, which factors?

	Reduced c.b. on higher rates		Reduced c.b. on earlier overages		More careful cash management		Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks
All Respondents	6	54.5	4	36.4	6	54.5	11
\$10.0 and Over	3	60.0	2	40.0	2	40.0	5
Under \$10.0	3	50.0	2	33.3	4	66.7	6

- iii. Has the weakness in business demand deposits been concentrated in particular types of businesses?

	Yes		No		information		Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks
All Respondents	4	16.0	6	24.0	15	60.0	25
\$10.0 and Over	3	21.4	2	14.3	9	64.3	14
Under \$10.0	1	9.1	4	36.4	6	54.5	11

If so, which ones? (For example, retailers, manufacturers, mortgage bankers, or securities brokers.)

	Retailers		Manufactures		Mortgage bankers		Securities brokers		Other		Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks
All Respondents	1	20.0	0	0.0	3	60.0	1	20.0	2	40.0	5
\$10.0 and Over	1	33.3	0	0.0	2	66.7	0	0.0	1	33.3	3
Under \$10.0	0	0.0	0	0.0	1	50.0	1	50.0	1	50.0	2

iv. Has the weakness in business demand deposits primarily been reflected in the number of accounts or in average account balances?

	Number of accounts		Avg. account balance		Both		Total
	Banks	Pct	Banks	Pct	Banks	Pct	
All Respondents	1	3.6	25	89.3	2	7.1	28
\$10.0 and Over	1	7.1	12	85.7	1	7.1	14
Under \$10.0	0	0	13	92.9	1	7.1	14

4. Source of weakness in household demand deposits - please complete this question only if you cited weakness in household demand deposits in question 2. (more than one may apply).

- a. Increased economization of demand deposit balances owing to the earlier increases in interest rates this year.
- b. A change in the minimum balance requirement or fee structure of consumer accounts.
- c. Unusually large April tax payments.
- d. A slowdown in consumer transaction activity as evidenced, for example, by lower deposit turnover.

	Economization on earlier rate increases		Change in min. balances or fee structure		Large tax payments		Slowing transaction activity		Other		Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	
All Respondents	11	61.1	2	11.1	10	55.6	2	11.1	0	0.0	18
\$10.0 and Over	4	66.7	1	16.7	3	50.0	0	0.0	0	0.0	6
Under \$10.0	7	58.3	1	8.3	7	58.3	2	16.7	0	0.0	12

5. Other checkable deposits (i.e., NOW accounts) have declined sharply in May. Accounting for normal seasonal variation, please characterize growth in NOW accounts at your bank last month.

	Very strong		Above normal		About normal		Below normal		Very weak		Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	
All Respondents	0	0.0	2	3.9	20	39.2	24	47.1	5	9.8	51
\$10.0 and Over	0	0.0	1	4.5	9	40.9	11	50.0	1	4.5	22
Under \$10.0	0	0.0	1	3.4	11	37.9	13	44.8	4	13.8	29

6. If you characterized growth in NOW accounts as "below normal" or "very weak", was the weakness in: (more than one may apply)

	Consumer accounts		State and local		Nonprofit institutions		Total
	Banks	Pct	Banks	Pct	Banks	Pct	
All Respondents	27	100.0	1	3.7	0	0.0	27
\$10.0 and Over	11	100.0	0	0.0	0	0.0	11
Under \$10.0	16	100.0	1	6.3	0	0.0	16

7. Sources of weakness in consumer NOW accounts - please complete this question only if you cited weak growth in consumer NOW accounts in question 6.

- i. To what would you attribute the weakness in consumer NOW accounts? (more than one may apply)
  - a. Increased shifts of funds to small time deposits or to other investments because of higher yields on these instruments.
  - b. A change in the minimum balance requirement or fee structure of consumer accounts.
  - c. Unusually large April tax payments.
  - d. A slowdown in consumer transaction activity as evidenced, for example, by lower deposit turnover.
  - e. Other (please explain).

	Change in										Total
	Shifts to min. balance		on fee structure		Large tax payments		Slowing transaction activity		Other		Banks
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks
All Respondents	24	88.9	2	7.4	16	59.3	2	7.4	1	3.7	27
\$10.0 and Over	10	90.9	1	9.1	7	63.6	0	0.0	0	0.0	11
Under \$10.0	14	87.5	1	6.3	9	56.3	2	12.5	1	6.3	16

- ii. Has the weakness in consumer NOW accounts primarily been reflected in the number of accounts or in average account balances?

	Number of avg. account			Both			Total
	Banks	Pct	Banks	Pct	Banks	Pct	Banks
All Respondents	1	4.3	20	87.0	2	8.7	23
\$10.0 and Over	0	0	9	90.0	1	10.0	10
Under \$10.0	1	7.7	11	84.6	1	7.7	13

8. Nationally reported rates paid on MMDAs appear to have lagged the increases in short-term market rates over the last year much more than they did when interest rates rose in the mid-1980s. If, over the past year, your institution raised its MMA rates by less, relative to the increase in market interest rates, than it did previously, what are the reasons:

- a. Prefer to compete for investment balances with small time deposit rates rather than with rates on liquid accounts.
- b. Prefer customers hold liquid savings balances in other savings accounts rather than in MMDAs with their checkwriting features.
- c. Retail deposit growth overall has been strong, obviating the need to raise MMA rates by more.
- d. Reduced rate competition from thrift institutions.
- e. Increased use of tiering of rates on MMDAs (paying higher rates for higher balances) or raised rates paid on higher balances by more than entry level rates.
- f. Other (please explain)

	Compete on small time yields		Compete on savings accounts		Strong retail deposit growth		Reduced thrift competition		Use of tiering		No information		Total		
	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Pct	Banks	Banks	Banks		
All Respondents	19	45.2	4	9.5	9	21.4	7	16.7	21	50.0	13	31.0	1	2.4	42
\$10.0 and Over	9	50.0	2	11.1	3	16.7	2	11.1	6	33.3	4	22.2	1	5.6	18
Under \$10.0	10	41.7	2	8.3	6	25.0	5	20.8	15	62.5	9	37.5	0	0.0	24