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[1] In some cases, original copies needed to be photocopied before being scanned into electronic format. All scanned images were deskewed (to remove the effects of printer- and scanner-introduced tilting) and lightly cleaned (to remove dark spots caused by staple holes, hole punches, and other blemishes caused after initial printing).

[2] A two-step process was used. An advanced optimal character recognition computer program (OCR) first created electronic text from the document image. Where the OCR results were inconclusive, staff checked and corrected the text as necessary. Please note that the numbers and text in charts and tables were not reliably recognized by the OCR process and were not checked or corrected by staff.

STRICTLY CONFIDENTIAL (FR) CLASS I FOMC

NOVEMBER 13, 1998

MONETARY POLICY ALTERNATIVES

PREPARED FOR THE FEDERAL OPEN MARKET COMMITTEE
BY THE STAFF OF THE BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

Strictly Confidential (F.R.)
Class I -- FOMC

November 13, 1998

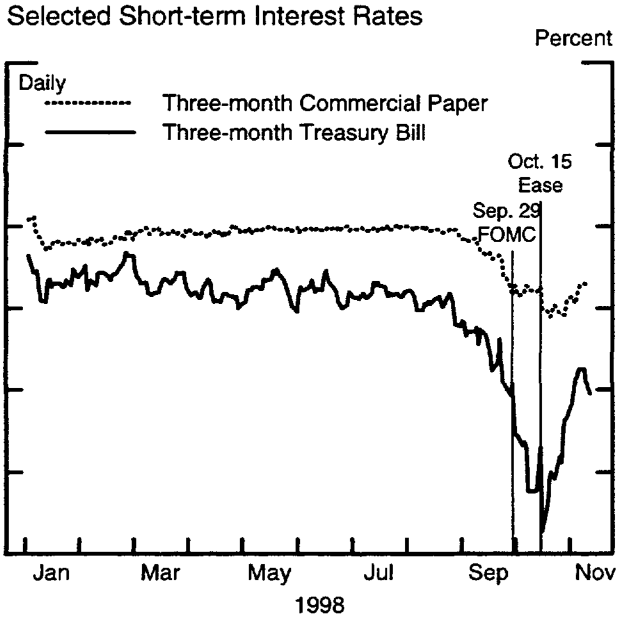
MONETARY POLICY ALTERNATIVES

Recent Developments

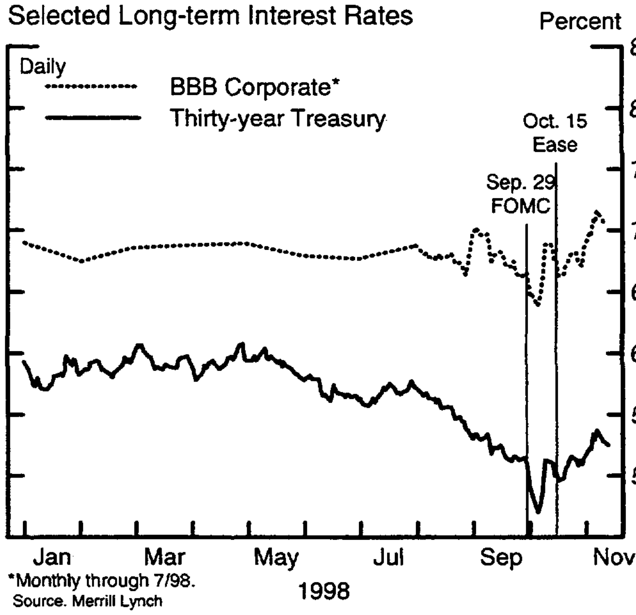
(1) The Committee's quarter-point easing in the intended federal funds rate at its September meeting was smaller than many market participants anticipated but elicited only a muted immediate response in financial markets (chart 1). In the days that followed, the announcement by several major banks of large trading losses and the expected unwinding of positions by hedge funds and other leveraged investors combined to weigh on market sentiment. Market liquidity, which had already begun to worsen, deteriorated sharply, as evidenced by rising premiums for on-the-run Treasury securities (chart 2) and widening bid-asked spreads. The demand for on-the-run Treasury securities was heightened further by flight-to-quality flows out of private and emerging market securities. Credit spreads on private instruments moved still higher, and major equity indexes suffered additional losses, as market participants' perceptions of, and aversion to, risk intensified. Many borrowers responded to the continued tightening of credit terms in open markets by drawing down prearranged lines at banks. Banks, meanwhile, encountered increasing difficulty in syndicating large loans, with some deals completed only after an upward repricing of rates while others were canceled altogether. Owing in large part to deteriorating financial conditions, expectations of further System easing mounted in the two weeks following the September meeting. Nevertheless, the announcement on October 15 of a second quarter-point reduction in the intended level of the federal funds rate, along with a like change in the discount rate, came sooner than market participants had expected. On the

Chart 1

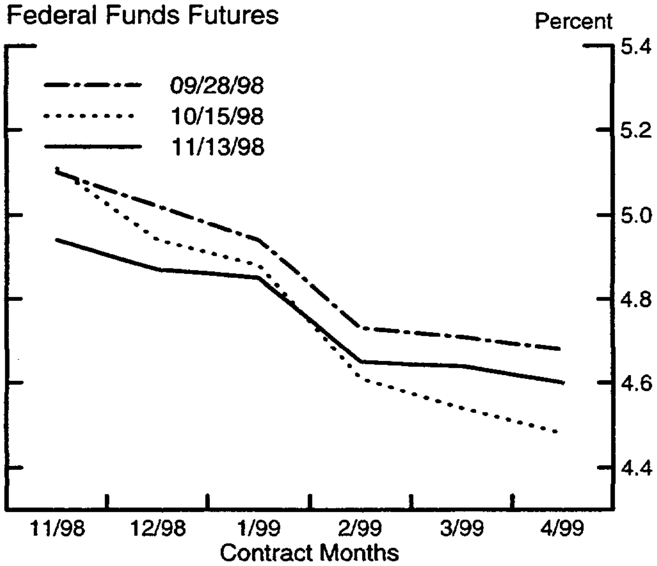
Selected Short-term Interest Rates



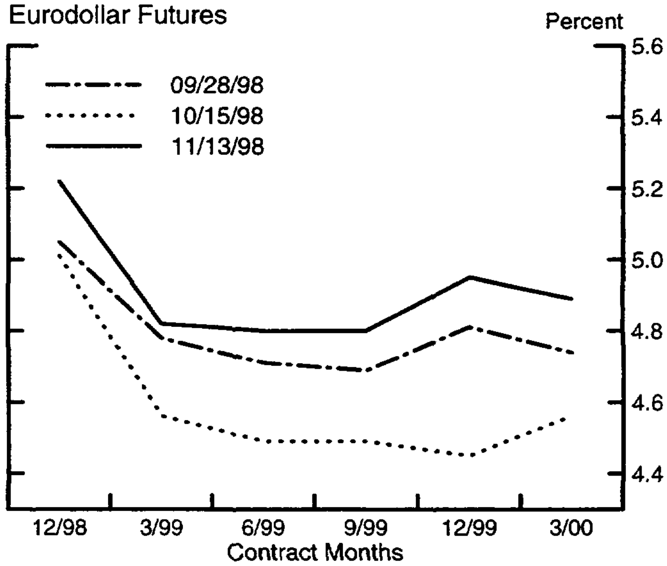
Selected Long-term Interest Rates



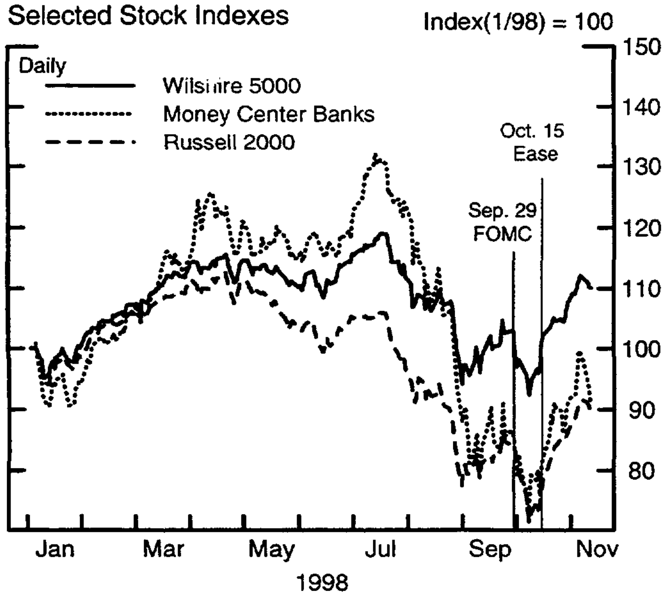
Federal Funds Futures



Eurodollar Futures



Selected Stock Indexes



Dollar Exchange Rate Indexes

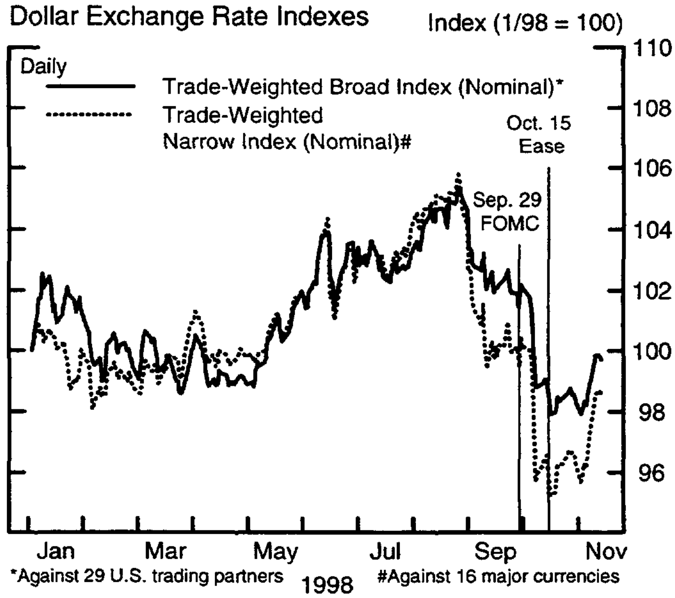
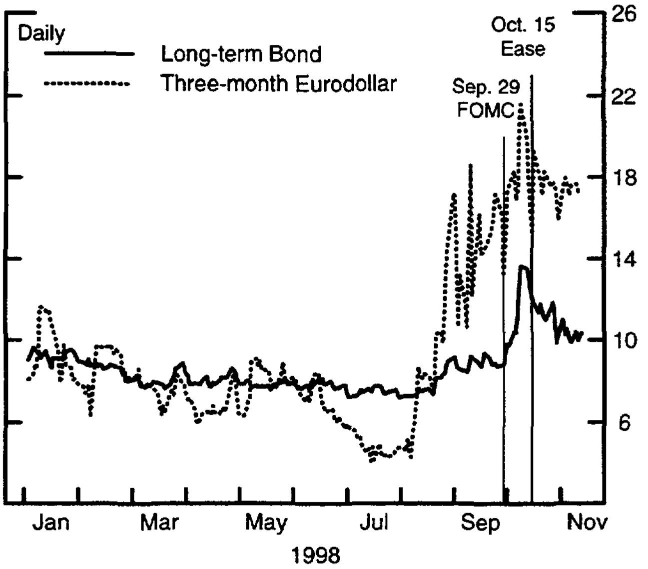
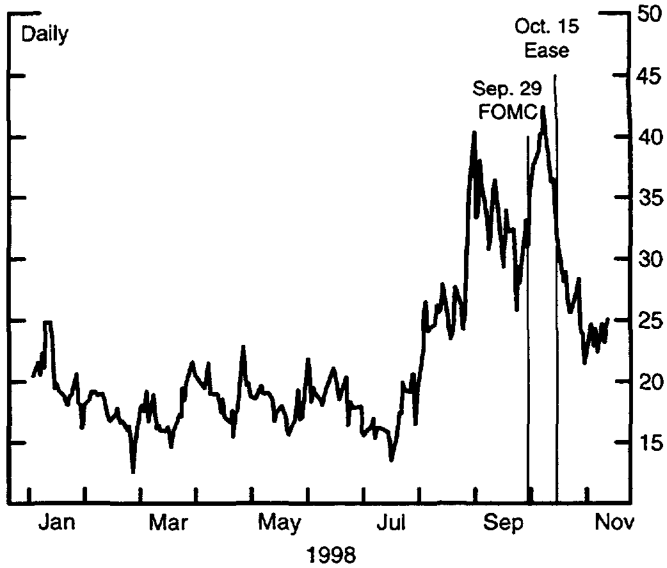


Chart 2

Implied Interest Rate Volatilities

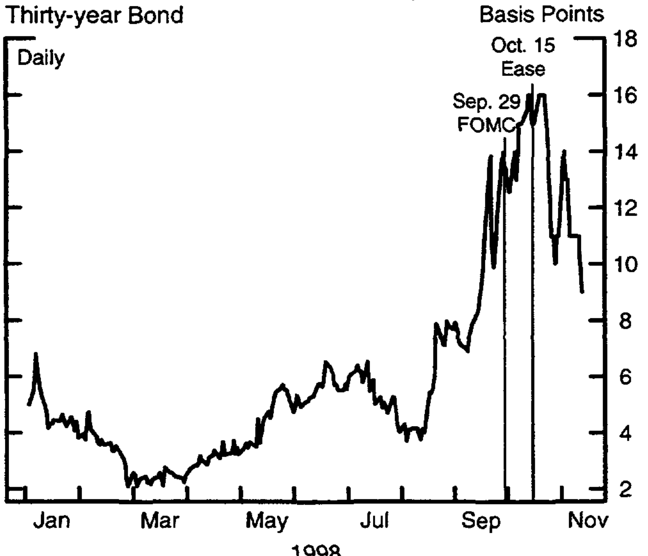


S&P 500 Implied Volatility



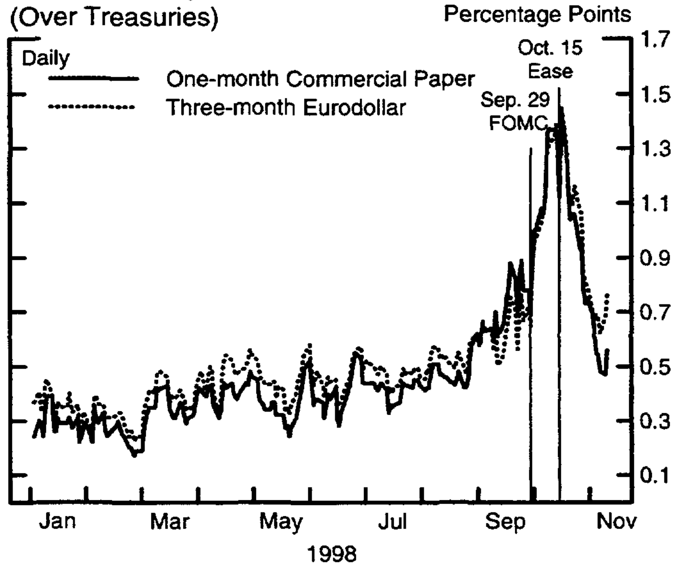
On-the-Run Premiums for Treasury Securities*

Thirty-year Bond



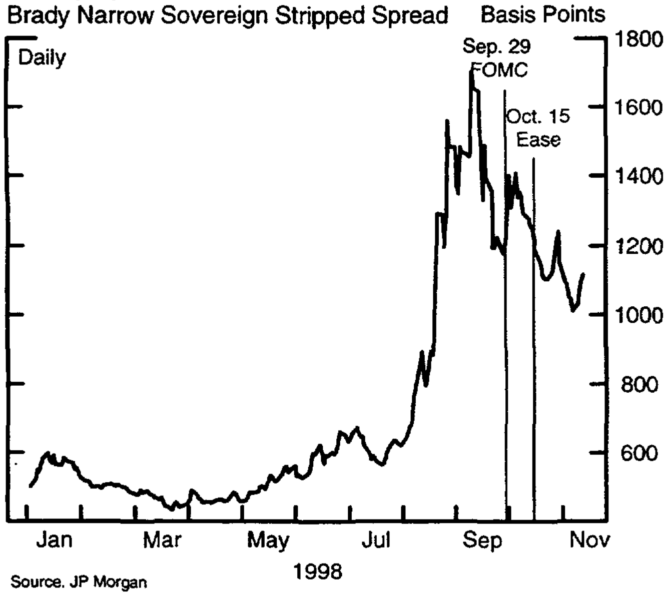
*Spreads of next-to-most recently issued security over most recently issued security.

Interest Rate Spreads
(Over Treasuries)



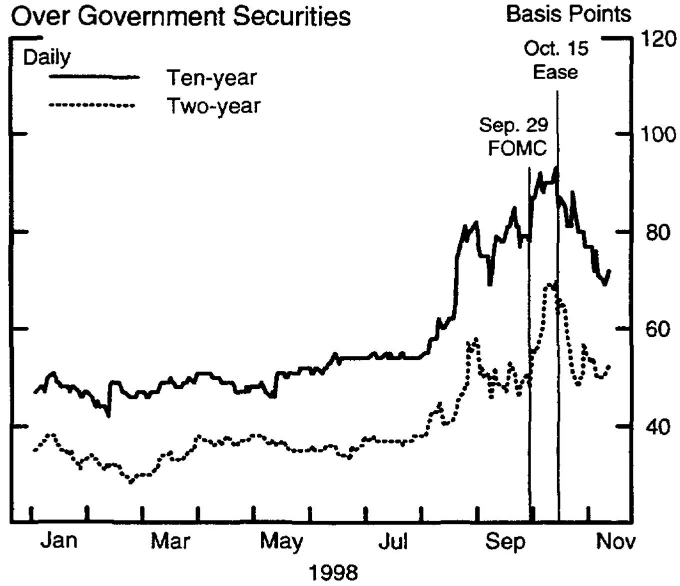
Emerging Market Bond Index

Brady Narrow Sovereign Stripped Spread



Source. JP Morgan

Swap Spreads
Over Government Securities



afternoon of the announcement, Treasury securities again rallied, with rates on bills out to a year shedding 25 basis points and those further out the curve declining somewhat less.

(2) Over the rest of the intermeeting period, financial strains gradually moderated, and security issuance resumed in a number of key markets, although investors remain highly selective and conditions in securities markets are still abnormally illiquid. As investors became somewhat more willing to take on risks, as market expectations of additional near-term System easing waned, and as issuance by the Treasury and the private sector picked up, Treasury rates backed up appreciably. Bid-asked spreads in that market and premiums for on-the-run issues both narrowed, albeit to levels that are above normal. Interest rates on private instruments showed mixed changes after the second easing. In the commercial paper market, yields on higher-rated paper edged down, but rates on lower-grade paper were little changed. In the corporate bond market, investment-grade yields generally rose somewhat, in part owing to supply pressures related to the recovery of issuance. For junk bonds, both rates and spreads declined, rolling back a portion of their outsized increases of September and early October; while offerings of high-yield bonds have resumed of late, investors have continued to favor better-known issuers. Equity markets also rallied substantially after the second policy easing, with notable rebounds for shares of money-center and investment banks. On balance over the intermeeting period, nominal Treasury interest rates rose as much as 20 basis points, many private rates were about unchanged at the short end but increased 18 to 40 basis points at the long end, and major equity indexes gained 6 to 10 percent. Against the backdrop of the significant improvement in market conditions, federal funds futures rates now suggest about even odds of no action or a 25 basis

point cut at the November FOMC meeting (although they point to a near certainty of such a move by year end).

(3) Variations in the federal funds rate around target levels were somewhat larger than usual over the intermeeting period. Although aggregate balances held to meet reserve and clearing requirements continued to edge down as a result of the ongoing spread of retail sweep arrangements, other factors probably were much more important in exacerbating fluctuations in the funds rate in recent weeks. Heightened perceptions of counterparty risk in the interbank market led borrowing banks to lock in their funding earlier in the morning (so as to minimize the risk of having to borrow at the discount window) and induced lending banks to shift more of their placements from term to overnight maturity. Commercial banks pared or more tightly administered their counterparty credit limits in the interbank market. These forces on net boosted the need for additional reserve balances and put upward pressure on the funds rate at the usual Desk intervention time. The Desk responded by using the level of the funds rate at the time of operations as a guide.[1] Often, the funds rate fell late in the day when banks attempted to shed unneeded balances as reserve positions became clearer. In the event, the effective federal funds rate averaged very close to the intended level, but there were several instances of atypically large and persistent daily deviations from that level.

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[1] To meet projected permanent needs to add reserves, the Desk arranged $4.6 billion of outright purchases of Treasury coupons in several tranches. In light of the illiquidity in the Treasury market, the Desk gave dealers extra time to afford them more opportunity to line up clients willing to sell Treasury securities. The Desk also split its outright operations into eight, rather than the usual four, tranches to reduce the number of issues in each purchase so as to keep processing time between submission and acceptance of offers to a minimum. In addition, for the first time, the Desk announced the specific securities it was not willing to purchase because the SOMA already had sufficient holdings relative to the total outstanding supply.

(4) The dollar declined around 1 percent on balance against the major currencies during the intermeeting period, paced by a net depreciation of 8-1/2 percent against the yen. On October 7 and 8, the dollar-yen rate dropped by as much as 15 percent to an intraday trough of 111.58 amid especially volatile and illiquid trading conditions. Market sources attributed much of the downward pressure to the efforts of hedge funds and other investors to reduce leverage and exchange-rate exposure embodied in speculative positions involving the funding of non-yen assets with low-interest yen borrowing (the so-called yen-carry trade). Over the most recent two weeks, the dollar has risen steadily, reversing about 7 percent of its losses against the yen, bolstered in part by mounting disappointment about Japanese fiscal and banking system measures. On balance, the realignment of the dollar-yen exchange rate contributed to an improved financial climate in some of the economies in the Asian-Pacific region, especially those with currencies tied to the dollar. The dollar appreciated slightly on balance against the mark, despite the easing of U.S. monetary policy, which contrasted with the unchanged stance of the Bundesbank. Other euro-area central banks did lower official interest rates during the period, bringing their short-term market interest rates closer to the corresponding German rates, but these moves were expected as part of the convergence process ahead of the launch of the euro in January. The dollar rose 3 percent against sterling, as the Bank of England lowered its official RP rate 1/2 percentage point, somewhat more than expected, in response to signs of weakening economic growth. The U.S. dollar appreciated 2-1/2 percent against the Canadian dollar, even though the Bank of Canada moved in tandem with Federal Reserve policy actions. The Desk did not intervene in foreign exchange markets for U.S. accounts over the period.

(5) Declines in official short-term interest rates in several industrial countries contributed to the lessening of financial strains around the world over the intermeeting period. As in the United States, the flight to both quality and liquidity moderated in other industrial countries. Yields on ten-year German government securities rose 22 basis points over the intermeeting period, somewhat more than those on comparable government securities in other euro-area countries. Major equity indexes in industrial countries rose as much as 11 percent on balance during the intermeeting period. Internationally coordinated efforts to contain a possible financial crisis in Brazil, combined with statements by the G-7 on October 30, apparently reassured investors in emerging market assets. Equity prices in emerging economies also rose substantially, with indexes in many economies turning in double-digit percentage gains over the intermeeting period. In addition, yield spreads on dollar-denominated bonds of Asian and Latin American governments declined on net over the period.

(6) Turmoil in financial markets spurred expansion of the monetary aggregates in October. M2 posted its second consecutive month of double-digit growth, with continued strength in its liquid components, especially retail money market mutual funds (MMMFs). The advance in M2 probably was boosted as well by the decline in its opportunity cost resulting from the System's two easings and, for much of October, the unusual softness in Treasury bill rates. Gains in M3 were even larger, as the easings stimulated inflows to institution-only MMMFs and as banks sought to fund heavy demands for loans. Bank lending was supported in part by credit demands deflected from securities markets, where bond issuance, particularly of high-yield instruments, slowed sharply in September and into October, and where commercial paper ran off in October and early November. Borrowers evidently made use of preestablished lines of credit

at banks, but new borrowers and those attempting to renegotiate existing credit lines faced less favorable terms and conditions. According to the Senior Loan Officer Opinion Survey in November, a large share of respondent banks have tightened standards and terms for business loans since September, while distinct signs emerged for the first time in recent years of a tightening for smaller firms. Overall business borrowing apparently has softened in recent months. By contrast, household debt growth has been strong of late; home mortgage borrowing continued to respond to the relatively low level of mortgage rates, and consumer credit expanded briskly in September along with associated consumer spending. Federal debt, on a seasonally adjusted basis, has run off a little more rapidly in recent months, but, on net, overall domestic nonfinancial debt growth appears to have slowed only a bit.

MONEY, CREDIT, AND RESERVE AGGREGATES

(Seasonally adjusted annual percentage rates of growth)

	Aug.	Sept.	Oct.	1997:Q4 to Oct.[2]
Money and Credit Aggregates				
M1	-3.1	3.6	7.2	1.0
Adjusted for sweeps	2.5	7.6	8.4	5.5
M2	8.5	14.8	12.3	8.6
M3	11.7	14.4	13.6	10.6
Domestic nonfinancial debt	5.8	5.6	n.a.	6.2
Federal	-0.8	-3.3	n.a.	-1.1
Nonfederal	8.0	8.4	n.a.	8.6
Bank Credit	17.3	15.9	27.0	11.5
Adjusted[1]	17.0	10.4	18.9	9.9
Reserve Measures				
Nonborrowed Reserves	4.6	-10.5	-2.7	-4.3
Total Reserves	4.9	-11.0	-4.7	-4.5
Adjusted for sweeps	12.1	2.2	2.2	5.9
Monetary Base	8.9	11.5	9.4	6.9
Adjusted for sweeps	9.7	12.1	9.6	7.8
Memo: (millions of dollars)				
Adjustment plus seasonal borrowing	271	251	174	--
Excess Reserves	1513	1684	1597	--

1. Adjusted to remove effects of mark-to-market accounting rules (FIN 39 and FASB 115).
2. For nonfinancial debt and its components, 1997:Q4 to September.

NOTE: Monthly reserve measures, including excess reserves and borrowing are calculated by prorating averages for two-week reserve maintenance periods that overlap months. Reserve data incorporate adjustments for discontinuities associated with changes in reserve requirements.

Policy Alternatives

(7) Although the staff forecast now foresees a somewhat less pronounced slowdown in output than in the September Greenbook, aggregate demand growth still is projected to weaken appreciably in coming quarters, helping to contain inflation. The current projection assumes that the Federal Reserve will take one more small easing step by year end, with the total decline in the funds rate thereby cumulating to the same 3/4 percentage point assumed in September but more frontloaded to the end of this year. International influences are expected to remain a drag on U.S. economic growth, albeit a diminishing one. Domestic credit spreads and liquidity premiums, while narrowing further as investor confidence continues to recover, are seen as staying somewhat elevated relative to levels earlier this year. Corporate earnings reports are expected to prove disappointing to investors, pushing equity prices down noticeably by next spring. With financial conditions on balance restraining aggregate demand, real GDP growth is projected to slow considerably next year, to just over 1-1/2 percent, before strengthening somewhat to 2-1/4 percent over the year 2000. The labor market remains tight, with the unemployment rate edging up to about 5-1/4 percent by the middle of 2000. Overall inflation picks up somewhat, boosted by a reversal in petroleum and other import prices.

(8) The Committee may find such a pattern to be relatively attractive if it believes that the economy is operating beyond a sustainable level, but wishes to reduce the pressures on resources only gradually; inflation still stays fairly quiescent, and financial markets strike a better balance between the frothy conditions of recent years and the extreme risk aversion evident in recent months. A slight additional easing at this meeting, as in the 25 basis point reduction in the federal funds rate of **alternative A,** could be considered broadly in line with the policy

assumption underlying the staff forecast.[2] The case for an immediate easing would be strengthened if the Committee thought that the risks to the staff's economic outlook were distinctly skewed to the downside, perhaps owing to the possibility of more adverse developments in Latin America. In addition, a prompt policy easing would be more likely than would standing pat to lessen the odds on a reemergence of anything like the earlier extreme reluctance to take on risk that had caused rates on private securities to back up and had threatened to retard economic activity. Indeed, such an easing action might be expected to foster continued normalization of financial conditions here and abroad. An easing also might reduce the chances, or at least lessen the effects, of possible funding problems at some financial institutions, particularly around year end, that could interfere with credit intermediation. Finally, an easing would help to offset some of the effects of both the tightening in lending terms and standards at commercial banks that has been under way and the softness in global economic activity that has been exacerbated by further weakness in Japan.

(9) The 25 basis point easing of policy under alternative A would tend to boost most financial markets, given that the federal funds futures market evidently now has built in only about even odds of such an action at this meeting. Consequently, rates on short-term private market instruments, such as commercial paper, likely would move a little lower following implementation of alternative A. With the easing perhaps fostering additional attenuation of concerns about private credit risks, the unusual recent safe-harbor demands for Treasuries would

[2] Alternative A could be implemented either through a 1/4 percentage point reduction in the discount rate to 4-1/2 percent, or through a slightly more generous provision of nonborrowed reserves, with no discount rate change, that eliminates the spread between the two rates.

abate further, and Treasury bill yields probably would fall less than those on private instruments. Similarly, in longer-term markets, private rates also likely would decline, as would those on older, less-liquid Treasury notes and bonds, while yields for on-the-run Treasuries might be little changed as more of the recent flight-to-liquidity is unwound. Falling rates and improving liquidity in markets for private securities probably would augment the recent tendency for some rebound in trading volumes, and the better market conditions could help spur issuance, including some deals previously postponed because of market turbulence. The value of the dollar on foreign exchange markets likely would decline somewhat, and financial strains in foreign markets probably would moderate further.

(10) If the Committee finds the Greenbook forecast plausible and acceptable, with the risks of upside and downside surprises reasonably balanced, it may wish to defer consideration of an easing action to later in the year (the point at which the staff forecast assumes such an action will occur) to allow more time to assess the effects on financial markets and the real economy of the easing that it has already put in place. Leaving policy unchanged at this meeting, as under **alternative B,** would seem even more advisable if the Committee were skeptical that aggregate demand will slow to the extent forecast by the staff. There is some reason to be cautious in predicting much adverse effect on spending from financial developments. As noted, a number of indicators of market performance suggest that, at a minimum, the decline in asset prices and worsening of trading conditions have ceased and, in many markets, notably including that for equities, a partial reversal has occurred. Indeed, the Committee could well be concerned that further monetary easing would add fuel to the rebound in stock valuations, which arguably has already gone beyond fundamentals. Changes to date in private financing rates may not have

imposed strong restraint on planned investment spending and, although the increased cost of raising funds in private securities markets has shifted borrowing toward commercial banks, the growth of aggregate debt in nonfederal sectors appears to have been well maintained.

(11) With many market participants likely to be disappointed by policy inaction, yields on private securities could well back up some under alternative B. The increase in rates on Treasury securities likely would be somewhat less, and spreads on private securities over Treasuries probably would widen. Although the initial effects of this alternative on financial markets could be somewhat negative, they would be muted and short-lived to the extent that the public believes the Federal Reserve is staying especially watchful of financial market strains and has not closed the door on further policy easing. While some risk of unusual year-end pressures cannot be ruled out, chances are that any curtailment of liquidity and trading volumes across a variety of markets would prove limited and essentially temporary. Equity prices likely would decline somewhat. The value of the dollar on foreign exchange markets should firm, and credit spreads for emerging market securities might rise.

(12) In response to the greater awareness of credit risks as well as the prospective slowdown in economic growth, lenders are anticipated to remain cautious in extending credit in the forecast period. Nonetheless, growth of C&I loans is likely to remain brisk through year end, as lower-rated borrowers find the commercial paper market somewhat inhospitable and tap bank lines. In corporate bond markets, conditions should continue to improve in coming months, but investors are still likely to be selective, especially with regard to high-yield borrowers, and spreads should stay wider than the very narrow levels of earlier this year. In the aggregate, business borrowing will tend to drift down over coming quarters, owing to reduced net equity

retirements and, to a lesser extent, a trending lower of growth in fixed investment expenditures and a more modest pace of inventory investment. Most households are expected to experience little change in credit market terms, although marginal borrowers may see the availability of credit trimmed a little. Still, the rate of expansion of consumer and mortgage credit will probably edge lower, as personal consumption and housing expenditures decelerate over the next two years along with personal income. On balance, growth in overall domestic nonfinancial debt is expected to moderate in coming months. For 1998 as a whole, such debt is projected to expand 6 percent, in the upper half of the Committee's 3 to 7 percent annual range, but by March, this aggregate is forecast to stand near the center of its comparable provisional range for 1999.

(13) M2 and M3 are predicted to continue to grow rapidly through the end of the year, reflecting strong demands for liquidity in the aftermath of the volatile market climate, as well as in response to the recent policy easings and the expectation in markets of more to come, which have reduced the opportunity cost of holding monetary assets.[3] Over 1998 as a whole, M2 and M3 are projected to expand 9 and 10-3/4 percent, respectively, far overshooting their annual ranges. In early 1999, however, M2 growth is projected to slow considerably as unusual demands for liquid assets abate and households redeploy liquid assets previously parked in money market mutual funds awaiting longer-term investment opportunities. M2 growth, however, is expected to exceed that of nominal GDP. M3 is forecast to outpace M2 as banks seek funding through instruments included in the broader aggregate to finance bank credit

[3] The projections of money growth under alternative B assume, consistent with the Greenbook forecast, that the stance of policy is left unchanged at the November meeting and eased 25 basis points at the December meeting.

expansion and as institution-only money market funds remain attractive investments for corporate cash managers. Under alternative B, M2 and M3 are projected to expand over the October-to-March period at annual rates of 8 and 9-1/2 percent, respectively, leaving both aggregates by March well above the ranges established provisionally for 1999.

Alternative Growth Rates for Key Money and Credit Aggregates

	M2		M3		Debt
	Alt. A	Alt. B	Alt. A	Alt. B	All Alternatives
Monthly Growth Rates					
Jul-98	4.9	4.9	1.5	1.5	6.2
Aug-98	8.5	8.5	11.7	11.7	5.8
Sep-98	14.8	14.8	14.4	14.4	5.6
Oct-98	12.3	12.3	13.6	13.6	5.4
Nov-98	11.2	11.0	12.1	12.0	6.0
Dec-98	11.2	10.6	10.8	10.5	5.2
Jan-99	8.1	7.6	9.2	9.0	4.4
Feb-99	5.6	5.6	8.0	8.0	4.9
Mar-99	4.4	4.6	6.8	7.0	4.6
Quarterly Averages					
1998 Q1	8.0	8.0	11.0	11.0	6.2
1998 Q2	7.5	7.5	10.3	10.3	6.2
1998 Q3	6.7	6.7	7.1	7.1	5.9
1998 Q4	12.2	12.1	13.1	13.0	5.6
1999 Q1	8.2	7.9	9.4	9.3	4.9
Growth Rate					
From To					
Oct-98 Dec-98	11.3	10.9	11.5	11.3	5.6
Oct-98 Mar-99	8.2	8.0	9.5	9.4	5.1
1997 Q4 Oct-98	8.6	8.6	10.6	10.6	6.1
1997 Q4 Dec-98	9.1	9.1	10.9	10.9	6.1
1998 Q4 Mar-99	7.4	7.2	8.9	8.8	4.9
1995 Q4 1996 Q4	4.6	4.6	6.8	6.8	5.3
1996 Q4 1997 Q4	5.7	5.7	8.8	8.8	5.0
1997 Q4 1998 Q4	8.9	8.9	10.8	10.7	6.1
1998 Annual Ranges:	1.0 to 5.0		2.0 to 6.0		

Note: Alternative B is consistent with Greenbook forecast.

Chart 3

Actual and Projected M2

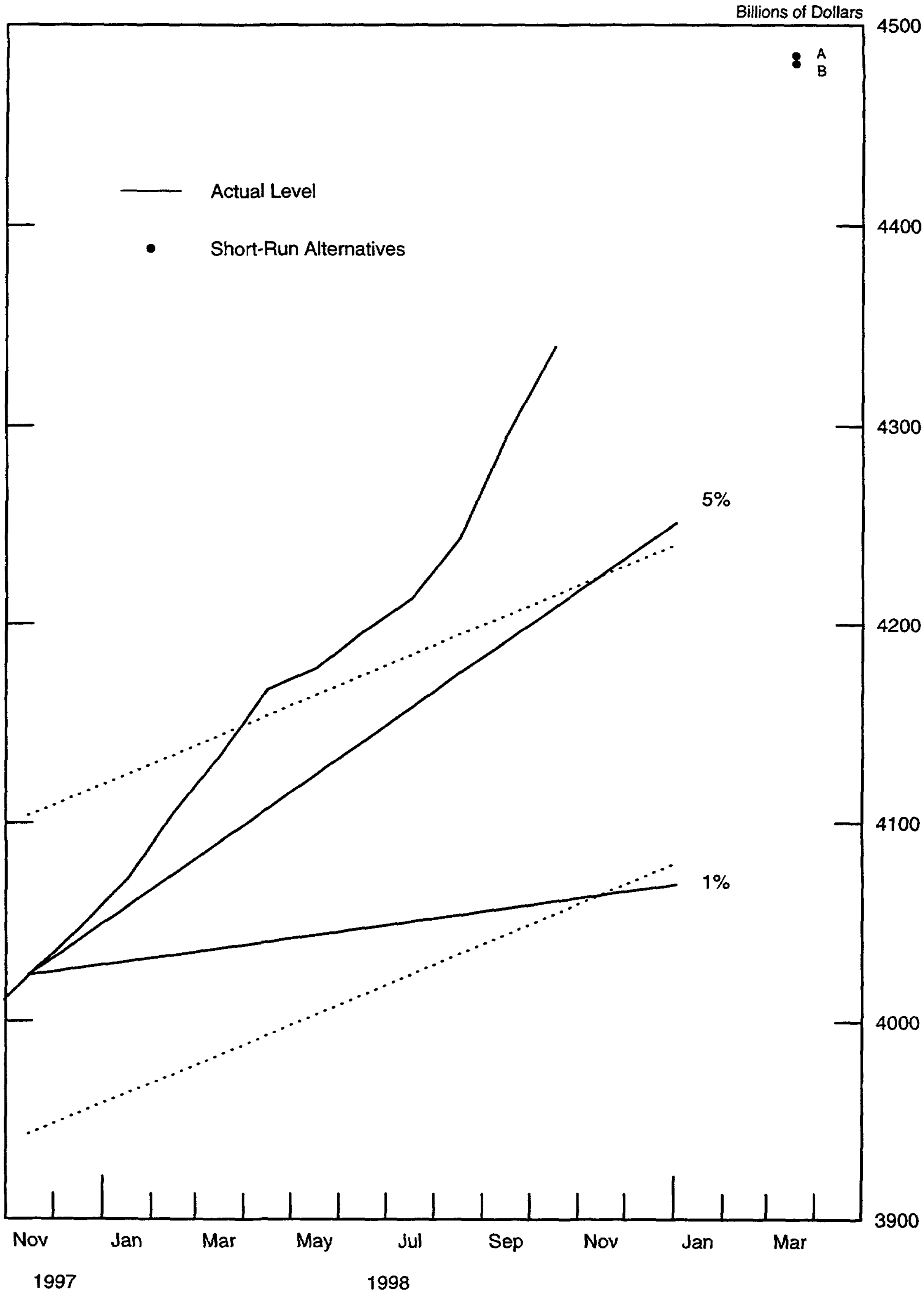


Chart 4

Actual and Projected M3

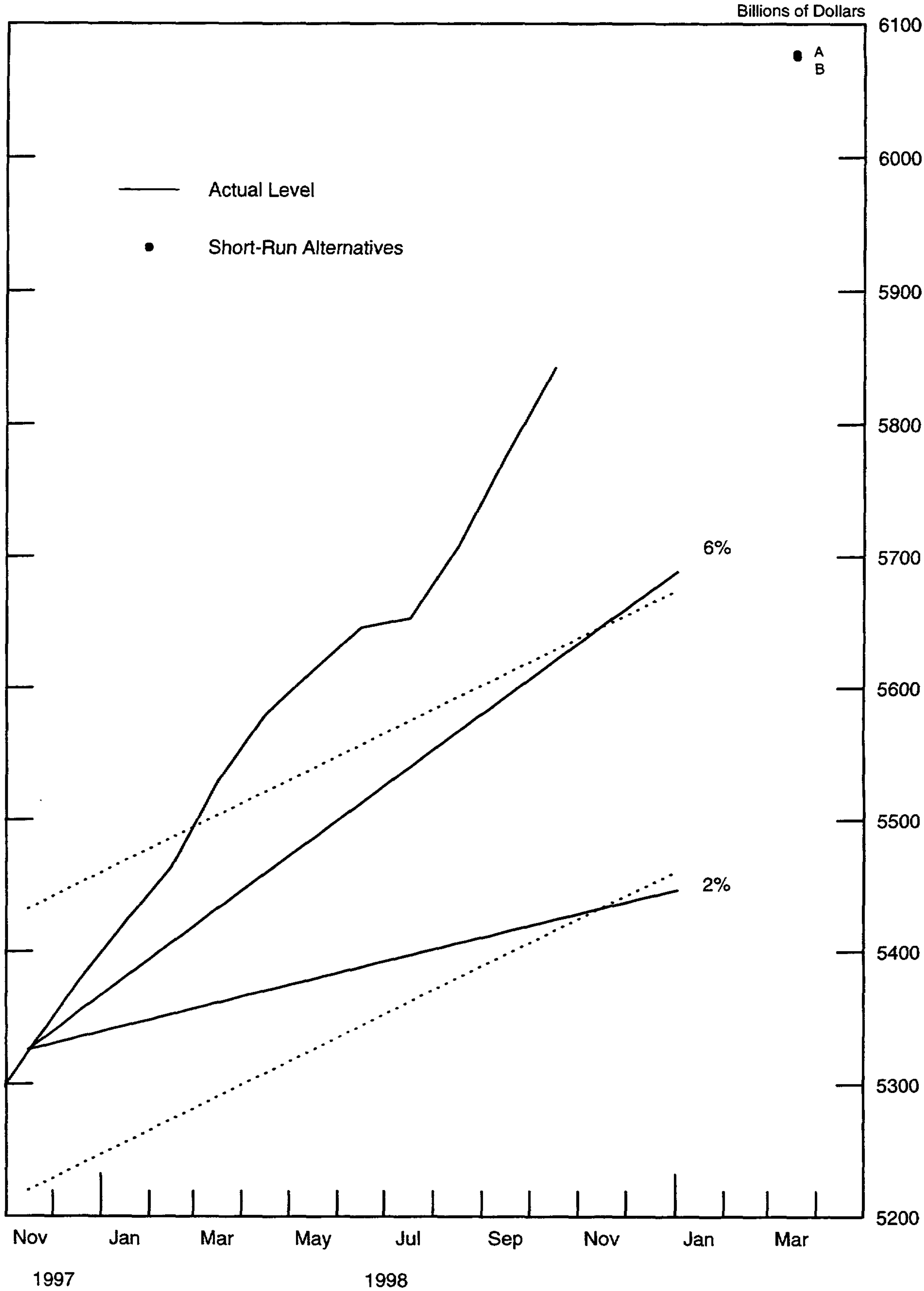
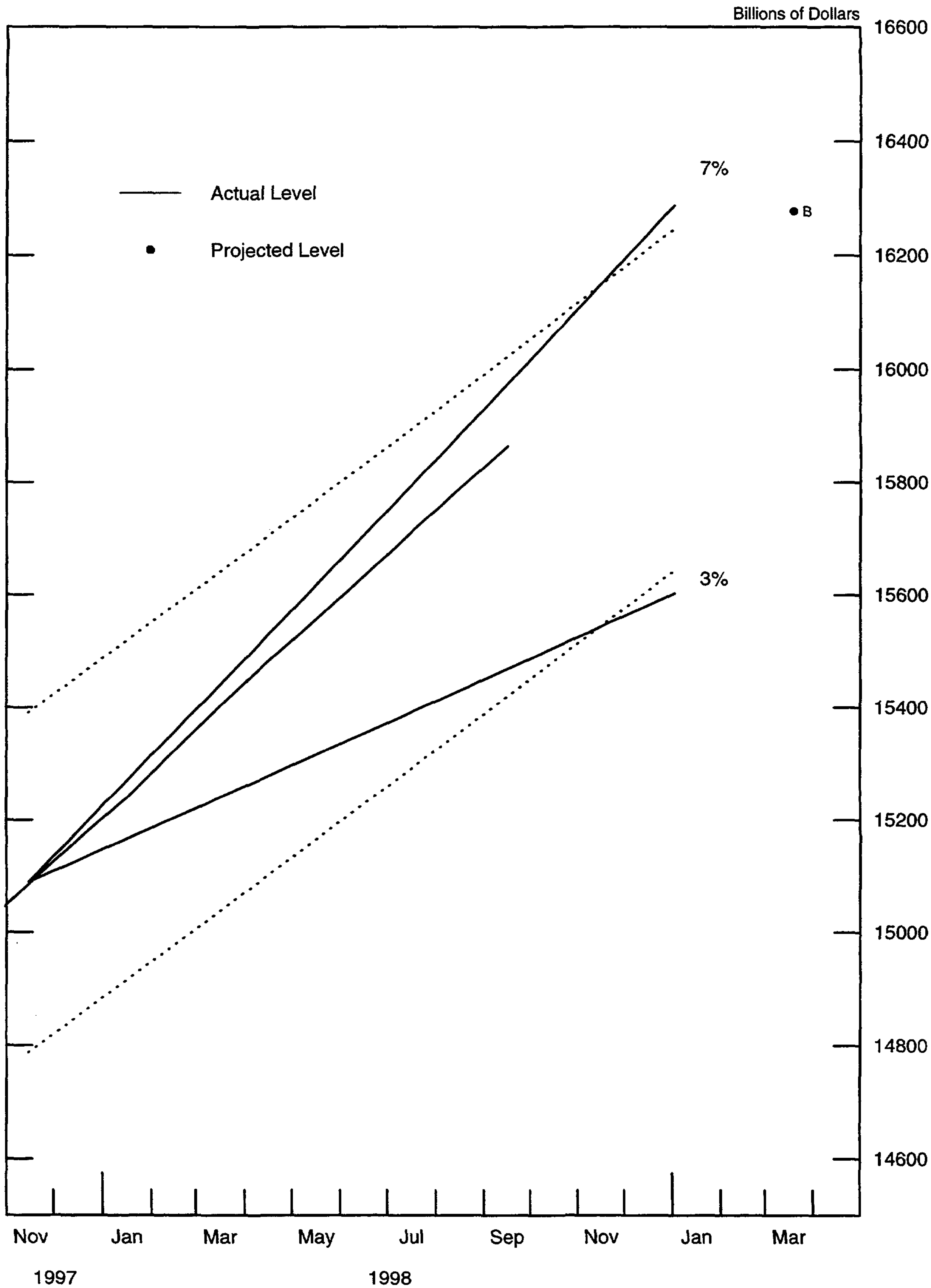


Chart 5

Actual and Projected Debt



<u>Directive Language</u>

(14) Shown below are the two versions of the operational paragraph that were circulated in Mr. Lindsey's memo on November 5, 1998, and a third option proposed by President Minehan.

Traditional Wording of the Operating Paragraph

(Option 1)

In the implementation of policy for the immediate future, the Committee seeks conditions in reserve markets consistent with MAINTAINING/INCREASING/decreasing the federal funds rate AT/to an average of around ___ 5 percent. 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, a slightly/SOMEWHAT higher federal funds rate WOULD/might or a SLIGHTLY/somewhat lower federal funds rate would/MIGHT be acceptable in the intermeeting period. The contemplated reserve conditions are expected to be consistent with some moderation in the growth in M2 and M3 over coming months.

Alternative Language for the Operating Paragraph

(Option 2)

To promote the Committee's long-run objectives of price stability and sustainable economic growth, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining/increasing/decreasing the federal funds rate at/to an average of around ____ percent. In view of the evidence currently available, the Committee believes that prospective developments are [equally likely to warrant an increase or a decrease (NO TILT)];

[more likely to warrant [a further] increase/decrease than a decrease/an increase (TILT)] in the federal funds rate in coming months. Any potential changes in the federal funds rate operating objective during the intermeeting period should be considered in that context. The contemplated reserve conditions are expected to be consistent with some moderation in the growth in M2 and M3 over coming months.

NOTE: Presidents Boehne and Parry and Governor Kelley have indicated a preference for dropping the next to last sentence ["Any potential changes...."]. President Parry also would insert the phrase "federal funds rate operating objective" in place of "federal funds rate" in the prior sentence. President Hoenig would prefer to include the next to last sentence in the operating paragraph only with asymmetric directives.

Alternative Language Proposed by President Minehan

(Option 3)

To promote the Committee's long-run objectives of price stability and sustainable economic growth, the Committee in the immediate future seeks conditions in reserve markets consistent with maintaining/increasing/decreasing the federal funds rate at/to an average of around ___ percent.

(1) (NO TILT) In that regard, the Committee views risks to the economic outlook as evenly balanced for the intermeeting period, and believes changes in economic, financial, and monetary conditions over that period could call for no change or for a slight [further] increase or [further] decrease in the federal funds rate.

(2) (TILT) [However] [In addition], in view of the evidence currently available, the Committee believes that economic, financial, and monetary developments over the intermeeting period might require a slight [further] increase/decrease in the federal funds rate.

The contemplated reserve conditions are expected to be consistent with some moderation in the growth in M2 and M3 over coming months.

SELECTED INTEREST RATES
(percent)

	Short-Term: federal funds	Short-Term: Treasury bills secondary market 3-month	Treasury bills secondary market 6-month	Treasury bills secondary market 1-year	CDs secondary market 3-month	comm. paper 1-month	Long-Term: U.S. government constant maturity yields 3-year	U.S. government constant maturity yields 5-year	U.S. government constant maturity yields 10-year	U.S. government constant maturity yields 30-year	indexed yields 5-year	indexed yields 10-year	corporate A-utility recently offered	municipal Bond Buyer	conventional home mortgages primary market fixed-rate	conventional home mortgages primary market ARM
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
97 -- High	5.80	5.27	5.40	5.66	5.82	5.90	6.64	6.79	6.92	7.12	3.67	3.67	8.27	6.14	8.18	5.91
-- Low	5.05	4.85	4.99	5.07	5.34	5.37	5.69	5.72	5.74	5.90	3.52	3.27	7.05	5.40	6.99	5.45
98 -- High	5.87	5.24	5.24	5.23	5.74	5.71	5.70	5.72	5.75	6.05	3.93	3.82	7.19	5.52	7.22	5.71
-- Low	4.81	3.84	3.94	3.84	5.14	5.03	4.15	4.17	4.41	4.88	3.44	3.55	6.77	5.09	6.49	5.35
Monthly																
Nov 97	5.52	5.14	5.17	5.17	5.74	5.53	5.76	5.80	5.88	6.11	3.55	3.54	7.24	5.59	7.21	5.49
Dec 97	5.50	5.16	5.24	5.24	5.80	5.78	5.74	5.77	5.81	5.99	3.63	3.60	7.10	5.44	7.10	5.52
Jan 98	5.56	5.04	5.03	4.98	5.54	5.46	5.38	5.42	5.54	5.81	3.73	3.68	6.97	5.32	6.99	5.54
Feb 98	5.51	5.09	5.07	5.04	5.54	5.47	5.43	5.49	5.57	5.89	3.72	3.66	7.02	5.33	7.04	5.60
Mar 98	5.49	5.03	5.04	5.11	5.58	5.51	5.57	5.61	5.65	5.95	3.79	3.71	7.11	5.41	7.13	5.69
Apr 98	5.45	4.95	5.06	5.10	5.58	5.49	5.58	5.61	5.64	5.92	3.86	3.75	7.10	5.44	7.14	5.67
May 98	5.49	5.00	5.14	5.16	5.59	5.49	5.61	5.63	5.65	5.93	3.92	3.75	7.16	5.45	7.14	5.69
Jun 98	5.56	4.98	5.12	5.13	5.60	5.51	5.52	5.52	5.50	5.70	3.88	3.72	6.98	5.36	7.00	5.69
Jul 98	5.54	4.96	5.03	5.08	5.59	5.51	5.47	5.46	5.46	5.68	3.87	3.76	6.93	5.35	6.95	5.63
Aug 98	5.55	4.90	4.95	4.94	5.58	5.50	5.24	5.27	5.34	5.54	3.85	3.80	7.02	5.32	6.92	5.59
Sep 98	5.51	4.61	4.63	4.50	5.41	5.44	4.62	4.62	4.81	5.20	3.64	3.67	6.93	5.22	6.72	5.47
Oct 98	5.07	3.96	4.05	3.95	5.21	5.14	4.18	4.18	4.53	5.01	3.53	3.63	6.96	5.19	6.71	5.38
Weekly																
Sep 11 98	5.48	4.73	4.71	4.55	5.46	5.49	4.67	4.72	4.90	5.26	3.67	3.71	6.93	5.22	6.77	5.50
Sep 18 98	5.52	4.62	4.69	4.54	5.42	5.49	4.65	4.62	4.83	5.21	3.65	3.66	6.90	5.20	6.66	5.43
Sep 25 98	5.43	4.53	4.52	4.40	5.37	5.45	4.51	4.48	4.67	5.14	3.58	3.62	6.89	5.17	6.64	5.42
Oct 2 98	5.61	4.26	4.33	4.22	5.22	5.23	4.26	4.24	4.46	5.00	3.44	3.55	6.77	5.09	6.60	5.39
Oct 9 98	5.09	3.96	4.10	4.01	5.29	5.25	4.18	4.18	4.41	4.88	3.49	3.60	6.98	5.17	6.49	5.36
Oct 16 98	5.14	3.84	3.99	3.96	5.26	5.22	4.22	4.22	4.58	5.02	3.57	3.70	7.02	5.21	6.90	5.35
Oct 23 98	4.81	3.85	3.94	3.84	5.14	5.03	4.15	4.17	4.59	5.08	3.54	3.62	7.03	5.25	6.73	5.37
Oct 30 98	5.06	4.12	4.11	3.93	5.16	5.05	4.20	4.22	4.63	5.12	3.60	3.64	6.97	5.24	6.83	5.42
Nov 6 98	5.09	4.43	4.43	4.27	5.27	5.11	4.50	4.45	4.83	5.29	3.73	3.76	7.12	5.29	6.89	5.48
Nov 13 98	4.87	4.44	4.44	4.35	5.31	5.10	4.57	4.51	4.82	5.27	3.83	3.81	7.00	5.28	6.93	5.56
Daily																
Oct 28 98	5.06	4.18	4.11	3.90	5.16	5.06	4.15	4.18	4.60	5.13	3.59	3.65	--	--	--	--
Oct 29 98	5.24	4.22	4.15	3.91	5.16	5.05	4.12	4.13	4.54	5.09	3.57	3.61	--	--	--	--
Oct 30 98	5.35	4.23	4.21	4.01	5.17	5.08	4.24	4.24	4.64	5.15	3.61	3.63	--	--	--	--
Nov 2 98	5.35	4.31	4.38	4.15	5.21	5.11	4.39	4.39	4.77	5.23	3.64	3.66	--	--	--	--
Nov 3 98	5.04	4.39	4.35	4.15	5.25	5.12	4.37	4.33	4.78	5.22	3.69	3.72	--	--	--	--
Nov 4 98	4.85	4.45	4.43	4.27	5.29	5.11	4.53	4.48	4.83	5.34	3.74	3.77	--	--	--	--
Nov 5 98	5.05	4.47	4.47	4.33	5.30	5.12	4.55	4.48	4.82	5.29	3.75	3.79	--	--	--	--
Nov 6 98	4.64	4.52	4.53	4.44	5.31	5.11	4.65	4.58	4.93	5.37	3.84	3.84	--	--	--	--
Nov 9 98	4.95	4.52	4.50	4.43	5.32	5.10	4.63	4.55	4.88	5.28	3.84	3.83	--	--	--	--
Nov 10 98	4.84	4.43	4.44	4.32	5.30	5.10	4.57	4.50	4.81	5.27	3.84	3.82	--	--	--	--
Nov 11 98	4.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Nov 12 98	5.13	4.37	4.40	4.29	5.30	5.10	4.52	4.47	4.77	5.25	3.83	3.80	--	--	--	--
Nov 13 98	5.06 p	4.42	4.43	4.34	5.31	--	4.56	4.53	4.82	5.26	3.81	3.80	--	--	--	--

NOTE: Weekly data for columns 1 through 12 are week-ending averages. As of September 1997, data in column 6 are interpolated from data on certain commercial paper trades settled by the Depository Trust Company; prior to that, they reflect an average of offering rates placed by several leading dealers. Columns 13 and 14 are 1-day quotes for Friday or Thursday, respectively. Column 14 is the Bond Buyer revenue index. Column 15 is the average contract rate on new commitments for fixed-rate mortgages (FRMs) with 80 percent loan-to-value ratios at major institutional lenders. Column 16 is the average initial contract rate on new commitments for 1-year, adjustable-rate mortgages (ARMs) at major institutional lenders offering both FRMs and ARMs with the same number of discount points.

p - preliminary data

Money and Debt Aggregates

Seasonally adjusted

Period	Money stock measures and liquid assets					Domestic nonfinancial debt		
	M1	M2	nontransactions components: In M2	nontransactions components: In M3 only	M3	U. S. government[1]	other[1]	total[1]
	1	2	3	4	5	6	7	8
Annual growth rates(%):								
Annually (Q4 to Q4)								
1995	-1.6	3.9	6.6	15.4	6.1	4.4	5.8	5.4
1996	-4.5	4.6	8.7	15.3	6.8	3.8	5.9	5.3
1997	-1.2	5.7	8.5	19.6	8.8	0.7	6.5	5.0
Quarterly(average)								
1997-Q4	0.9	7.0	9.3	19.5	10.0	0.4	7.9	6.0
1998-Q1	3.0	8.0	9.8	20.3	11.0	0.0	8.3	6.2
Q2	0.2	7.5	10.1	18.8	10.3	-1.4	8.6	6.2
Q3	-2.4	6.7	9.9	8.0	7.1	-1.5	8.3	5.9
Monthly								
1997-Oct.	-1.8	6.0	8.9	16.2	8.5	0.0	8.1	6.1
Nov.	8.2	7.3	6.9	25.5	11.7	-0.4	8.5	6.2
Dec.	7.6	6.8	6.5	25.6	11.4	1.5	7.9	6.3
1998-Jan.	-2.6	7.5	11.2	19.0	10.4	-0.5	7.9	5.8
Feb.	3.1	9.8	12.1	6.7	9.0	-1.3	8.9	6.4
Mar.	5.1	8.4	9.7	32.8	14.5	1.4	8.2	6.5
Apr.	-0.4	9.7	13.2	14.3	10.8	-1.8	8.6	6.1
May	-3.3	3.0	5.2	20.4	7.4	-4.0	9.0	5.8
June	-3.6	5.3	8.4	10.9	6.8	-0.9	8.0	5.8
July	-3.0	4.9	7.6	-8.4	1.5	-0.9	8.4	6.2
Aug.	-3.1	8.5	12.5	21.1	11.7	-0.8	8.0	5.8
Sep.	3.6	14.8	18.6	13.3	14.4	-3.3	8.4	5.6
Oct. p	7.2	12.3	14.1	17.2	13.6			
Levels ($billions):								
Monthly								
1998-June	1074.5	4196.1	3121.6	1449.8	5645.9	3775.7	11858.3	15634.0
July	1071.8	4213.2	3141.4	1439.6	5652.8	3772.9	11941.4	15714.3
Aug.	1069.0	4243.2	3174.2	1464.9	5708.0	3770.3	12020.6	15790.9
Sep.	1072.2	4295.6	3223.4	1481.1	5776.7	3760.0	12104.3	15864.3
Oct. p	1078.6	4339.8	3261.2	1502.3	5842.1			
Weekly								
1998-Oct. 5	1081.1	4317.6	3236.5	1479.3	5796.9			
12	1066.7	4319.7	3253.0	1493.9	5813.6			
19	1078.4	4344.1	3265.7	1500.8	5844.9			
26p	1086.1	4361.1	3275.0	1515.0	5876.1			
Nov. 2p	1092.5	4364.0	3271.5	1521.5	5885.5			

1. Debt data are on a monthly average basis, derived by averaging end-of-month levels of adjacent months, and have been adjusted to remove discontinuities.

p preliminary
pe preliminary estimate

November 13, 1998

NET CHANGES IN SYSTEM HOLDINGS OF SECURITES[1]
Millions of dollars, not seasonally adjusted

Period	Treasury bills			Treasury coupons						Federal agencies redemptions (-)	Net change outright holdings total [4]	Net RPs [5]
	Net purchases [2]	Redemptions (-)	Net change	Net purchases [3]				Redemptions (-)	Net Change			
				within 1 year	1-5	5-10	over 10					
1995	10,932	900	10,032	390	5,366	1,432	2,529	1,776	7,941	1,003	16,970	-1,023
1996	9,901	---	9,901	524	3,898	1,116	1,655	2,015	5,179	409	14,670	5,351
1997	9,147	---	9,147	5,549	19,680	3,849	5,897	1,996	32,979	1,540	40,586	-64
1997 ---Q1	---	---	---	619	3,366	698	1,237	607	5,314	230	5,084	-11,149
---Q2	4,602	---	4,602	877	5,822	1,233	1,894	376	9,451	498	13,554	6,771
---Q3	---	---	---	644	2,697	---	---	598	2,744	571	2,173	-4,493
---Q4	4,545	---	4,545	3,409	7,794	1,918	2,766	416	15,471	241	19,775	8,807
1998 ---Q1	---	2,000	-2,000	1,501	2,262	283	743	478	4,311	60	2,251	-15,409
---Q2	3,550	---	3,550	1,369	2,993	495	---	286	4,571	99	8,022	10,707
---Q3	---	---	---	2,024	4,524	654	1,769	1,311	7,659	98	7,536	-6,732
1997 November	---	---	---	1,462	3,323	535	904	---	6,224	26	6,198	5,519
December	4,545	---	4,545	1,947	4,471	613	1,214	---	8,245	---	12,790	7,700
1998 January	---	2,000	-2,000	---	---	---	---	478	-478	---	-2,478	-21,985
February	---	---	---	---	---	---	---	---	---	10	-10	4,262
March	---	---	---	1,501	2,262	283	743	---	4,789	50	4,739	2,314
April	3,550	---	3,550	1,369	2,993	495	---	286	4,571	74	8,047	9,405
May	---	---	---	---	---	---	---	---	---	---	---	-14,806
June	---	---	---	---	---	---	---	---	---	25	-25	16,108
July	---	---	---	---	---	---	---	1,311	-1,311	---	-1,311	-9,397
August	---	---	---	986	535	303	1,769	---	3,593	50	3,518	1,409
September	---	---	---	1,038	3,989	351	---	---	5,377	48	5,329	1,257
October	---	---	---	741	725	---	1,674	602	2,539	15	2,524	-7,302
Weekly												
August 5	---	---	---	---	---	---	1,049	---	1,049	---	1,049	-7,532
12	---	---	---	---	---	---	---	---	---	50	-75	9,774
19	---	---	---	---	---	---	---	---	---	---	---	-6,976
26	---	---	---	---	---	303	720	---	1,023	---	1,023	7,374
September 2	---	---	---	986	535	---	---	---	1,521	---	1,521	-6,951
9	---	---	---	---	---	---	---	---	---	---	---	8,405
16	---	---	---	---	---	---	---	---	---	48	-48	-5,832
23	---	---	---	1,038	3,111	---	---	---	4,148	---	4,148	-377
30	---	---	---	---	878	351	---	---	1,229	---	1,229	2,542
October 7	---	---	---	---	---	---	1,058	---	1,058	---	1,058	-8,982
14	---	---	---	---	---	---	---	602	-602	15	-617	-534
21	---	---	---	---	---	---	---	---	---	---	---	3,930
28	---	---	---	741	---	---	---	---	741	---	741	-4,692
November 4	---	---	---	---	725	---	616	---	1,341	15	1,326	645
11	---	---	---	---	1,178	---	---	---	1,178	---	1,178	-641
Memo: LEVEL (bil. $) [6]												
November 11				48.4	107.9	42.0	55.6		253.9			-17.9

1. Change from end-of-period to end-of-period.
2. Outright transactions in market and with foreign accounts.
3. Outright transactions in market and with foreign accounts, and short-term notes acquired in exchange for maturing bills. Excludes maturity shifts and rollovers of maturing issues.
4. Reflects net change in redemptions (-) of Treasury and agency securities.
5. Includes change in RPs (+), matched sale-purchase transactions (-), and matched purchase sale transactions (+).
6. The levels of agency issues were as follows:

	within 1 year	1-5	5-10	over 10	total
November 11	0.1	0.1	0.2	0.0	0.4