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## Monetary Policy Alternatives

Prepared for the federal Open Market Committee
by the Staff of the Board of Governors of the Federal Reserve System

## MONETARY POLICY ALTERNATIYES

## Recent Developments

(1) U.S. financial markets have settled down some over the intermeeting period, but further turmoil in a number of foreign markets has engendered an underlying sense of unease, and, on occasion, has left its imprint on trading and prices. Implied volatility measures for both bond and equity markets have dropped back to levels prevailing before the October disturbances, and, though share prices for companies with significant exposures to Asian economies have been hit hard, broad measures of equity prices are mainly somewhat higher (Chart 1). The wider yield spreads on some private securities that opened up in late October have persisted, although they remain low by historical standards, and premiums paid by Japanese banks for short-term dollar funding have increased, on net, during the intermeeting period. Although data releases over the period, on balance, signaled stronger economic activity than had been anticipated by most private analysts, yields on most Treasury securities have declined somewhat. ${ }^{1}$ Investors apparently have come to the view that, with future U.S. exports to Asia restrained by slower growth in that region and a stronger dollar, inflation news will continue to be favorable. The prices of Treasury securities were also

1. The widely anticipated decision to keep the Committee's intended federal funds rate at 5-1/2 percent in November elicited no market reaction, and the effective federal funds rate generally has averaged close to the intended rate over the intermeeting period. The upward trend in excess reserves evident in recent months has become more pronounced, and the Desk raised the formal path allowance for excess reserves to $\$ 1.4$ billion. Also during the period, Yamaichi International (America), Inc., a primary dealer, ceased operations, along with its Japanese parent. After winding down its positions in an orderly fashion, the dealer, at its request, was dropped from the list of primary dealers on December 4.


Implied Volatility


Daily beginning November 10.

*Index, Jan 1996=100
Dailv beainnina November 10.
Federal Funds Futures


buoyed by demands for safe assets on occasions when foreign problems seemed to intensify. Adjusting for estimated year-end effects, federal funds futures rates suggest that investors view the possibility of a change in monetary policy at this FOMC meeting as essentially nil. ${ }^{2}$
(2) Over 1997, nominal yields on long-term Treasury securities have fallen about 80 basis points; short-term Treasury bill rates have changed little, despite the March policy tightening, which raised the intended federal funds rate by 25 basis points. ${ }^{3}$ As a result, the Treasury yield curve has flattened considerably this year, with the spread between the yields on the ten-year note and three-month bill now at a level last seen in January 1996, when market participants expected a policy easing (Chart 2). Some of the flattening this year may stem from reduced uncertainty about future long-term rates, perhaps reflecting less concern about the small possibility of sharply higher inflation. Expected volatility of bond prices inferred from options on futures contracts has declined appreciably on net this year. The real federal funds rate has moved up over the year, but the increase has not been mirrored at longer maturities. Real one-year interest rates, constructed as the nominal rate less the mean of survey-based measures of inflation expectations at that maturity, have changed little, and real rates at the ten-year maturity have been unchanged or somewhat lower, depending on the measure used. Thus, the substantial decline in nominal long-term yields this year seems to
2. Domestic banks reportedly are paying premiums of 2 to 3 percentage points for federal funds over the turn of the year, about in line with recent years.
3. Three- and six-month Treasury bill rates may have been held down by net paydowns of those bills in three of the four quarters this year.

Chart 2
Spread Between Treasury 10-year Note Yield and 3-Month Bill Yield
Percent


Measures of the Real Federal Funds Rate*

*Nominal federal funds rate (365-day basis) less the change in the price index over the previous 12 months

Real One-Year Treasury Rates


Real Ten-Year Treasury Rates

stem importantly from a drop in inflation expectations. As calculated, both one-year and tenyear real rates are well within their ranges of the last two years.
(3) Most East Asian currencies--the main exceptions being those of China and Hong Kong--have continued to depreciate against the dollar since the November FOMC meeting. A weighted average of the exchange value of the dollar vis-a-vis the currencies of ten (mostly Asian) developing economies, based on multilateral exports shares, has increased about 11-1/2 percent over the intermeeting period (Chart 1). In Korea, the central bank expended most of its foreign exchange reserves in the weeks before the country reached an agreement with the IMF on December 3-as the government tried to avoid making fundamental policy changes ahead of national presidential elections on December 18 . However, the willingness of the Korean government to implement the IMF program has been called into question, contributing to a precipitous further decline in the won and doubts about the ability of many Korean borrowers to meet their obligations-especially on foreign currency debt. Many southeast Asian currencies have continued to weaken against the dollar over the last month owing to the effects of the deteriorating Korean situation and investor disappointment over the slow pace of reforms in those countries. Meanwhile, Russian financial markets have sold off in recent weeks as the spillover from Asia has been intensified by a scandal that has undermined the standing of key economic reformers.
(4) Relative to the currencies of the other G-10 countries, the dollar has appreciated about 3-1/2 percent over the intermeeting period. Investors apparently have revised upward their estimates of the effects of the financial market turmoil in Asian and other emerging market economies, including those in Eastern Europe, on many of the G-10
countries. With inflation also continuing to be subdued in these industrial countries, prospects for monetary tightening appear to have ebbed and interest rates generally have fallen. The one major exception is Canada where concerns over the exchange value of the Canadian dollar in an environment of continued strong growth led the Bank of Canada to raise its Bank rate by 75 basis points over the intermeeting period. Downward pressures on interest and dollar-exchange rates in Continental Europe also have been fostered by data releases indicating that German economic growth has been moderate and by statements of European central bank officials that interest rates will converge at the low end of the current spectrum of European interest rates as monetary union approaches next year. Relative to the yen, the dollar has appreciated 5-1/4 percent as worries about the Japanese economy have intensified in the wake of widening domestic financial difficulties, punctuated by failures of a top-twenty bank and a major securities firm. Nonetheless, long-term government bond yields in Japan have been little changed on balance as investors have anticipated some fiscal stimulus and government expenditures to resolve troubled financial institutions.
(5) Growth of the broad monetary aggregates accelerated in November. M2 advanced at a 6-3/4 percent pace, stronger than the projection in the previous bluebook, as currency and liquid deposits surged. Preliminary data suggest a notable rise in U.S. currency shipments to Russia, likely stemming from concerns related to the financial turmoil already mentioned as well as the pending ruble redenomination. Liquid deposits have been boosted by a pickup in mortgage refinancing activity and perhaps by robust income growth. M3 climbed at a 10-3/4 percent pace, well above the rate anticipated in the previous bluebook, as bank credit growth strengthened and a few banks greatly stepped up their RP borrowing.
(6) From the fourth quarter of 1996 through November, M2 expanded at a 5-1/4 percent annual rate, placing this aggregate just above the upper bound of its 1 to 5 percent range. ${ }^{4}$ M2 growth was about $3 / 4$ percentage point faster in 1997 than forecast by the staff in February, despite the March policy tightening, reflecting stronger-than-projected growth in nominal income. The staff had anticipated that M2 velocity would be unchanged in 1997; however, the staff now estimates that M2 velocity will tick up $3 / 4$ percent, reflecting the March policy firming and perhaps some ongoing portfolio allocations away from deposits and into capital market instruments. Through November, M3 grew at an 8-1/2 percent rate in 1997, well above both the upper end of its 2 to 6 percent range and the staff's expectation in February. Depository credit grew more rapidly than anticipated, and banks increased their reliance on the liabilities in M3 and scaled back their borrowing from foreign offices to a greater extent than envisioned by the staff. Inflows into institution-only money funds were also well above expectations.
(7) Growth of domestic nonfinancial debt picked up a little in October, to a 5 percent rate. Net debt issuance by the federal government in recent months has been virtually zero, on a seasonally adjusted basis, as the favorable budget picture has continued to hold down financing needs. Borrowing by the household sector appears to have increased recently, accounted for by a strengthening of consumer credit. Business borrowing has remained brisk against the backdrop of continued ample availability of credit. From the fourth quarter of
4. Through November, M1 contracted at a $1-1 / 2$ percent pace, but it expanded at a 6 percent rate after adjusting for the initial effects of retail sweep accounts. For 1997 as a whole, the initial effects of new retail sweeps are projected to total about $\$ 85$ billion, reducing required reserves by about $\$ 7-3 / 4$ billion and required reserve balances by about $\$ 7-1 / 2$ billion.

1996 through October, domestic nonfinancial debt increased at a $4-1 / 2$ percent pace, placing this aggregate somewhat below the midpoint of its 3 to 7 percent monitoring range. Debt growth was about $1 / 2$ percentage point slower than forecast by the staff in February. The markedly weaker-than-projected expansion of federal debt was only partly offset by higher than anticipated business borrowing. The slowing of household credit expansion was more pronounced than anticipated.

MONEY, CREDIT, AND RESERVE AGGREGATES
(Seasonally adjusted annual rates of growth)

|  | Sept. | Oct. | Nov. | 96:Q4 to Nov. ${ }^{3}$ |
| :---: | :---: | :---: | :---: | :---: |
| Money and Credit Aggregates |  |  |  |  |
| M1 | -9.9 | -3.8 | 7.7 | -1.5 |
| Adjusted for sweeps | 3.1 | 3.6 | 8.8 | 5.9 |
| M2 | 5.9 | 4.8 | 6.8 | 5.2 |
| M3 | 9.5 | 8.1 | 10.7 | 8.4 |
| Domestic nonfinancial debt | 4.3 | 5.1 | n.a. | 4.4 |
| Federal | 1.1 | 0.5 | n.a. | 0.6 |
| Nonfederal | 5.4 | 6.6 | n.a. | 5.7 |
| Bank Credit | 7.5 | 10.5 | 13.5 | 8.9 |
| Adjusted ${ }^{1}$ | 10.8 | 10.5 | 11.4 | 8.4 |
| Reserve Measures |  |  |  |  |
| Nonborrowed Reserves ${ }^{2}$ | -15.0 | -1.2 | 16.1 | -6.0 |
| Total Reserves | -18.9 | -5.5 | 12.9 | -6.1 |
| Adjusted for sweeps | 7.9 | 8.7 | 13.4 | 9.0 |
| Monetary Base | 7.5 | 6.8 | 11.6 | 6.0 |
| Adjusted for sweeps | 10.1 | 8.3 | 11.7 | 7.7 |
| Memo: (millions of dollars) |  |  |  |  |
| Adjustment plus seasonal borrowing | 438 | 270 | 153 | -- |
| Excess reserves | 1295 | 1396 | 1711 | -- |

1. Adjusted to remove effects of mark-to-market accounting rules (FIN 39 and FASB 115).
2. Includes "other extended credit" from the Federal Reserve.
3. For nonfinancial debt and its components, $96: Q 4$ to October.

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

## Short-run Policy Alternatives

(8) The staff now reads the effect of intensifying strains in Asia and emerging markets elsewhere as shaving enough from aggregate demand to hold the growth of GDP over the next two years below that of its potential by more than in the last Greenbook, even without any increase in the federal funds rate. The unemployment rate currently is slightly lower than anticipated in the last forecast, but it is at a higher level at the end of the forecast in 1999. Still, it remains low by historical standards throughout the forecast period. The tight labor markets tend to put upward pressure on costs and prices. Those pressures are tempered in the forecast relative to November by more ample industrial capacity than had been anticipated and by faster growth in productivity in 1999. Over the near term, price pressures also are damped by lower import prices and greater competition from foreign producers, as the negative spending shock abroad is transmitted to the U.S. economy in part through recent dollar appreciation. In addition, a decline in oil prices resulting from softer Asian demand and a higher level of OPEC production helps to hold down inflation over the next few quarters. By the second half of 1998 , most of the effects of these favorable supply shocks wear off and reported CPI inflation edges up; during 1999, the CPI increases about 2-1/4 percent-a little below the November forecast. (The acceleration relative to this year is damped a few tenths by technical changes to the index.)
(9) While the economy continues to operate in the staff forecast at a level above estimates of its potential, inflation remains quiescent for some time with no change in the federal funds rate and stays relatively low over the forecast period. Even if the Committee is concerned about the pressures on labor resources and finds the eventual uptrend in underlying
inflation unacceptable, it may be willing to keep the funds rate constant at this meeting, as under Alternative B. In the staff forecast, the emergence of inflation has been pushed back enough to suggest that delaying possible firming to await further information about global and national economic developments runs minimal risk of embedding higher inflation and inflation expectations in economic decisionmaking. The situation in a number of foreign markets and economies remains quite unsettled, amplifying uncertainties about the extent of the global retrenchment and its implications for the U.S. financial markets and economy. The circumstances are sufficiently fluid that the Committee might see some possibility of a major economic retrenchment, which could be exacerbated by a preemptive tightening of U.S. monetary policy at this time. Under alternative $B$, the Committee would be buying time to assess the extent to which developments abroad restrain aggregate demand, depress oil prices, and support the dollar, as well as the degree to which recent momentum in the economy might be sustained. More data might also be seen as especially useful in sorting out some of the questions about underlying pressures on labor compensation and the extent to which productivity behavior might damp the feed-through of higher compensation to profit margins and prices.
(10) The markets expect no policy action over the next few months and would react little, if at all, to the choice of alternative B. Apart from year-end effects, interest rates-especially Treasury yields--should fluctuate close to recent lows over the intermeeting period. Any tendency for rates to edge higher if foreign markets settle down should be offset by the effects of more moderate economic growth, as in the staff forecast. Stock prices, however, could drift down as economic reports begin to undermine the prospects for profits. In these
circumstances, investors might reevaluate credit risk more generally, and spreads on bonds could widen a touch further. The market for Treasury securities might, from time to time, be buffeted by the fallout from developments in Asia. On occasion in recent weeks, the Treasury market has weakened temporarily on the expectation of official and private sales of Treasuries for purposes of addressing financial difficulties in Asia, and such events could well recur over the weeks and months ahead. However, by themselves, such sales are unlikely to have much lasting effect on dollar yields because they do not change the fundamental outlook for prices and spending in the United States. Moreover, they should be easily absorbed into markets benefiting from demands for safer assets and from reduced borrowing by Asian financial institutions to the extent they repay dollar liabilities with the proceeds of their asset sales.
(11) The 25 basis point tightening of Alternative $\mathbf{C}$ might be favored if the Committee wanted to lean against the inflationary bias that may well be inherent in the current and prospective tautness of labor markets. The further tightening of labor markets this fall indicates that financial conditions prevailing over recent quarters have not been sufficiently restrictive to hold economic growth to a sustainable pace. With real bond rates no higher--and perhaps even a bit lower--than over the last few quarters, equity prices still high, and monetary growth above expectations, only the rise in the dollar gives any hint of the firmer financial conditions needed to damp strong aggregate demands. Against this background, and with labor markets already extremely tight, the Committee might perceive that counting on sufficient additional restraint coming from Asian developments runs an unacceptable risk of a rebound in inflation in 1998 that would be disruptive to reverse.
(12) Indeed, the Committee may believe that fragile financial markets abroad may be better positioned to weather a small tightening now than a larger increase later. A tightening at this time would catch the markets by surprise and money market interest rates and the prime rate would increase around 25 basis points. The impact on the longer end of the market would depend on the degree to which market participants extrapolated further tightening. Indeed, market participants might read action at this time, when financial markets remain unsettled in many parts of the globe, as evidence that the Committee was quite worried about unsustainable strength in the U.S. economy. At a minimum, market participants would be unlikely to expect a reversal of the tightening for a considerable period, and with the yield curve at this time arguably embodying no rise in short-term rates, interest rates should ratchet noticeably higher, at least through the intermediate-term maturities. The stock market likely would come under substantial selling pressure, especially if the move were seen to be only the first in a series of tightenings.
(13) The 25 basis point easing of Alternative A might be favored if the Committee were concerned that turmoil abroad might have an even greater impact on the U.S. economy than the staff has built into the forecast. Given the favorable near-term inflation outlook for the United States, the Committee might see insurance against such an outcome to be relatively inexpensive in that the easing likely could be reversed, if that proved necessary, before it boosted inflation and inflation expectations. Indeed, such an easing, by lowering real dollar interest rates might contribute a little toward stabilizing foreign markets, helping to forestall some repercussions in the United States. Moreover, the recent weakness in
commodity prices and the shallow slope of the yield curve may support the view that real short-term rates are high relative to their equilibrium.
(14) An easing at this time would also catch the market by surprise, and shortterm interest rates would decline by around the 25 basis point reduction in the funds rate. The extent of the decline in longer-term rates would depend on whether market participants were convinced that an easing could be sustained because of damped export demand and lower import prices stemming from recent developments overseas or whether they viewed the Committee to be taking undesirable inflation risks in order to stabilize global markets in the short run. The dollar likely would give back some of its recent gains while stock prices probably would rise, especially if investors were to see the easing as sustainable.
(15) Growth of the broad money aggregates is expected to moderate from the recent rapid pace, as the expansion of nominal GDP slows in the first quarter. M2 growth is projected at around a 4 percent annual pace over the November-to-March period under alternative B, leaving this aggregate near the upper end of its provisional 1998 range. Nonetheless, growth in M2 would again outpace that of nominal GDP in the first quarter of 1998, and M2 velocity would edge lower. M3 should slow by more than M2 over the November-to-March period, as growth in bank credit ebbs and some of the shifting in the composition of bank managed liabilities diminishes. Nonetheless, growth in M3--at a 6-1/2 percent rate-is expected to run above the upper end of its provisional range for 1998.
(16) Borrowing by domestic nonfinancial sectors other than the federal government is projected to remain substantial in late 1997 and early 1998. Continued favorable conditions in capital markets should tilt borrowing toward longer-term sources. Rising
external financing needs of corporations, as capital outlays continue to advance while internal funds level out, will be boosting business credit demands. Household debt growth is expected to stay around the moderate pace of the past year. Credit supply conditions should continue to be generally accommodative as any reassessment of risk by business creditors should be limited. Moreover, U.S. banks and other financial intermediaries appear sufficiently strong to absorb losses stemming from their exposure to Asia and other emerging markets without facing significant funding difficulties. The federal government should continue to be a light borrower, as the deficit stays narrow. Growth in overall debt of domestic nonfinancial sectors over the coming months is expected to average around $4-3 / 4$ percent at an annual rate, a bit below the midpoint of its provisional range for 1998.

## Directive Language

(15) Presented below is draft wording for the operational paragraph that includes the usual options for Committee consideration.

## OPERATIONAL PARAGRAPH

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 $\qquad$ 5-1/2 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 somewhat/SLIGHTLY higher federal funds rate would/MIGHT or a SOMEWHAT/slightly 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 of M2 and M3 over coming months.

Alternative Levels and Growth Rates for Key Monetary Aggregates



## Actual and Projected M2



## Actual and Projected M3



## Actual and Projected Debt


(percent)

 o 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, following the end of the statement week. Column 14 is the俍
p-preliminary data


1. Adjusted for breaks caused by reclassifications.
2. 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.
$\begin{array}{ll}\mathrm{p} & \text { preliminary } \\ \text { preliminary estimate }\end{array}$


[^1] gh accounts.
Net of large denomination time deposits held by money market mutual funds, depository institutions, U.S. government, and foreign banks and official institutions Net of money market mutual fund holdings of these items.
Includes both overnight and term.

Millions of dollars, not seasonally adjusted


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

| within <br> 1 year | $1-5$ | $5-10$ | over 10 | total |
| :---: | :---: | :---: | :---: | :---: |
| 0.3 | 0.2 | 0.3 | 0.0 | 0.8 |


[^0]:    ${ }^{1}$ 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.

[^1]:    Includes money market deposit accounts
    ncludes retall repurchase agreements. All IRA and Keogh accounts at commercial banks and thrift institutions are subtracted from small time deposits.

