Prefatory Note

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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.

MONETARY POLICY ALTERNATIVES

Recent Developments

(1)The events in financial markets prior to the terrorist attacks might seem to read like ancient history by now: The Committee's quarter-point reduction in the intended federal funds rate on August 21 was widely expected and barely sent a ripple through markets. In the days that followed, most market interest rates edged lower in light of generally downbeat news on the economy, including the release of the August employment data in early September, and broad equity indexes fell appreciably. Shortly after the terrorist attacks on September 11, the System announced that the discount window was available to meet liquidity needs and began to provide a massive amount of reserves through the window later that day and through open market operations on the next day. (See the box for a discussion of Desk operations and reserve markets in the aftermath of the attacks.) Market participants evidently interpreted the interruptions to production and spending ensuing from the terrorist attacks and the possible knock-on effects on asset prices and confidence as necessitating a considerable monetary policy response. In the event, on September 17, the FOMC reduced the target federal funds rate ½ percentage point to 3 percent and said in the press release that unusually large volumes of liquidity would continue to be supplied until more normal financial market functioning was restored. In recent days, investors appear to be interpreting the sketchy information available on economic conditions since September 11 as pointing to a gloomier outlook for the economy, and federal funds futures quotes seem to incorporate high odds of another 50 basis point move at the October meeting and further easing in coming months that would bring the funds rate to the neighborhood of 2 to 21/4 percent by early next year (Chart 2). As has been the case for some time, market participants apparently expect

that policy will reverse course fairly promptly, with about 1 percentage point of firming next year embedded in market interest rates, although option prices indicate that investors are unusually uncertain about this trajectory.

Desk Operations and Reserve Markets in the Wake of the Sept. 11 Attacks

The operations of some banks and federal funds brokers were seriously disrupted by the effects of the terrorist attacks. To help deal with these dislocations to markets and payment systems, the System provided an immense volume of reserves through open market operations and discount window lending and also established swap lines with several foreign central banks, one of which was partially drawn down (as shown in the table in Chart 1). A large additional volume of reserves was created by check float as air transportation was halted. Although other factors-notably a significant expansion in the foreign RP pool-absorbed a portion of these reserves, reserve balances swelled dramatically, peaking at \$114 billion on September 13. The System suspended its fees and penalties for daylight and overnight overdrafts for a time to ease the challenges banks faced in managing reserve positions. To facilitate settlement in the Treasury securities market, the Desk temporarily eased its rules on securities lending, and dealers borrowed record amounts of securities from the System. Late in the week, discount window borrowing plunged, returning to more normal levels as a result of the enlarged volume of nonborrowed reserves and better functioning of the reserve market. As air transportation resumed, the level of float dropped back to more usual levels by early the following week. With the fed funds market functioning more normally, the Desk gradually cut back the provision of reserves through open market operations, and the level of reserve balances began to drop sharply. Nonetheless, the demand for and supply of reserve balances has remained somewhat above usual levels.

In the immediate aftermath of the attacks, banks mostly traded reserves at the 3½ percent target federal funds rate under an informal convention, with a substantial proportion of direct, rather than brokered, transactions. As more normal functioning resumed in the funds market, the federal funds rate fell below the FOMC's formal targets for several days but fluctuated around the new target last week (as seen in the lower panel of Chart 1).

Chart 1

Factors Supplying Reserves to the Banking System (daily levels, \$ billion, n.s.a.)

| _ | ` | • | | , | | | | _ |
|-------------------------------|-------------|-----------------|-----------------|-----------------|-------------|-------------|-----------------|-------------|
| | Mon 9/10 | Tue 9/11 | Wed 9/12 | Thu 9/13 | Fri 9/14 | Mon 9/17 | Tue 9/18 | Wed 9/19 |
| | | | | | | | | |
| (1) Discount Window Borrowing | 0 | 37 | 46 | 8 | 0 | 0 | 0 | 3 |
| (2) Overdrafts | 0 | 3 | 6 | 0 | 0 | 0 | 0 | 0 |
| (3) Swap draws | 0 | 0 | 5 | 20 | 9 | 0 | 0 | 0 |
| (4) Float | 1 | 4 | 23 | 47 | 44 | 12 | 9 | 4 |
| Open Market Operations | | | | | | | | |
| Repurchase Agreements | | | | | | | | |
| (5) Long-term | 16 | 16 | 16 | 14 | 14 | 12 | 12 | 12 |
| (6) Short-term | 7 | 7 | 45 | 70 | 81 | 57 | 36 | 28 |
| (7) Other Net Factors* | -18 | - 27 | - 40 | - 45 | -44 | - 43 | - 45 | -39 |
| (8) Reserve Balances | 6 | 40 | 101 | 114 | 104 | 38 | 12 | 8 |
| Memo: | | | | | | | | |
| (9) Effective Fed Funds Rate | 3.50 | 3.50 | 3.56 | 3.31 | 3.13 | 2.13 | 1.25 | 1.19 |

^{*} Includes all other factors supplying reserves: gold, SDRs, outright holdings of securities, other assets, coin and other Treasury currency minus all other factors (except reserve balances) absorbing reserves: currency in circulation, Treasury and other deposits at the Fed, required clearing balances, other liabilities and capital.

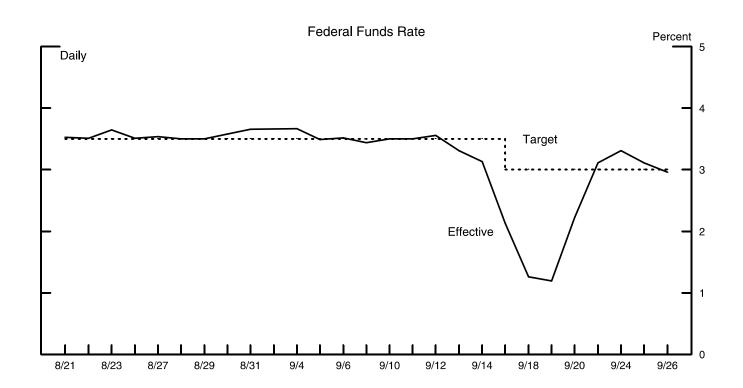
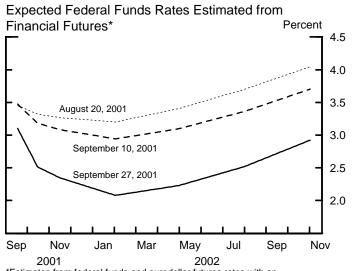
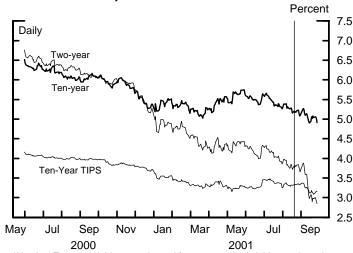


Chart 2
Financial Market Indicators

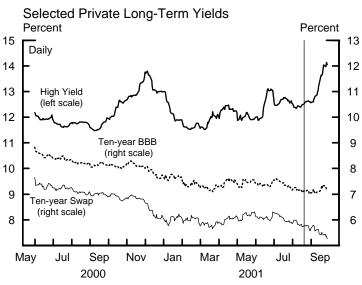


*Estimates from federal funds and eurodollar futures rates with an allowance for term premia and other adjustments.

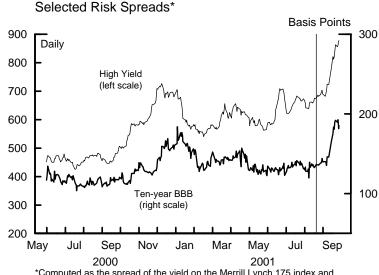


Selected Treasury Yields*

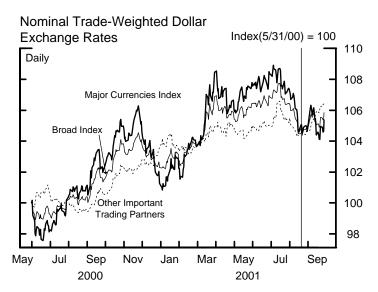
*Nominal Treasury yields are estimated from a smoothed yield curve based on off-the-run securities.



Selected Equity Indexes Index(5/31/00) = 100140 Daily 120 Wilshire 5000 DJIA 100 80 Nasdaq 60 40 Sep May Sep May Jul Nov Jan Mar Jul



*Computed as the spread of the yield on the Merrill Lynch 175 index and an estimated ten-year BBB yield over the ten-year swap rate.



Note: Solid vertical line indicates August 21 FOMC meeting.

2001

2000

- (2) Rates on short- and intermediate-term Treasury securities fell about 60 to 110 basis points on balance over the intermeeting period, with the bulk of the decline occurring after September 11. The prices for these securities appear to have been boosted by actual and expected easing of the stance of monetary policy as well as safe-haven demands amid sharp fluctuations in equity prices and heightened global economic and political uncertainties. Yields on ten-year Treasury notes declined about 30 basis points, however, and those on thirty-year bonds were flat, buoyed in part by investor concerns about the deteriorating outlook for the federal budget surplus and the future supply of Treasury debt.
- (3) Some of the infrastructure of the Treasury securities market was damaged or destroyed by the terrorist actions. Since then, market functioning has improved considerably but remains somewhat impaired. Virtually all brokers and dealers have resumed operations, although many are operating at backup locations and a number of firms have scaled back their market-making. Trading volumes for on-the-run issues have returned to historical ranges, and bid-asked spreads have narrowed. Nonetheless, such spreads remain slightly elevated, the amounts that can be transacted at those spreads are smaller than usual, and trading in off-the-run issues is quite limited. While clearance and settlement mechanisms are now generally performing normally, market participants report that a considerable volume of trades from September 11 have yet to be reconciled. Partly as a consequence, the incidence of failed securities trades remains relatively high.
- (4) Yields on investment-grade corporate bonds were generally about unchanged on balance over the intermeeting period, with the exception of those on relatively short-term or very highly rated obligations, such as federal agency debt, which dropped considerably. Junk bond yields, however, jumped more than 100 basis points over the period. Issuance of corporate bonds ceased for a few days after

September 11, and investment-grade firms have accounted for virtually all the issuance since then. Trading activity in secondary markets for corporate bonds also has picked up in recent days but remains noticeably below normal, particularly in the high-yield sector. The commercial paper market was significantly disrupted, leading to brief involuntary extensions of paper that would otherwise have matured, but issuance and activity have since rebounded; during the interruption, some firms reportedly drew on backup lines of credit at commercial banks. Discussions with several large banks indicate that most have not yet adjusted their terms and standards for business loans since September 11, but loan requests from firms in selected industries are being scrutinized more carefully; some of the banks contacted said that loan demand had weakened notably. Equity markets were closed for four days following the attacks. After the markets reopened, broad equity price indexes tumbled, but in recent days they have recovered part of those losses on balance, bringing their cumulative declines over the intermeeting period to 13 to 22 percent. Intraday price changes in the equity market were quite large, and forward-looking measures of uncertainty inferred from options prices are unusually high.

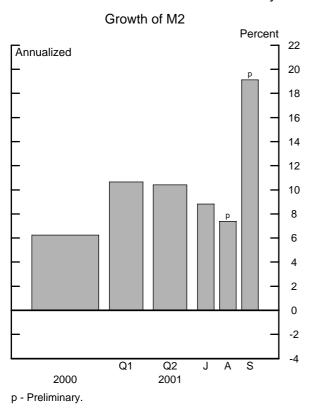
(5) The dollar's average exchange value against other major currencies was about unchanged on balance over the intermeeting period, as modest dollar appreciation early in the period was erased following the attacks. The dollar varied in a wide range against the yen, ending the period ³/₄ percent lower. Against the euro, the dollar slipped ¹/₂ percent on balance. In contrast, the dollar gained about 2 percent vis-à-vis the Canadian dollar, as investors reacted to signs that the slowdown in that country could be particularly abrupt. Central banks in most foreign industrial countries appreciably eased policy after the attacks, typically by 50 basis points, but long-term yields generally moved little on net. Share prices fell sharply on all major exchanges, in many cases by more than in this country.

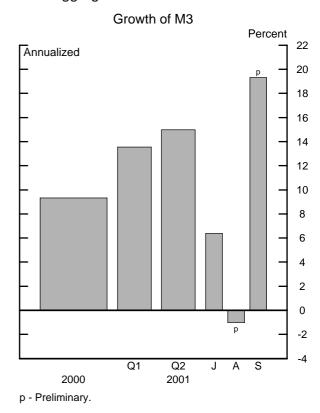
U.S. authorities did not intervene for their

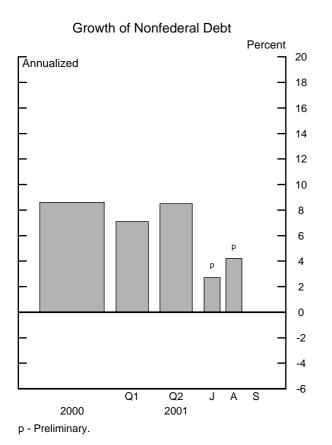
own accounts.

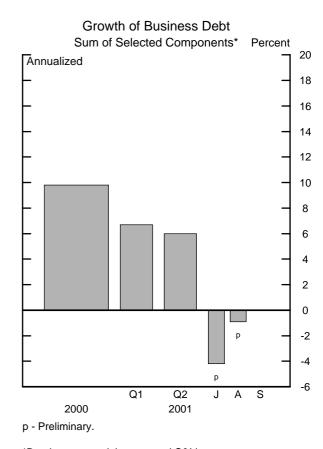
- (6) The dollar's exchange value against the currencies of our other important trading partners rose 2 percent during the intermeeting period, driven especially by the reaction in Latin American markets to the more uncertain global economic environment. The dollar gained 7½ percent against the Brazilian *real*, and it rose 4¾ percent against the peso, as Mexican output declined and as investors worried about an intensification of the spillovers from the U.S. slowdown. Trading in emerging market debt was severely reduced for almost a week. Once trading recovered, emerging market bond spreads increased sharply, with those on Latin American sovereign debt widening by 50 to 200 basis points on net over the intermeeting period.
- (7) M2 growth spiked to an estimated 19 percent annual rate in September as the result of a record \$165 billion surge in this aggregate for the week ending September 17. In that week, disruptions to the infrastructure of financial markets led to a large involuntary accumulation of liquid deposits, which is expected to have largely run off in the subsequent week. A heightened demand for safe and liquid assets apparently encouraged further substitutions from equity mutual funds into deposits in M2. The flight to safety and the intermeeting policy easing spurred a resurgence in institution-only money market funds in September, further lifting M3 growth. Domestic nonfinancial sector debt expanded at a 4¾ percent pace in August, about in line with its average growth since the fourth quarter of last year. The growth of nonfederal debt remained relatively low, as the liquidation of inventories likely

Chart 3 Growth of Money and Selected Debt Aggregates









^{*}Bonds, commercial paper, and C&I loans.

allowed firms to run off short-term debt. With the Treasury raising funds to finance tax rebates, federal debt rose at around a $7\frac{1}{2}$ percent annual rate in August, somewhat faster than in the previous month.

MONEY AND CREDIT AGGREGATES

(Seasonally adjusted annual percentage rates of growth)

| | Jun 2001 | Jul 2001 | Aug 2001 | Sep 2001 (p) |
|-----------------------------|----------|----------|------------------|--------------|
| Money and Credit Aggregates | | | | |
| M2 | 10.1 | 8.8 | 7.4 | 19.1 |
| M3 | 12.9 | 6.4 | -1.0 | 19.3 |
| Domestic nonfinancial debt | 6.2 | 3.1 | 4.7 ^p | n.a. |
| Federal | 2.8 | 5.1 | 7.6 p | n.a. |
| Nonfederal | 6.9 | 2.7 | 4.1 ^p | n.a. |
| Bank credit | -1.5 | -0.5 | 2.6 | 16.0 |
| Adjusted ¹ | -3.0 | 3.2 | -0.7 | 15.2 |
| Memo: | | | | |
| Monetary base | 5.6 | 11.6 | 15.2 | 48.2 |
| Adjusted for sweeps | 5.6 | 11.3 | 15.0 | 45.4 |

^{1.} Adjusted to remove the effects of mark-to-market accounting rules (FIN 39 and FASB 115).

p -- preliminary

Policy Alternatives

- The information that had accumulated up to September 11 pointed to weaker economic activity than the staff had anticipated at the time of the August FOMC meeting. Since then, in response to the dislocations to economic activity arising from the terrorist attacks, the further drop in equity prices, and an expected marking down of household and business confidence, the staff has revised down substantially its near-term outlook and now shows a mild downturn in real GDP in the Greenbook this year and only a modest uptick, on balance, in the first half of 2002. In light of this much weaker outlook, the staff has assumed that the federal funds rate will be reduced another 50 basis points this fall and then held steady at 2½ percent until it is raised gradually in the second half of 2003. Fiscal policy is assumed to provide a moderate impetus to growth over the next two years. Long-term interest rates are expected to hold at about their current levels into early next year and then to drift down, the dollar to depreciate slightly, and equity prices to fall in the near term on earnings disappointments but to trend higher thereafter. With the growth of spending projected to fall short of that of potential output growth until mid 2002, the unemployment rate is expected to reach 6½ percent and then to decline just slightly toward the end of the forecast period. The resulting slack in resources, as well as the pass-through effects of lower oil prices, allows core PCE and CPI inflation to edge down to $1\frac{1}{2}$ percent and $2\frac{1}{4}$ percent, respectively, in 2003.
- (9) If the Committee, like the staff, saw a high probability of protracted economic weakness ahead and, as a consequence, a substantial rise in the unemployment rate and a decline in core inflation, it presumably would ease policy further, as assumed in the Greenbook. The Committee may see the staff forecast as embodying an appreciable enough downward revision to the prospects for spending and inflation pressures to justify reducing the intended federal funds rate **50 basis**

points at this meeting. The equilibrium real federal funds rate, which summarizes the more persistent factors shaping spending and pressures on resources, is now estimated to be about a full percentage point lower than was thought at the time of the August meeting according to the measures based on the staff forecast as well as historical data (as discussed in the box). Even if the Committee did not think that the factors depressing spending were likely to be long lasting enough to lower the equilibrium real funds rate to that extent, those forces still might be seen as sufficiently persistent to warrant additional policy easing for a time. In addition, with household and business confidence possibly fragile, the Committee may consider it important to be seen as moving aggressively with another half percentage point easing. Indeed, given the prevailing expectation among market participants of such an action, the Committee might be concerned that a smaller-sized ease could trigger an inappropriate tightening of other financial conditions that could prove especially problematic given the remaining strains in the financial market infrastructure. Moreover, the Committee may believe that, if aggregate demand proves to be surprisingly strong, the cost of having eased policy a little too much at this time would be relatively small given that inflation expectations are likely to remain well contained.

(10) Investors have largely priced in a ½ percentage point easing at this meeting, along with a characterization of the balance of risks as pointed toward economic weakness. Accordingly, financial market prices likely would be little changed if such expectations were realized. As always, the press release will be scrutinized for hints of the Committee's policy intention going forward, and any sense in the statement that there were higher-than-expected odds of subsequent policy easing would trigger a downward adjustment of the expected path of the funds rate. In that circumstance, short- and intermediate-term interest rates would likely decline and equity prices increase.

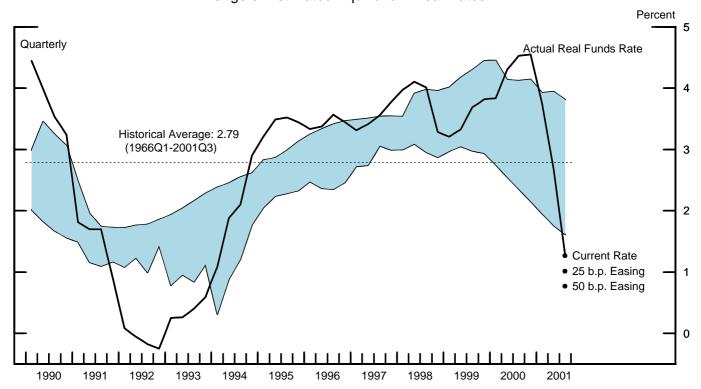
Equilibrium Real Federal Funds Rate Estimates

One way to assess the stance of monetary policy is by comparing the actual real federal funds rate to estimates of its equilibrium level. The equilibrium real federal funds rate can be defined as the rate consistent with output being at its potential level once the effects of transitory shocks—those with dynamics that play out within a few years—have dissipated. Chart 4 shows the range spanned by five estimates of the equilibrium federal funds rate calculated by Board staff, as well as the actual real federal funds rate and the real funds rates implied by the policy alternatives discussed in the text. (The real funds rate is measured as the nominal federal funds rate less the lagged four-quarter change in core PCE prices as a proxy for expected inflation.)

The recent behavior of these measures is shown in the table below the chart. The two estimates of the equilibrium rate based on the historical data have declined over the intermeeting period because current-quarter activity now appears likely to be weaker than had previously been anticipated. The two measures of the equilibrium rate based on the historical data augmented by the staff projection have declined considerably further, reflecting the much weaker assessment of aggregate demand embodied in the staff forecast. By contrast, the estimate of the equilibrium federal funds rate based on indexed Treasury yields has changed little.

The revisions to the measures of the equilibrium funds rate, while substantial in some cases, are fairly modest relative to the uncertainty associated with the estimates. In the case of the statistical filter method, standard errors of the estimates can be calculated. For 2001Q3, these standards errors imply that a 90-percent confidence interval is roughly 2½ percentage points on each side of the point estimate.

Chart 4
Actual Real Federal Funds Rate and
Range of Estimated Equilibrium Real Rates



Note: The shaded range represents the maximum and the minimum values each quarter of five estimates of the equilibrium real federal funds rate. Real federal funds rates employ four-quarter lagged core PCE inflation as a proxy for inflation expectations, with the staff projection used for the third quarter of 2001.

| Equilibrium F | Funds Rate Estim | ıates | Pe |
|---|------------------|---------------|--------|
| <u>Method</u> | <u>2000</u> | <u>2001H1</u> | 2001Q3 |
| Statistical Filter | | | |
| -Based on historical data* August Greenbook | 3.1 | 2.8 | 2.8 |
| | 3.3 | 3.1 | 3.1 |
| -Based on historical data and the staff forecast | 2.5 | 1.9 | 1.6 |
| August Greenbook | 3.0 | 2.7 | 2.6 |
| FRB/US Model | | | |
| -Based on historical data** August Greenbook | 3.9 | 2.8 | 1.8 |
| | 4.1 | 3.1 | 2.5 |
| -Based on historical data and the staff forecast | 3.0 | 2.2 | 2.0 |
| August Greenbook | <i>4.1</i> | 3.5 | 3.2 |
| Treasury Inflation-Indexed Securities August Greenbook | 4.2 | 3.9 | 3.8 |
| | 4.2 | 3.9 | 3.8 |

^{*} Also employs the staff forecast for 2001Q3 and 2001Q4.

^{**} Also employs the staff forecast for 2001Q3. Backward-looking moving averages, rather than centered moving averages, are used to estimate the persistent and transitory components of shocks to the model.

- Committee as sufficient to induce an adequate recovery of economic growth over the time frame that such policy action would be felt on spending. The Committee might be especially inclined to adopt this option if it had reason to suspect that aggregate demand would snap back relatively promptly. For example, the Committee may read the current political climate as indicating that a considerable degree of fiscal stimulus is in the offing. Or the Committee may be of the view that much of the adverse effects of the terrorist attacks on confidence is likely to be short lived. In any case, the outlook for fiscal policy, the state of confidence, and the economy more generally is quite uncertain at this time, and the Committee may prefer to await further developments before committing to a larger policy action. If events turn more adverse than expected in coming weeks, an additional easing step could be taken even before the next meeting. In contrast, should aggregate demand prove resilient, this relatively modest ease would provide a bit more assurance of eventually bringing core inflation down.
- (12) The announcement of a 25 basis point easing would surprise market participants, likely prompting a rise in interest rates, particularly at the short end of the yield curve, as well as a decline in stock prices. While the market fully expects an announcement that the risks remain tilted toward weakness, a more explicit suggestion of the Committee's readiness to consider further steps, even in the intermeeting period, would work to limit the market reaction to this policy choice.
- (13) Under the Greenbook forecast, the growth of domestic nonfinancial debt is expected to remain subdued in the months ahead. The federal government is forecast to resume paying down debt, albeit at a slower rate than earlier this year. Household and business debt is projected to continue to expand moderately in reflection of the weak outlook for consumer and investment spending. Much of the

bulge in emergency financing provided by banks immediately following the terrorist attack should be repaid quickly, as bond and paper markets have made considerable progress in returning to more normal operations. However, in light of the likely increased perception of and lessened willingness to take on risk, investors will probably remain more cautious in extending credit to lower-rated firms, as reflected in widened risk spreads since the terrorist actions. Home mortgage borrowing should be fairly well maintained because of continuing low interest rates.

(14) Under the assumptions of the Greenbook forecast, M2 growth is projected to slow to a 5½ percent pace over the September-to-March period, owing to declines in household incomes, the waning of effects on money demand of the cumulative policy easings, and the running off of balances bloated by market disruptions. Over the four quarters of 2001, M2 is expected to post robust growth of around 10 percent, boosted not only by declines in the opportunity cost of holding money but also by the surge in mortgage refinancings, by unusual demands for U.S. currency, especially in Argentina, and by the reduced attractiveness of stock market investments relative to deposits and money funds. Partly because of these special factors, the velocity of M2 is expected to drop at a record annual rate of 6¾ percent this year, faster than would be predicted by the traditional relationship of velocity to opportunity costs.

Directive and Balance of Risks Language

(15) Presented below for the members' consideration is draft wording for (1) the directive and (2) the "balance of risks" sentence to be included in the press release issued after the meeting (not part of the directive).

(1) Directive Wording

The Federal Open Market Committee seeks monetary and financial conditions that will foster price stability and promote sustainable growth in output. To further its long-run objectives, the Committee in the immediate future seeks conditions in reserve markets consistent with MAINTAINING/INCREASING/reducing the federal funds rate AT/to an average of around ___3 percent.

(2) "Balance of Risks" Sentence

Against the background of its long-run goals of price stability and sustainable economic growth and of the information currently available, the Committee believes that the risks [ARE BALANCED WITH RESPECT TO PROSPECTS FOR BOTH GOALS] [ARE WEIGHTED MAINLY TOWARD CONDITIONS THAT MAY GENERATE HEIGHTENED INFLATION PRESSURES] [continue to be weighted mainly toward conditions that may generate economic weakness] in the foreseeable future.

| | | | M2 | | M2 | М3 | Debt |
|---------------|----------|----------------|----------------|--------------|--------------|------------|------|
| | | Ease 50 bps | Ease 25 bps | No Change | Greenboo | ok Forecas | ;t* |
| Monthly Growt | h Rates | | | | | | |
| Apr-2001 | | 10.7 | 10.7 | 10.7 | 10.7 | 19.1 | 5.1 |
| May-2001 | | 5.7 | 5.7 | 5.7 | 5.7 | 14.0 | 6.4 |
| Jun-2001 | | 10.1 | 10.1 | 10.1 | 10.1 | 12.9 | 6.2 |
| Jul-2001 | | 8.8 | 8.8 | 8.8 | 8.8 | 6.4 | 3.1 |
| Aug-2001 | | 7.4 | 7.4 | 7.4 | 7.4 | -1.0 | 4.4 |
| Sep-2001 | | 19.1 | 19.1 | 19.1 | 19.1 | 19.3 | 4.7 |
| Oct-2001 | | -1.5 | -1.2 | -1.8 | -1.5 | 2.5 | 1.0 |
| Nov-2001 | | 8.9 | 9.2 | 7.8 | 8.5 | 9.0 | 3.1 |
| Dec-2001 | | 9.7 | 9.1 | 7.5 | 8.5 | 9.0 | 6.5 |
| Jan-2002 | | 8.6 | 7.1 | 5.7 | 7.0 | 8.0 | 4.1 |
| Feb-2002 | | 7.5 | 5.7 | 4.6 | 6.0 | 7.0 | 4.1 |
| Mar-2002 | | 6.2 | 4.7 | 3.8 | 5.0 | 6.5 | 6.6 |
| Quarterly Ave | erages | | | | | | |
| 2000 Q2 | | 6.4 | 6.4 | 6.4 | 6.4 | 8.9 | 6.2 |
| 2000 Q3 | | 5.6 | 5.6 | 5.6 | 5.6 | 9.0 | 4.8 |
| 2000 Q4 | | 6.3 | 6.3 | 6.3 | 6.3 | 7.4 | 4.5 |
| 2001 Q1 | | 10.7 | 10.7 | 10.7 | 10.7 | 13.6 | 4.8 |
| 2001 Q2 | | 10.4 | 10.4 | 10.4 | 10.4 | 15.0 | 5.8 |
| 2001 Q3 | | 9.7 | 9.7 | 9.7 | 9.7 | 8.5 | 4.6 |
| 2001 Q4 | | 7.6 | 7.6 | 7.1 | 7.4 | 8.0 | 3.3 |
| 2002 Q1 | | 8.4 | 7.3 | 5.9 | 7.1 | 8.0 | 4.8 |
| Growth Rate | | | | | | | |
| From | То | | | | | | |
| Dec-2000 | Sep-2001 | 11.4 | 11.4 | 11.4 | 11.4 | 12.9 | 5.0 |
| Dec-2000 | Dec-2001 | 10.1 | 10.1 | 9.8 | 10.0 | 11.5 | 4.7 |
| Sep-2001 | Dec-2001 | 5.7 | 5.6 | 4.6 | 5.2 | 6.9 | 3.5 |
| Aug-2001 | Mar-2002 | 8.5 | 7.8 | 6.8 | 7.6 | 8.9 | 4.3 |
| Sep-2001 | Mar-2002 | 6.7 | 5.8 | 4.7 | 5.6 | 7.1 | 4.3 |
| 2000 Q4 | Jun-2001 | 10.5 | 10.5 | 10.5 | 10.5 | 14.5 | 5.5 |
| 2000 Q4 | Sep-2001 | 11.1 | 11.1 | 11.1 | 11.1 | 12.8 | 5.1 |
| 2000 Q4 | Dec-2001 | 10.0 | 10.0 | 9.7 | 9.8 | 11.6 | 4.8 |
| 1999 Q4 | 2000 Q4 | 6.2 | 6.2 | 6.2 | 6.2 | 9.3 | 5.3 |
| 2000 Q4 | 2001 Q4 | 10.0 | 10.0 | 9.8 | 9.9 | 11.7 | 4.7 |

^{*} This forecast is consistent with nominal GDP and interest rates in the Greenbook forecast.

(Millions of dollars, not seasonally adjusted) Changes in System Holdings of Securities 1

September 27, 2001

| | | Treasury Bills | | | | Treasury Compons | Subulio | | | Federal | Net change | | Net RPs 5 | |
|-----------------------|-------------------------------|--------------------|---------------|--------|-----------------|------------------|---------|--------------------|---|--------------------|-----------------------------------|-----------------------------|----------------------------|---------------|
| | | | | | | 3 | | | | Agency | total | č | | |
| | Net Purchases ² | Redemptions (-) | Net Change | 7 | Net Purchases 7 | 10 | Over 10 | Kedemptions (-) | Net Change | Kedemptions (-) | outrignt holdings ⁴ | Short- Term ⁶ | Long- Term ⁷ | Net Change |
| 1998 | 3,550 | 2,000 | 1,550 | 6,297 | 12,901 | 2,294 | 4,884 | 2,676 | 23,699 | 322 | 24,902 | -7,242 | 463 | -6,779 |
| 1999 | 1 | 1 | 1 | 11,895 | 19,731 | 4,303 | 9,428 | 1,429 | 43,928 | 157 | 43,771 | 2,035 | 8,347 | 10,382 |
| 2000 | 8,676 | 24,522 | -15,846 | 8,809 | 14,482 | 5,871 | 5,833 | 3,779 | 31,215 | 51 | 15,318 | -2,027 | 7,133 | 5,106 |
| | 000 | 7 | 090 | c | 20 | Ċ | 1 670 | 0 | 2000 | , | 2,7 | 5 | 002.0 | 900 |
| 2000 | 7,234 | 607, 1 | -4,303 | 2,039 | 9,0,9 | 920 | 6 /0,1 | 000 | 086,7 | | 2,419 | 5 | -9,709 | 6,000 |
| Ē | 2,587 | 12,238 | -9,621 | 4,770 | 7,152 | 2,362 | 1,774 | 1,254 | 14,803 | 10 | 5,142 | -1,911 | -2,025 | -3,937 |
| ΔIV | 3,795 | 4,822 | -1,027 | 2,000 | 3,111 | 1,281 | 982 | 1,567 | 5,806 | 1 | 4,779 | 1,398 | 4,067 | 5,465 |
| 2001 QI | 3,782 | 1,076 | 2,706 | 1,672 | 5,792 | 1,283 | 1,791 | 3,951 | 985'9 | 120 | 9,172 | 1,884 | -1,378 | 206 |
| ē | 3,097 | 7,476 | -4,379 | 6,611 | 8,592 | 2,047 | 3,573 | 959'9 | 14,167 | 1 | 9,788 | 629 | -2,186 | -1,547 |
| | | | | | | | | | | | | | | |
| 2001 Jan | 520 | 228 | 292 | ! | 925 | 1,283 | 296 | 2,422 | 82 | 1 | 374 | 777 | -3,364 | -2,587 |
| Feb | 2,683 | 638 | 2,046 | 1,605 | 2,983 | ! | 495 | 1,529 | 3,554 | 120 | 5,480 | 999 | -6,327 | -5,661 |
| Mar | 629 | 211 | 368 | 29 | 1,883 | ! | 1,000 | ! | 2,950 | i | 3,318 | -1,078 | -11 | -1,089 |
| Apr | 308 | 3,537 | -3,229 | 3,027 | 4,480 | 1,390 | 913 | 4,368 | 5,441 | 1 | 2,212 | 699 | 0 | 699 |
| May | 624 | 3,939 | -3,315 | 2,174 | 2,685 | 657 | 1,241 | 2,287 | 4,469 | 1 | 1,154 | 2,035 | _ | 2,036 |
| Jun | 2,165 | 1 | 2,165 | 1,410 | 1,428 | ! | 1,419 | ! | 4,257 | 1 | 6,422 | -2,781 | ဇှ | -2,783 |
| lnC | 718 | 1 | 718 | 235 | 4,193 | 756 | 815 | 4,668 | 1,330 | 1 | 2,048 | 1,455 | 7 | 1,454 |
| Aug | 2,899 | 1 | 2,899 | 1,385 | 810 | 935 | 720 | 1,055 | 2,795 | 1 | 5,694 | 899- | 3,421 | 2,753 |
| 2001 Jul 4 | 06 | i | 06 | i | 739 | i | ! | 2,500 | -1,761 | 1 | -1,671 | 6,997 | i | 6,997 |
| Jul 11 | 28 | 1 | 28 | I | i | 125 | 815 | ! | 940 | 1 | 866 | -2,415 | ! | -2,415 |
| Jul 18 | 74 | 1 | 74 | 235 | 2,024 | 621 | : | ! | 2,880 | 1 | 2,954 | -1,947 | ! | -1,947 |
| Jul 25 | 380 | 1 | 380 | 1 | 1 | ! | ! | ! | 1 | 1 | 380 | 2,625 | ! | 2,625 |
| Aug 1 | 116 | 1 | 116 | 1 | 1,429 | 10 | : | 2,168 | -728 | i | -613 | 299 | ! | 299 |
| Aug 8 | 288 | 1 | 288 | 1 | 1 | ! | 1 | 1 | 1 | 1 | 288 | -1,125 | 2,000 | 875 |
| Aug 15 | 2,215 | 1 | 2,215 | 1 | 1 | ! | ! | ! | 1 | 1 | 2,215 | -3,828 | 2,000 | -1,828 |
| Aug 22 | 251 | 1 | 251 | 1,385 | i | ! | ! | ! | 1,385 | 1 | 1,635 | 4,348 | 2 | 4,350 |
| Aug 29 | 145 | 1 | 145 | 1 | 810 | 222 | ! | ! | 1,367 | 1 | 1,512 | -2,110 | က | -2,107 |
| Sep 5 | 127 | 1 | 127 | 1 | i | 379 | 720 | 1,055 | 44 | 1 | 171 | 6,908 | ! | 6,908 |
| Sep 12 | 27 | 1 | 27 | 1 | 851 | ! | ! | 1 | 851 | 1 | 878 | -3,379 | 1 | -3,379 |
| Sep 19 | 89 | 1,543 | -1,475 | 1 | i | ! | ! | ! | 1 | 1 | -1,475 | 33,559 | -2,859 | 30,700 |
| Sep 26 | 126 | ŀ | 126 | 1 | 1 | ! | ! | ! | i | 1 | 126 | -34,686 | 6,285 | -28,401 |
| 2001 Sep 27 | i | i | I | I | i | ! | ! | ! | I | i | ! | -6,294 | -2,000 | -8,294 |
| Intermeeting Period | | | | | | | | | | | | | | |
| Aug 21-Sep 27 | , 220 | 1,543 | -993 | i | 1,661 | 935 | 720 | 1,055 | 2,261 | 1 | 1,268 | 1,744 | 2,000 | 3,744 |
| Memo: LEVEL (bil. \$) | (: | | o c | C | 2.00 | Q L | 700 | | o O | C C | 1 | 1 | 0 | 6 |
| 3 000 | : | | 2002 | 02.0 | 74.C | 0.55 | 0.0 | | - - - - - - - - - - - - - - - - - - - | - | 3.800 | | 0.00 | 7.01 |

Change from end-of-period to end-of-period.
 Outright purchases less outright sales (in market and with foreign accounts).
 Outright purchases less outright sales (in market and with foreign accounts). Includes short-term notes acquired in exchange for maturing bills. Excludes maturity shifts and rollovers of maturing issues.

Includes redemptions (-) of Treasury and agency securities.
 RPs outstanding less matched sale-purchases.
 Original maturity of 15 days or less.
 Original maturity of 16 to 90 days.