

William T. Gavin is vice president and research coordinator for the Federal Reserve Bank of St. Louis. Dan Steiner provided research assistance.



The FOMC in 1995: A Step Closer to Inflation Targeting?

William T. Gavin

In the course of the Committee's discussion of its monetary growth ranges, members commented on the failure of the monetary aggregates to provide a reliable nominal anchor for the conduct of monetary policy in recent years. Moreover, the restoration of historic relationships, or the emergence of new but stable relationships, between money growth and measures of progress toward broad economic objectives could not be predicted with any degree of confidence. Some members expressed the view that in these circumstances the Committee needed to continue to look at potential alternative approaches to guide the formulation of policy and to communicate its intentions to the public, especially with respect to the Committee's objective of promoting price stability over time.

Minutes of the FOMC meeting,
July 5–6, 1995, pp. 19–20.

The FOMC has long had a price stability goal, but it has not accepted suggestions to choose an index and set a timetable that would make this goal an operational target. The FOMC took up the issue of inflation targeting at its first meeting in 1995, discussing the advantages and disadvantages of setting explicit inflation targets. The issue also came up at the Committee's September 1995 meeting when it discussed the Economic Growth and Price Stability Act of 1995, a bill proposed in the Senate.

The shaded box on page 30—"FOMC Discussion of Inflation Targets"—summarizes these two discussions.

Those who advocate inflation targeting argue that the FOMC would better communicate its intentions and thereby enhance the credibility of its policy. Nevertheless, some members are opposed to inflation targeting, stating that such targets might hinder the pursuit of effective counter-cyclical policies. In addition, some economists have argued that targeting the aggregate price level directly would cause instability in the economy and, possibly, in the price level. This view is based on the notion that prices adjust sluggishly to all shocks. It gives little credence to a rational expectations view of the monetary transmission mechanism. The rational expectations revolution in macroeconomic theory, as well as the practical experience of the United States and other countries in setting monetary targets and attempting to control inflation, has led many economists (including this one) to favor using the price level, rather than the money supply, as a guide for policy.

Rational Expectations

Sargent (1986) explains how the rational expectations revolution in macroeconomics changed the way economists think about the monetary transmission mechanism. Economists believe price level is determined by expected future policies rather than by past monetary policies. The intuition behind rational expectations is simply that people will use information about the policy process when they form expectations of inflation. This is an important insight because it suggests that the long and variable lag from money to prices is partly caused by changes in expectations about future inflation that occur because the policymakers and circumstances that determine monetary policy change.¹

News about monetary policy actions is transmitted through all markets almost

¹ See Bryan and Gavin (1994) for details of this argument. Gavin and Kydland (1995) present evidence of instability in U.S. data, which, they argue, can be explained by changes in the monetary policy process.

FOMC DISCUSSION OF INFLATION TARGETS

Setting Specific Inflation Targets

“The Committee also considered the potential advantages and disadvantages of setting specific targets for bringing inflation down and achieving price stability over time. Such targets might provide an alternative or supplemental approach to the monetary growth ranges, which had been found to be unreliable guides for monetary policy over the past several years. The members discussed a number of aspects of inflation targeting. On the one hand, such targeting would help to anchor the conduct of monetary policy and progress in meeting these objectives could enhance the credibility of the Federal Reserve and perhaps reduce the overall cost of attaining price stability. On the other hand, close adherence to preset inflation targets could unduly constrain the Federal Reserve in its efforts to counteract the effects of cyclical shortfalls in the performance of the economy.”

Minutes of the FOMC Meeting, January 31–February 1, 1995, p. 18.

The Goal of Price Stability

“At this meeting, the Committee discussed a bill, titled the “Economic Growth and Price Stability Act of 1995,” that recently had been introduced in the United States Senate. The bill would make price stability the primary long-run policy goal of the Federal Reserve and require the Federal Reserve to establish a numerical definition of price stability and to implement a policy that would effectively promote such stability over time. It would repeal the Full Employment and Balanced Growth Act of 1978 (the “Humphrey-Hawkins Act”) and certain related provisions in the Employment Act of 1946 and the Congressional Budget Act of 1974. The Federal Reserve had not yet been asked its views of the bill, but testimony was likely at some point and a preliminary discussion would help to identify important issues.

“The members had not had time to review the bill in detail or to consider fully all its implications. Nonetheless, their initial reaction was favorable in regard to the overall thrust of the bill’s monetary policy provisions. These would make clear that price stability was the primary long-run objective of monetary policy and would restructure the monetary policy reporting requirements to permit the Congress to carry out its oversight responsibilities more effectively. Many members felt that in the context of seeking and maintaining price stability, monetary policy should have the flexibility to react to short-run fluctuations in output and employment, and they believed the bill would be improved if its intent in this regard were clarified. A few members expressed strong reservations about the part of the bill that would delete the employment objectives set forth in the Employment Act of 1946.”

Minutes of the FOMC Meeting, September 26, 1995, pp. 17-18.

simultaneously because changes in expected monetary policy affect pricing behavior in all markets. In markets where contracts prevail, or where markets do not meet and clear frequently, such monetary policy changes will affect the distribution of wealth even though the price changes may not be recorded in transactions until much later. With forward-looking expectations, the important channels through which monetary policy affects real out-

comes are changes in the expected inflation trend and deviations of the actual inflation rate from the rate that was expected.²

The rational expectations revolution implies that policies should be transparent. Everything else equal, the policy process should be structured to help people form accurate expectations. For example, a credible multiyear price-level objective would help concentrate expectations about

² See Litterman and Weiss (1985) for an econometric analysis of this view of the monetary transmission mechanism.

inflation. This, in turn, would cause people to make decisions in a way that would make the multiyear targets easier to achieve.

Experience with Monetary Targets

Our understanding of monetary phenomena has also been advanced through two decades of experience with monetary targeting in the United States. The Monetary Control Act of 1980 was structured under the assumption that M1—the sum of currency in circulation, traveler's checks, and checkable deposits—would be the key monetary target. This decision reflected the relatively constant growth rate of M1 velocity, the ratio of aggregate income to the money stock. As Figure 1 shows, M1 velocity appeared to experience a steady 3 percent growth during the 1960s and 1970s. The average inflation rate was approximately equal to the average M1 growth rate because the real economy grew at the same average rate as M1 velocity. The simplicity of the long-run relationship of M1 to inflation implied that policymakers could center the M1 growth range on the desired inflation trend.

Unfortunately, the simple relationship did not hold after 1980. The introduction of interest-bearing checkable accounts and the implementation of disinflation policy caused a dramatic change in the behavior of M1 velocity. Rather than continuing to grow at 3 percent per year, M1 velocity has actually fallen during the past 15 years. From 1981 through 1995, M1's average annual growth was just under 7 percent. Under the simple rule of thumb that worked before 1980, the average consumer price index (CPI) inflation rate would have been expected to be about 7 percent, rather than the 4 percent average that was actually observed. By 1987 the FOMC stopped targeting M1 and emphasized the broader aggregates.

Hallman, Porter, and Small (1991) suggested that a long-run relationship existed between M2 and the aggregate price level. This relationship was reflected in a relatively flat trend in M2 velocity,

Figure 1

M1 Velocity

Quarterly Data, Seasonally Adjusted

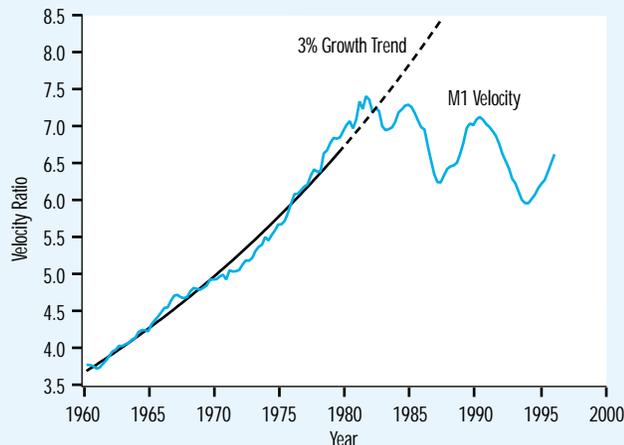


Figure 2

M2 Velocity

Quarterly Data, Seasonally Adjusted

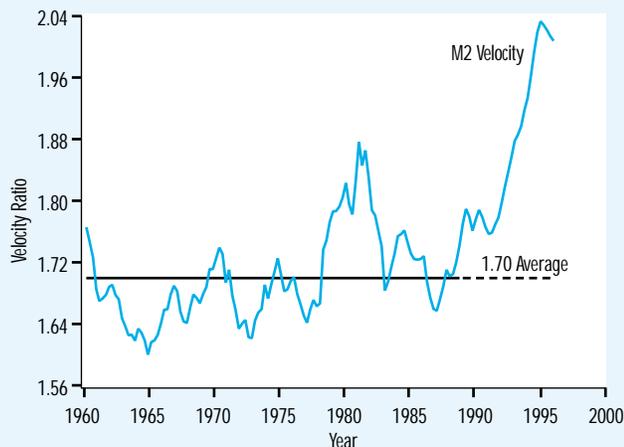
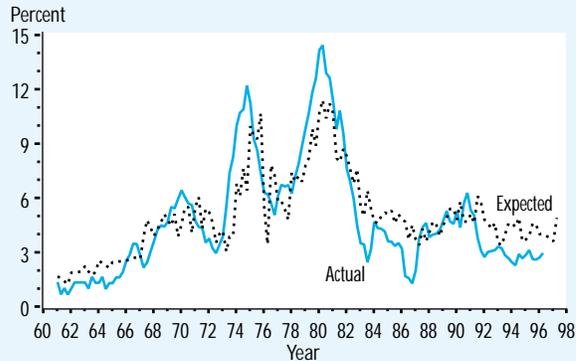


Figure 2 shows M2 velocity with a trend line calculated as the average from 1959 to 1989. M2 velocity displayed considerable cyclical variability and interest-rate sensitivity, but Carlson (1989) and Moore, Porter, and Small (1990) showed that these fluctuations appeared to be transitory and reasonably well explained by standard money demand theory. The apparent lack of trend in M2 velocity suggests that targets for M2 could be useful in communicating the long-run inflation objective. Here, the simple long-run relationship suggests that nominal gross

Figure 3

Michigan Mean Expectations and Actual CPI Inflation (Year-over-Year CPI)



Note: The expected inflation in May 1997 is the forecast from May 1996.

domestic product (GDP) growth would be equal to M2 growth. To achieve price stability, all the Fed would need to do is set the M2 growth target equal to the trend in real GDP growth.

From 1991 through 1995, M2 grew at an average annual rate of 2.1 percent, a little more than the average real GDP growth rate of 1.9 percent. Ex ante, such an outcome should have been expected to have resulted in a stable price level—an average inflation rate very near zero. However, the relatively constant long-term trend in M2 velocity also disappeared as the economy recovered from the 1990–1991 recession. There was a substantial increase in M2 velocity, a surprisingly stable 3 percent inflation trend, and a continuing de-emphasis of M2 in discussions about the short-run stance of monetary policy. This experience with M1 and M2 gives us less reason to agree that “the long way around seems the surer way to our objective” (Friedman, 1968, p. 15).

Controlling Inflation

The desirability of targeting inflation has been affected by the FOMC’s success in getting control over inflation in the past 15 years. In a study of errors in private forecasts from 1976 through 1987, McNees (1988) reported that uncertainty about inflation went up, not just with the length of the forecast horizon, but also

with the length of the period during which inflation was forecast: Forecasters could predict the next quarter better than they could forecast the average of the next two years. Although inflation was relatively predictable in the short run, the trend in the inflation rate appeared to be highly variable. Since 1990, it appears that this longer-term uncertainty may be substantially reduced. Figure 3 depicts the actual change in the CPI and the mean forecast of inflation from the Survey of Consumer Attitudes conducted monthly by the University of Michigan Survey Research Center. The mean value from this survey is aligned so that the forecast matches the period of actual inflation. Both the actual and the expected inflation rate display high year-to-year variability in the 1976–1987 time frame McNees studied. Figure 3 also shows declining variability with the decline in the average inflation rate after 1982.

Table 1 includes detail about the level and variability of inflation for various sub-periods and alternative inflation measures. The average inflation level so far in the 1990s is about the same as it was in the 1960s, well below levels recorded in the 1970s and somewhat below those of the 1980s. In general, inflation volatility rose with the average level of inflation, so we should not be surprised to see volatility in the 1990s below that observed in the 1980s. Nevertheless, it is difficult to compare inflation variability of the recent period with the 1980s because the United States has not had a recession or a major oil price shock since the 1990–91 recession. Even with an optimal policy process, we would expect inflation to become more variable in response to such disturbances.

As we might expect, inflation rate stabilization has been associated with a reduction in the uncertainty about inflation. Table 2 reports statistics from two surveys of inflation expectations. The first is the Michigan survey, also shown in Figure 3; the second is the semi-annual Livingston survey of economists that is maintained by the Research Department at

Table 1

Inflation Statistics

Period	CPI [*]	CPI(LFE)	PPI [†]	PPI(LFE)	PGDP [‡]
1961-70	3.0 (2.7)	3.2 (2.9)	1.8 (3.9)	Not Available	2.9 (1.8)
1971-80	8.2 (4.5)	7.4 (4.2)	9.0 (8.5)	9.2 (5.7)	7.3 (2.3)
1981-90	4.6 (3.3)	5.1 (2.7)	3.0 (5.7)	3.6 (3.1)	4.3 (1.8)
1991-96	2.9 (1.3)	3.3 (1.2)	1.4 (3.3)	1.9 (2.7)	2.6 (0.8)

Note: Each cell contains the average inflation for the period and the standard deviation of the inflation rate in parentheses. All figures are seasonally adjusted and expressed as compound annual growth rates.

* The CPI, the Consumer Price Index for all urban consumers, and the CPI less food and energy (LFE) are monthly.

† The PPI, the Producer Price Index for finished goods, and the PPI less food and energy (LFE) are monthly.

‡ PGDP, the Gross Domestic Product chain-type price index (1992=100), is quarterly.

Table 2

Inflation Forecast Errors (Forecast Minus Actual)

Period	Michigan Survey		Livingston Survey	
	MAE [*]	Bias [†]	MAE	Bias
1961-70	0.78	0.30	1.08	-1.07
1971-80	1.95	-1.05	2.63	-2.33
1981-90	1.27	0.70	1.35	0.92
1991-96	1.38	1.32	0.61	0.49

Note:

* MAE = Mean Absolute Error

† Bias = Mean Error

the Federal Reserve Bank of Philadelphia. Except for the case of the Michigan survey in the most recent period, the surveys show a positive correlation between the average level and predictability of inflation. In this case, the larger error is associated with lower inflation, but this is almost entirely a result of bias in the forecast.

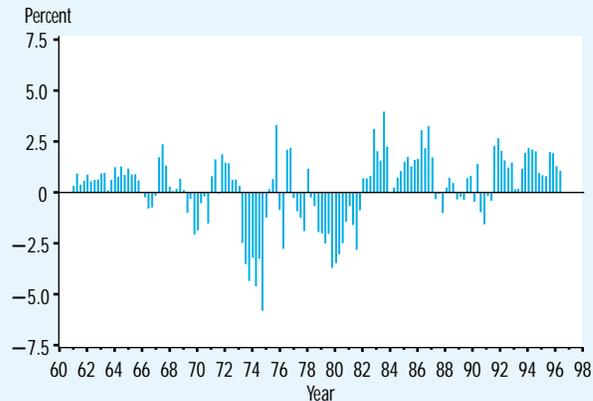
Figure 4 shows the error in the mean forecast by respondents to the Michigan survey. The mean forecast has consistently been either too high or too low. When inflation was accelerating in the 1970s, survey respondents were slow to catch on

to the policy process and thus tended to underestimate the inflation rate. In the early 1980s, when inflation was averaging around 4 percent, it appears that people in the Michigan survey did not really believe inflation would remain at that low level. Inflation forecasts were accurate from 1987 through 1990, a period of accelerating inflation. The bias in the errors is quite pronounced over short periods. This bias exists even today, when inflation is at its lowest level since the early 1960s. The inflation rate has stabilized at around 3 percent since 1990, but it does not appear

Figure 4

Forecast Error in the Michigan Survey

Deviation of Expected from Actual Inflation



that people who have responded to this survey have had much confidence that the trend would continue. The question is whether the Federal Reserve could enhance its credibility and reduce these expectational errors by adopting explicit inflation targets.

An interesting statement of the Federal Reserve's current long-term inflation objective can be found in the 1996 Monetary Policy Objectives:

Most on the Committee anticipate consumer price inflation at or somewhat below 3 percent in 1996. ... the Committee recognized that its expectations for inflation do not imply that price stability has yet been reached. Nonetheless, keeping inflation from rising significantly during economic expansions will permit a gradual ratcheting down of inflation over the course of successive business cycles that will eventually result in the achievement of price stability (p. 5).

This statement suggests that the objective is to keep inflation from rising above the recent 3 percent trend through the end of the current expansion. On page 20 of the minutes from its January 31 – February 1, 1995, meeting, the FOMC explained its decision to raise the fed funds rate target from 5.5 percent to 6.0 percent on February 1, 1995: “In terms of balancing the policy risks that were involved, a prompt move would provide some insur-

ance against what these members viewed as the principal risk in current circumstances—that of rising inflation.” The FOMC issued an asymmetric directive at its March 28, 1995, meeting to “provide a clear signal of the Committee’s intention to resist higher inflation” (minutes of FOMC meeting, p. 23).

The statement of an inflation objective also suggests that policy would become less restrictive if there were no signs of accelerating inflation. The FOMC lowered the fed funds rate to 5.75 percent in July 1995, explaining, “The members agreed that under present economic conditions a slight easing of the stance of policy would incur little risk of stimulating increased inflation and would be entirely consistent with their commitment to continued progress toward price stability over time” (minutes of July 5–6, 1995, FOMC meeting, p. 20).

In December 1995 the Committee explained its vote to lower the fed funds target to 5.5 percent: “In any case, the recent slowing of the economic expansion, combined with the wage and price restraint evident at current levels of resource utilization and continuing business efforts to expand capacity, suggested that there was little risk of a pickup in inflation” (minutes of December 19, 1995, FOMC meeting, p. 14).

This description of the policy objective resembles the “opportunistic” view of policy outlined by Orphanides and Wilcox (1996) and by Orphanides, Small, Wieland et al. (1996). This view is that the FOMC should stabilize the inflation rate at the recent trend (currently, about 3 percent in the CPI) until some outside event such as a favorable supply shock or an unavoidable recession causes a reduction in the inflation rate. Then the FOMC would take such an opportunity to lock in that lower rate as its new objective. One attraction of this approach is that the FOMC would never intentionally engineer disinflation that might cause a recession.

This opportunistic approach to policy arises naturally in a committee setting where the decision-making process requires a compromise between members whose views lie on a continuum.

Table 3

1995 and 1996 Projections

Variable		FOMC Central Tendency Projections			Blue Chip Consensus Forecasts	
		July 1994	Feb 1995	July 1995	Feb 1995	July 1995
Projections for 1995	Nominal GDP	5-5½	5-6	4½-4¾	5.5	4.8
	Real GDP	2½-2¾	2-3	1½-2	2.5	2.0
	CPI	2½-3½	3-3½	3½-3¾	3.4	3.4
	Unemployment Rate	6-6½	5½	5½-6½	5.5	5.7
Projections for 1996	Nominal GDP			4½-5½	5.4	5.6
	Real GDP			2½-2¾	2.2	2.4
	CPI			2½-3½	3.7	3.6
	Unemployment Rate			5½-6½	5.7	5.8

At one end of the continuum are members who want to focus policy actions on the short-run real economy and who will be willing to resist signs of rising inflation pressures because such signs are associated with high levels of aggregate demand. Furthermore, this group may be persuaded to adopt preemptive policies to prevent the acceleration of inflation because they believe inflation is so costly to eradicate. On the other hand, they will resist attempts to lower the inflation trend intentionally if they believe that doing so would require higher unemployment and slower growth.

At the other end of the continuum are members who want a deliberate policy with multi-year targets to eliminate inflation. They argue that announcing targets in advance and implementing the policy gradually will reduce any costs associated with disinflation.

When inflation appears to be on the rise, there is no need for compromise: Everyone votes for monetary restraint. But in times of steady inflation, the key to compromise is members in the middle of the continuum. They want price stability but will wait for more favorable circumstances.

1995 Economic Outlook: Turmoil and Tranquility

FOMC members' and nonvoting presidents' forecasts are summarized in pro-

jections reported to Congress in February and July, pursuant to the Humphrey-Hawkins Act. The central tendency of these forecasts is shown in Table 3.³ Blue Chip forecasts show the corresponding forecasts of private-sector economists.

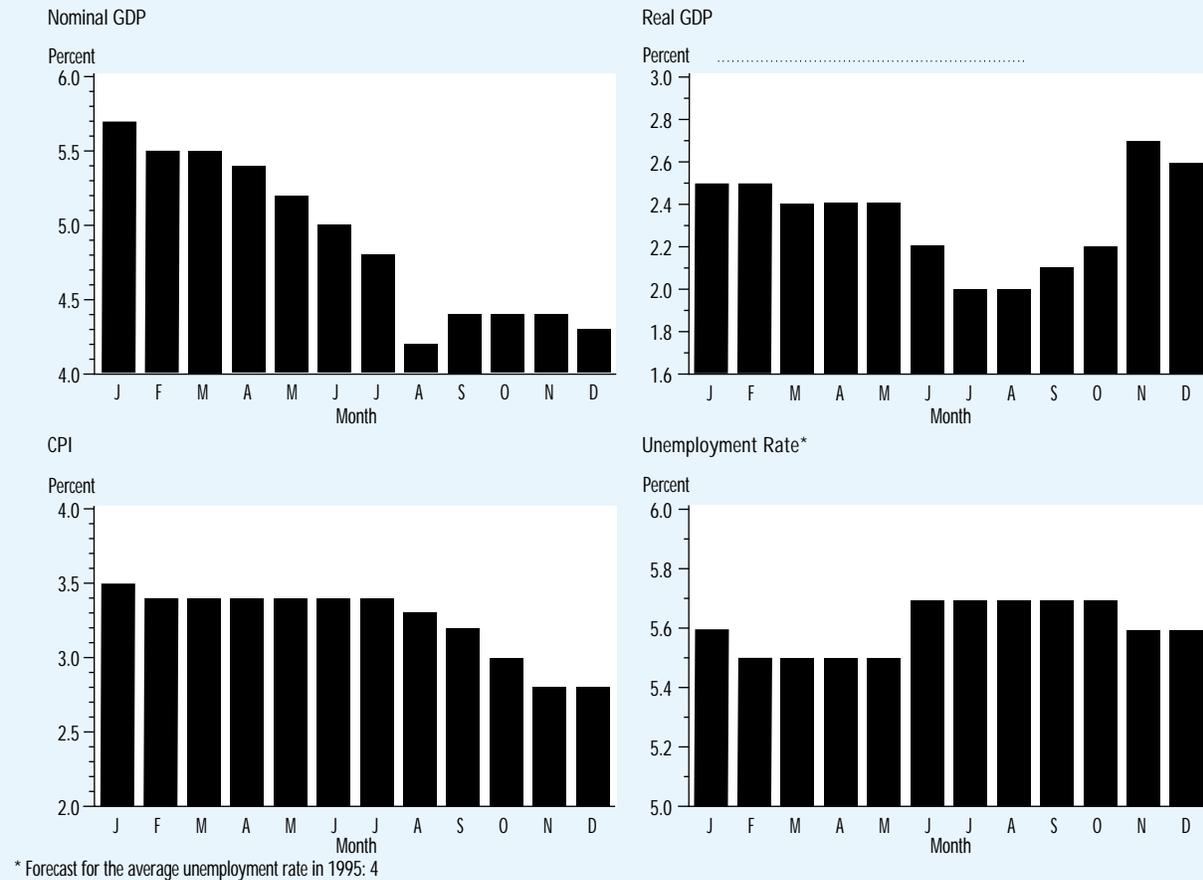
Both output and employment grew more than expected in the second half of 1994. By the beginning of 1995, forecasters had therefore nudged up inflation forecasts and reduced unemployment forecasts for the year. In February, the central tendency of the FOMC's forecast for output was almost perfectly centered on the Blue Chip Consensus forecasts. The Fed policymakers were predicting 3.0 percent to 3.5 percent inflation in the CPI, while the Blue Chip Consensus fell in the upper part of that range.

As 1995 unfolded, recurring reports of weakness in industrial production, the leading indicators, retail sales, and employment growth led both the FOMC and the private forecasters to revise their projections downward for real growth. By July 1995, the FOMC and nonvoting Federal Reserve Bank presidents were a little more pessimistic about real growth than were the Blue Chip forecasters. On the inflation side, both the Fed and Blue Chip had essentially the same forecasts in July as they had reported early in the year. The Fed reported a smaller range, centered on the same 3.25 percent midpoint. The Blue

³ Pakko (1995) provides a detailed description of earlier forecasts and policy actions in 1993–1994.

Figure 5

Blue Chip Forecasts for 1995 (Fourth Quarter/Fourth Quarter)



Chip reported the same 3.4 percent consensus figure as in February.

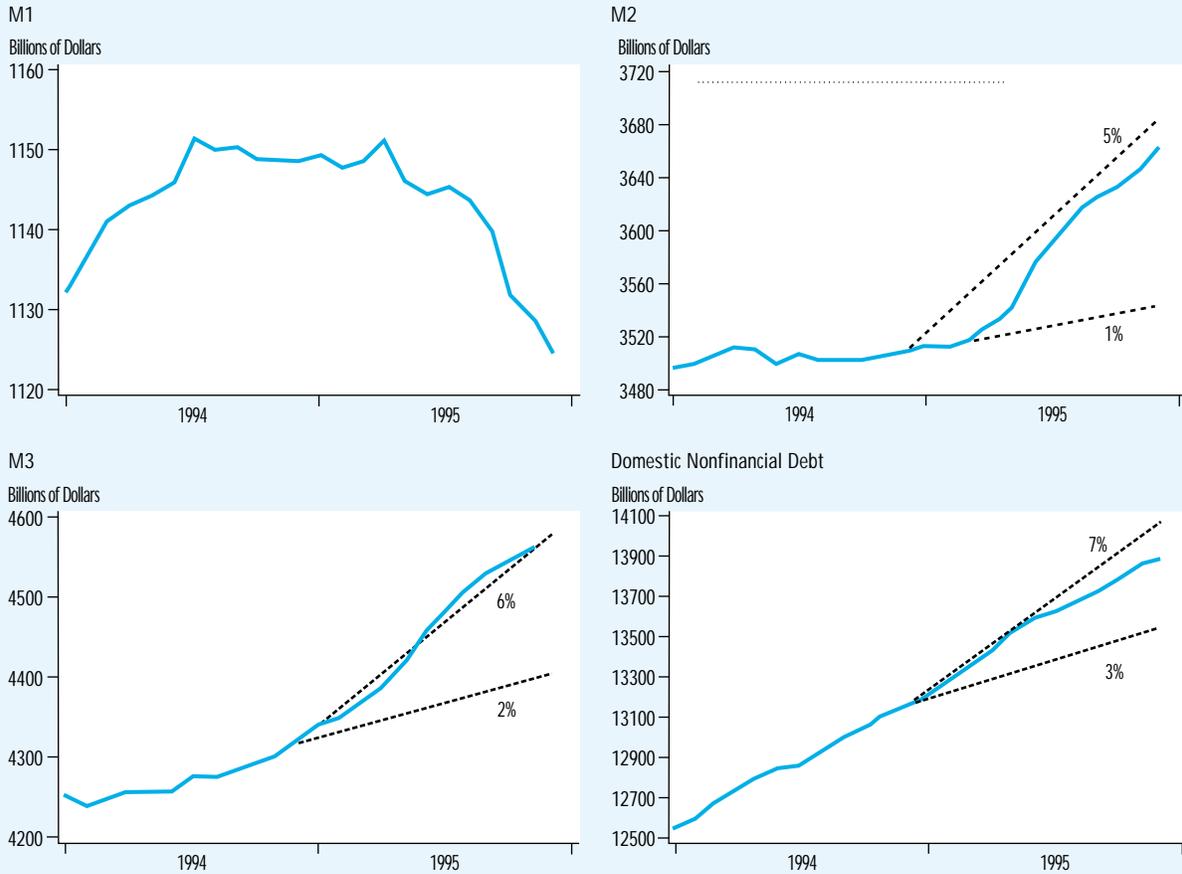
The monthly evolution of the Blue Chip forecasts for growth in nominal GDP, real GDP, and the CPI are shown in Figure 5. Also included are the monthly updates to the forecast for the fourth quarter average unemployment rate. Two important trends appeared in the evolving outlook for 1995—the general decline in inflation expectations that occurred during the second half of the year and the U-shaped pattern in the outlook for growth in the real economy. By midyear many economists were asserting that a recession had begun. Yet the second half of 1995 turned out to be surprisingly robust, with output bouncing back so

strongly that the year actually finished above the initial forecasts (when measured by the 1987 fixed-weight output measure that was the basis for many beginning-of-the-year projections).

The monetary aggregates are shown in Figure 6. The introduction of sweep accounts caused M1 to decline throughout most of 1995. New software made it easy for depository institutions to sweep funds automatically out of checkable accounts into savings accounts to avoid the reserve requirement on checkable deposits. Funds would be moved back into the checkable accounts when needed to make payments. Since these funds were swept into accounts included in M2, this broad aggregate was not directly affected by

Figure 6

Monetary Aggregates with Targets (Monthly Data, Seasonally Adjusted)



Note: The M3 target was set at 0 percent to 4 percent and was changed to 2 percent to 6 percent after the July 5-6, 1995, FOMC meeting.

Table 4

Monetary Policy Objectives

Meeting	Target Period	Percentage Growth Rates		
		M2	M3	Debt
January 31-February 1, 1995	1994:Q4-1995:Q4	1 - 5	0 - 4	3 - 7
July 5-6, 1995	1994:Q4-1995:Q4	1 - 5	2 - 6	3 - 7
	1995:Q4-1996:Q4	1 - 5	2 - 6	3 - 7

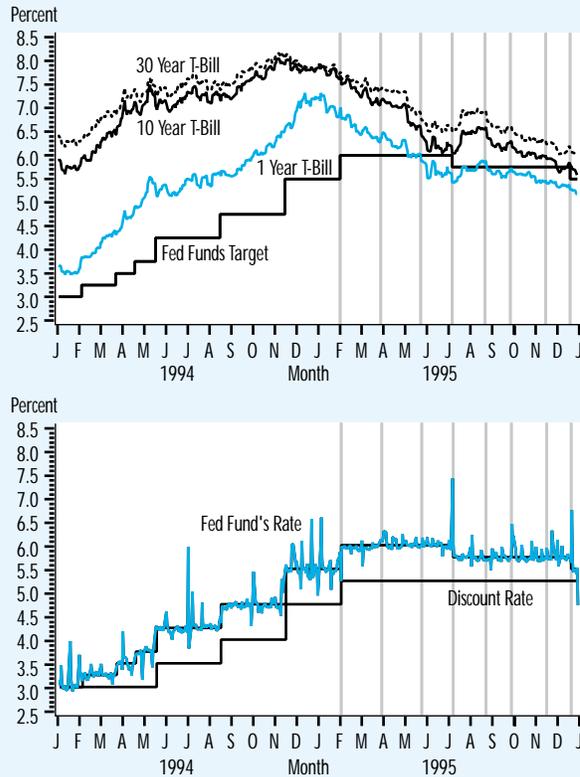
sweep activity. The targets for the broad monetary aggregates are shown in Table 4, as well as in Figure 6. M2 grew in the upper part of its 1 percent to 5 percent growth range. From early in the year, M3 grew above its initial 0 percent to 4 percent

target range. In July, the FOMC raised this target range to 2 percent to 6 percent. The monitoring range for nonfinancial debt was set at 3 percent to 7 percent for 1995. This measure of debt grew in the upper part of the range throughout the year.

Figure 7

Selected Interest Rates

(Daily Data, Annual Percentage Rates)



The top panel of Figure 7 depicts the federal funds rate target and the evolution of three interest rates: yields on 1-year, 10-year, and 30-year, constant-maturity Treasury securities. Aggressive 1994 policy actions and a 50 basis-point increase in the fed funds target at the first FOMC meeting of 1995 quelled expectations of rising inflation and led to a year-long bond rally as surveys and market measures of inflation expectations inched downward throughout the year. An interruption in the trend occurred in July 1995, after the FOMC lowered the fed funds rate on the day before the Bureau of Labor Statistics announced a large increase in jobs for June and a major upward revision of employment statistics for May. Subsequent economic reports showed that inflation pressures were easing even as the economy appeared to be strengthening. With the

exception of this temporary increase in July, 1995 was a year in which the level of rates fell and the term structure flattened.

The bottom panel of Figure 7 shows the target level for the fed funds rate, again accompanied by the actual fed funds rate and the discount rate. The variability of the actual fed funds rate demonstrates that the Fed does not control the fed funds rate directly but, rather, supplies reserves in a way that keeps the average trading range very close to the target rate. The upward move to 6 percent in February, followed five months later by a decline to 5.75 percent, is shown in the figure. On December 19, 1995, the rate was lowered again to 5.5 percent. The discount rate had been raised to 5.25 percent in February and held at that level through the end of the year.

FOMC DISCUSSIONS AND DECISIONS

Several common themes emerged in discussions on the outlook for the economy at all the FOMC meetings:

- The deceleration in the growth of nominal hourly compensation. This slowing in nominal labor costs spanned most major occupations and industries and was believed to reflect a fundamental lowering of inflation expectations.
- The view that inventories were above desired levels in many sectors and that, on average, 1995 would be a year in which attempts to reduce inventory accumulation would lead to cuts in production and slower real GDP growth.
- The notion that business fixed investment would stop growing so rapidly and slow down to a more sustainable rate.
- The view that, by the end of 1994, the economy had fully recovered from the last recession and that pent-up demand for housing, autos, and other durable goods was exhausted.

The Committee's decisions are summarized in Table 5. The directive to the Manager of the Open Market Desk contains language indicating the FOMC's intentions about a possible policy change within the intermeeting period, depending on developments in that period. Table 5

Table 5

FOMC Directives and Measures of Monetary Policy Stance

1995 Meetings	Directive for Pressure	Intermeeting Stance toward		Result from Change in Reserve Pressure		
		Lesser Restraint	Greater Restraint	Date of Change	Fed Funds Target*	Discount Rate
Jan. 31-Feb. 1	Increase somewhat	Would	Would	Feb. 1	6.00	5.25
Mar. 28	Maintain (+)	Might	Would	N/A†	6.00	5.25
May 23	Maintain	Would	Would	N/A	6.00	5.25
Jul. 5-6	Decrease slightly (-)	Would	Might	Jul. 6	5.75	5.25
Aug. 22	Maintain	Would	Would	N/A	5.75	5.25
Sep. 26	Maintain	Would	Would	N/A	5.75	5.25
Nov. 15	Maintain	Would	Would	N/A	5.75	5.25
Dec. 19	Decrease slightly	Would	Would	Dec. 19	5.50	5.25

* Federal funds rate expected to be consistent with desired reserve restraint. The rate expected to be consistent with policy before the Jan. 31-Feb. 1 meeting was 5.5 percent. The discount rate was raised from 4.75 percent to 5.25 percent on Feb. 1. An asymmetric policy setting is indicated by a (+) or (-) in the second column.

† N/A indicates that there was no change in the discount rate or the fed funds target.

shows that, at the first meeting of 1995, the Committee used the same word, “would,” indicating that either greater or lesser restraint would be acceptable within the intermeeting period. An example of an asymmetric directive was the one written after the March 28, 1995, meeting, in which the Committee used the weaker word “might” to indicate that an easier policy was less likely to be acceptable than a tighter policy.

The FOMC began the year concerned about the inflationary pressures implied by the relatively high demand observed in 1994, and those pressures began to show through in reports of consumer and producer prices. Incoming data showed that the economy was weaker than had been expected in early 1995. In May the FOMC adopted a symmetric directive, switching from a position of prospective tightening to a more neutral posture. Negative economic reports continued, leading the FOMC to reduce the target for the fed funds rate to 5.75 percent on July 6.

Indicators of a slowing real expansion appeared to turn around with a sur-

prisingly robust labor market report on July 7 and subsequent positive reports on economic activity. The switch in beliefs about real growth caused bond prices to decrease temporarily. Throughout the summer and fall, news continued to show a robust economy and declining inflation. The bond market turned around again with the news of lower inflation and the rally dating from the final months of 1994 continued through 1995. Falling long-term interest rates and inflation expectations, combined with some year-end slowing in the economy, led the FOMC to lower the fed funds target to 5.50 percent at the December 19th meeting. I present details about the decisions and discussions in the following accounts of each meeting.

January 31-February 1 Meeting

The year began with the federal funds rate trading at 5.5 percent. The Open Market Desk operated under an asymmetric directive that called for a bias toward a firming of reserve conditions during the intermeeting period. The most important economic news that had been

released since the December 20, 1994, FOMC meeting was a report showing a surge in the fourth quarter GDP to an annual rate of 4.7 percent. Although rapid accumulation of inventories had been a big part of the growth, analysts were divided about whether this accumulation had resulted from falling demand or from anticipation of future sales. News reviewed at the meeting suggested that retail sales were mixed but that consumer confidence was high, and strength in the housing sector was expected to support moderate growth in 1995, even in the face of a probable inventory correction. Reports about the economy in the closing months of 1994 indicated that both industrial production and payroll employment continued to grow above their longer-term trends.

Financial markets were embroiled in concerns about debt quality in the wake of the Orange County, California, default and the crisis in Mexico. Neither the FOMC nor the markets were giving much weight to monetary aggregates' sluggish 1994 growth. Although M3 had picked up with the rising demand for bank loans at the end of 1994, M2 had grown along the bottom of the 1 percent to 5 percent target range. Total non-financial debt was increasing slightly below the trend growth in nominal spending. Although rising money market interest rates in 1994 had brought a halt to growth in M1, the Committee saw little indication that credit conditions were tight.

Household and economic forecaster surveys all predicted an acceleration of inflation in 1995. To reduce the probability and extent of such an acceleration, the FOMC unanimously voted to increase reserve market pressures so that the fed funds rate would trade around 6 percent. In conjunction with this decision, the Board of Governors voted to raise the discount rate from 4.75 percent to 5.25 percent. The action was explained in a press release:

Despite tentative signs of some moderation in growth, economic activity has continued to advance at a substantial pace, while resource utilization has risen further. In these circum-

stances, the Federal Reserve views these actions as necessary to keep inflation contained, and thereby foster sustainable economic growth. (Feb. 1, 1995.)

This 50-basis point increase in the fed funds rate was followed by lower interest rates in the bond market during the intermeeting period, as shown in Figure 7.

Crisis in Mexico

At the Committee's first meeting of 1995, members also voted to expand the swap arrangement with the Bank of Mexico:

On December 30, 1994, the Committee approved a temporary increase from \$3 billion to \$4.5 billion in the system's reciprocal currency (swap) agreement with the Bank of Mexico and it also approved the activation of that agreement. The Committee approved a further temporary increase of \$1.5 billion and activation of that amount at this meeting, thereby raising the swap arrangement with the Bank of Mexico to a level of \$6 billion, consisting of the regular \$3 billion line and a special \$3 billion line. (Minutes of FOMC meeting, p. 24.)

In addition, the Committee voted to facilitate U.S. participation in the Multilateral Program to Restore Financial Stability in Mexico, with an increase in the agreement to "warehouse" foreign currencies for the U.S. Treasury:

The Committee also approved at this meeting an increase from \$5 billion to \$20 billion in the amount of eligible foreign currencies that the System is prepared to 'warehouse' for the Treasury and the Exchange Stabilization Fund (ESF)" (Minutes of FOMC meeting, p. 25).

The majority of members voted to approve these measures because they "were persuaded that the nature and severity of Mexico's financial problems could not be contained without making available substantial financial assistance to the Government of Mexico" (minutes of FOMC meeting, p. 26). Two members dissented:

Messrs. Lindsey and Melzer dissented with respect to increases in both the swap line and the warehousing arrangement with the Exchange Stabilization Fund. They did not believe that the Committee had been provided sufficient information to assess whether developments in Mexico threatened U.S. financial stability, a possible justification for increased central bank lending on a short-term basis. Furthermore, they considered it inappropriate for the Federal Reserve to participate, directly or indirectly, in intermediate to long-term financing to facilitate debt restructuring. They were concerned that such participation in a fiscal policy matter might compromise, or appear to compromise, the independence of the monetary policy process. Mr. Lindsey added that the latter risks were significantly enhanced given the absence of Congressional authorization or more general public support for these measures. (Minutes of FOMC meeting, pp. 26–27.)

March 28 Meeting

Given the rapid economic growth in 1994, policymakers anticipated a relative slowdown in 1995. Early reports on economic activity were mixed. Industrial production continued to grow, and new jobs were created at a rate that exceeded the underlying trend in labor force growth. The expected inventory correction was not yet evident; available information showed that inventories had continued to accumulate in January. On a weaker note, reports of spending in the first two months of 1995 showed a decline in auto sales and a slowdown in the housing market. Lower demand for autos led to cutbacks in production schedules and this, combined with a bleak housing market, led Blue Chip economists to nudge GDP forecasts down slightly in 1995.

Expectations for a slight pickup in inflation were reinforced as reports for the first two months showed both consumer and producer prices rising at rates above their 1994 averages. Although private forecasters were lowering predictions of inflation slightly, there was no sign that anyone

expected the FOMC to make further progress toward price stability. Few indications of monetary restraint surfaced as bank credit continued to advance and the broad monetary aggregates appeared to be growing within the prescribed ranges.

In sum, there was a consensus among Committee members that the economy was slowing from the torrid pace of 1994 but was already operating at a high level, and the extent of the slowdown was in question. The Committee voted unanimously to maintain the degree of the reserve restraint (fed funds trading at about 6 percent), but concern about the risk of accelerating inflation and a desire to move gradually toward price stability led them to adopt an asymmetric directive biased in the direction of more restraint.

May 23 Meeting

By the time of the May meeting, the Committee was picking up signs of weakness in the year's first half, particularly in the demand for autos and housing. This perception was reinforced by reports that indicated slower job growth, a jump in the unemployment rate to 5.8 percent in April, a slowdown in the manufacturing sector, a decline in retail sales, and a weakness in export demand associated with problems in Mexico. These indicators of weakness were offset by expectations that the economy, especially the interest-sensitive sectors, would benefit from the ongoing rally in bond markets and the surge in stock prices. The rising stock market was reducing the cost of capital to businesses and enhancing the wealth of many households.

Declining long-term interest rates were accompanied by declines in survey measures of inflation expectations despite the above-average growth in the CPI and the producer price index (PPI) in the first four months of the year. Monetary aggregates grew little, and the market seemed to believe the increase in inflation would be transitory—the Blue Chip consensus remained at 3.4 percent.

Overall, the perceptions of weakness in demand led the Committee to revise its view that the next move in interest rates

would be upward. It unanimously set aside the asymmetric directive of the previous meeting and voted in favor of a symmetric policy that would maintain the existing degree of pressure on reserve markets.

July 5–6 Meeting

Committee members' differing perceptions had a strong influence at this mid-year policy meeting. Some members believed the economy would be substantially weaker than expected. On June 2, the Bureau of Labor Statistics reported a 101,000 decline in the number of nonfarm payroll jobs in May. This was after a slight decline in April. The household surveys, although thought to be less reliable, showed even greater declines in April and May. This unexpected weakness in the labor market led Blue Chip forecasters to revise their estimate of GDP growth for 1995 substantially downward. The consensus forecast fell from 2.4 percent in the May release to 2.2 percent in the June 10th report. In July, Blue Chip forecasters again lowered the 1995 outlook for GDP, this time from 2.2 percent to 2.0 percent. Although these figures were not released until after the July FOMC meeting, most of the individual forecasts would have been made with the same information available to the FOMC members who had reduced their forecasts from February. The central tendency in the outlook for real GDP growth in 1995 fell from a range of 2 percent to 3 percent in February to 1.5 percent to 2.0 percent in early July. Pessimism brought on by the dramatic decline in jobs was reinforced by the string of negative reports on retail sales, industrial production, and the leading indicators.

M2 rebounded strongly after April and approached the upper 5 percent limit of the target range by midyear. In choosing to keep the 1 percent to 5 percent range for M2, a majority of the members reasoned that they did not have enough confidence in the relationship between measures of economic performance and M2 to justify making a change in the target:

Moreover, if the more normal behavior of velocity over the past several

quarters were to continue, a 1 to 5 percent range for growth of M2 likely would prove consistent with the Committee's ultimate objectives of sustained economic expansion and reasonable price stability (Minutes of FOMC meeting, p. 16).

Not all the members agreed that the 1 percent to 5 percent growth range was appropriate for M2:

Mr. Blinder and Ms. Yellen dissented on a technical judgment, not a policy difference. They noted that if growth in the demand for M2 were close to historic norms in 1995 or 1996, as indeed it had been for some time, then the Committee members' projections for nominal GDP would likely imply M2 growth near the top of, or even above, the current range. While the relationship between the growth of M2 and that of nominal GDP remained subject to a great deal of uncertainty, they were persuaded that the range—in fact, the midpoint of the range—should normally be consistent with members' forecasts of nominal GDP growth. (Minutes of FOMC meeting, p. 18.)

Strong growth in loans stimulated bank demand for M3 liabilities and caused M3 to grow above the upper 4 percent limit. Projections of continued growth in M3 led the FOMC to raise the target for this broad aggregate by 2 percentage points. The Committee voted unanimously to raise the M3 target to 2 percent to 6 percent and to reestablish the monitoring range for domestic nonfinancial credit at 3 percent to 7 percent. The Committee also voted unanimously to adopt tentative targets for 1996 that were the same as the targets agreed to for 1995.

In spite of reports of higher inflation early in the year, the Committee left its inflation outlook centered on 3.25 percent. Blue Chip forecasters ignored these reports as well, upholding their January inflation outlook of 3.4 percent. The May CPI report showed some slowing from the early data. The flat PPI for finished goods in May suggested some reduction of infla-

tion pressures in the second half of the year. At this meeting, members expressed some differences of opinion about the definition of price stability. Some members believed the weakening economy would prevent an acceleration of inflation—and therefore policy should be eased substantially. Other members stated that there was no indication of progress toward price stability—and therefore policy should be held at a 6 percent fed funds rate. The Committee compromised by slightly easing reserve pressures. In the press release issued at the end of the meeting, on July 6th, the Fed explained:

As a result of the monetary tightening initiated in early 1994, inflationary pressures have receded enough to accommodate a modest adjustment in monetary conditions.

Today's action will be reflected in a 25 basis point decline in the federal funds rate from about 6 percent to about 5.75 percent.

There was one dissent on the short-run policy decision:

Mr. Hoenig dissented because he believed the stance of monetary policy should remain unchanged at this time. With the pace of economic activity likely to return to trend growth later this year and inflation expected to be higher this year and next than in 1994, he felt an unchanged policy in the near term would enhance the prospects of achieving the Committee's long-run objectives of sustainable economic growth and price stability. (Minutes of FOMC meeting, p. 24.)

August 22 Meeting

The news leading up to the July meeting had been almost entirely negative. But one day after the July meeting ended, the monthly labor report showed an unexpected 215,000 increase in nonfarm payroll jobs during the month of June; it also revised the earlier report of a 101,000 jobs decline for May to show a decline of only 46,000 jobs. Incoming information suggested that the economy, after a weak first half, was on track for continued mod-

erate expansion. Revised data showed that retail sales had not been as weak as reported earlier. The housing market picked up considerably in response to falling long-term interest rates. Business investment, led by spending on computing equipment and construction, continued to post solid gains. Although the state of the economy remained uncertain, the news was more balanced than it had been earlier in the year. The good news about the economy caused a temporary backup in interest rates as market participants realized that aggregate demand was stronger than previously thought.

CPI inflation, after rising at a 3.25 percent rate through the first five months of the year, rose at more subdued rates in June and July—the two months averaged 1.2 percent at an annual rate. Increases in producer prices at the earlier stages of production appeared to be decelerating, suggesting some further reduction of inflation later in the year. An ongoing slowdown in the growth of benefit costs supported continued moderate growth in labor costs. By early August, Blue Chip economists were beginning to mark down their forecasts for CPI inflation in 1995.

The wedge between growth in the narrow and broad monetary aggregates increased. The narrow aggregates, from currency to M1, were dramatically below expected trends. The slowdown in currency was attributed to an unexplained decline in the net foreign demand for U.S. currency. The slowdown in the deposit component of M1 was attributed to the introduction of sweep accounts that substantially reduced banks' required reserves.

The broad aggregates grew well above the trend that had been established in recent years. Some observers noted that, following a period of rising velocity, M2 velocity appeared to be stabilizing around a new higher level. M3 growth was also rapid, reflecting the continued growth in managed liabilities needed to fund strong growth in bank loans.

This good news about the economy led the Committee to vote unanimously to

maintain the existing degree of pressure in the reserve market—a fed funds rate trading around 5.75 percent—and to abandon the bias in favor of an easier policy that had been adopted at the previous meeting.

September 26 Meeting

Good news of lower inflation and the real economy's continued expansion filled most reports during the intermeeting period. In September, the Blue Chip consensus forecast slightly higher spending in 1995, with a bit more real output growth and a bit less inflation. Indicators that had caused concern about economic weakness early in the year turned around during the summer:

- Consumer spending continued at a relatively high level.
- Housing markets strengthened in the presence of lower mortgage rates.
- The manufacturing sector surged in August, led by a sharp increase in auto production.
- Growth in employment rebounded strongly from slower growth in July.
- Business spending on equipment and structures remained surprisingly robust.

News about consumer and producer price inflation suggested that acceleration in the first six months was likely to be reversed in the second six months. On a year-over-year basis, inflation was moderate in 1995, approximately equal to or below that of the previous year and the previous five years. The broad monetary aggregates continued to grow in the top part of the range (M2) or well above the target range (M3). The term structure of interest rates, while still above the low level reached at midyear, had declined slightly across the maturity spectrum from the levels at the time of the August meeting.

Overall, information available to the Committee at this meeting indicated continued strength in aggregate demand and a moderating inflation trend, suggesting little reason to adjust the degree of pressure in reserve markets. Members voted unanimously to maintain the existing

degree of pressure in reserve markets, with no bias for a change before the next meeting. Some members were concerned about downside risks to the economy and believed the 5.75 percent fed funds target was slightly restrictive.

However, the current performance of the economy suggested that the timing of an easing action was not an immediate concern. Other members who preferred an unchanged policy placed more emphasis on current forecasts of little or no progress in reducing inflation from recent levels. They thought it would be premature to ease policy without greater assurance that inflation had been contained in the current cyclical expansion and that prospects for significant further progress toward the long-run objective of price level stability had improved. (Minutes of FOMC meeting, p. 14.)

November 15 Meeting

Information released before this meeting revealed a surge of economic growth in the third quarter that caused forecasters to revise the GDP outlook for 1995 substantially upward. The Blue Chip consensus for real GDP growth in 1995 was 2.7 percent in the November report, up from 2.2 percent a month earlier. As often occurs in the face of a surprisingly good report for the previous period, the GDP outlook for the current quarter was revised downward. Falling retail sales in October, slower employment growth in September and October, falling industrial output with a labor strike in the aircraft industry, and uncertainty about the duration of the government shutdown led some members to question whether aggregate demand would be sustained, given the current policy setting. Other members believed there was sufficient evidence of continued expansion to delay any policy easing. Anecdotal evidence suggested that retail sales were beginning to rebound in early November; a strong housing market earlier in the year was expected to fuel the demand for household appliances and other durable goods; and growth in

business investment, although slowing somewhat, remained on an upward trend.

On the price side, reports of lower inflation caused analysts to revise expectations downward. Long-term bond rates fell with inflation expectations, and the Blue Chip forecasters continued the march downward in their outlook for CPI inflation for both 1995 and 1996. On the short end of the market, the yield curve became U-shaped as the one-year rate fell below both the three-month and the three-year rates. Growth in the broad monetary aggregates, at or above the upper limits of their respective target ranges, slowed in October as the demand for bank loans slowed. All these factors pointed toward lower inflation pressures. As reported in the minutes of the meeting, "With regard to inflation, members noted that despite generally high levels of resource use, including tight labor markets in many parts of the country, inflation had been more subdued than many had expected over the past several months." Although inflation expectations were lowered, they still remained at or above the actual inflation trend in the economy.

Deliberations at the November meeting reflected both differences in views about the outlook and differences about the strategy that might be taken to achieve price stability. The majority of the Committee agreed that aggregate demand was sufficiently high to justify leaving the trading range for the fed funds rate at 5.75 percent despite considerable sympathy with the view reflected in the term structure—that is, during the next year, short-term interest rates would move lower. Most members who would have preferred to cut rates at this meeting were willing to wait for further information about the state of the economy and the associated demands for credit. The meeting's minutes explicitly state that monetary policy should not be conditioned directly on the budget negotiations, but rather, monetary policy should deal directly with any change in the net demand for credit that resulted from a budget deal.

The Committee voted to maintain the existing degree of pressure on reserve markets. Even those who might have preferred a bias toward a lower interest rate agreed that there was not likely to be enough new information available to justify an intermeeting policy adjustment. Only Governor Lawrence B. Lindsey dissented from the majority opinion:

Mr. Lindsey dissented because he believed that monetary policy should be eased. The evidence suggested to him that in the absence of an easing move the underlying rate of nominal GDP growth was likely to be lower than needed to maintain real GDP at or near its potential. The intermediate forecast was subject to a number of significant risks: household balance sheets seemed unlikely to sustain the current rate of durables expenditure for any extended period; government expenditures were certain to be cut substantially; and with fiscal contractions underway in Europe and Canada and severe financial stresses present in Japan and Mexico, he did not see much likelihood of a substantial expansion of exports. In keeping with his views, the financial markets were signaling the likelihood that a weaker pace of nominal GDP growth would materialize. The yield curve was virtually flat, with government securities up through relatively long maturities trading at yields below the current average federal funds rate. Thus, markets would be unlikely to find some easing inappropriate and over the intermediate horizon would view the current level of short-term rates as unsustainable. (Minutes of FOMC meeting, p. 18.)

December 19 Meeting

As FOMC members prepared for their final meeting of the year, financial markets were reflecting a continuing decline in inflation expectations, and Committee members were somewhat concerned that fourth-quarter aggregate demand was slightly weaker than had been anticipated

at the November meeting. The Blue Chip consensus released in December forecast a slight modification in the 1995 real GDP growth rate to 2.6 percent, down 0.1 from November's report. This lower forecast for the year was based on a view that the fourth quarter would see little increase in manufacturing, the tangled budget process would result in a temporary reduction in federal outlays, and both consumer and business demand for current output would moderate from earlier expectations. The economy was expected to grow closer to its perceived trend rate—around 2.5 percent in the unchained measure, down from the rapid growth in the third quarter. Consumer demand was thought to be restrained by job insecurity associated with widespread reports of business restructuring; higher debt service burdens; and the satisfaction of pent-up demands for housing, autos, and other durable goods. Growth in business fixed investment was expected to slow just because few economists believed it could continue growing as rapidly as it had done since 1992.

The reports on inflation reinforced a widespread impression that 1995 would be another year in which the CPI would increase less than 3 percent. These lower inflation expectations were evident in surveys, as well as in financial markets, where interest rates continued to fall across the entire term structure. The growth in the broad aggregates remained subdued in November after experiencing sluggish growth in October. Nevertheless, robust growth earlier in the year meant that M2 finished the year in the upper portion of its targeted 1 percent to 5 percent range, and M3 finished the year above the upper end of its targeted 2 percent to 6 percent range.

Falling inflation and, more important, expectations for lower inflation in the future, as well as some indications of slowing in the expansion, led the Committee to vote unanimously for a slight decrease in reserve pressure, lowering the target for the fed funds rate from 5.75 percent to 5.5 percent. The discount rate, which had been raised to 5.25 percent at the first meeting of the year, was left unchanged. In

a press release dated December 19, 1995, Fed Chairman Alan Greenspan announced that the easing was made possible because "inflation has been somewhat more favorable than anticipated, and this result along with an associated moderation in inflation expectations warrants a modest easing in monetary conditions."

BETTER CONTROL THROUGH AN EXPLICIT OBJECTIVE

Long-term bond yields decreased as the FOMC's federal funds rate target increased in late 1994 and early 1995. In July, long-term yields rose after the fed funds rate target was lowered. Although politically unpopular, increases in the fed funds rate target may be needed to lower inflation expectations, and thus, long-term bond yields. The focus on long-term interest rates highlights expectations in the monetary transmission mechanism. The FOMC's practice in 1995 was directed toward the control of inflation and was generally explained in terms of the expectations for and outcomes of the various price indexes. Modern theories in macroeconomics and finance suggest that the Fed could improve control over inflation by committing to an explicit long-term inflation (price level) objective.

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MEMBERS OF THE FOMC IN 1995

At any given time, the Federal Open Market Committee consists of 12 voting members. The Committee includes all seven members of the Board of Governors of the Federal Reserve System, as well as five of the 12 presidents of the regional Federal Reserve banks. Reflecting the importance of the Federal Reserve Bank of New York in policy implementation, the president of that Reserve Bank is always a voting member and is, in fact, elected as Vice Chairman of the Committee (the Chairman of the Board of Governors is elected as Chairman of the FOMC). The remaining four positions rotate among the presidents of the other 11 Federal Reserve banks. Although only a limited number of Federal Reserve Bank presidents are voting members of the Committee, all 12 attend the meetings and participate in the discussions. John P. LaWare attended the first meeting of 1995, later resigning from the Board, and was not replaced until 1996, so there were only 11 voting members for the last seven meetings of 1995.

Listed below are the voting members of the FOMC in 1995.

Alan Greenspan, Chairman, FOMC
Chairman, Board of Governors

William J. McDonough,
Vice Chairman, FOMC
President, Federal Reserve Bank of
New York

Alan S. Blinder
Member, Board of Governors

Thomas M. Hoenig
President, Federal Reserve Bank of
Kansas City

Edward W. Kelley, Jr.
Member, Board of Governors

John P. LaWare*
Member, Board of Governors

Lawrence B. Lindsey
Member, Board of Governors

Thomas C. Melzer
President, Federal Reserve Bank of
St. Louis

Cathy E. Minehan
President, Federal Reserve Bank of Boston

Michael M. Moskow
President, Federal Reserve Bank of
Chicago

Susan M. Phillips
Member, Board of Governors

Janet L. Yellen
Member, Board of Governors

*Resigned effective April 30, 1995