

# The Reaction of Interest Rates to the Employment Report: The Role of Policy Anticipations

*Timothy Cook and Steven Korn\**

Participants in the financial markets have been intensely interested in the monthly employment report in recent years. Interest rates have frequently changed sharply following the report, and the report appears to have strongly influenced market expectations of Federal Reserve policy actions. The employment report for November 1988, for example, indicated that nonfarm payroll employment had risen by 463,000, which was well above the increase expected by market participants of about 255,000. The *Wall Street Journal's* financial market story the following day reported that "the Federal Reserve is likely, in light of November's strong employment figures, to decide to raise short-term interest rates at its policy meeting December 14." Treasury bill rates rose about 25 basis points the day of the employment report, and the *Journal* subsequently reported that the Fed raised its target for the federal funds rate on December 15.

As this example suggests, many market participants believe that Federal Reserve policy actions in recent years have been more closely linked to the employment report than in previous years and that the reaction of rates to the report at least partly reflects this link. According to this view, after the Fed de-emphasized the monetary aggregates in the early 1980s, it began to place relatively greater emphasis on current economic conditions. The monthly employment report provides an early, comprehensive reading on the economic conditions of the previous month.

The idea that market participants' reaction to economic news is influenced by their expectations

---

\* Timothy Cook is an economist at the Federal Reserve Bank of Richmond and Steven Korn is a financial analyst with Burlington Industries. The authors benefited from comments by Marvin Goodfriend, Thomas Hahn, Thomas Humphrey, Tony Kuprianov, Bob LaRoche, and Roy Webb.

of the Federal Reserve's response to the news has been called the "policy anticipations hypothesis."<sup>1</sup> According to this view, the Federal Reserve makes periodic changes in its target for the federal funds rate in response to new information, and these changes are highly persistent and seldom quickly reversed. Treasury bill rates, like other longer-term rates, are linked to current and expected levels of the federal funds rate in accordance with the expectations theory of interest rates. Consequently, the reaction of bill rates to economic news depends on how market participants expect the Fed to move its target for the funds rate in reaction to this news. This view implies that as the economic and monetary variables influencing the Fed's policy decisions change, so should the market reaction to the announcement of new information on these variables.<sup>2</sup>

In this paper we examine the reaction of interest rates to the employment report since the mid-1980s and find that it has been significant. We then look at the reaction of interest rates to the employment report over a longer period of 20 years and find that, consistent with the policy anticipations hypothesis, the reaction in recent years has been considerably stronger than it used to be. In the final part of the paper we illustrate in more detail how the employment report has influenced market expectations of Fed policy actions.

---

<sup>1</sup> This term comes from the money announcement literature, which documented the reaction of interest rates to money announcements in the late 1970s and early 1980s and proposed a number of explanations for this reaction. The most widely accepted explanation is that the reaction reflected the effect of money announcements on market participants' anticipations regarding subsequent Federal Reserve policy actions. See Dwyer and Hafer (1989) and Santomero (1991).

<sup>2</sup> Poole (1988) and Santomero (1991), among others, emphasize this point.

## I. THE REACTION OF INTEREST RATES TO THE EMPLOYMENT REPORT SINCE 1985

The employment report for a given month is generally released on the first Friday of the following month. The most widely publicized and anticipated data in the report is the change in nonfarm payroll employment. Two other elements of the report are the unemployment rate and the revision in the previous month's employment, which can be substantial.<sup>3</sup> To examine the reaction of interest rates to the employment report, we collected monthly data for nonfarm payroll employment and the unemployment rate as they were *initially* reported by the Bureau of Labor Statistics in its monthly publication, *Employment and Earnings*.

We would expect interest rates to react only to the *unexpected* part of the announced changes in employment, the unemployment rate and the revision.<sup>4</sup> As a proxy for the market's expectations of the change in nonfarm payroll employment, we use survey data from MMS International, which are available starting in January 1985. The expectations series is the median forecast of a large group of market specialists surveyed by MMS International. The unexpected component of the employment announcement is the difference between the actual change in employment and the survey expectation. The unexpected component of the change in the unemployment rate is calculated in a similar way using survey expectations for the unemployment rate, which MMS International has collected since 1980. Survey data on expectations of the revision in employment are not available, so in the empirical work below we are unable to separate the expected and unexpected components of the revision.

In addition to general economic conditions, two factors affecting the monthly changes in nonfarm payroll employment numbers over the 1985-91 period were the number of workers on strike each month and the number of government workers collecting data for the 1990 census. The survey data on expectations are not adjusted for strikers and

census workers so, in effect, the survey participants have to incorporate their knowledge about strikers and census workers into their forecasts. The employment report comes out *after* the end of the month, however, and it is probably reasonable to assume that survey participants had a good idea of the number of strikers and census workers in the month when making their forecasts. In any case, neither the actual employment numbers nor the survey expectations are adjusted for strikers or census workers, so this feature of the data presents no problem in this section of the paper.

To measure the change in interest rates following the employment report, we use the change in the three-month, six-month, and twelve-month Treasury bill rates from the afternoon prior to the report to the afternoon following the report, as provided in the Federal Reserve Board's H.15 release.<sup>5</sup> We examine the response of interest rates to the employment report by estimating the coefficients of the equation:

$$\begin{aligned} \Delta Rn_t = & a + b1\Delta\text{Expected Emp}_t \\ & + b2\Delta\text{Unexpected Emp}_t \\ & + b3\Delta\text{Expected UR}_t \\ & + b4\Delta\text{Unexpected UR}_t \\ & + b5\text{Rev}_t + e_t \end{aligned} \quad (1)$$

where  $\Delta Rn$  is the one-day change in the  $n$ -month Treasury bill rate surrounding the employment report,  $\text{Emp}$  is employment as initially reported,  $\text{UR}$  is the unemployment rate as initially reported,  $\text{Rev}$  is the revision in the previously reported monthly employment figure,<sup>6</sup> and  $e$  is an error term. The coefficients are estimated over the period from February 1985 through April 1991. The starting point for the regressions is dictated by the availability of the MMS International survey data, but as noted above it also corresponds roughly with the growing interest in the employment report among market participants as indicated by the financial press.

On three occasions in the 1985-91 period the Federal Reserve changed the discount rate on the

<sup>3</sup> The employment report also includes data on hourly wages and the workweek. We do not include these because we do not have expectations data for them and because they receive relatively little emphasis in accounts of the market's reaction to the employment report. See Webb (1989) for a description of the data in the employment report.

<sup>4</sup> The reason is that if interest rates (and, hence, security prices) reacted to the expected component of these announcements, that would imply that market participants were ignoring an easy way to make large profits.

<sup>5</sup> All yields are converted to a simple interest basis.

<sup>6</sup> We calculated the revision in employment as the difference between the initial report of the monthly level of employment and the next report of that level. This computation includes revisions in the changes in employment for all previous months. We also calculated the revision as the revised change in employment over the two most recent months. The regression results were generally similar, although the revision calculated in the latter way added less to their explanatory power.

same day as the employment report. (On March 7, 1986, the Fed lowered the discount rate by one-half percentage point; on September 4, 1987, it raised the discount rate by one-half percentage point; and on February 1, 1991, it lowered the discount rate by one-half percentage point.) Discount rate changes have well-documented effects on market interest rates. To control for these effects, we added to the regressions a variable set equal to the change in the discount rate.

The estimates of equation (1) are reported in Table 1. The estimates of the coefficients of the expected components of the changes in employment and the unemployment rate are not significantly different from zero in any of the regressions. The coefficients of the unexpected change in employment are positive and significantly different from zero at the 1 percent level in all three regressions. The coefficients indicate that over this period an unexpected increase of 100,000 in nonfarm payroll employment on average caused about a 5 to 8 basis point increase in Treasury bill rates on the day of the announcement.

The coefficients of the unexpected component of the change in the unemployment rate and the revision are significant at the 5 percent level in all the regressions, and these variables account for about one-fourth of the explanatory power of the regressions.<sup>7</sup> These results suggest that while market par-

<sup>7</sup> This statement is made on the basis of a comparison of the  $R^2$  of the regressions in Table 1 with the  $R^2$  of unreported regressions that include as independent variables only employment or only the unemployment rate and the revision. These regression results and others mentioned but not reported in the paper are available from the authors, as are the data from *Employment and Earnings* used in the regressions.

ticipants put greatest weight on the payroll employment figure, they also consider other aspects of the employment report in evaluating its likely effects on interest rates and monetary policy.

The coefficient of the revision in employment is about one-third of the coefficient of the unexpected component of employment in the most recent month. The coefficient on the revision is smaller for two reasons. First, market participants probably place less weight on more lagged data in evaluating the current state of the economy and the Federal Reserve's likely response to it. Second, some of the revision may be anticipated.<sup>8</sup>

## II. THE REACTION OF INTEREST RATES TO THE EMPLOYMENT REPORT PRIOR TO THE MID-1980S

While the regression results for the 1985-91 period are consistent with the policy anticipations hypothesis, they are also consistent with an alternative hypothesis called the "real activity hypothesis."<sup>9</sup> According to the latter hypothesis, a stronger-than-expected employment report may be signaling only that the economy is stronger than previously thought, thereby leading market participants to raise their

<sup>8</sup> Neumark and Wascher (1991, p. 198) provide evidence that some of the revision can be forecast. They find that "incorporating other labor-market information available at the time of the release of the preliminary estimate [of nonfarm payroll employment] into a forecast equation for the first revision leads to a reduction of about 10 percent in the unanticipated component of the revision."

<sup>9</sup> This term also arose in the early literature on money announcements, when this hypothesis was proposed as an explanation for the reaction of interest rates to money announcements. See Cornell (1983, pp. 647-48).

Table 1

### The Reaction of Interest Rates to Employment Announcements, 1985-1991

	Constant	$\Delta$ Expected Emp	$\Delta$ Unexpected Emp	$\Delta$ Expected UR	$\Delta$ Unexpected UR	Revision	Discount Rate	$R^2$	DW
$\Delta R3$	0.61 (0.29)	-0.26 (0.24)	5.31 (7.29)**	8.18 (0.68)	-12.83 (2.08)*	1.71 (2.74)**	0.20 (2.15)*	.59	2.14
$\Delta R6$	2.56 (0.95)	-1.49 (1.10)	6.40 (6.87)**	1.17 (0.08)	-20.00 (2.54)*	2.37 (2.96)**	0.25 (2.14)*	.58	2.18
$\Delta R12$	2.57 (0.78)	-1.81 (1.09)	7.41 (6.49)**	5.82 (0.31)	-20.56 (2.13)*	2.01 (2.04)*	0.15 (1.07)	.50	2.24

Note: Treasury bill yields and the discount rate are in basis points, employment is in hundreds of thousands, and the unemployment rate is in percentage points. Estimation period is February 1985 through April 1991. t-statistics are in parentheses. DW is the Durbin-Watson statistic.

\* denotes significant at 5 percent level and \*\* denotes significant at 1 percent level.

expectations of the real interest rate. Thus, a stronger-than-expected report will be associated with an increase in Treasury bill rates. Under this hypothesis, any change in the Fed's funds rate target following the report is interpreted simply as a contemporaneous reaction to the same underlying "real" shock. Hence, monetary policy anticipations cannot be said to have contributed to the rise in bill rates following the report.

The obvious way to provide evidence on which of the two hypotheses is right would be to reestimate equation (1) for the period prior to 1985. Under the policy anticipations hypothesis we would expect the reaction of interest rates to the unanticipated information in the employment report to be greater in a period when the Fed was putting greater emphasis on the report. Hence, if the coefficient of the unexpected component of the employment report were significantly greater in the period after the mid-1980s than earlier, that would be evidence that policy anticipations were affecting the market's reaction to the report. Unfortunately, we cannot conduct this exercise because MMS International did not begin to collect expectations data for nonfarm payroll employment until the beginning of 1985. But this fact in itself suggests that market participants became more interested in the employment report in the mid-1980s because they perceived it was becoming more important in the Fed's policy decisions.

Although expectations data on nonfarm payroll employment are not available before 1985, such data on a wide variety of other macroeconomic variables were collected prior to that time. Specifically, MMS International collected survey data as far back as the beginning of 1980 for industrial production, the unemployment rate, the trade balance, the producer price index, and the consumer price index. Dwyer and Hafer (1989) estimate regressions from 1980 through 1987 of changes in the 3-month Treasury bill rate and the 30-year Treasury bond rate on the unexpected component of these government statistics. They find very little evidence of an interest rate response.<sup>10,11</sup> In light of their finding, it seems

<sup>10</sup> Dwyer and Hafer's finding that the unexpected component of the unemployment rate did not affect interest rates in the period from 1985 through 1987 at first appears inconsistent with the regression results reported in Table 1. When we estimated the regressions from 1985 through 1987, however, the coefficient of the unexpected component of the unemployment rate was not significant.

<sup>11</sup> Hardouvelis (1988) examines the response of interest rates and exchange rates to 15 macroeconomic series from October 1979 to August 1984. He finds that markets respond primarily

unlikely that the strong reaction of interest rates to the unexpected component of nonfarm payroll employment since the mid-1980s results solely from the impact of this news on the market's perception of the economy.

In the absence of survey expectations for nonfarm payroll employment prior to 1985, we estimated an autoregressive time series model and used it to generate a series of proxy expectations. The steps of our procedure were as follows. (1) We used final data (i.e., the latest revised historical series) on nonfarm payroll employment to estimate an autoregressive time series model from 1955 through 1970. In this model, the logarithm of employment is first-differenced and then regressed on two lags of itself.<sup>12</sup> (2) We generated a forecast of the change in employment for each month (month  $t$ ) from January 1971 through March 1991 using the coefficients of the time series model and the employment figures available in the previous month (month  $t-1$ ) as *initially* reported in *Employment and Earnings*. (3) Prior to making these forecasts, we adjusted the initial employment data for strikers and 1990 census workers by adding the former and subtracting the latter. After making the forecasts, we subtracted strikers and added census workers to get a prediction of the actual employment numbers. In effect, we assumed that market participants knew the number of strikers and census workers prior to any month's employment announcement.<sup>13</sup>

As before, we subtracted forecasted from actual employment to generate a series for the unexpected component of the employment announcement. Then we estimated the regression:

---

to monetary news, although he also finds some evidence that markets respond to variables that reflect the state of the economy.

<sup>12</sup> The estimated coefficients of this model are (t-statistics in parentheses):

$$\Delta E_t = .00078 + .2026\Delta E_{t-1} + .3793\Delta E_{t-2} \quad R^2 = .24$$

(3.06)      (2.99)      (5.59)

<sup>13</sup> The series for 1990 census workers is from the December 1990 issue of *Employment and Earnings*. The series for strikers is from the Board of Governors. The strikers series does not begin until 1968, so we were unable to use it to estimate the autoregressive model. We did, however, reestimate the model after making adjustments for the steel strikes of 1956 and 1959, which were the two major strikes of the 1955-70 period. We used the "Highlights" section of the *Employment and Earnings* reports to estimate the effects of these strikes on the monthly employment numbers and then used these estimates to reestimate the autoregressive model and generate employment forecasts. The resulting forecasts were very similar to those made without these adjustments.

$$\Delta R_{nt} = a + b_1 \Delta \text{Expected Emp}_t + b_2 \Delta \text{Unexpected Emp}_t + e_t, \quad (2)$$

where expected employment is the forecast of the change in employment and unexpected employment is the difference between announced employment and this forecast.

Table 2 shows the estimates of equation (2) for seven subperiods from the beginning of 1971 through early 1991. The coefficient of the expected component of the change in employment is not significantly different from zero in any of the regressions. (Nor was the constant statistically significant in any regressions, and it is not reported in the table to conserve space.) The coefficient of the unexpected component of the change in employment is not significantly different from zero in any of the three subperiods in the 1970s. The coefficient then jumps sharply in the period from 1980 through 1982 and is highly significant. It then falls substantially in the 1983-84 period, rises again in the 1985-87 period

and stays high in the 1988-91 period.<sup>14</sup> In the latter two periods the coefficient is significant at the 1 percent level and is only a little lower than the coefficient in comparable regressions using the survey expectations data, shown at the bottom of Table 2. These results suggest that the autoregressive time series procedure is doing a reasonably good job of mimicking market expectations.<sup>15</sup>

<sup>14</sup> We also estimated equation (2) over one-year periods, and the results were very similar to those reported in Table 2. The coefficient of the unexpected component of the employment announcement was statistically significant at the 10 percent level in only one year (1980) prior to 1984, but was significant at the 10 percent level in each of the years from 1984 through 1990. The coefficient was also significant at the 5 percent level in four of the latter years and in 1980.

<sup>15</sup> We did three additional exercises to check the robustness of the results reported in Table 2. First, rather than estimating the autoregressive model only once over a fixed period ending in 1970, we extended the estimation period to month  $t-1$  prior to forecasting employment in month  $t$ . Second, we forecast employment without making the adjustments for strikers and census workers described in the text. Third, we added another lagged term to the autoregressive model. In each case the interest rate regression results were not substantially different from those reported in Table 2.

Table 2

**The Reaction of Interest Rates to Nonfarm Payroll Employment Announcements, 1971-1991**

	$\Delta R3$			$\Delta R6$			$\Delta R12$		
	Expected	Unexpected	R <sup>2</sup> /DW	Expected	Unexpected	R <sup>2</sup> /DW	Expected	Unexpected	R <sup>2</sup> /DW
1971-73	-1.61 (0.71)	-1.04 (0.92)	.04 2.07	-1.09 (0.43)	-1.69 (1.33)	.06 2.31	0.64 (0.26)	-0.97 (0.79)	.02 2.47
1974-76	-2.71 (1.62)	1.04 (0.86)	.09 1.86	-2.43 (1.63)	0.61 (0.56)	.08 1.93	-2.23 (1.34)	0.10 (0.09)	.05 1.82
1977-79	-0.55 (0.30)	-0.29 (0.28)	.00 1.74	-0.35 (0.21)	0.29 (0.29)	.00 1.61	-0.71 (0.42)	0.57 (0.58)	.02 1.92
1980-82	4.13 (1.07)	9.14 (3.38)**	.27 1.85	1.49 (0.44)	9.47 (3.97)**	.32 1.69	-0.98 (0.29)	10.88 (4.56)**	.39 1.49
1983-84	0.57 (0.64)	1.78 (1.40)	.09 1.69	0.67 (0.74)	2.84 (2.20)*	.19 2.31	0.74 (0.66)	3.14 (1.95)	.16 2.47
1985-87	1.57 (0.53)	5.11 (3.86)**	.32 2.20	1.76 (0.49)	5.98 (3.65)**	.29 2.38	1.93 (0.51)	6.74 (3.98)**	.33 2.53
1988- April 1991	1.09 (0.83)	4.70 (4.38)**	.38 2.06	0.46 (0.27)	6.32 (4.49)**	.37 2.21	-0.49 (0.23)	7.05 (4.18)**	.33 2.13
<i>Estimated with Survey Data</i>									
1985-87	-2.38 (0.66)	5.72 (4.59)**	.40 1.84	-2.87 (0.65)	6.74 (4.43)**	.38 2.13	-3.48 (0.74)	7.49 (4.61)**	.40 2.22
1988- April 1991	0.18 (0.17)	6.36 (5.87)**	0.50 2.11	-0.35 (0.25)	8.30 (5.82)**	.49 2.15	-1.18 (0.70)	9.25 (5.33)**	.44 2.22

Note: Treasury bill yields are in basis points and employment is in hundreds of thousands. t-statistics are in parentheses. DW is the Durbin-Watson statistic.

\* denotes significant at 5 percent level and \*\* denotes significant at 1 percent level.

On balance, the regression results are consistent with the policy expectations hypothesis. The coefficients of the unexpected component of the change in employment in the 1985-91 period are highly significant and much greater than those in the 1970s, which are essentially zero. The reason for the strong reaction of interest rates to the employment announcement in the period from 1980 through 1982 is not clear.<sup>16</sup> These years correspond roughly to the period from October 6, 1979, through October 9, 1982, when the Federal Reserve went on a "non-borrowed reserves" operating procedure intended to improve its control of the money supply. Movements in the funds rate were unusually large in this period, and they were largely determined on a judgmental basis by the Federal Reserve, as they had been before.<sup>17</sup> One interpretation of the sensitivity of interest rates to the employment announcement in this period is that it reflected the view of market participants that the Fed was reacting more aggressively to all information—money growth and economic conditions—affecting its policy decisions. Hetzel's (1986) description of the Fed's behavior in this period is consistent with this view.

### III. THE EMPLOYMENT ANNOUNCEMENT AND MARKET FORECASTS OF THE FEDERAL FUNDS RATE

As a final exercise, we use the financial market stories of the *Wall Street Journal* to illustrate the link in recent years between the employment report and market expectations of Federal Reserve behavior. Beginning in late 1988 the *Journal* stories immediately following the employment report regularly included what can be interpreted as a consensus market forecast of near-term Fed policy actions conditional on the report. These forecasts are summarized in Table 3. The table also shows (1) the market's expectation of the change in nonfarm payroll employment as reported by the *Journal*, (2) the unexpected component of the employment announcement, and (3) the *Journal's* reports of changes in the Fed's target

for the federal funds rate, if any, over the period until the following employment report. (The *Journal's* reports of funds rate target changes shown in Table 3 are based on the perceptions of participants in the financial markets. They have not been confirmed by the Federal Reserve and may not correspond precisely with the timing of actual Fed policy changes.)

Table 3 confirms that in the late 1980s and early 1990s market participants believed there was a close link between the employment report and Fed policy actions and that market participants' forecasts of Fed behavior were strongly influenced by the report. Late in the period shown in Table 3, Fed policy actions appeared to be especially closely linked to the employment report. In December 1990, February 1991, and March 1991 the *Journal* reported that the Fed changed its target for the funds rate later on the same day as the employment report. And in January 1991 the *Journal* reported that the Fed changed its funds rate target on the market day following the employment announcement.

The near-term policy forecasts recorded in Table 3 were accurate three-fourths of the time.<sup>18</sup> The major forecasting error followed the weak employment reports of August and September 1990, which led market participants to anticipate that the Fed would lower its funds rate target. Following the September employment report the *Journal* reported that "[i]n a rare show of unanimity, many economists, bond strategists and big investors are predicting that the Federal Reserve will reduce short-term interest rates within four weeks." Yet the Fed did not reduce the funds rate target, and the *Journal's* story following the employment report in October found the reason in the Fed's probable decision to link further decline in the funds rate to a federal deficit reduction package. After agreement on such a package was reached on Thursday, October 25, the *Journal* reported that the Fed lowered its target for the funds rate the following Monday.

### VII. CONCLUSION

This article has provided evidence that market interest rates responded more strongly to the unexpected component of the employment report in the

<sup>16</sup> We reviewed the financial market stories in the *Wall Street Journal* to investigate the possibility that this coefficient was picking up the effect of monetary policy events. The *Journal* reported six policy events that were contemporaneous with employment announcements. These included two discount rate changes, one change in the funds rate, a speech by Chairman Volcker, the phase-out of credit controls, and a large unexpected money announcement. We reestimated the regressions for the 1980-82 period without these six observations. The coefficients of the unexpected component of the employment announcement were smaller in each of the regressions, but they were still significant at the 5 percent level.

<sup>17</sup> For detailed evidence on this point, see Cook (1989).

<sup>18</sup> The policy forecasts were accurate 18 times and wrong 6 times (in November 1989, March 1990, June 1990, July 1990, August 1990 and September 1990). In seven instances the forecast cannot be evaluated because the *Journal* did not provide a consensus forecast or because the Fed reportedly changed the target on the same day as the report.

latter half of the 1980s and the early 1990s than they generally did in earlier years. We have also documented the perception of market participants that the Fed's month-to-month policy decisions over this period were heavily influenced by the report. A reasonable conclusion is that the strong reaction of interest rates to the employment report in this period largely reflects the greater impact of this report on expectations of Fed policy. This conclusion reinforces

the finding of the money announcement literature that monetary policy anticipations can strongly influence the way market interest rates react to economic news. A corollary, emphasized by Goodfriend (1991) and Poole (1988), is that movements in market interest rates cannot be used to extract information about the economy without an understanding of how monetary policy influences interest rate expectations.

Table 3

**Employment Reports, Policy Forecasts, and *Journal* Reports of Funds Rate Target Changes**

Announcement Date	Employment (thousands)			Change in Six-Month Rate (Basis Points)	Policy Forecast in <i>Journal</i> Financial Market Story	<i>Journal</i> Report of Subsequent Change in Funds Rate Target
	Expected	Actual	Unexpected			
Oct-7-88	283	255	-28	-11	Friday's rally...came after government figures indicated the economy isn't expanding as rapidly as many people had thought. Money managers quickly concluded that removed any pressure on the Fed to tighten credit, at least until after Election Day.	No change in target
Nov-4-88	239	323	84	+16	Hopes for a credit-easing move by the Federal Reserve have vanished. Some analysts even predict tighter credit after the elections, especially if the dollar drops in the foreign-exchange markets.	Target raised late November
Dec-2-88	255	463	208	+28	The Federal Reserve is likely, in light of November's strong employment figures, to decide to raise short-term interest rates at its policy meeting December 14.	Target raised December 15
Jan-6-89	273	279	6	+1	[not available]	No target change
Feb-3-89	292	408	116	+12	Speculation that the Fed will tighten credit soon grew Friday after the government released its January employment report showing a robust increase of 408,000 in payrolls.	Target raised February 13 Target raised February 23-24
Mar-10-89	258	289	31	+17	The Federal Reserve probably will leave its credit grip unchanged for the next few weeks. But many economists think the central bank will raise short-term rates again next month to combat inflation.	No target change
Apr-7-89	215	180	-35	+3	Many analysts expect the Federal Reserve Board to sit tight and leave interest rates where they are in the wake of the report.	No target change

Announcement Date	Employment (thousands)			Change in Six-Month Rate (Basis Points)	Policy Forecast in <i>Journal</i> Financial Market Story	<i>Journal</i> Report of Subsequent Change in Funds Rate Target
	Expected	Actual	Unexpected			
May-5-89	223	117	-106	-14	April's employment report makes it highly unlikely that the Federal Reserve Board will decide to push up interest rates when its policy-making committee meets here next week.	No target change
Jun-2-89	204	101	-103	-26	The meek growth in new jobs last month confirmed to many economists that the U.S. economy is on a slower track and could lead the Federal Reserve to ease its grip on credit this week.	Target lowered June 6 Target lowered July 6
Jul-7-89	214	180	-34	-5	Many economists expect the closely watched federal funds rate, which fell to 9¼% Thursday, to decline ¼ percentage point sometime soon.	Target lowered July 26
Aug-4-89	158	169	11	+30	It now appears that investors should expect the federal funds rate to remain at about 9%, according to many economists and analysts.... Before Friday, many investors were betting that the Fed would allow the rate to fall an additional quarter of a point.	No target change
Sep-1-89	70	110	40	-1	[not available]	No target change
Oct-6-89	279	209	-70	-24	Speculation that the Fed will ease credit grew Friday after a government report painted a darker picture of the economy than analysts had expected. The report indicated severe weakening in the manufacturing sector.	Target lowered October 16
Nov-3-89	152	233	81	+18	The jobs data dashed hopes for an immediate easing of interest rates by the Federal Reserve, and caused bond prices to tumble.	Target lowered November 7
Dec-8-89	155	210	55	-8	Many economists say the latest employment numbers—the government's first economic report for November—suggest the economy has weakened to the point the Fed may decide to cut interest rates further. But they expect the central bank to wait at least until its policy-making committee meets next Monday [December 18] before taking any action.	Target lowered December 20
Jan-5-90	208	142	-66	-4	[not available]	No target change
Feb-2-90	181	275	94	+4	The catalyst for Friday's retreat was a mixed bag of employment data, which economists said provided little reason for the Federal Reserve to alter its credit policy. That policy appears to be holding for now.	No target change



Announcement Date	Employment (thousands)			Change in Six-Month Rate (Basis Points)	Policy Forecast in <i>Journal</i> Financial Market Story	<i>Journal</i> Report of Subsequent Change in Funds Rate Target
	Expected	Actual	Unexpected			
Mar-9-90	268	372	104	+ 9	Just a few weeks ago, many Wall Street economists were holding on to hopes that interest rates would soon resume their downward drift and that the Federal Reserve would cut short-term rates once again. Now they believe the Fed will push rates higher sometime this spring.	No target change
Apr-6-90	178	26	-152	- 1	Interest rates are likely to remain relatively stable in the weeks ahead while the Federal Reserve keeps credit policy on hold, many economists believe.	No target change
May-4-90	384	64	-320	- 20	But the weakness in the report led many analysts to predict that the Federal Reserve will refrain from pushing up interest rates for now.	No target change
Jun-1-90	253	164	-89	- 11	Speculation that the Fed may choose to push rates lower began on Friday, after the Department of Labor released the May employment report.	No target change
Jul-6-90	100	40	-60	+ 11	Friday's employment report, coming on top of stronger than expected auto sales data on Thursday, has convinced investors that interest rates won't fall significantly and that the Federal Reserve will probably keep credit policy on hold.	Target lowered July 13
Aug-3-90	5	-219	-224	- 12	Speculation that the Fed will soon ease interest rates has been swirling for weeks, but the prospects that such an easing will occur sooner, rather than later, were heightened on Friday when the government released a bombshell July employment report.	No target change
Sep-7-90	-29	-75	-46	+ 3	In a rare show of unanimity, many economists, bond strategists and big investors are predicting that the Federal Reserve will reduce short-term interest rates within four weeks.	No target change
Oct-5-90	-5	-101	-96	- 7	Although Friday's employment report should have provided the Fed with an additional reason to lower rates, many economists believe that by linking lower interest rates to the deficit-reduction package, the Fed is now paralyzed. [Deficit reduction agreement approved on Thursday, October 25.]	Target lowered October 29
Nov-2-90	-43	-68	-25	+ 2	Then last week's batch of economic reports pointed straight toward recession...and the Federal Reserve is expected to ease interest rates further before year end.	Target lowered November 16

Announcement Date	Employment (thousands)			Change in Six-Month Rate (Basis Points)	Policy Forecast in <i>Journal Financial Market Story</i>	<i>Journal Report of Subsequent Change in Funds Rate Target</i>
	Expected	Actual	Unexpected			
Dec-7-90	-78	-267	-189	-14	Treasury bond prices soared and short-term interest rates fell sharply after the government reported unexpectedly grim economic news.... The Fed reacted to the economic news by moving to nudge a key short-term rate slightly lower.	Target lowered same day Target lowered December 19
Jan-4-91	-149	-76	73	+12	[not available]	Target lowered January 8
Feb-1-91	-15	-232	-217	-25	Prices of U.S. government bonds soared in response to a surprisingly weak employment report and a slashing of the discount rate by the Federal Reserve.	Target lowered same day
Mar-8-91	-126	-184	-58	-11	The Federal Reserve eased credit another notch Friday....The move... came shortly after the [employment report].	Target lowered same day
Apr-5-91	-167	-206	-39	-2	Although the Fed left interest rate policy unchanged on Friday, many analysts expect the central bank to reduce the federal funds rate another notch sometime soon.	Target lowered April 30

## REFERENCES

- Cook, Timothy. "Determinants of the Federal Funds Rate: 1979-1982." Federal Reserve Bank of Richmond *Economic Review* 75 (January/February 1989): 3-19.
- Cornell, Bradford. "The Money Supply Announcements Puzzle: Review and Interpretation." *American Economic Review* 73 (September 1983): 644-57.
- Dwyer, Gerald P., Jr., and R. W. Hafer. "Interest Rates and Economic Announcements." Federal Reserve Bank of St. Louis *Economic Review* 71 (March/April 1989): 34-45.
- Falk, Barry and Peter F. Orazcm. "The Money Supply Announcements Puzzle: Comment." *American Economic Review* 75 (June 1985): 562-64.
- Goodfriend, Marvin. "Interest Rates and the Conduct of Monetary Policy." *Carnegie-Rochester Series on Public Policy* 34 (Spring 1991): 7-30.
- Hardouvelis, Gikas A. "Economic News, Exchange Rates and Interest Rates." *Journal of International Money and Finance* 7 (March 1988): 23-35.
- Hetzel, Robert L. "Monetary Policy in the Early 1980s." Federal Reserve Bank of Richmond *Economic Review* 72 (March/April 1986): 20-32.
- Neumark, David, and William L. Wascher. "Can We Improve Upon Preliminary Estimates of Payroll Employment Growth?" *Journal of Business & Economic Statistics* 9 (April 1991): 197-205.
- Poole, William. "Monetary Policy Lessons of Recent Inflation and Disinflation." *Journal of Economic Perspectives* 2 (Summer 1988): 73-100.
- Santomero, Anthony M. "Money Supply Announcements: A Retrospective." *Journal of Economics and Business* 43 (February 1991): 1-23.
- Webb, Roy H., and William Whelpley. "Labor Market Data." Federal Reserve Bank of Richmond *Economic Review* 75 (November/December 1989): 15-22.