

**THE FOMC VERSUS THE STAFF:
WHERE CAN MONETARY POLICYMAKERS ADD VALUE?**

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DATA APPENDIX

The FOMC Forecasts. The FOMC's forecasts are presented in its *Monetary Policy Reports (MPRs)* to the Congress, which have been submitted each February and July since 1979. The *MPRs* are reprinted in both the *Federal Reserve Bulletin* and the Board of Governors *Annual Report*. They are available on-line back to the July 1996 *MPR*.

Over our sample period, four variables are always forecast: nominal growth, real growth, inflation, and unemployment. Growth rates are always fourth quarter to fourth quarter (Q4 to Q4), and the unemployment rate is always for Q4. In the February *MPR*, the forecasts are for the current year only. In the July *MPR*, they are for the current year and the next year.

From the February 1983 *MPR* to the end of the sample, the forecasts are reported in terms of "ranges" and "central tendencies." It is fairly clear that the ranges go from the lowest to the highest forecast. When the "Chart Shows" (see below) explain the central tendencies, they almost always say that they are obtained by dropping the three lowest and the three highest forecasts. (The Chart Show preceding the February 1994 *MPR* says that those central tendencies are obtained by dropping only the lowest and highest two. There are also occasional references to rounding in the Chart Shows.)

The first two *MPRs* that have forecasts say (or imply) that the forecasts are the Board's and not the full FOMC's; the next five are not clear about whether the forecasts incorporate the views of the Reserve Bank presidents who are not voting members of the FOMC. In addition, the first seven *MPRs* only give ranges. The language varies, sometimes implying that they are full ranges and sometimes that they are central tendencies.

The members first prepare their forecasts prior to the FOMC meeting that precedes the submission of the *MPR*. At least in most cases, they have already received the Greenbook for the upcoming meeting by the time they prepare their forecasts. The members are allowed to revise their forecasts between the meeting and the time the *MPR* is completed. (We do not know whether they have always been allowed to do this, but they certainly have for a long time.)

The staff presentation (known as the "Chart Show") at the FOMC meeting preceding the *MPR* often includes a chart summarizing the members' forecasts. The forecasts presented in the Chart Shows are often not in exactly the same terms as the forecasts in the *MPRs*. Sometimes the forecasts are for annual averages; early on, they are presented separately for Governors and Presidents; and the like. And, because the members can revise their forecasts after the meeting, even when the forecasts are of exactly the same thing, the forecasts in the Chart Show often differ from the forecasts in the *MPR*.

The exact variables forecast have changed over time. The first *MPR*, in February 1979, contained no forecasts. From July 1979 to July 1988, the *MPRs* forecast nominal GNP growth, real GNP growth, inflation measured using the GNP deflator, and the unemployment rate. (The February 1980 *MPR* also forecast employment growth and CPI inflation. This is the only time in our sample that additional variables were forecast.) The inflation variable switched to the CPI (CPI-U) in the February 1989 *MPR*, and then to the PCE chain-type price index in the February 2000 *MPR*. The switch from GNP to GDP for nominal and real growth occurred in the February 1992 *MPR*. In addition, the real growth measure changed base years, and then changed to chain-weighted, as the Bureau of Economic Analysis (BEA) switched its measure.

The unemployment rate forecast has almost always been the civilian unemployment rate. For the *MPRs* from February 1983 through February 1986, however, it is not clear whether it was the civilian unemployment rate or the unemployment rate including members of the armed forces stationed in the United States (which is typically a tenth of a percentage point lower) that was being forecast. It is clear that the Greenbooks used the civilian unemployment rate throughout (this can be seen by looking at the figures in the Greenbooks for the actual unemployment rate). The *MPRs* for this period generally do not specify the exact unemployment concept being forecast. Two (February 1983 and February 1986) indicate that the FOMC's forecast is for the overall unemployment rate, and one (July 1985) indicates that it is for the civilian unemployment rate.

We have examined some transcripts from this period and found no discussion of this issue. Our guess is that there was little concern about it. For example, it is possible that the FOMC members were simply asked to prepare forecasts of the unemployment rate, without the exact concept being specified, and that the occasional notes in the *MPRs* specifying which unemployment concept was being forecast were added when the *MPRs* were being prepared. Given that it is clear from the Greenbooks that the Federal Reserve focused on the civilian unemployment rate throughout, we interpret the FOMC forecasts as being of that rate in all cases.

The Staff Forecasts. We take our figures for the staff forecasts from the Greenbook prepared for the FOMC meeting at which the members' forecasts and the *MPR* were discussed. The Greenbook is typically prepared about a week before the FOMC meeting. When the cover sheet of the forecast presents a figure for the exact variable being forecast (such as Q4 to Q4 real GNP growth), we use that figure. When it does not, we compute it from the detailed forecast tables.

The charts presenting the FOMC forecasts also give the staff's forecasts of the same variables. With a few small exceptions (which we believe are typographical errors), these numbers agree with what is in the Greenbook for the same meeting. The only times we use data from the Chart Shows are when the Chart Show reports a figure for the exact variable being forecast and the Greenbook does not. In these cases, we check that the figure in the Chart Show is consistent with the detailed forecast tables in the Greenbook.

The Greenbooks from year t are released at the end of year $t+5$. Thus, the latest Greenbooks currently available are those from 2001.

Outcomes. For NIPA variables (nominal and real GNP and GDP growth, and inflation measured by the implicit GDP deflator or the PCE chain-type price index), we use the BEA's "final" estimates. This version of the data includes the two very rapid revisions the BEA does of each series. The Q4 final estimates are typically released in March, and are first published in the March or April issue of the Survey of Current Business. We compute percentage changes using numbers from the same issue of the Survey. For example, our figure for real GDP growth in 1999 is computed as the percentage change in the estimates of real GDP from 1998Q4 to 1999Q4 from the April 2000 Survey.

For the CPI and the unemployment rate, our figures for outcomes are those first reported by the Bureau of Labor Statistics (BLS). Since the BLS did not construct its own quarterly averages of monthly figures for much of our sample, we use the figures for actual Q4 to Q4 CPI inflation and the actual Q4 unemployment rate from the first Greenbook prepared after the release of the December data. This is always the Greenbook prepared in late January or the very beginning of February. Since the last publicly available Greenbook is for the end of 2001, we take our figures for actual unemployment in 2001Q4 and 2002Q4 from the first issues of the Monthly Labor Review that report the unemployment rate for December of the corresponding year.

Our outcome measures correspond as closely as possible to the measures being forecast. For example, the July 1988 *MPR* forecast inflation for 1989 measured by the GNP deflator, while the February 1989 and July 1989 *MPRs* forecast inflation for 1989 measured by the CPI. We therefore use 1989 inflation measured by the deflator as the outcome corresponding to the first forecast, and 1989 inflation measured by the CPI as the outcome corresponding to the other two forecasts. (One case where

we cannot make the concepts line up exactly involves changes in base years. For example, the February 1995 *MPR* forecast real growth in 1995 as measured by real GDP in 1987 dollars. By the time the final estimates of 1995Q4 real GDP were released in early 1996, however, the BEA had switched to reporting chain-weighted real GDP, and no longer reported real GDP in 1987 dollars.)