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Is monetary policy important for forecasting real growth and inflation?

Edward N. Gamber[a,*], David R. Hakes[b]

[a] Department of Economics and Business, Lafayette College, Easton, PA 18042, USA
[b] Department of Economics, University of Northern Iowa, Cedar Falls, IA 50614-0129, USA

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Abstract

We hypothesize that if monetary policy is important in explaining movements in output and inflation then it should follow that more accurate forecasts of monetary policy, on average, will tend to produce more accurate forecasts of growth and inflation. Using data from the Survey of Professional Forecasters we find that improved monetary policy forecast accuracy corresponds to lower variance of forecast errors for growth and inflation but very little reduction in the overall average size of forecast errors for growth and inflation.

Keywords: Survey of Professional Forecasters; Monetary policy; Forecast accuracy

1. Introduction

The literature on measuring the importance of monetary policy is immense. Friedman and Schwartz (1963) mark the beginning of a long series of papers and books looking at the importance of monetary policy in explaining movements in real output and inflation. The techniques used to address these questions are quite varied. The narrative approach pioneered by Friedman and Schwartz has been expanded upon by other authors (see Romer and Romer, 1989, 1994). The strand of literature initiated by Anderson and Jordan (1968),

* Corresponding author. Tel.: +1 610 330 5310; fax: +1 610 330 5715.
E-mail address: gambere@lafayette.edu (E.N. Gamber).

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estimates the impact of monetary policy using reduced-form regressions. Work by Sims (1972) continued this line of research using vector autoregressive techniques. Structural approaches such as Bernanke (1986), Sims and Leeper (1994) and Sims, Leeper, and Zha (1996) are also aimed at assessing the importance of monetary policy in explaining movements in real output and inflation.

The general conclusion of this literature is that monetary policy matters for explaining movements in real output (in the short run) and inflation (in the long run). The exact mechanism through which monetary policy affects the economy is still being debated. But the overall effect of monetary policy on the economy is one of the few areas of agreement among macroeconomists.

This paper looks at the importance of monetary policy from the perspective of forecasting. If monetary policy is important in explaining the economy we would expect it to be important in forecasting the economy as well. In other words, the importance of monetary policy should be revealed in the forecasts of real growth and inflation. We investigate this question by testing whether more accurate forecasts of monetary policy result in more accurate forecasts of real growth and inflation. If monetary policy is important, we expect to find that lower forecast errors for monetary policy are associated with lower forecast errors for growth and inflation.

The questions addressed in this paper are of particular importance to policymakers. Policymakers are consumers and producers of economic forecasts. From the perspective of a consumer of forecasts, policymakers would find it useful to know whether the overall accuracy of forecasts that they purchase depend on the accuracy of the embedded monetary policy forecasts. From the perspective of a producer of forecasts, policymakers may wish to understand how best to improve their modeling. Does it make sense to devote more resources to improve the forecast of monetary policy or is the accuracy of monetary policy forecasts irrelevant for the overall accuracy of an economic forecast?

We test this hypothesis using the sample of interest rate, real growth and inflation forecasts contained in the Survey of Professional Forecaster (SFP) data set from the Federal Reserve Bank of Philadelphia.[1] In each quarter, a sample of 20–50 professional forecasters report their forecasts to the Federal Reserve Bank of Philadelphia. Variables included in the forecast are real GDP (real GNP before 1992), inflation, corporate profits, unemployment rate and interest rates as well as several other variables. The variables of interest for this paper are real GDP and the 3-month T-bill rate, which we use as a proxy for the stance of monetary policy.

We find that the mean and median forecasts of monetary policy are biased and inefficient. We also find that improving monetary policy forecast errors would not reduce the mean absolute forecast error for growth or inflation at three and four quarter ahead forecast horizons. We do, however, find that getting monetary policy right (zero forecast error) would substantially reduce the root means square error of the inflation and output forecast errors. Thus, it appears that the payoff for accurate monetary policy forecasts is a reduction in the variance but not the level of the forecast error for growth and inflation.

[1] See http://www.phil.frb.org/econ/spf/index.html. The Survey of Professional Forecasters (SFP) was previously called the ASSA-NBER Survey of Forecasters from 1968 to 1990. The Federal Reserve Bank of Philadelphia took over the survey in 1990. See Croushore (1993) for a complete description of the SFP.