Comparing Federal Reserve, Blue Chip, and time series forecasts of US output growth

Hamid Baghestani, Bassam M. AbuAl-Foul

Department of Economics, School of Business Administration, American University of Sharjah, P.O. Box 26666, Sharjah, United Arab Emirates

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ABSTRACT

We evaluate the predictive content of Federal Reserve and Blue Chip forecasts of output growth by utilizing two comparable forecasts as benchmarks: a univariate autoregressive (AR) model, and a vector autoregressive (VAR) model which includes output growth, growth in residential investment, and consumers’ assessments of business conditions. We first show the forecasts are all directionally accurate, free of systematic bias, and efficient. Second, the asymmetric information hypothesis cannot be supported. Third, the Federal Reserve and private forecasts are generally less informative than the VAR forecasts and thus lack past information on residential investment growth and consumers’ assessments of business conditions.

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1. Introduction

Despite the inherent difficulty, both public and private forecasters are regularly engaged in predicting output growth. Market participants seek accurate forecasts of growth for making a variety of economic and financial decisions including investment. Such forecasts are also key inputs for both fiscal and monetary authorities in formulating economic policies (Chauvet and Potter, 2013). In evaluating the accuracy of output growth, inflation, and unemployment forecasts, studies have often tested the asymmetric information hypothesis that the Federal Reserve has useful information about the state of the economy that is not known by the private sector. Romer and Romer (2000), Gavin and Mandal (2001), and Sims (2002) convincingly support this hypothesis for inflation forecasts. However, as noted by Gavin and Mandal (2001), the findings are rather weak for output growth forecasts. In addition, Baghestani (2008) shows that the private forecasts of unemployment are more informative than the Federal Reserve forecasts.1

In this study, we evaluate the predictive information content of the Federal Reserve and private (Blue Chip) forecasts of output growth by employing two sets of comparable forecasts as benchmarks. The first set is from a univariate autoregressive

1 Baghestani (2011) investigates the predictive information content of the Federal Reserve and private forecasts of non-residential and residential investment and reports mixed evidence in support of the asymmetric information hypothesis.

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(AR) model, and the second one is from a vector autoregressive (VAR) model. The AR forecasts contain past information in output growth, and the VAR forecasts contain past information on output growth, growth in residential investment, and consumers’ assessments of business conditions.

There are two noteworthy aspects to this study. First, we utilize real time data to provide out-of-sample evidence on the usefulness of growth in residential investment for predicting output growth. This complements existing studies which have provided in-sample evidence. For instance, Green (1997) utilizes the Granger-causality approach to demonstrate that, unlike non-residential investment, residential investment Granger-causes GDP. As demonstrated by Coulson and Kim (2000), the reason behind such evidence is that, unlike non-residential investment, residential investment has a significant impact on consumption. Leamer (2007) shows that “It is residential investment that contributes most to weakness before recessions.” Toward a more effective monetary policy, Leamer argues for a new Taylor Rule in which GDP is replaced by housing leading indicators.  

Second, the inclusion of consumers’ assessments of business conditions in the VAR model is important in light of existing literature that offers mixed results. Carroll, Fuhrer, and Wilcox (1994) and Bram and Ludvigson (1998) present evidence in support of consumer sentiment as a reliable predictor of consumption growth. Croushore (2005) replicates these studies using real-time data and finds that consumer sentiment is of little value. Garner (1991) argues that consumer sentiment is rarely a useful predictor of economic performance. Batchelor and Dua (1998) show that consumer sentiment could predict only the 1991 US recession. More recent studies by Dees and Brinca (2013), Christiansen, Eriksen, and Møller (2014), and Østerholma (2014), however, find that consumer sentiment has significant predictive power for economic indicators. The study by Christiansen et al. (2014), in particular, shows that sentiment indexes can significantly help improve predictions of US recessions.

We find a number of important results. First, the Federal Reserve, Blue Chip, AR, and VAR forecasts are all directionally accurate, free of systematic bias, and efficient. Second, our test results do not support the asymmetric information hypothesis that the Federal Reserve has useful information about the state of the economy that is not known by the private sector. Third, the VAR forecasts embody useful predictive information above and beyond that contained in the AR forecasts. This means that past information on growth in residential investment and consumers’ assessments of business conditions is useful in predicting output growth. Fourth, the VAR forecasts generally embody useful predictive information beyond that contained in the Federal Reserve and Blue Chip forecasts. This suggests that the Federal Reserve and Blue Chip forecasts of output growth do not fully contain past information in residential investment growth and consumers’ assessments of business conditions combined. We proceed by describing both the data and alternative output growth forecasts in Section 2. Section 3 presents both the methodology and forecast evaluation test results. Section 4 concludes.

2 Kydland, Rupert, and Šustek (2014) note that US investment-output dynamics cannot be generalized for other developed countries except Canada.
3 The historical Blue Chip Financial Forecasts were purchased from Aspen Publishers, Inc.
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