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Evaluating qualitative forecasts: The FOMC minutes, 2006–2010

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ABSTRACT

We present a methodology for evaluating and interpreting qualitative forecasts. The minutes of the FOMC meetings are used as a case study. This permits us to observe the forecasting process and determine the information that was used in generating the qualitative forecasts. Our results show that the FOMC examined an extensive amount of GDP and sectoral data and the indicators that usually foreshadow economic developments. Nevertheless, the FOMC did not predict the Great Recession in advance or recognize it quickly.

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1. Introduction

If one were to ask an economist to describe the components of an economic forecast, their answer would include things like the rate of growth of GDP, the rate of inflation, the level of unemployment, etc. These are all quantitative measures. In addition, the profession's current methodology for evaluating these forecasts is also based on quantitative procedures. However, the qualitative scenarios and policy statements that are issued can also be interpreted as forecasts.¹

Thus, this paper presents a procedure for evaluating and interpreting such qualitative forecasts, using the minutes of the Federal Open Market Committee (FOMC) meetings as an illustrative case study.² In particular, we wish

to determine how the FOMC viewed the Great Recession while it was happening. The statements that are included in the minutes assessing the current state of the economy or commenting on its future direction have never been evaluated. Using these minutes, we observe the process that actually occurred as a forecast was being made. The information obtained from this analysis enables us to understand why errors were made and improves our understanding of the forecasting process.

Given the qualitative nature of these statements about the state of the US economy, it is necessary to develop a methodology for evaluating the FOMC's judgments. As is explained below, this will be in the form of a quantitative index, with the values depending on the FOMC's assessment of the strength of the US economy. This quantitative index is supplemented with a textual analysis of the minutes to determine the information that the members of the FOMC considered in making their judgments (see Appendix A).

This paper makes three contributions to the forecasting literature, two methodological and one empirical. First, in

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¹ Consider for example the statements that are issued at the end of each Federal Open Market Committee (FOMC) meeting. Considerable effort is expended in parsing the entrails of those statements in order to forecast when the Fed will increase interest rates.

² Very few papers have been concerned with analyses of such qualitative forecasts (the exceptions are: Armesto, Hernandez-Murillo, Owyang, & Piger, 2009, Balke & Petersen, 2002, Goldfarb, Stekler, & David, 2005, and Lundquist & Stekler, 2012). In addition, the political science literature has examined the content of the minutes of the FOMC meetings.

These studies examine the minutes to determine how deliberations affect monetary policy and whether the increased transparency of the FOMC affected the deliberations (see Hansen, McMahon, & Prat, 2014, Schonhardt-Bailey, 2013).

Table 1
Characteristics of Federal Reserve system forecasts/reports.

Forecast	Member input	Data	Content	Focus	Publication schedule
Minutes from FOMC meetings	All 19 FOMC members and the staff of the Board of Governors	Qualitative	Discussion between FOMC members and the staff of the Board of Governors	National	3 weeks after FOMC meetings
Beige Book	The 12 regional banks of the Federal Reserve	Qualitative	Anecdotal information about each region's economy	Regional	2 weeks prior to FOMC meetings
Greenbook forecasts	Staff of the Board of Governors	Quantitative	Assessments and projections of the direction of the US economy	National	5 years after FOMC meetings
FOMC member projections—summary	13 FOMC members (the middle views)	Quantitative	Range and central tendency of the middle 13 members' economic projections	National	3 weeks after four of the eight annual FOMC meetings
FOMC member projections—individual	All 19 FOMC members	Quantitative	Individual economic projections from each of the 19 members	National	10 years after FOMC meetings

order to evaluate qualitative statements, we present a consistent, verifiable scoring method for transforming such statements into a quantitative index. Second, textual analysis is used to determine the information that was used to generate the qualitative forecasts. The empirical contribution is to show that an analysis of the minutes can provide unique insights about the knowledge that the FOMC had when it met in order to set monetary policy. In addition to the Greenbook and the Beige Book, these data are a source of information about the variables that the FOMC used to set policy.

Using the minutes as data, our empirical results show that the FOMC possessed the relevant information regarding the sectors of the economy that were responsible for the recession. Moreover, they understood the implications and magnitude of these sectors' declines relatively quickly. While we show that the FOMC foresaw the strong possibility of an impending recession, they did not predict it in advance and only recognized it as it was happening. However, they did predict the upswing in the economy at the end of the recession.

The remainder of this paper is divided into five sections. First, we introduce the minutes and review the other Federal Reserve forecasts and reports. The methodology is explained in the next section. This is followed by the results, the conclusions, and finally a discussion that highlights the contributions of this paper to the forecasting literature and provides suggestions for further research that could be done using these data.

2. Literature review

This section begins with a brief explanation of the minutes.

This is followed by a discussion of the other forecasts made within the Federal Reserve System and a review of the literature that evaluates these forecasts. The section concludes with a summary of our reasons for believing that an analysis of the minutes provides unique insights.

2.1. The minutes

The minutes are a record of the discussion among all 19 FOMC members³ and the Federal Reserve staff at each of

³ The FOMC consists of 19 members in total; 12 vote. The voting members include the seven Governors of the Federal Reserve System, the

their eight regularly-scheduled meetings throughout the year. In the recorded discussion, members qualitatively assess the current state and future direction of the economy, in order to set monetary policy. The discussion focuses on output growth, key sectors of the economy, inflation, and unemployment. The minutes remain relatively consistent over time both in the language that they use to describe participants' views and in their overall structure.⁴ They are currently released about three weeks after the date of the meeting.⁵

2.2. Other Federal Reserve forecasts/reports

2.2.1. Beige book

In addition to the minutes, there are also various other forecasts and/or reports generated within the Federal Reserve System that are concerned with the state of the US economy. Table 1 presents this information and describes the attributes of these forecasts/reports. Like the minutes, the Beige Book (officially titled "The Summary of Commentary on Current Economic Conditions by Federal Reserve District") provides qualitative information. It compiles anecdotal information on the state of the economy in each Federal Reserve District through interviews with "bank and branch directors... key business contacts, economists, market experts, and other sources" (Board of Governors, 2013). Armesto et al. (2009) and Balke and Petersen (2002) have shown that the Beige Book's assessments of regional economic situations are generally accurate and provide valid information about current economic activity and the future growth of the economy overall. Balke and Petersen (2002) used a methodology similar to that used in this study to transform the qualitative statements in the Beige Books into quantitative data. In particular, they noted that the Beige Books possessed uniquely

Regional Bank President of New York, and a rotating group of four other Regional Bank Presidents. All 19 members – both voting and nonvoting – participate in the meeting's discussion.

⁴ This reduces the problems that might result if the language varied from meeting to meeting; see Armesto et al. (2009, p. 37).

⁵ They have been being published in various formats since 1936. (For a complete history of the minutes, see Danker & Luecke, 2005.)

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