



Strategic behavior of Federal Open Market Committee board members: Evidence from members' forecasts[☆]



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ABSTRACT

In this paper, we use panel data to test whether Federal Open Market Committee (FOMC) board members' forecasts are rational. Rationality is rejected in the sense that forecasts by members are heavily dependent on previous own forecasts and last consensus made in FOMC. Furthermore, we reveal the strategic behavior of FOMC board members. Forecasts by governors, who always have voting rights, agree much with the previous consensus of FOMC members' forecasts. In contrast, non-governors, who rotate voting rights, exaggerate their forecasts: they aggressively deviate their forecasts from previous consensus. The former is *herding* behavior and the latter is *anti-herding* behavior. Our results imply that individual members behave strategically; governors want to present policy-consistent forecasts to the Congress and non-governors utilize their forecasts to influence decision making in FOMC.

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1. Introduction

This paper aims to test the rationality of inflation forecasts by Federal Open Market Committee (FOMC) board members. In particular, we focus on the strategic behavior of individual board members using panel data on inflation forecasts submitted by FOMC members prior to the semiannual monetary policy report to the Congress.

In this paper, we use two concepts for testing the rationality of forecasting: *anchoring* and *herding*. The seminal study on *anchoring* is [Tversky and Kahneman \(1974\)](#), who find the possibility that decision making is not perfectly rational, but rather heuristic. Decision makers tend to use a simple rule such as anchoring, where the decision is based on some *uninformative* targets.¹ [Tversky and Kahneman \(1974\)](#) report that answers to such a simple but unfamiliar question as “What percentage of African countries is in the United Nations?” can be heavily influenced by an *uninformative* number suggested by the *Wheel of Fortune*. However, very little work has been done to analyze the presence of anchoring effects in real economic situations. [Wansink et al. \(1998\)](#) study the psychological process behind the purchase quantity decision and [Beggs and Kathryn \(2009\)](#) find anchoring effects in art auctions. Using financial data, [Fujiwara et al. \(2013\)](#) and [Nakazono \(2012\)](#) report anchoring effects of market participants in Japan.

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¹ For the developments in the studies on anchoring, see [Chapman and Johnson \(2002\)](#).

Herding is closely related to anchoring.² According to Banerjee (1992), herding is defined as the behavior wherein “people will be doing what others are doing rather than using their information.” For example, some economic activities such as fertility decisions and voting are heavily influenced by what other people are doing. In such cases, people deem others’ decision making as *informative*, which contrasts with anti-herding to *uninformative* points. Banerjee (1992) and Zhang (1997) provide a theoretical framework for herding and point out that strong complementarity between each decision and asymmetric information can lead to herding. Recently, Park and Sabourian (2011) present a theoretical analysis on herding and contrarian behavior.³

There also exist many articles on projections by the Federal Reserve, but until very recently, the aggregate data on each FOMC member’s forecasts was only available for researchers. However, thanks to Romer (2010), who contributes to the compilation of individual forecasts semiannually made by each FOMC member from 1992, we are able to analyze the characteristics of these projections in light of heterogeneity among board members. Using these new, unique data, we examine the existence of any anchoring effect and rationality in the projections by individual FOMC members. Although the literature on testing the rationality of decision making, including forecasting, shows forecasters’ “bounded rationality,” early studies on forecasts by the Federal Reserve generally conclude rationality. For example, Romer and Romer (2000) and Sims (2002) examine the rationality of Federal Reserve forecasts in the “Green Book” prepared by the staff of the Board of Governors before each FOMC meeting, and conclude that the forecasts are rational.⁴

In this paper, we revisit rationality using a panel data set and find the following. First, rationality is rejected in the sense that forecasts by members are heavily dependent on previous own forecasts and last consensus made in FOMC. Individual members heavily rely on past forecasts when they submit their forecasts, while the average of projections made by FOMC members seems to be rational. Second, we reveal the strategic behavior of FOMC board members. Estimation results from using panel data suggest that forecasts by governors, who always have voting rights, agree much with the previous consensus of FOMC members’ forecasts. In contrast, non-governors exaggerate their forecasts: non-governors deviate their forecasts aggressively from the previous consensus particularly for the longer horizon. The former is *herding* behavior and the latter is *anti-herding* behavior. Our results imply that individual members behave strategically in the sense that governors want to present policy-consistent forecasts to the Congress and non-governors utilize their forecasts to influence decision making in FOMC.

This paper is structured as follows. In Section 2, we explain the data and estimation strategy. Section 3 provides the estimation results, and Section 4 discusses the possibility of improper rejection of rationality due to informational frictions. Section 5 concludes.

2. Data

The data we use are based on that submitted for the semiannual monetary policy report made to the Congress in January/February and June/July of each year, and that are now available for the period 1992–2001; the individual projections are open to the public after a lag of 10 years.⁵ Each member of FOMC makes macroeconomic forecasts containing end-of-year nominal and real GDP growth rate, inflation,⁶ and the unemployment rate, which are denoted as percent changes from the same quarter in the previous year.⁷ The board members make forecasts on nominal and real GDP, consumer price index, unemployment rate, and personal consumption expenditure regularly twice a year.

Forecasts made in January/February are the point forecasts for the current calendar year, while June/July sees two sets of forecasts being submitted: one set contains updated forecasts for the current calendar year and the other provides forecasts for the next calendar year. For simplicity, we refer to these projections as forecasts for the 12-month, 6-month, and 18-month horizons, respectively.

The data are vital because these represent the panel data of forecasts made by FOMC members, and allows analysts to examine individual members’ behavior. Because this dataset provides each member’s forecasts, one can identify members who made relatively higher forecasts of inflation rates, observe governors’ records of forecasts, and observe heterogeneity among members. In fact, there exist several empirical studies suggesting dissonance and strategic behavior among FOMC members. Tillmann (2011) and Banerghansa and McCracken (2009) find systematic differences in individual inflation

² For a comprehensive reference on modeling herding behavior, see Chamley (2003).

³ Many works study herding behavior in financial markets, particularly the forecasting behavior of analysts or professional forecasters. See, for example, De Bondt and Forbes (1999), Ehrbeck and Waldmann (1996), Fujiwara et al. (2013), Graham (1999), and Welch (2000).

⁴ Capistrán (2008) also concludes that a negative bias in the forecasts (systematic over-prediction) is rational if the central bank is cautious in the sense that inflation above the target is considered more costly than inflation below the target. This type of forecast behavior is called asymmetric loss. Empirical evidence on asymmetric loss has been found in inflation forecasts and in forecasts of other economic variables. See Capistrán (2008), Ito (1990), Elliott et al. (2008), and Patton and Timmermann (2007).

⁵ The data we use are available as “Projections for the Semiannual Monetary Policy Report to the Congress” in the Federal Reserve Bank of Philadelphia’s website: <http://www.philadelphiafed.org/research-and-data/real-time-center/monetary-policy-projections/>.

⁶ Forecasts of inflation rate are available for the period 1992–1999.

⁷ According to the Federal Reserve Bank of Philadelphia’s website, the data set will be updated annually and the projections do not include those of the Chairman because there is no record of those projections.

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