On the herding instinct of interest rate forecasters*

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First version received: June 1999/Final version received: February 2001

Abstract. It is not uncommon to observe the published forecasts of economic commentators closely bunched together over long periods of time. In our case, the phenomenon is observed for eight national panels of economists who report monthly forecasts. A framework is developed that conveniently nests within it several simple, yet plausible forecasting rules, and allows us to explore the extent of the clustering phenomenon.

Key words: Clustering of forecasts; forecast accuracy; panel data

JEL classification: C33, C53

1. Introduction

It is not uncommon to observe the published forecasts of economic commentators closely bunched together over long periods of time. For example, Zarnowitz (1979), and MacFarlane and Hawkins (1983), both found a strong tendency for individual forecasts to be more highly correlated with the mean forecast than with the actual outcome of the variable of interest. In our case, the phenomenon is observed for national panels of economists who report three-month-ahead forecasts of three month interest rates each month. This empirical regularity is the context within which we seek to analyse the behaviour of forecasters.

Data on panels of forecasts have previously been used to test theories of how expectations are formed. For example, Keane and Runkle (1990) and

* We acknowledge the financial assistance of the Australian Research Council. We would like to thank Graham Elliott, Brett Inder, and the editor and referee of this journal for their comments and suggestions. Sean Gleason provided excellent research assistance on this project. This project was conducted while Fiebig was affiliated to the University of Sydney.
MacDonald and Macmillan (1994) investigate the rationality of expectations. The procedure they use is indirect in that there is no need to isolate the actual process by which the expectations (or forecasts) are actually generated. Rather, they test whether forecasts and subsequent realisations satisfy various theoretical properties such as unbiasedness and efficiency. By comparison, this literature also includes examples where the testing proceeds through direct modelling of an hypothesised mechanism generating forecasts. One example is testing adaptive expectations such as in Figlewski and Wachtel (1981). Our contention is that there are insights to be gained by this direct approach. As such we concentrate on modelling the forecast mechanism and do not test the rationality of our panel of forecasters; this has been considered by Kelly (1998) using a related data set.

Another potential source of data is that obtained in an experimental setting. Hey (1994) recently used experimental methods to test alternative theories of expectations formation. Participants in the experiment were shown time series data and provided incentives to accurately predict the future values. In analysing the predictions of his experimental forecasters he found that he could provide a good explanation of the predictions being made by a simple model involving past values of the variable being predicted. This part of his work is similar in spirit to ours. The important distinctions are that the data sources are different and that his forecasters acted independently without knowledge of the forecasts of the other participants. Given our results, the issue of interdependence of forecasters in an experimental setting is one worth pursuing.

While forecasters may act independently, clustering of forecasts can still occur. As Zarnowitz and Lambris (1987) observe, forecasters “use in part the same public information and the same established techniques and relationships. The common elements induce some positive correlation across the resulting forecasts.” While the actual forecasting methods used by individuals are unknown to us, we have been able to successfully specify and estimate a regression model that adequately fits the observed time series of individual interest rate forecasts within and between countries. The chosen specification conveniently nests within it several simple, yet plausible forecasting rules, and allows us to explore the extent of the clustering phenomenon.

In our analysis, forecasters who are found to act independently, like Hey’s experimental forecasters, are referred to as ‘time series modellers’. They take little or no direct notice of the actions of other forecasters. In our modelling context, this situation occurs when the consensus mean is not an important determinant of an individual’s forecasts. But as has been emphasised by Banerjee (1992), the actions of others potentially convey useful information that a rational forecaster would use. Such individuals or ‘followers’ (since they follow the herd) are using the information contained in the consensus mean as part of their information set.

Herding can also occur when forecasters act strategically. It is reasonable to assume that forecasters (sometimes called managers) have objective functions that depend on factors other than forecast accuracy. For example, there is the safety in numbers argument presented by Palley (1995). There are incentives to report forecasts not too far from the expected range of the remainder of the panel. There is a fear of being alone, or more precisely, alone and wrong. Using ideas similar to the safety in numbers argument, Ehrbeck and Waldmann (1996) formalised what they termed “rational cheating”; that is, reporting biased predictions because forecasters are not only trying to predict the