

# **Belief changes and expectation heterogeneity in buy- and sell-side professionals in the Japanese stock market**

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## ***Abstract***

In contrast to the assumption of the traditional rational representative agent, several papers investigate survey data of professional forecasts on macroeconomic series, such as inflation and GDP, as well as financial series such as stock prices and foreign exchange rates, and find that the forecasts are heterogeneous. While Mankiw, Reis, and Wolfers (2003) suggest that “*disagreement may be a key to macroeconomic dynamics*”, several recent agent-based models demonstrate that heterogeneity drives observed features in reality that are still not explained well enough with traditional asset pricing models under efficient market and rational expectation hypotheses, such as fat tails of stock returns and non-zero trading volume. Several studies examine the determinants of expectation heterogeneity in inflation and GDP or foreign exchange rates, but recent empirical research has foundered for explaining what explains forecast heterogeneity in stock market professionals. This paper achieves this goal by using a monthly survey dataset distributed by QUICK Corporation, a Japanese financial information vendor in the Nikkei Group, on the Japanese Nikkei Stock Average.

We argue over why professionals’ expectations are heterogeneous by categorizing our sample into buy- and sell-side professionals, and find that the sources are attributed to the difference in the behavior of buy- and sell-side professionals in the following ways. First, sell-side professionals have a more optimistic view than buy-side professionals, suggesting that heterogeneity arises because different types of professionals exist in the same market. Second, heterogeneity arises because forecasters make different interpretations on the current state of the economy, although they share the same information. As Mankiw and Reis (2002) and Carroll (2003) suggest, a higher frequency of news arrivals, which we measure with higher volatility, causes professionals, who revise their information sets asynchronously, to

update them more frequently, making their expectations more heterogeneous. Volatility is the information commonly observed by buy- and sell-sides. But the response by buy-side and sell-side professionals to volatility is different in our sample, generating the heterogeneity of expectations.

Third, we show that buy-side forecasters refer to how sell-side professionals evaluate the market, and they take the information observed even from the several months ago. However, the sell-side does not refer to what the buy-side thinks on the future. This would be consistent with the reality that buy-side assessments are not available for the sell-side, whereas the sell-side sells their recommendations to the public. Our result also supports the empirical evidence, finding that sell-side analysts' recommendations are informative to the buy-side, e.g., Busse, Green, Jegadeesh (2010). The result implies that expectations are heterogeneous because different types of investors have different information sets for making their predictions.

### **Reference**

Busse, J., Green, C., Jegadeesh, N., 2010. Buy-side trades and sell-side recommendations: Interactions and information content. Working paper.

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