# FORECAST MANAGEMENT: MEASUREMENT AND MARKET LEARNING

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# Abstract

This dissertation studies the firm's forecast management behavior by taking into consideration the effect of market learning over time. Most research studies forecast management in a static setup, even though the forecast management behavior for a firm may depend on the extent of market learning over time. I find that the firm's forecast management behavior and the market reaction to forecast management when I take market learning into consideration differ from those in a static setup. This may occur because the market learns from a firm's history about its propensity to manage forecasts and earnings surprises are the result of the manager's forecast management. Although the market may treat a firm that manages its forecast downward for the first time as an honest one and respond positively to the earnings surprise, the market response may be less positive when a firm's earnings surprise is followed by a downward revision when the firm has done this several times in the last few years. Expecting that the market learns over time, firms will adjust their forecast management behavior over time as well. A rational firm will react to this market learning by not managing sequential forecasts.

Using forecast management measures defined below, I find evidence supporting the hypothesis that the market learns about a firm's forecast management behavior from the firm's history. Although the market revises expectations before the earnings announcement and responds positively to an earnings surprise after the earnings announcement for all firms, the revision of expectations and the responses are smaller the more frequently a firm manages forecasts downward. Moreover, as a response to market learning, firms that manage forecasts consecutively in previous periods are more likely to stop doing so in the current period.

In this dissertation, I employ several methods to find accurate measures of forecast management. Related prior research has been criticized for using a biased measure of forecast management: the consensus forecast revision. This measure contains three components: forecast management, analyst effect and new information. I develop empirical procedures to disaggregate these components. First, I control for analyst effect by explicitly estimating it. Second, I employ two methods to control and correct for the new information bias: adding a control for new information and an instrumental variables (IV) specification. These methods can mitigate the biases to a different degree and generate better estimates for the effects of forecast management on market reactions.

Statistical tests using these measures of forecast management generate results that are consistent with existing conjectures in the literature. First, forecast management is positively correlated with earnings surprises for firms failing to meet expectations, and is negatively correlated with earnings surprises for firms meeting or beating expectations. Second, a significant number of firms manage forecast downward to just meet or beat expectations. Third, firms managing forecasts downward are significantly more likely to meet or beat expectations. Besides these tests, I also compare my measures to the consensus forecast revision, the measure that is most often used in the literature. By estimating the effect of forecast management on the abnormal return in the prior earnings announcement period, the measure of market expectations, I find that the consensus forecast revision is a biased measure of forecast management. The effect of analysts tends to bias the estimated coefficients toward zero, and new information tends to overstate the market's reaction to forecast management.

I also conduct several robustness tests for both the measures of forecast management and the learning hypothesis. First, I employ an out-of-sample IV approach to minimize the likelihood that the generated measure is contaminated by the current year new information. Second, I employ the First Call management guidance data to derive alternative measures of forecast management. These alternative measures not only are highly correlated with the main measures introduced above, but also perform similarly. Third, in my test of the learning effects, I allow the effects to differ for profit and loss firms. The results show that most of my findings are robust for profit

and loss firms. Fourth, in the tests of the learning hypotheses, I allow factors such as growth potential, risk and size to have independent effect on the market response. These additional tests support my main learning hypothesis.

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