When is Managers' Earnings Guidance Most Influential?

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ABSTRACT: This paper investigates whether managers have varying degrees of influence when they provide earnings guidance. The findings suggest that analysts are more skeptical of managers’ earnings guidance when it is less likely to be reliable. The findings also suggest that exhibiting greater skepticism in the face of managers’ earnings guidance is detrimental to analysts from an earnings-forecasting standpoint, but this effect is isolated to firms with poorer-quality analyst coverage. Lastly, the findings provide evidence that investors initially overweight managers’ earnings guidance versus analyst earnings estimates with this effect being more pronounced for firms having greater visibility in the capital markets.

Key Words: Management earnings forecasts, Analyst earnings estimates, Stock prices, Managerial influence

Data Availability: Management earnings forecasts as well as analyst earnings estimates used in this paper were provided by First Call Corporation. All other data are available from public sources.
I. Introduction

The practice of managers providing guidance to the capital markets about future performance has become widespread. For example, a 1998 survey by the National Investor Relations Institute found that 79 percent of 2,600 public companies always or usually comment on analyst earnings estimates (Schonfeld 1998). Guidance can be carried out through a variety of communication channels, including press releases, conference calls, or informal one-on-one conversations between managers and analysts. The nature of information provided via guidance can also vary widely. Such information might consist of specific numerical predictions or vague qualitative disclosures.


Overall, existing evidence indicates that capital market participants consider various types of guidance to be informative. However, relatively little work has been done to date that tests if guidance has systematically varying degrees of influence. This paper investigates whether characteristics of guidance as well as characteristics of the environment in which guidance is provided have an impact on how it is perceived. Using a sample of 969 management earnings forecasts issued between January 1, 1995 and
December 31, 1997, this paper addresses three questions: 1.) What factors affect how much analysts react to information contained in managers’ earnings guidance?, 2.) Does the extent to which analysts heed managers’ earnings guidance affect the accuracy of their post-guidance earnings estimates?, and 3.) How do investors reconcile differences in opinion between managers and analysts about upcoming earnings?

The findings suggest that analysts exhibit greater skepticism towards managers’ earnings guidance when it is less likely to be reliable. Management earnings forecasts produce smaller revisions in analyst earnings estimates for a given level of news when issued over longer horizons by firms with lower analyst following, greater operational uncertainty, and managers who aggressively bias their predictions relative to actual earnings. Analysts are more skeptical of management earnings forecasts that contain good news, which is consistent with the findings in Hassell et al. (1988). Increased usefulness of previously provided guidance results in analysts more fully adopting the amounts predicted in management earnings forecasts, but this association is not statistically significant as shown in Williams (1996).

The findings also suggest that exhibiting greater skepticism in the face of managers’ earnings guidance is detrimental to analysts from an earnings-forecasting standpoint. The less analysts revise their earnings estimates for a given level of management earnings forecast news, the worse is the accuracy of their post-guidance earnings estimates versus managers’ predictions. However, once firms lacking timely analyst coverage are excluded from the analysis, this association disappears. Thus, skepticism towards managers’ earnings guidance on the part of analysts seems to be appropriately characterized as a “healthy disagreement” in most instances.
Lastly, the findings provide evidence on how investors reconcile differences in opinion between analysts and managers about upcoming earnings. It appears that investors initially overweight managers’ predictions relative to post-guidance analyst earnings estimates. Controlling for the news content of management earnings forecasts, differences between managers’ predictions and post-guidance analyst earnings estimates are negatively associated with subsequent abnormal returns. This association is particularly strong for firms where managers are likely to possess a greater amount of visibility in the capital markets.

The next section describes the sample selection procedure and provides descriptive statistics. Section 3 discusses the research design and empirical findings. Section 4 offers some concluding thoughts.

II. Sample Selection and Descriptive Statistics

The management earnings forecast sample used in this paper is constructed from a database of earnings pre-announcements maintained by First Call Corporation. An earnings pre-announcement is defined as any managerial statement about earnings that is disclosed before the release of actual earnings for the corresponding fiscal period. This paper analyzes only pre-announcements made prior to the fiscal period end. Such pre-announcements correspond to the most common definition of a management earnings forecast in the accounting literature.

The sample of management earnings forecasts consists of 969 observations. Table 1 describes the construction of this sample. The First Call database provides broad coverage of earnings pre-announcements beginning in 1995. To ensure the availability of stock return and accounting data, December 31, 1997 is chosen as the sample period.
cutoff date. Over the three-year period between 1995 and 1997, only those management earnings forecasts that consist of point- or range-format predictions are examined. The midpoint of the upper and lower bounds of range-format predictions is used as a measure of managers’ earnings expectations. Other forecast formats, such as minimum and maximum predictions, are excluded from the analysis out of concern that they do not provide an unbiased measure of managers’ earnings expectations. Long-term management earnings forecasts (i.e., those issued more than one fiscal year in advance) are also omitted from the sample. These observations are excluded because very few analysts provide earnings estimates so far in advance of fiscal period ends, which makes it difficult to get a precise measure of analysts’ earnings expectations in these instances.

Table 1

The resulting sample of management earnings forecasts from First Call that meet these criteria totals 1,925 observations. Of these, 353 observations are dropped because analyst earnings estimates are not available for them on First Call. An additional 330 observations are dropped because they lack the appropriate CRSP and/or COMPUSTAT data. Lastly, 273 observations are removed from the sample because they represent confirmatory management earnings forecasts, situations where earnings amounts predicted by managers equal prevailing consensus analyst earnings estimates. This final data restriction is necessary in order to have well-defined values for all variables used in the analysis.

Table 2 provides information on the distributional characteristics of the management earnings forecast sample. Panel A describes the yearly distribution of the sample management earnings forecasts. The number of observations per year remains relatively constant across the sample period. Panel B of table 2 provides information on
the cross-sectional distribution of the sample management earnings forecasts. The average number of observations per sample firm is 1.51 while the median is one. This frequency of management earnings forecast issuance is consistent with prior work showing that firms, at least historically, have not adopted regular policies of providing forward-looking information about earnings in either point- or range-format predictions (Kile et al. 1998).

Table 2

Table 3 provides descriptive statistics on various characteristics of the sample firms as well as the sample management earnings forecasts. SURPRISE measures the difference between the amount predicted in the management earnings forecast and the prevailing consensus analyst earnings estimate at the time of the prediction. On average, the sample management earnings forecasts convey bad news as indicated by the negative mean and median of SURPRISE. The mean of this variable is -$0.081 while its median is -$0.040. The fact that the sample management earnings forecasts convey bad news, on average, is confirmed by the negative mean and median of MFCAR. This variable, which measures the three-trading-day cumulative abnormal return around a management earnings forecast, has a mean of -6.08 percent and a median of -2.86 percent. These findings on the news content of management earnings forecasts are consistent with other recent studies of these disclosures (Baginski et al. 1993, Skinner 1994, Kasznik and Lev 1995, Kile et al. 1998).

The variable REVISE measures how much analysts revise their earnings estimates in response to management earnings forecasts. The mean of this variable is -$0.084 while its median is -$0.040. These values are very similar to those for SURPRISE, which suggests that analysts revise their earnings estimates close to the amounts predicted in
management earnings forecasts. This inference is supported by values for the variable
\textit{DIFF}. This variable measures how closely post-guidance analyst earnings estimates
resemble managers’ predictions.\(^1\) This variable has a mean of $0.003$ and median of
zero, indicating that analysts, on average, adjust their earnings estimates to match exactly
the amounts predicted in management earnings forecasts. However, the standard
deviation of $0.079$ for \textit{DIFF} suggests that there is variability in how closely analysts
track managers’ predictions.

\textbf{Table 3}

The means and medians of \textit{ABSMERR}, \textit{ABSAERR}, and \textit{ACCURACY} suggest that
managers and analysts at the sample firms predict actual earnings with essentially equal
ability. \textit{ABSMERR}, which measures the absolute management forecast error, and
\textit{ABSAERR}, which measures the post-guidance absolute analyst forecast error, have
approximately identical means and medians. \textit{ACCURACY}, calculated as the difference
between \textit{ABSMERR} and \textit{ABSAERR}, has a mean of -$0.003$ and a median of zero. The
medians of \textit{SIGNMERR} and \textit{SIGNAERR}, the signed equivalents of \textit{ABSMERR} and
\textit{ABSAERR}, both equal zero, which indicates that managers and analysts at the sample
firms are making unbiased earnings forecasts.

The median market value of equity (\textit{MKTVAL}) and share price (\textit{PRICE}) of the
sample firms is $724$ million and $26.00$ while their median book-to-market ratio
(\textit{BMRATIO}) is $0.276$. Six analysts maintain coverage (\textit{ANALYSTS}) on the median sample

\(^1\)The first analyst earnings estimate revision after the management earnings forecast is chosen to calculate
this variable to reduce any effect of “stale” analyst earnings estimates on the findings. If no revisions are
made within one month of the management earnings forecast, \textit{DIFF} is calculated using the prevailing
consensus analyst EPS estimate. Different measures of post-guidance analyst earnings estimates are also
examined. These include an average of the first three individual analyst earnings estimate revisions as well
as the consensus analyst EPS estimate at the end of the first month after the management earnings forecast.
These measures produce qualitatively similar findings to those reported.
firm. Additional descriptive variables calculated for the sample firms include
REPUTATION, RETVOL, DISPERSION, and FPCAR. REPUTATION proxies for the
usefulness of managers’ previously provided guidance. This variable is calculated as in
Williams (1996) for sample management earnings forecasts from 1996 and 1997 that
occur within one fiscal year of a previous guidance event. REPUTATION equals the
prior management earnings forecast’s improvement in absolute forecast accuracy over the
prevailing consensus analyst earnings estimate.\footnote{Only 1996 and 1997 observations are used because prior years’ data is necessary to calculate this variable.} The mean of REPUTATION is $0.017, which suggests that managers’ predictions in their prior guidance were, on average, approximately two cents more accurate than prevailing consensus analyst earnings estimates.\footnote{This variable is set equal to zero for sample management earnings forecasts without previously provided guidance. Approximately 45 percent of the observations in 1996 and 1997 occur within one fiscal year of a previous guidance event.}

Providing a measure of variability in the sample firms’ performance, RETVOL equals the standard deviation of daily stock returns over approximately one fiscal quarter before the management earnings forecast. The mean of this variable is 2.63 percent while its median is 2.35 percent. DISPERSION is designed to proxy for uncertainty among analysts at the sample firms. This variable equals the standard deviation of individual analyst estimates that make up the First Call consensus at the time of the management earnings forecast for the fiscal period to which the prediction applies. RETVOL has a mean of $0.048 and a median of $0.030. FPCAR measures the cumulative abnormal return beginning one trading day after the post-guidance analyst earnings estimate is made and ending one trading day after the earnings announcement for the fiscal period to which the management earnings forecast applies. This variable has a mean of only -0.33
percent and a median of -0.76 percent, but it exhibits large variation. It has an interquartile range exceeding 18 percent.

Several other variables in table 3 provide information on the sample management earnings forecasts. *HORIZON* is the number of trading days between the management earnings forecast and the end of the fiscal period to which the prediction applies. The median of this variable is 25 trading days, indicating that management earnings forecasts tend to take place approximately mid-way through fiscal quarters. The means of several dummy variables categorize the sample management earnings forecasts along various dimensions. Approximately 55 percent of the sample management earnings forecasts consist of range-format predictions while 76 percent contain a negative surprise relative to prevailing consensus analyst earnings estimates. The mean of *D_QTR* is 0.60, indicating that 60 percent of the sample involves the prediction of a quarterly earnings number. Lastly, *D_SPEC* measures the fraction of the sample firms that incurred some type of special charge in earnings during any of the four fiscal quarters before the one containing the management earnings forecast. This fraction is 44 percent.

### III. Research Design and Empirical Findings

**Determinants of managers’ influence on analyst earnings estimates**

Verrecchia (1983) proposes a model of voluntary disclosure in which a primary factor determining the weight placed on some signal about the future payoff to a risky asset is the precision of the signal. The model in Verrecchia (1983) serves as the motivation for the analysis in this paper. In particular, we argue that management earnings forecasts can be thought of as signals about upcoming earnings whose influence depends upon how reliable they are perceived to be. We test this argument by examining
whether revisions in analyst earnings estimates in response to information contained in
management earnings forecasts are conditioned on empirical proxies for the likely
reliability of managers’ predictions. The analysis focuses on characteristics of
management earnings forecasts as well as characteristics of the environment in which
such predictions are provided. The model takes the following form:

\[
RATIO = \alpha + \beta_1 \ln(HORIZON) + \beta_2 D\_SPEC + \beta_3 RETVOL \\
+ \beta_4 DISPERSION + \beta_5 \ln(ANALYSTS) + \beta_6 BMRATIO \\
+ \beta_7 REPUTATION + \beta_8 SURPRISE + \beta_9 MBIAS \\
+ \beta_{10} D\_RANGE + \beta_{11} D\_QTR + \beta_{12} PRECAR + \beta_{13} POSTCAR + \epsilon 
\] (1)

where:

\( RATIO \) equals \( REVISE \) divided by \( SURPRISE \).

\( MBIAS \) equals \( SIGNMERR \) if \( SURPRISE \) is greater than zero and \( SIGNMERR \times -1 \) if \( SURPRISE \) is less than zero.

\( PRECAR \) is the cumulative abnormal return beginning one trading day after the
date associated with the prevailing consensus analyst earnings estimate for the
fiscal period in question and ending two trading days before the management
earnings forecast.

\( POSTCAR \) is the cumulative abnormal return beginning two trading days after the
management earnings forecast and ending one trading day before the first
subsequent analyst earnings estimate revision for the fiscal period in question.
All other variables are defined as in table 3.⁴

*RATIO* is designed to capture how much of the information contained in management earnings forecasts gets reflected in post-guidance analyst earnings estimates. The cumulative distribution of this variable is described in figure 1. As evidenced in this figure, the median value of *RATIO* is one, which indicates that analysts, on average, exactly adopt the numbers provided in management earnings forecasts. The median value of one for this variable implies that analysts are as likely to over-react versus under-react to managers’ earnings guidance. Except for a few exceptions, *RATIO* is essentially uniformly distributed. Relatively large numbers of observations are clustered at the values of zero and one. In addition, approximately seven percent of the sample has values of either less than zero or greater than two. Because some of the observations in the tails of the distribution take on extreme values, *RATIO* is transformed into a percentile rank for the purpose of the regression described in eq. (1) and all subsequent analyses.⁵

The first set of variables included in eq. (1) is designed to proxy for the uncertainty of the environment in which managers’ earnings guidance is provided. These variables include \( \ln(HORIZON) \), \( D_{SPEC} \), \( RETVOL \), \( DISPERSION \), \( BMRATIO \), \( \ln(ANALYSTS) \), and \( \text{REPUTATION} \).⁶ As the length of time increases between when managers provide guidance and actual earnings are realized, the chance for forecasting errors by managers increases, thereby rendering their predictions less reliable. This

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⁴To control for scale differences across observations, *MBIAS* and *SURPRISE* are measured as a percentage of *PRICE*. Similarly, *REPUTATION* is measured as a percentage of the forecasting firm’s stock price just prior to the previously issued management earnings forecast.

⁵Other treatments of outliers in *RATIO* were also examined. One approach involved windsorizing observations less than zero or greater than two. Another approach involved deleting these observations from the sample. These alternative approaches produced qualitatively similar findings to those reported.

⁶The logarithmic specifications of *HORIZON* and *ANALYSTS* are designed to limit the effect of large
argument implies a negative coefficient on $\ln(HORIZON)$. Analogous arguments can also be made for $D\_SPEC$, $RETVOL$, $DISPERSION$, and $BMRATIO$. Greater dispersion in analyst earnings estimates and higher recent stock price volatility are both likely indicative of greater uncertainty about a firm’s prospects. Similarly, firms who have recently included a special item in earnings, such as a restructuring reserve, are likely experiencing some type of large-scale change in their operations. $BMRATIO$, included in eq. (1) to capture a firm’s growth prospects, is also likely correlated with uncertainty.\footnote{It has been argued that lower values of this variable proxy for higher growth prospects (Collins and

To the extent that it is more prone to error, managers’ earnings guidance provided when there is greater uncertainty is predicted to elicit greater skepticism on the part of analysts. This would result in negative coefficients on $D\_SPEC$, $RETVOL$, and $DISPERSION$ and a positive coefficient on $BMRATIO$.

Although greater uncertainty is likely to make managers’ earnings guidance less reliable, it is in these exact circumstances where analysts might also have relatively low confidence in their own earnings estimates. All else equal, guidance provided by managers should have relatively greater influence when analysts have relatively low confidence in their own earnings estimates. This implies a positive association between $RATIO$ and $\ln(HORIZON)$, $D\_SPEC$, $RETVOL$, and $DISPERSION$ and a negative association between this variable and $BMRATIO$. Also, because managers can observe the forecasting environment before deciding whether or not to make a prediction, those that chose to do so are presumably the ones with the most confidence in their estimates. Because of this self-selection, there could be no observable association between the influence of managers’ earnings guidance and the uncertainty of the environment in outliers on the regression findings.
which it is provided. The signs on $ln(HORIZON)$, $D_{SPEC}$, $RETVOL$, $DISPERSION$, and $BMRATIO$ in eq. (1) is ultimately an empirical question.

The association between $RATIO$ and $ln(ANALYSTS)$ is subject to a similar caveat. The amount of information being produced about a firm likely increases with analyst following. For firms with greater amounts of available information, analysts will have more confidence in their own earnings estimates, thereby reducing the influence of managers’ earnings guidance. This argument implies a negative coefficient on $ln(ANALYSTS)$. Alternatively, large firms with extensive analyst coverage are likely to suffer the most significant reputation costs for misleading earnings guidance and, therefore, have the greatest incentive to be accurate. Greater reliability on the part of managers when analyst following is relatively high would result in a positive coefficient on $ln(ANALYSTS)$.

$REPUTATION$ is the final variable in eq. (1) that describes a characteristic of the environment in which managers’ earnings guidance is provided. Based on the findings in Williams (1996), the sign on this variable is predicted to be positive. The argument underlying this prediction is that managers’ are more effective at influencing analyst earnings estimates as the accuracy of their previously provided guidance improves.

The next set of variables included in eq. (1) pertains to characteristics of managers’ earnings guidance. The first of these variables, $SURPRISE$, has been identified by prior research to be associated with how closely analysts revise their earnings estimates to match the amounts predicted in managers’ earnings guidance. Hassell et al. (1988) find that revisions in analyst earnings estimates around management earnings forecasts are smaller in absolute magnitude when the information contained in

Kothari 1989).
the prediction consists of bad news. Thus, the coefficient on $SURPRISE$ is predicted to be negative.

The next variable in eq. (1), $MBIAS$, is included in the regression specification to take into account any potential bias that might be introduced into managers’ earnings guidance. Matsumoto (1999) presents evidence that is consistent with managers guiding analyst earnings estimates in order to produce a positive surprise when actual earnings are announced. $MBIAS$ is designed to capture how cautiously managers guide analysts away from their prevailing consensus earnings estimates and toward actual earnings. For example, if prevailing analyst EPS estimates are $1.00$, the amount predicted in a management earnings forecast is $2.00$, and actual earnings turn out to be $2.50$, $MBIAS$ would equal $0.50=$2.50-$2.00. Similarly, if prevailing analyst EPS estimates are $1.00$, the amount predicted in a management earnings forecast is $0.00$, and actual earnings turn out to be -$0.50, $MBIAS$ would also equal $0.50=(-$0.50-$0.00)*-1.

Hassell et al. (1988) find that analysts are able to distinguish between management earnings forecasts that are ex-post more accurate and those that are ex-post less accurate than their own prevailing consensus earnings estimates. $MBIAS$ is designed to test a similar concept. Namely, this ex-post measure is included in eq. (1) to proxy for analysts’ ex-ante expectations regarding differences in managers’ tendencies to bias their guidance relative to actual earnings. If analysts are able to anticipate when managers are likely to bias their earnings guidance, the coefficient on $MBIAS$ is predicted to be positive. A positive coefficient implies that analysts more fully adopt managers’ earnings guidance when such guidance provides a more cautious adjustment away from prevailing consensus analyst earnings estimates and towards actual earnings.
$D_{\text{RANGE}}$ is included in eq. (1) to control for differences in the precision of earnings information disclosed by managers. Baginski and Hassell (1997) and Bamber and Cheon (1998) find that managers choose to disclose less precise earnings forecasts in situations where their forecasting confidence is lower. If analysts regard range-format predictions as less reliable than those consisting of point estimates, a negative association should result between this variable and $RATIO$. However, a positive association between $D_{\text{RANGE}}$ and $RATIO$ is also possible if greater uncertainty reduces analysts’ confidence in their own earnings estimates, thereby increasing the usefulness of managers’ earnings guidance. Again, the sign on this variable in eq. (1) is an empirical question.

Lastly, several control variables are included in eq. (1). $D_{\text{QTR}}$ is included in the regression specification to ensure that any findings are not driven by an incomplete analysis of quarterly versus annual forecasts. The purpose of $PRECAR$ is to control for information that becomes known between the dates of the pre-guidance prevailing consensus analyst earnings estimate and the management earnings forecast. The purpose of $POSTCAR$ is to control for information that is made public after the management earnings forecast but before analysts revise their earnings estimates. We include these two stock return variables to alleviate concerns that our findings could be due to analysts reacting to information other than that contained in the management earnings forecasts.

Table 4 reports the findings from the regression specified in eq. (1) for the entire sample of management earnings forecasts as well as different sub-samples. The first column of table 4 describes the regression results for eq. (1) using all sample management earnings forecasts. The second column of table 4 presents the findings from the regression specified in eq. (1) on a sub-sample that excludes observations where analysts fail to update their earnings estimates within one month of managers’ earnings.
guidance. We re-estimate the findings on this sub-sample because it is impossible for us to distinguish between when analysts consciously do not react to managers’ earnings guidance and when they plan to make a revision but the revision has not yet occurred or First Call has not yet recorded it. This restriction results in a loss of 126 observations.

The third column of table 4 includes \textit{REPUTATION} as an independent variable. Since calculation of \textit{REPUTATION} requires prior years’ data, only observations from 1996 and 1997 are included in this regression, reducing the sample size to 699 observations. Lastly, the final column in table 4 contains the regression findings for only those observations where analysts explicitly revise their earnings estimates and for which the variable \textit{REPUTATION} can be calculated.

Overall, the findings in table 4 suggest that analysts exhibit greater skepticism towards managers’ earnings guidance when it is less likely to be reliable. With respect to the variables that describe the environment of forecasting firms, the coefficient on $\ln(HORIZON)$ is negative and significant in all four regressions at the 0.01 level. This finding is consistent with analysts being more skeptical of information contained in management earnings forecasts issued further in advance of the fiscal period end, presumably when there is greater potential for managerial forecasting error and less information available for analysts to corroborate managers’ predictions.

Another characteristic of forecasting firms that appears to impact the influence of managers’ earnings guidance is the existence of recent special items in earnings. The coefficients on $D_{SPEC}$ range from -0.0337 to -0.0617 and are statistically significant at or beyond the 0.05 level in all four regressions. The magnitude of the coefficients across all four columns in table 4 indicates that the occurrence of prior-period special items reduces how closely analysts adopt managers’ earnings guidance by 3-6 percent.
Consistent with Gilson (1999), this finding suggests that managers experience greater difficulty in guiding analyst earnings estimates just after their firms have undergone significant changes in operations like a restructuring.

The coefficient on $\ln(\text{ANALYSTS})$ is negative and statistically significant at the 0.01 level in the full-sample regression. These results are described in column one of table 4. This association also holds in the third column of table 4 where observations from 1995 are excluded. A negative coefficient on $\ln(\text{ANALYSTS})$ in these two regressions indicates that analysts revise their earnings estimates by more in response to information contained in management earnings forecasts at firms with more extensive analyst coverage.\(^8\) However, this variable is not significant in the second and fourth columns of table 4. These columns contain regression results where observations without analyst earnings estimate revisions have been removed. A possible explanation for this finding is that firms where analysts do not respond quickly to managers’ earnings guidance are likely to be firms followed by fewer analysts. Therefore, removing observations with unresponsive analysts has the effect of removing observations with low analyst following, which reduces the dispersion in $\ln(\text{ANALYSTS})$ and increases the difficulty of finding an association between this variable and $RATIO$.

The coefficients on the variables $\text{RETVOL}$, $\text{DISPERSION}$, $\text{BMRATIO}$, and $\text{REPUTATION}$ are not statistically significant at conventional levels for any of the regressions described in table 4. Despite lacking statistical significance, the coefficients on $\text{RETVOL}$ in all four regressions have a negative sign, which is weakly suggestive of

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\(^8\)Market value of equity is also used as a proxy for firm size and produces qualitatively similar findings to those reported. If both analyst following and market value are included in the same regression specification, both variables remain negative but neither is statistically significant. This is likely due to the 0.76 correlation between the two variables.
recent stock price volatility at forecasting firms resulting in analysts regarding managers’ earnings guidance with greater skepticism. The statistical insignificance on the coefficients for DISPERISON indicate that the standard deviation of individual analyst earnings estimates does not help explain analyst skepticism towards managers’ earnings guidance after controlling for other aspects of uncertainty at forecasting firms. A similar argument can be made for BMRATIO. Growth options at forecasting firms do not appear to explain variation in managers’ influence on analyst earnings estimates. Moreover, no support is found for the finding in Williams (1996) that analysts rely on the usefulness of previously provided guidance in revising their earnings estimates around a management earnings forecast. The sign on the coefficient for REPUTATION is positive, as predicted, in both regressions that contain this variable, but it is not statistically significant at conventional levels.\(^9\)

With respect to variables that describe characteristics of management earnings forecasts, the coefficients on SURPRISE are negative in all four regressions described in table 4. A negative coefficient on this variable is consistent with the findings in Hassell et al. (1988) and indicates that analysts revise their earnings estimates closer to managers’ earnings guidance when such predictions contain bad news. SURPRISE is statistically significant at the 0.01 level in the first and third columns of table 4, where both regressions include observations with unresponsive analysts. Once these observations are removed, the statistical significance of this variable declines somewhat.\(^{10}\) Thus, it

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\(^9\)Further attempts were made to replicate the findings in Williams (1996) without success. These included removing all other independent variables from the regressions containing REPUTATION and only including observations in the regression with previously provided guidance. These changes were made to more closely replicate the empirical design in Williams (1996). Time period differences between the two samples remains as a possible explanation for the discrepancy between the two sets of findings.

\(^{10}\)If one-tailed tests of significance are used because of the unambiguous directional prediction for this variable, SURPRISE is statistically significant at conventional levels in all four regression in table 4.
appears that the strength of the association between analyst earnings estimate revisions around management earnings forecasts and the news content of these predictions is partially driven by the lack of timely analyst coverage at forecasting firms.

The variable \( MBIAS \), designed to take into account potential bias in managers’ earnings guidance, has coefficients that range in value from 0.0556 to 0.0876 and that are statistically significant at the 0.01 level in all four regression described in table 4. The positive sign of the coefficients for this variable indicates that analysts are more likely to adopt managers’ earnings guidance that ex-post provides a relatively cautious adjustment away from prevailing consensus analyst earnings estimates and towards actual earnings. Thus, it appears that analysts are able to at least partially anticipate forecasting biases in managers’ earnings guidance and adjust for it in their post-guidance earnings estimates. This finding is similar in spirit to one in Hassell et al. (1988) in which analysts are shown to distinguish between management earnings forecasts that are ex-post more accurate and those that are ex-post less accurate than their prevailing consensus earnings estimates.

Table 4

The coefficients on \( D\_RANGE \) are positive and significant in all four regressions described in table 4. These coefficients vary between 0.0641 and 0.1004, indicating that values of \( RATIO \) are between 6-10 percent higher for management earnings forecasts that consist of range- versus point-format predictions. Higher values of \( RATIO \) imply that analysts are less skeptical of range-format predictions. This finding suggests that although previous research has found that range-format predictions are issued at times of greater uncertainty, analysts do not appear to find them less reliable than point-format predictions. One explanation for this finding is that the times when managers choose to make range-format predictions are also the times when analysts are less certain about
their own earnings estimates, thereby increasing the usefulness of any signal from managers. Another explanation for this finding is that analysts do not regard the midpoint of range-format predictions to be an unbiased measure of managerial earnings expectations. Instead, the number towards which analysts gravitate is slightly higher than the midpoint.

The coefficients for the control variables in eq. (1), $D_{QTR}$, $PRECAR$, and $POSTCAR$, are statistically insignificant in all four regressions described in table 4. Analysts do not appear to revise their earnings estimates differently when management earnings forecasts pertain to fiscal years versus quarters. In addition, the statistical insignificance of the coefficients on $PRECAR$ and $POSTCAR$ suggest that any interim news disclosed between the dates when the management earnings forecast and pre-and post-guidance analyst earnings estimates are made is not associated with $RATIO$.

**Forecasting-accuracy impact of analyst skepticism towards managers’ earnings guidance**

The findings from the previous section reveal that managers possess varying degrees of influence with analysts when providing earnings guidance. The analysis in this section is concerned with determining whether analysts pay less attention to management earnings forecasts in situations where these predictions turn out to be relatively less informative or whether analysts end up ignoring what proves to be useful information from managers. To address this issue, we construct a measure of relative forecast accuracy ($ACCURACY$) that compares the accuracy of managers’ earnings guidance to post-guidance analyst earnings estimates. Next, we examine the association between $ACCURACY$ and $RATIO$, our measure of how fully analysts adopt the amounts predicted in management earnings forecasts. The model takes the following form:
\[ ACCURACY = \alpha + \beta RATIO + \varepsilon \]  \hspace{1cm} (2)

where:

\textit{ACCURACY} and \textit{RATIO} are defined as in table 3 and figure 1.\textsuperscript{11}

\textit{ACCURACY} increases as the forecasting error in post-guidance analyst earnings estimates declines versus managers’ predictions. Thus, a positive coefficient on \textit{RATIO} would indicate that more skeptical analysts are less accurate than they could have been if they had fully adopted the information contained in management earnings forecasts.

The first column of table 5 shows the full-sample findings for the regression described in eq. (2). The coefficient on \textit{RATIO} equals 0.1129 and is statistically significant at the 0.01 level, indicating that when analysts more fully embrace managers’ earnings guidance, the accuracy of their post-guidance earnings estimates increases relative to managers’ predictions. The second column of table 5 re-examines the association between \textit{ACCURACY} and \textit{RATIO} after excluding those observations from the full sample where no analysts revise their earnings estimates within one month of the management earnings forecast. The coefficient on \textit{RATIO} is insignificantly different from zero in this regression, which suggests that the full-sample finding in column one is primarily driven by analysts who fail to revise their earnings estimates after a management earnings forecast.

**Table 5**

Evidence from previous studies suggests that many characteristics of a firm’s information environment vary with the number of analysts following a firm (Bhushan

\textsuperscript{11}To control for scale differences across observations, \textit{ACCURACY} is measured as a percentage of \textit{PRICE}. for all regressions whose results are described in table 5.
1989, Lang and Lundholm 1996, Walther 1997). As such, the regression whose results are described in column three of table 5 examines the how the association between ACCURACY and RATIO varies with the level of analyst following. The regression takes the following form:

\[ \text{ACCURACY} = \alpha + \beta_1 \text{RATIO} + \beta_2 \text{D}_\text{LOW} + \beta_3 \text{RATIO} \times \text{D}_\text{LOW} + \epsilon \]  

(3)

where:

\( \text{D}_\text{LOW} \) takes on the value of one (zero otherwise) if \( \text{ANALYSTS} \) has a value less than six.

All other variables are defined as in table 3 or figure 1.

A significant coefficient on the interaction variable in eq. (3) would indicate that the association between ACCURACY and RATIO is influenced by the level of analyst following at forecasting firms. Using only the sub-sample of observations with responsive analysts, the regression results shown in the third column of table 5 indicate that the coefficient on \( \text{RATIO} \times \text{D}_\text{LOW} \) equals 0.1543 and is statistically significant at the 0.10 level. A positive sign on this coefficient suggests that the positive association between how fully analysts adopt managers’ earnings guidance and the relative accuracy of post-guidance analyst earnings estimates versus managers’ predictions is more pronounced in firms with lower levels of analyst following.\(^{12}\)

The coefficient on \( \text{RATIO} \) in this regression is not statistically different from zero, suggesting that skepticism towards managers’ earnings guidance on the part of analysts in firms with higher analyst following does not affect their earnings-forecasting accuracy.

\(^{12}\)If the regression described in eq. (3) is estimated using the entire sample of management earnings forecasts, the coefficient on \( \text{RATIO} \times \text{D}_\text{LOW} \) is positive and significant at the 0.01 level.
relative to that of managers. Lastly, the coefficient on $D_{LOW}$ is negative and statistically significant at the 0.09 level. A negative coefficient on $D_{LOW}$ indicates that analysts at more widely followed firms have unconditionally more accurate post-guidance earnings estimates versus managers’ predictions. Possible explanations for this last finding include greater competition among analysts at firms with higher levels of coverage or higher quality analysts choosing to cover firms that attract greater attention in the capital markets.

Relative influence of managers versus analysts on investors’ earnings expectations

The findings from the two previous sections reveal differences in managers’ ability to influence analysts’ earnings estimates and that such differences have implications for the relative forecasting accuracy of managers versus analysts. The final part of our analysis involves examining how investors reconcile differences between managers’ earnings guidance and post-guidance analyst earnings estimates.

Prior research has shown that investors find management earnings forecasts to be informative (Patell 1976, Waymire 1984, Baginski et al. 1993, Lev and Penman 1990, Skinner 1994, Kasznik and Lev 1995). In addition, other research has documented significant stock price reactions to both analyst earnings estimate revisions as well as their stock recommendations (Givoly and Lakonishok 1979, Lys and Sohn 1990, Beneish 1991, Francis and Soffer 1997). However, no research of which we are aware has attempted to assess how investors reconcile signals from managers and analysts about upcoming earnings when they differ. Thus, we attempt to bring together these two lines of research by providing evidence on investors’ reaction to the joint event of managers providing earnings guidance and analysts responding to it.
Because the amounts predicted in managers’ earnings guidance as well as analyst earnings estimates are observable by investors, efficient markets would dictate that the implications of a divergence in these two sources of information would be correctly and quickly impounded into stock prices. Alternatively, the divergence in beliefs between managers and analysts might result in confusion among investors, causing them to fixate initially, perhaps incorrectly so, on either one of these two different predictions about upcoming earnings. Whether either of these scenarios is an accurate description of investor behavior is ultimately an empirical question.

In an attempt to provide empirical evidence on this issue, we test whether differences between managers’ predictions and post-guidance analyst earnings estimates are associated with subsequent abnormal returns. The regression model takes the following form:

\[ FPCAR = \alpha + \beta_1 \text{DIFF} + \beta_2 \text{SURPRISE} + \varepsilon \]  

(4)

where:

- \( FPCAR \) measures the cumulative abnormal return beginning one trading day after the post-guidance analyst earnings estimate is made and ending one trading day after the earnings announcement for the fiscal period to which the management earnings forecast applies.

- All other variables are defined as in table 3.\(^{13}\)

Efficient markets would predict that the coefficient on \( \text{DIFF} \) should not be significantly different from zero, as future abnormal stock returns should not be

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\(^{13}\)To control for scale differences across observations, \( \text{DIFF} \) and \( \text{SURPRISE} \) are measured as a percentage of \( \text{PRICE} \) for all regressions whose results are described in table 6.
predictable from publicly available information. Alternatively, if investors do not properly interpret DIFF when setting stock prices but instead initially overweight the information in managers’ earnings guidance (post-guidance analyst earnings estimates), the sign on the coefficient for DIFF is predicted to be negative (positive).

McNichols (1989) finds that abnormal stock returns subsequent to management earnings forecasts exhibit a pattern similar to post-earnings-announcement drift. Specifically, abnormal stock returns following a management earnings forecast are shown to be positively associated with the news content of the prediction. To control for this potentially confounding influence on post-guidance abnormal stock returns, SURPRISE is included in eq. (4).

Table 6 presents the findings from the regression model described in eq. (4). The first column describes the results for the full-sample regression.\textsuperscript{14} The coefficient on DIFF equals -3.628 and is statistically significant at the 0.06 level. The value on this coefficient implies that a one percent increase in DIFF is associated with over a three percent decline in subsequent abnormal stock returns, which is consistent with investors initially overweighting managers’ earnings guidance. This association holds despite a statistically significant coefficient on SURPRISE. As in McNichols (1989), there is a positive association between the news content of management earnings forecasts and subsequent abnormal returns.

The second column of table 6 re-estimates the same regression but limits the sample to only those observations where analysts explicitly revise their earnings

\textsuperscript{14}The number of observations in this regression is 958 even though there are 969 sample management earnings forecasts. This discrepancy occurs because for eleven observations, analyst earnings estimate revisions after the management forecast occurred during the three-trading-day earnings announcement period. These observations were eliminated. However, it should be noted that including them in the regression does not qualitatively affect the findings.
estimates. Interestingly, the positive association between $FPCR$ and $DIFF$ is stronger in this sub-sample. This finding indicates that the regression results from column one are not affected by the timeliness of analyst coverage. In fact, it suggests that investors rely too heavily on managers’ earnings guidance at firms that have sufficient visibility in the capital markets to attract greater attention from analysts.

Table 6

To provide further empirical evidence on this issue, we estimate a variation of the regression described in eq. (4) in which the association between $FPCR$ and $DIFF$ is allowed to vary with the level of analyst following. The model takes the following form:

$$FPCR = \alpha + \beta_1 DIFF + \beta_2 SURPRISE + \beta_3 D_{LOW}$$

$$+ \beta_4 DIFF \ast D_{LOW} + \beta_5 SURPRISE \ast D_{LOW} + \epsilon$$

where:

All variables are defined as before.

The results from the regression described in eq. (5) estimated using only observations with responsive analyst are reported in column three of table 6. Several interesting findings emerge from this regression. The coefficient on $DIFF$ has a value of -10.448 and is statistically significant at the 0.01 level. This coefficient describes the association between $FPCR$ and $DIFF$ for the sub-set of observations where $D_{LOW}$ equals zero. The statistical significance of this coefficient provides further support to the finding in column two that investors more strongly overweight managers’ earnings guidance at firms with greater visibility in the capital markets. The sum of the coefficients on $DIFF$ and $DIFF \ast D_{LOW}$ describe the association between $FPCR$ and
for the sub-set of observations where \( D_{LOW} \) equals one. The sum of these coefficients is not statistically different from zero at conventional levels, suggesting that investors do not fixate on managers’ earnings guidance at firms with lower levels of analyst following. These firms are smaller, and managers at them presumably lack the capital-markets presence of their counterparts at more-established companies.

\( D_{LOW} \) measures the difference in \( FPCAR \) between firms with high and low levels of analyst following. The coefficient on this variable is negative and significant at the 0.02 level. A possible explanation for this finding is that analyst following is associated with firm size and that large firms had superior stock price performance over the sample period. Neither coefficient on the variables containing \( SURPRISE \) is statistically significant in this regression specification.

IV. Conclusions

This paper examines if the influence of managers’ earnings guidance on analyst earnings estimates varies systematically with characteristics of the guidance or characteristics of the environment in which the guidance is provided. The findings suggest that managers have greater difficulty in swaying analyst earnings estimates when the reliability of their earnings guidance is likely to be lower. This finding has significant implications for managers deciding whether to provide guidance. Namely, it suggests that when guidance would presumably be most useful, when uncertainty about future earnings is relatively high, analysts place less weight on earnings predictions made by managers. A productive avenue for future research on guidance would be to examine in greater detail other managerial actions taken in conjunction with providing guidance, such as describing the underlying assumptions behind their predictions. Such an analysis
could shed light on whether managers can affect their influence with analysts even in environments of relatively high uncertainty.

The findings also suggest that analysts who are more skeptical of managers’ earnings guidance have higher post-guidance forecasting errors relative to managers. However, this finding is driven primarily by firms with smaller analyst following and less attentive analysts. Thus, it appears that for firms with poorer quality analyst coverage, managers have difficulty influencing analyst earnings estimates even though analysts would apparently benefit from more fully adopting their guidance.

While some analysts appear to ignore information that would improve their forecasting accuracy, the findings also suggest that investors have difficulty in sorting out differences between managers’ earnings guidance and post-guidance analyst earnings estimates. Investors appear to initially overweight the information contained in management earnings forecasts. Interestingly, this finding is primarily driven by firms with high levels of analyst coverage where managers presumably command greater attention from the capital markets.
References


<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>all management earnings forecasts available from First Call with the following characteristics: a.) issued between January 1, 1995 and December 31, 1997 b.) consisting of either a point- or range-format prediction c.) issued less than one year before the end of the fiscal period to which the prediction applies</td>
<td>1,925</td>
</tr>
<tr>
<td>less forecasts issued by firms without First Call analyst earnings estimates</td>
<td>(353)</td>
</tr>
<tr>
<td>less forecasts issued by firms lacking relevant CRSP and/or COMPUSTAT data</td>
<td>(330)</td>
</tr>
<tr>
<td>less forecasts where the predicted earnings amount equals the prevailing consensus analyst earnings estimate</td>
<td>(273)</td>
</tr>
<tr>
<td></td>
<td>969</td>
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Table 2
Distributional properties of the management earnings forecast sample

Panel A. This panel describes the time-series distribution of the management earnings forecast sample.

<table>
<thead>
<tr>
<th>Year</th>
<th>N</th>
</tr>
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<tr>
<td>1995</td>
<td>270</td>
</tr>
<tr>
<td>1996</td>
<td>345</td>
</tr>
<tr>
<td>1997</td>
<td>354</td>
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</table>

Panel B. This panel provides information on the cross-sectional distribution of the management earnings forecast sample.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Median</th>
<th>Q3</th>
<th>Q1</th>
</tr>
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<tbody>
<tr>
<td>number of observations</td>
<td>1.51</td>
<td>0.98</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>per sample firm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>Mean</td>
<td>Std. Dev.</td>
<td>Median</td>
<td>Q3</td>
</tr>
<tr>
<td>------------------------</td>
<td>----</td>
<td>------</td>
<td>-----------</td>
<td>--------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>SURPRISE ($)</strong></td>
<td>969</td>
<td>-0.081</td>
<td>0.193</td>
<td>-0.040</td>
<td>-0.010</td>
</tr>
<tr>
<td><strong>REVISE ($)</strong></td>
<td>969</td>
<td>-0.084</td>
<td>0.185</td>
<td>-0.040</td>
<td>0.000</td>
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<td><strong>MFCAR (%)</strong></td>
<td>969</td>
<td>-6.08</td>
<td>12.55</td>
<td>-2.86</td>
<td>1.06</td>
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<tr>
<td><strong>DIFF ($)</strong></td>
<td>969</td>
<td>0.003</td>
<td>0.079</td>
<td>0.000</td>
<td>0.015</td>
</tr>
<tr>
<td><strong>SIGNMERR ($)</strong></td>
<td>969</td>
<td>-0.017</td>
<td>0.168</td>
<td>0.000</td>
<td>0.030</td>
</tr>
<tr>
<td><strong>ABSMERR ($)</strong></td>
<td>969</td>
<td>0.075</td>
<td>0.151</td>
<td>0.025</td>
<td>0.070</td>
</tr>
<tr>
<td><strong>SIGNAERR ($)</strong></td>
<td>969</td>
<td>-0.014</td>
<td>0.171</td>
<td>0.000</td>
<td>0.030</td>
</tr>
<tr>
<td><strong>ABSAERR ($)</strong></td>
<td>969</td>
<td>0.079</td>
<td>0.153</td>
<td>0.030</td>
<td>0.080</td>
</tr>
<tr>
<td><strong>ACCURACY ($)</strong></td>
<td>969</td>
<td>-0.003</td>
<td>0.073</td>
<td>0.000</td>
<td>0.015</td>
</tr>
<tr>
<td><strong>MVAL ($ millions)</strong></td>
<td>969</td>
<td>3,618</td>
<td>10,314</td>
<td>724</td>
<td>2,473</td>
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<tr>
<td><strong>PRICE ($)</strong></td>
<td>969</td>
<td>29.59</td>
<td>18.55</td>
<td>26.00</td>
<td>38.25</td>
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<td><strong>BMRATIO</strong></td>
<td>969</td>
<td>0.330</td>
<td>0.272</td>
<td>0.276</td>
<td>0.455</td>
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<td><strong>ANALYSTS</strong></td>
<td>969</td>
<td>8.42</td>
<td>6.81</td>
<td>6.00</td>
<td>11.00</td>
</tr>
<tr>
<td><strong>REPUTATION ($)</strong></td>
<td>699</td>
<td>0.017</td>
<td>0.088</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td><strong>RETVOL (%)</strong></td>
<td>969</td>
<td>2.63</td>
<td>1.30</td>
<td>2.35</td>
<td>3.46</td>
</tr>
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<td><strong>DISPERSION ($)</strong></td>
<td>969</td>
<td>0.048</td>
<td>0.057</td>
<td>0.030</td>
<td>0.060</td>
</tr>
<tr>
<td><strong>FPCAR (%)</strong></td>
<td>958</td>
<td>-0.33</td>
<td>17.70</td>
<td>-0.76</td>
<td>8.89</td>
</tr>
<tr>
<td><strong>HORIZON (# trading days)</strong></td>
<td>969</td>
<td>48</td>
<td>51</td>
<td>25</td>
<td>75</td>
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<tr>
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</tr>
<tr>
<td><strong>D_NEG</strong></td>
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<td>0.76</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>D_QTR</strong></td>
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<td>0.60</td>
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<td></td>
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<tr>
<td><strong>D_SPEC</strong></td>
<td>969</td>
<td>0.44</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Variable descriptions:

\( \text{SURPRISE} = MF - AF_{\text{PRE}} \)

\( MF \) is the EPS amount predicted in the management earnings forecast. This variable is set equal to the midpoint of the upper and lower bound of the management earnings forecast for range-format predictions.  
\( AF_{\text{PRE}} \) is the median of individual analyst EPS estimates that make up the First Call consensus at the time of the management earnings forecast for the fiscal period to which the prediction applies.

\( \text{REVISE} = AF_{\text{POST}} - AF_{\text{PRE}} \)

\( AF_{\text{POST}} \) is the first individual analyst EPS estimate made after the management earnings forecast with a fiscal period matching the prediction’s.

\( \text{MFCAR} \) is the cumulative abnormal return for the three trading days around the management earnings forecast. A daily abnormal return is defined as the difference between the return on an individual stock and the return on the CRSP value-weighted NYSE/AMEX index.

\( \text{DIFF} = MF - AF_{\text{POST}} \)

\( AE \) is the forecasting firm’s actual EPS for the fiscal period to which the management earnings forecast pertains.

\( \text{ABSMERR} \) is the absolute value of \( \text{SGNMERR} \).

\( \text{SIGNAERR} = AE - MF \)

\( \text{ABSAERR} \) is the absolute value of \( \text{SGNAERR} \).

\( \text{ACCRACY} = \text{ABSMERR} - \text{ABSAERR} \)

\( \text{FPCAR} \) is the cumulative abnormal return beginning one trading day after \( AF_{\text{POST}} \) is made and ending one trading day after the earnings announcement for the fiscal period to which the management earnings forecast pertains.

\( \text{DISPERSION} \) is the standard deviation of individual analyst EPS estimates that make up the First Call consensus at the time of the management earnings forecast for the fiscal period to which the prediction applies.

\( \text{MVAL} \) is the forecasting firm’s market value of equity two trading days before the management earnings forecast.

\( \text{PRICE} \) is the forecasting firm’s stock price two trading days before the management earnings forecast.

\( \text{ANALYSTS} \) is the number of individual analyst EPS estimates that make up the First Call consensus at the time of the management earnings forecast for the fiscal period to which the prediction applies.

\( \text{BMRATIO} = \text{BVAL} / \text{MVAL} \)

\( \text{BVAL} \) is the forecasting firm’s book value of equity from the most recent fiscal-year-end balance sheet before the management earnings forecast. This variable is set equal to zero for observations with negative book values.

\( \text{REPUTATION} = |LagAF_{\text{PRE}} - LagAE| - |LagMF - LagAE| \)

If the management earnings forecast is preceded by another no more than a fiscal year old, \( LagAF_{\text{PRE}}, LagMF, \) and \( LagAE \) are defined for the earlier prediction analogously to \( AF_{\text{PRE}}, MF, \) and \( AE \). Otherwise, \( \text{REPUTATION} \) is set equal to zero.

\( \text{RETVOLO} \) is the standard deviation of the forecasting firm’s daily stock returns over a 60-trading-day window immediately prior to the management earnings forecast.

\( \text{HORIZON} \) is the number of trading days between the management earnings forecast and the end of the fiscal period to which the prediction applies.

\( \text{D_SPEC} \) takes on the value of one (zero otherwise) if the forecasting firm’s earnings from any of the four fiscal quarters prior to the one containing the management earnings forecast included special items.

\( \text{D_NEG} \) takes on the value of one (zero otherwise) if \( \text{SURPRISE} \) is less than zero.

\( \text{D_RANGE} \) takes on the value of one (zero otherwise) if the management earnings forecast is a range-format prediction.

\( \text{D_QTR} \) takes on the value of one (zero otherwise) if the management earnings forecast pertains to a fiscal quarter.
<table>
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<th>Determinants of managers’ influence on analyst earnings estimates</th>
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<td><strong>Coefficient$^a$</strong></td>
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<td><strong>Intercept</strong></td>
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<td></td>
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<td><strong>ln(HORIZON)</strong></td>
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<td><strong>D_SPEC</strong></td>
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<td><strong>ln(ANALYSTS)</strong></td>
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<tr>
<td></td>
</tr>
<tr>
<td><strong>BMRATIO</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td><strong>REPUTATION</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>SURPRISE</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>MBIAS</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
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</tr>
<tr>
<td></td>
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<tr>
<td><strong>D_QTR</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>PRECAR</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>POSTCAR</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Adj. R$^2$</td>
</tr>
</tbody>
</table>
Variable descriptions:

$MBIAS$ equals $SIGNMERR$ if $SURPRISE$ is greater than zero and $SIGNMERR\times -1$ if $SURPRISE$ is less than zero.

$PRECAR$ is the cumulative abnormal return beginning one trading day after the date associated with $AF_{PRE}$ and ending two trading days before the management earnings forecast. $POSTCAR$ the cumulative abnormal return beginning two trading days after the management earnings forecast and ending one trading day before $AF_{POST}$ made.

*For the purpose of these regressions, $MBIAS$ and $SURPRISE$ are each measured as a percentage of $PRICE$. Similarly, $REPUTATION$ is measured as a percentage of the forecasting firm’s stock price just prior to the previously issued management earnings forecast.

bStandard errors of the coefficients are adjusted as described in White (1980).

The numbers in parentheses are two-sided $p$-values.

***significantly different from zero at the 0.01 level
**significantly different from zero at the 0.05 level
*significantly different from zero at the 0.10 level
Table 5
Forecasting-accuracy impact of analyst skepticism towards managers’ earnings guidance

<table>
<thead>
<tr>
<th></th>
<th>#1 (n=969)</th>
<th>#2 (n=843)</th>
<th>#3 (n=843)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
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<td>0.0101</td>
<td>0.0439</td>
</tr>
<tr>
<td></td>
<td>(0.01)***</td>
<td>(0.71)</td>
<td>(0.10)*</td>
</tr>
<tr>
<td>RATIO</td>
<td>0.1129</td>
<td>0.0040</td>
<td>-0.0421</td>
</tr>
<tr>
<td></td>
<td>(0.01)***</td>
<td>(0.74)</td>
<td>(0.29)</td>
</tr>
<tr>
<td>D_LOW</td>
<td></td>
<td></td>
<td>-0.1106</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.09)*</td>
</tr>
<tr>
<td>RATIO*D_LOW</td>
<td></td>
<td></td>
<td>0.1543</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(0.10)*</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.01</td>
<td>0.00</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Variable descriptions:
D_LOW takes on the value of one (zero otherwise) if ANALYSTS has a value of less than six.

*a* For the purpose of these regressions, ACCURACY is measured as a percentage of PRICE.

*b* Standard errors of the coefficients are adjusted as described in White (1980).

*c* The numbers in parentheses are two-sided *p*-values.

***significantly different from zero at the 0.01 level
**significantly different from zero at the 0.05 level
*significantly different from zero at the 0.10 level
Table 6
Relative influence of managers versus analysts on investors’ earnings expectations

<table>
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<th>FPCAR</th>
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<th></th>
<th></th>
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</thead>
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<td>#2 (n=837)</td>
<td>#3 (n=843)</td>
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<tr>
<td>Intercept</td>
<td>0.268</td>
<td>0.566</td>
<td>1.875</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.68)</td>
<td>(0.43)</td>
<td>(0.03) **</td>
<td></td>
</tr>
<tr>
<td>DIFF</td>
<td>-3.628</td>
<td>-6.250</td>
<td>-10.448</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.06) *</td>
<td>(0.02) **</td>
<td>(0.01) ***</td>
<td></td>
</tr>
<tr>
<td>SURPRISE</td>
<td>1.235</td>
<td>1.272</td>
<td>1.116</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.03) **</td>
<td>(0.03) **</td>
<td>(0.35)</td>
<td></td>
</tr>
<tr>
<td>D_LOW</td>
<td></td>
<td></td>
<td>-3.634</td>
<td>(0.02) **</td>
</tr>
<tr>
<td>DIFF*D_LOW</td>
<td></td>
<td></td>
<td>8.082</td>
<td>(0.16)</td>
</tr>
<tr>
<td>SURPRISE*D_LOW</td>
<td></td>
<td></td>
<td>-0.383</td>
<td>(0.79)</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.01</td>
<td>0.01</td>
<td>0.02</td>
<td></td>
</tr>
</tbody>
</table>

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a For the purpose of these regressions, DIFF and SURPRISE are measured as a percentage of PRICE.
b Standard errors of the coefficients are adjusted as described in White (1980).
c The numbers in parentheses are two-sided p-values.

***significantly different from zero at the 0.01 level
**significantly different from zero at the 0.05 level
*significantly different from zero at the 0.10 level
Figure 1
Cumulative distribution of $RATIO$

Variable descriptions:
$RATIO = REVISE / SURPRISE$