Management Long Term Earnings Growth Forecasts

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Abstract:

This study examines the issuance of long-term earnings growth (LTG) forecasts by managers. We find that managers issue LTG forecasts when firms have high growth prospects, more LTG guidance among industry peers, and greater demand for growth information by analysts. News conveyed by LTG forecasts appears to guide analysts closer to realized future growth rates and analysts generally revise their LTG forecasts in the direction of guidance. Nevertheless, consistent with an awareness of their own optimistic bias, analysts do not significantly respond to upward LTG guidance when guidance is issued outside of earnings announcement windows. When we consider the relation of LTG guidance to concurrent disclosures at earnings announcement, we find that upward guidance relates strongly to positive short-term earnings news that is quantitative in nature, whereas downward guidance relates more strongly to forward-looking qualitative information that conveys a relatively upbeat tone about the future. Therefore, our findings suggest that the nature of LTG guidance "bundling" with concurrent disclosures depends on the sign of the news conveyed by the guidance.

JEL Classification: C23; D81; D82; M41.

Keywords: *long term growth, earnings guidance, management forecast, analysts*

1. Introduction

We investigate the issuance of long-term earnings growth (LTG) forecasts by managers. Researchers have extensively examined managers' short-term earnings forecasts, which anticipate earnings realizations for the coming fiscal quarter or year-end. By contrast, very little is known about managers' LTG forecasts, which anticipate growth rates in earnings over multi-year horizons. Recent years have witnessed a pronounced spike in LTG forecast issuance (we document a three-fold increase in guidance events from 2001 to 2007) with many forecasts appearing alongside concurrent disclosures of earnings news and short-term earnings forecasts. Motivated by this rise in LTG forecast popularity as well as by the burgeoning literature on ancillary components of earnings-related disclosures (e.g., Wasley and Wu 2006; Rogers and Van Buskirk 2013; Bozanic et al., 2015), we seek to understand the factors that drive LTG forecast issuance and whether and to what extent LTG guidance relates to quantitative and qualitative information contained in concurrent earnings-related disclosures.

Beginning with the determinants of LTG forecasts, we find that LTG forecast issuance is increasing with proxies for firm growth prospects (e.g., market-to-book ratio) as well as proxies for the demand for long-term growth information (e.g., the level of analyst LTG following). In addition, LTG guidance is positively associated with the proportion of industry peers providing LTG forecasts and negatively associated with market sentiment, suggesting that guidance is industry-driven and deployed when economy-wide prospects are relatively poor. Meanwhile, LTG guidance is less likely to

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¹ See the well-established literature that has studied financial forecasts made by management (e.g., Hutton, Miller, and Skinner 2003; Kasznik and Lev, 1995; Miller 2002; Patell 1976; Penman 1980; Rogers and Stocken 2005; Wasley and Wu 2006; Waymire 1984), and the more recent literature on management earnings guidance (Brown and Higgins 2005; Hutton 2005; Merkley, Bamber, and Christensen 2013).

² For example, 67% of our sample is drawn from earnings announcement press releases or conference calls.

occur when firm-specific performance is poor (e.g., earnings decreases or losses) and when a firm's long-term prospects are more uncertain (e.g., high analyst LTG forecast dispersion). These deterring factors are consistent with those identified in prior guidance literature (e.g., Waymire 1985; Miller 2002), suggesting that LTG guidance (as with short-term guidance) is sensitive to market assessments of forecast credibility.

Since our determinants results suggest that managers issue LTG forecasts to provide analysts with informative disclosure about firm growth prospects, we next examine whether the news conveyed by LTG forecasts is consistent with aligning analyst LTG expectations with those of management. Prior research finds that analysts publish their own LTG forecasts to support their key research outputs, such as target prices and stock recommendations (Bradshaw 2002; 2004). These forecasts have been found to be of dubious value, as they tend to be highly inaccurate with a large optimistic bias on average (Dechow and Sloan 1997; Chan et al. 2003; Bradshaw 2004). While management LTG forecasts tend to exhibit a similar optimistic bias, we nevertheless find that LTG guidance, on average, improves upon the prevailing analyst consensus growth forecast, particularly when news conveyed by LTG guidance is negative. Therefore, our evidence suggests that LTG guidance is typically deployed to adjust public growth expectations closer to management's private information about future growth.

With evidence that management LTG forecasts, on average, guide analysts toward actual future growth rates, we next look to see whether analysts adjust their LTG forecasts in the direction of management's forecast. We expect analysts to be generally responsive to LTG guidance based on our earlier finding that analyst demand for LTG information contributes to the guidance decision. However, analysts that are aware of

their own optimistic bias may be reluctant to revise their forecasts in the direction of upward guidance since upward guidance implies even greater optimism. With upward guidance events comprising 42% of our sample, overall analyst responsiveness to LTG guidance may be muted if analysts question the credibility of upward guidance. However, if analysts find downward guidance to be more credible, we should see a stronger analyst response to downward guidance relative to upward guidance.

For the full sample, we find that analysts respond significantly to both upward and downward guidance with no statistically significant difference in response to upward versus downward guidance. While this result is contrary to our initial expectations, we find that responsiveness to upward guidance is only significant when guidance is issued during quarterly earnings announcement events. This finding prompts us to consider whether the credibility of upward LTG guidance is enhanced by concurrent disclosures at earnings announcement. We find that positive quarterly earnings news is a significant determinant of upward LTG guidance and that news conveyed by LTG guidance varies in the direction of positive, but not negative, quarterly earnings news. By contrast, downward LTG guidance relates positively to qualitative information in earnings announcement disclosures such as net positive disclosure tone and the percentage of forward-looking words used. We interpret these results as suggesting that upward LTG guidance is frequently "bundled" with complementary short-term earnings news that is quantitative in nature, whereas downward guidance relates more strongly to forwardlooking qualitative information that conveys a relatively upbeat tone about the future.³

³ While bundling downward LTG guidance with upbeat forward-looking language may seem counter-intuitive, one possible explanation is that managers issue downward guidance to partially correct for analyst over-optimism about the future, which could potentially spill over into analysts' short-term expectations.

Overall, we find that LTG guidance is deployed under credible circumstances by firms with high growth prospects and high analyst demand for LTG information. Furthermore, analysts generally respond to LTG guidance, but don't revise significantly to upward guidance disclosed outside of quarterly earnings announcement windows. Examination of LTG guidance issued at earnings announcement reveals that upward guidance varies positively with good short-term earnings news, while downward guidance relates more to qualitative information such as net positive disclosure tone and the proportion of forward-looking statements provided.

This paper provides at least two key contributions to the literature. First, we contribute to the earnings guidance literature by examining the issuance of long-term earnings growth forecasts, which prior literature has largely ignored. While researchers have examined analysts' published LTG forecasts (Dechow and Sloan 1997; Chan et al. 2003; Bradshaw 2002, 2004) little is known about the channels through which analysts obtain LTG information in developing their forecasts. Part of the reason for this is likely due to the fact that prior to Regulation Fair Disclosure (which went into effect in October of 2000), managers were allowed to privately disclose LTG information to analysts, thereby making data on LTG guidance difficult to obtain until recently.

Second, we contribute to an emerging literature that examines ancillary components of earnings-related disclosures such as cash-flow forecasts (Wasley and Wu 2006), concurrent short-term earnings forecasts (Roger and Van Buskirk 2013), and qualitative forward-looking disclosures (Bozanic et al. 2015). We find that LTG guidance is frequently bundled with earnings announcements and that earnings announcement bundling appears to enhance analyst responsiveness to upward LTG guidance.

Furthermore, we find that quantitative and qualitative components of earnings announcement disclosures relate differentially to LTG guidance based on the news conveyed by the guidance, suggesting that LTG guidance interacts strategically with short-term earnings-related disclosures in conveying growth information to the public.

The remainder of the paper is organized as follows. Section 2 outlines our sample selection criteria and describes our data. Section 3 develops predictions and presents results for our tests of LTG guidance determinants. Section 4 investigates the news conveyed by LTG forecasts as well as the analyst response to LTG guidance. Section 5 explores the nature of LTG guidance "bundling" with quarterly earnings news disclosures. Section 6 offers concluding remarks.

2. Sample Selection and Data

Management LTG forecasts are identified using keyword searches of press releases and conference call transcripts on Factiva for the years 2001 to 2007 (covering all press releases on the Dow Jones News Wires, Financial Disclosure and Fair Disclosure Wires, Dow Jones Business News and the *Wall Street Journal*). We chose 2001 as our starting year because it is the first calendar year following the October 2000 enactment of Regulation Fair Disclosure, which prohibits private disclosure of material information (e.g., management LTG forecasts) to analysts and other outside parties. To be included in our sample, a management LTG forecast has to be a quantitative forecast

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⁴ The search string used is as follows: (management or manager or CEO or Chief Executive* or company) and ((anticipates or expect* or predict* or forecast* or see* or project* or put* or estimate) near5 (growth adj2 earning) or (growth adj2 earnings) or (earn* near4 long-term) or (earn* near4 long-term growth)).

of earnings or earnings-per-share attributable to the firm and/or its management.

Appendix A provides illustrative examples of LTG guidance events.

Our initial sample is comprised of 1,342 unique firm-date-forecast events. Our research design uses firm-year-forecast units of observation, so after deleting duplicate firm-year-forecast events, we are left with 892 observations. We require firms to have company identifiers on Compustat, CRSP, Thomson Reuters, and I/B/E/S databases, reducing our sample to 850 firm-year-forecasts. We further require observations to have all data necessary to estimate our determinants models (see section 3). This requirement reduces our sample to 772 firm-year-forecasts before considering the availability of analyst LTG forecast data. Since we consider dispersion in analyst LTG forecasts as a possible determinant of LTG guidance, we delete observations with fewer than two analyst LTG forecasts on I/B/E/S in the month prior to the guidance event, reducing our sample to 726 firm-year-forecasts. Lastly, we delete observations with negative market capitalization, negative market-to-book ratios, and/or invalid institutional ownership data, resulting in a final LTG guidance sample of 722 unique firm-year-forecasts.

We employ two control samples for our determinants analysis. The first control sample consists of firm-year observations of LTG guidance firms in non-guidance years. This sample consists of 2,487 firm-year observations with valid data necessary to estimate our determinants models. The second control sample is a characteristic-matched control firm sample. We match along four characteristics: (1) firm size, using market capitalization at the end of the prior fiscal year, (2) fiscal year-end month, (3) the number

⁵ There are 52 cases where a firm issues two or more distinct LTG forecast rates in a given year. Our results are largely unaffected if we retain only the first or last LTG forecast issued by a firm in a given year. If a firm issues the same forecast multiple times in a given year, we use the first forecast event, though results are unaffected when we use the last forecast event.

of analysts following the firm, using I/B/E/S consensus data, and (4) short-term earnings guidance frequency (frequent, infrequent, or none) over the prior two years, using CIG data. We require exact matches for 2-4 and we retain the closest size match to construct a balanced sample of LTG guidance firms and control firms. As we cannot find matches for 86 of our LTG guidance firms, our matched sample is comprised of 636 firm-years corresponding to 636 firm-year-forecast observations from our guidance sample. Table 1 summarizes our sample selection criteria for the guidance and control samples.

Table 2, Panel A presents LTG guidance frequencies for the 471 firms that issued LTG forecasts over our sample period. We see that roughly 50% of firms provided only a single LTG forecast over our sample period. When considering unique firm-year-forecasts, roughly 60% of firms provided a single firm-year-forecast. While some firms appear to issue regular LTG guidance (9.1% of firms provided four or more firm-year-forecasts), Panel A suggests that the average firm in our sample does not have a set policy for providing LTG guidance.

Table 2, Panel B breaks down the distribution of forecast form choices in our sample. Range forecasts are the most popular form, comprising 50.1% of our sample, and it appears range popularity has generally increased over time. Point forecasts are the next most popular form of guidance at 25.1% of the sample, followed by lower bound (24.4%) and upper bound (0.4%) forecasts.⁷ For the purposes of calculating LTG forecast news

⁶ Following Brochet, Faurel and McVay (2011), a *frequent guider* is one that issues short-term guidance in at least four of the preceding eight quarters, including two of the preceding four quarters; an *infrequent guider* issues guidance in at least one of the preceding eight quarters, but does not meet the frequent guider definition; and a *non-guider* does not have a guidance event listed in CIG over the preceding eight quarters.

⁷ See Appendix A for examples of point, range, and bounded forecasts. Our results are insensitive to the exclusion of upper bound forecasts.

later in the paper, we follow prior literature and use the midpoint of range forecasts and the minimum (maximum) point implied by lower (upper) bound forecasts.

Table 2, Panel C compares the industry composition of LTG guidance firms with the overall Compustat industry composition using Fama and French (1997) industry classifications. Utilities and banks comprise the two most active LTG guidance industries at a combined 27% of the sample, followed by retail (8.3%), meals (7.5%), insurance (5.4%) and food (5.4%). Business service firms are somewhat underrepresented in our sample (5.0% vs. 13.0% for Compustat), as are finance and electronic equipment firms.

3. Determinants of LTG Guidance

We examine the drivers of the decision to issue LTG guidance using a logistic regression specification where the dependent variable *Guide* equals one for firm-years with LTG guidance events, zero otherwise. Throughout the paper, continuous independent variables are winsorized at the 1st and 99th percentiles and we cluster standard errors by firm and include year fixed effects. Equation (1) is the general form of our logistic regression model:

$$\log\left(\frac{\operatorname{Prob}(Guide) = 1}{1 - [\operatorname{Prob}(Guide) = 1]}\right) = \beta_0 + \beta X \tag{1}$$

The vector X contains both LTG-specific variables as well as variables that prior literature suggests are significant determinants of guidance (short or long-term). We first consider firm characteristics that are likely to prompt demand for LTG information. We expect firm growth to be among the most important characteristics prompting such demand, so we employ a series of proxies for firm growth prospects: the market-to-book

ratio (Mkt2Book), which we define as the natural logarithm of the ratio of a firm's market value of equity to its book value of equity as of the end of quarter q-l; prior year sales growth (PSalesGr), which is the year-over-year growth in sales from the prior year; and seasoned equity offerings (SEO), which is an indicator variable that equals one if the firm issued a secondary offering of equity in quarter q or q+l, zero otherwise. In addition, we also include an indicator variable for mergers & acquisitions activity (MA), which equals one if the firm announced an acquisition (minimum \$10MM deal value, with at least 50% ownership) in quarter q or q+l, zero otherwise. While we expect LTG guidance issuance to be increasing with Mkt2Book, PSalesGr, and SEO, we do not form a prediction for MA because while there is likely to be greater demand for long-term information for firms with M&A activity, there may also be a higher degree of uncertainty within the firm about post-merger growth, which should generally discourage disclosure.

Next, we specify a set of variables that capture sources of external demand for LTG information. AF is the natural logarithm of one plus the number of analysts providing LTG forecasts in month m-I. We also include the variable PctLTG, which is the number of analyst LTG forecasts divided by the number of analyst short-term (annual) forecasts in month m-I. PctLTG serves to capture the intensity of analyst coverage of LTG information relative to overall firm information (i.e., short and long-term information). In addition to analyst demand, we include a variable capturing long-term institutional investor demand (DED_net), which we define as the percentage of investors that are dedicated or quasi-indexer institutions minus the percentage of investors that are transient institutions, following the institutional investor classification

scheme available on Brian Bushee's website. Ajinkya, Bhojraj, and Sengupta (2005) find that overall guidance increases with both analyst following and institutional ownership, while Bushee and Noe (2000) find AIMR disclosure rankings are associated with higher institutional ownership. Assuming our variables capture long-term analogues of the short-term variables in these papers, we expect LTG guidance issuance to be increasing with the demand for LTG information by analysts and institutional investors.

Prior literature finds that guidance tendencies tend to vary significantly across industries (e.g., Anilowski, Feng and Skinner 2007). As our descriptive evidence suggests that such variation exists in our LTG sample, we include the variable *IndProp*, which is the number of Fama and French (1997) industry peers that provide LTG guidance in year *t-1* divided by the total number of industry peers with analyst LTG coverage (i.e., at least one analyst provides an LTG forecast for that firm).

Miller (2002) finds that disclosure tendencies decrease with poor firm performance. Based on this finding, we include the following set of variables when estimating equation (1): *AdjRet*, which is the cumulative market-adjust annual return ending on the last trading day of month *m-2*; *LossLagQ*, which indicates negative earnings in quarter *q-1*; *PctLoss8Q*, which measures the percentage of losses reported over the prior eight quarters; *RWBadNews*, which equals one if seasonally-differenced quarterly earnings is negative in quarter *q-1*, zero otherwise; and *MissExp*, which equals one if the firm missed the consensus forecast of earnings for quarter *q-1*, zero otherwise. While we expect poor performance to deter guidance, we note the possibility that firms issue long-term guidance to signal the temporary nature of short-term poor performance.

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⁸ http://acct3.wharton.upenn.edu/faculty/bushee

Therefore, the negative effect of poor performance on LTG guidance issuance is only expected to the extent poor performance captures deteriorating firm prospects.

Waymire (1985) finds that disclosure decreases with higher performance volatility, so we include a measure of earnings volatility (*EarnVolt*), which is the standard deviation of quarterly earnings per share over the prior eight quarters. In addition, we include analyst LTG forecast dispersion (*DISP*), which is the standard deviation of analyst LTG forecasts in month *m-1*. On the one hand, *DISP* may capture overall uncertainty about the future, which could deter LTG guidance if managers' uncertainty about long-term growth mirrors analysts' LTG uncertainty. On the other hand, if *DISP* is positively related to information asymmetry about firm growth prospects, then prior literature suggests higher *DISP* may increase LTG guidance (e.g., Ajinkya and Gift 1984; Coller and Yohn 1997) as a potential benefit of reducing information asymmetry via disclosure is to lower a firm's cost of capital (Leuz and Verrecchia 2000). Given these opposing forces, we do not form a sign prediction for *DISP*.

Next, we include a series of indicator variables that likely relate to the decision to issue LTG guidance. *Litigation* equals one if the firm was subject to a securities lawsuit over the past year (per the Stanford Securities Class Action Clearinghouse), zero otherwise. While high ex ante litigation risk should increase guidance tendencies (Skinner 1997; Brown, Hillegeist and Lo 2005), inaccurate LTG guidance could exacerbate litigation costs for firms with pending lawsuits (Rogers and Van Buskirk 2009), which could serve to discourage quantitative guidance. *Restatement* equals one if the firm issued a restatement within the past twelve months, zero otherwise. Restatements may preclude long-term disclosure if managers spend more time discussing past restated

financials. *Restrc_Dum* equals one if the firm reports restructuring charges in quarter *q-1*, zero otherwise. While a restructuring might trigger external demand for long-term growth information, restructurings are likely prompted by poor performance, suggesting future prospects are unclear. *RD_Dum* equals one if the firm reports research and development charges in quarter *q-1*, zero otherwise. While Wang (2007) finds that high proprietary costs proxied by R&D intensity deter earnings guidance, we note that R&D activity could also deter guidance if the outcomes of R&D spending are less certain among managers. In either case, we expect less LTG guidance when firms engage in more R&D spending.

We also include the following variables based on their documented associations with overall disclosure tendencies: firm size (SIZE), which is the natural logarithm of the firm's market capitalization as of the end of quarter q-1; a short-term guidance indicator (STG_dum), which equals one if the firm issued short-term earnings guidance within the past 12 months (based on CIG data), zero otherwise; the number of prior LTG guidance events (NPriorGuide), which counts the number of guidance events over the prior 8 quarters; and consumer sentiment (Sentiment), which is the consumer sentiment index from the University of Michigan consumer sentiment survey from month m-1. Bergman and Roychowdhury (2008) find that disclosure increases in periods of low market sentiment, consistent with the idea that managers issue forecasts to counteract the effect of market pessimism on performance expectations.

Recall from Section 2 that we employ two control samples to estimate determinants of LTG guidance: (i) guidance firms in non-guidance years and (ii) characteristic-matched firms with the same fiscal year-end month as the guidance firm. We consider the characteristic-matched control sample because by matching on size,

short-term guidance frequency, and analyst coverage, we control for overall guidance tendencies at a point in time, allowing us to better isolate those factors that incrementally drive longer-horizon guidance. Hence, *Size* and *STG_dum* are excluded from equation (1) when we use the matched control sample. We also exclude *NPriorGuide* when using the matched control sample because we do not allow control firms to have prior LTG guidance history and we exclude *Sentiment* because we match on fiscal year-end month, so *Sentiment* will be invariant between guidance and control observations.

Table 3 presents the sample means of the determinants variables for our LTG guidance sample and our two control samples. ¹⁰ Growth prospects tend to be higher for guidance firms relative to matched control firms (difference-in-means t-tests are significant for *Mkt2Book* and *SEO*) though growth prospects don't differ significantly within guidance firms from year to year. The demand for LTG information is generally higher in the guidance sample (*AF* relative to both control samples, *pctLTG* relative to the matched sample, *DED_net* relative to non-guidance years) while prior-year industry guidance activity (*IndProp*) is much higher for guidance firm-years relative to both control samples. Guidance firm-years also tend to have lower analyst LTG dispersion, lower earnings volatility, fewer earnings declines and losses, and less R&D activity. Collectively, these factors suggest that LTG guidance is less likely to occur when recent performance is poor or when future prospects are more uncertain. Finally, guidance firm-years tend to be characterized by lower market sentiment, larger size, and greater past guidance activity relative to non-guidance years.

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⁹ Our matching on analyst coverage is based on the number of analysts providing <u>short-term</u> (year-ahead) forecasts, so we retain long-term coverage variables (*AF* and *PctLTG*) in our matched sample estimation. ¹⁰ In Table 3, we "de-log" variables with log transformations to facilitate comparison across samples.

Table 4 presents the results of our estimation of equation (1) using guidance firm-years and two control samples (the control sample #1 case is reported at left, the control sample #2 case is reported at right). Looking first at the variables that capture firm growth prospects (i.e., *Mkt2Book*, *PSalesGr*, and *SEO*), we see that the coefficient on *Mkt2Book* is positive and significant in both cases at the 5% level. The coefficient on *SEO* is positive and significant at the 1% level in case #2 when control firms are characteristic-matched, while *PSalesGr* is positive but never significant at conventional levels in either case. Taken together, these results are consistent with our expectation that LTG guidance issuance increases with the growth prospects of the firm.

Next, we turn to our proxies for the external demand for LTG information (i.e., AF, PctLTG, and DED_net). In case #1, the coefficient on AF is positive and significant at the 5% level, suggesting that firms with guidance history tend to issue LTG guidance in years with higher levels of analyst LTG coverage. In case #2, the coefficient on PctLTG is positive and significant at the 1% level, suggesting that LTG guidance is issued when a higher percentage of analysts following a firm publish LTG forecasts as part of their research output. Meanwhile, the coefficient on DED_net is negative and insignificant in both cases. These results suggest that long-term analyst coverage significantly drives LTG guidance whereas long-term-oriented institutional holdings do not significantly contribute to the LTG guidance decision.

Moving on to variables that capture macro-level factors (i.e., *IndProp* and *Sentiment*), we find that the proportion of industry peers providing LTG guidance (*IndProp*) is a positive and highly significant determinant of LTG guidance in both cases (p-value < 0.01). By contrast, the coefficient on *Sentiment* is negative and highly

significant in case #1 (p-value < 0.001), consistent with evidence in Bergman and Roychowdhury (2008). We interpret these results as suggesting LTG guidance is largely industry-driven and deployed in years when economy-wide prospects are perceived to be relatively poor.

Consistent with prior guidance literature, we find that poor performance is a significant deterrent of LTG guidance, as evidenced by significant negative coefficients on *PctLoss8Q* in both cases and *RWBadNews* in case #2. Interestingly, the coefficient on *LossLagQ* is positive and significant at the 5% level in the case #2 (matched-sample). Since our model controls for the percentage of losses over the past eight quarters (*PctLoss8Q*), one interpretation of the positive coefficient on *LossLagQ* is that it picks up poor performance that is temporary in nature. In such cases, firms may issue LTG guidance to reassure outsiders that the loss is not indicative of deteriorating firm prospects. Alternatively, a sudden loss may elicit a spike in external demand for LTG information to gauge the implications of the loss for the firm's continuing prospects.

Rounding out the analysis in Table 4, we find significant negative coefficients on variables that proxy for uncertainty about the future (*RD_dum* in case #1, *DISP* in case #2) and significant positive coefficients for variables indicating prior guidance history (*NPriorGuide* and *STG_dum* in case #1). Overall, it appears that managers issue LTG guidance in response to analyst demand for long-term information about firms with high growth prospects. Such guidance appears to be industry-driven and it appears to be sensitive to market assessments of forecast credibility since we tend to observe less guidance when performance is poor and when future prospects are more uncertain.

4. LTG Forecast News and Analyst Response to Guidance

4.1 News Conveyed by LTG Guidance

In this section, we examine whether LTG guidance is deployed to align analyst growth expectations with those of management. Prior literature suggests that managers have incentives to reduce information asymmetry as expectation alignment can reduce a firm's cost of capital and increase liquidity in its stock (Ajinkya and Gift 1984; Diamond and Verrecchia 1991; Coller and Yohn 1997; Leuz and Verrecchia 2000; Verrecchia 2001). However, given the long-term horizon of an LTG forecast, it is unclear *ex ante* whether managers possess superior information about firm growth prospects, and even if they do, whether full disclosure will occur given proprietary cost concerns (e.g., Verrecchia 1983; Wang 2007). Since our determinants analysis suggests that guidance arises under credible conditions (i.e., good performance, less uncertainty), we suspect LTG guidance to be at least partially informative about future growth rates.

We estimate the following pooled cross-sectional OLS models using our guidance sample to test whether news conveyed by LTG forecasts improves upon prevailing analyst estimates of long-term earnings growth:

$$RDIFF = \beta_0 + \beta_1 MDIFF + Controls + \varepsilon$$
 (2a)

$$RDIFF = \beta_0 + \beta_1 PosMDIFF + \beta_2 NegMDIFF + Controls + \varepsilon$$
 (2b)

RDIFF is the difference between realized future earnings growth and the median analyst LTG forecast in month m-l. Similarly, MDIFF is the difference between management's LTG forecast and the median analyst LTG forecast in month m-l. A positive association between RDIFF and MDIFF (i.e., $\beta_l > 0$ in equation 2a) would suggest that managers issue LTG forecasts to better align analyst growth expectations

with their own private information about firm growth. 11 The vector Controls includes all of the independent variables from the determinants model in equation (1).

Equation (2b) partitions MDIFF into positive guidance news (PosMDIFF) and negative guidance news (NegMDIFF) to test whether guidance informativeness depends on the sign of guidance news. Given evidence of a pronounced optimistic bias in analyst LTG forecasts (Dechow and Sloan 1997; Chan et al. 2003; Bradshaw 2004), we are particularly interested to see whether upward guidance improves upon the prevailing consensus analyst LTG forecast. If the analyst consensus LTG forecast for upward guidance firms already exhibits a significant optimistic bias, then we predict β_1 to be statistically indistinguishable from zero. By contrast, we expect $\beta_2 > 0$ since we anticipate realized growth news to decrease as guidance news becomes more negative.

To calculate realized future growth in earnings, we compute compound annual growth rates (CAGR) over three or five year horizons:

$$CAGR(n) = \sqrt[1/n]{\frac{EPS_{t+n}}{EPS_t}} - 1 \text{ (where } n = 3 \text{ or 5)}$$
(3)

Note that to calculate (3), both EPS_{t+n} and EPS_t need to be positive. Therefore, not all guidance observations in our sample can be used to estimate (2a) and (2b). 12 We tabulate three and five year rates both for sensitivity purposes and because analyst LTG forecasts on I/B/E/S are specified for three-to-five year horizons.

¹¹ This test does not require managers to have perfect information about future growth in earnings. Rather, it assumes that managers possess superior information about future growth relative to the information conveyed by the consensus analyst forecast. Furthermore, the test is also valid under conditions where managers only partially disclose their private information about growth.

 $^{^{12}}$ Removing firms with negative EPS in year t has the advantage of not having to impute an initial value for earnings growth. Removing firms with negative EPS in year t+n has the advantage of enhancing the ability of CAGR to proxy for management's private LTG expectations (which are unlikely to be negative).

Table 5, Panel A provides distribution statistics for management and analyst growth expectations as well as the relation of these expectations to realized future growth rates. The mean forecasted growth rate for managers (analysts) is 13.3% (13.0%), while the inter-quartile range of forecasted growth rates for both groups is 10.0% to 15.0%. Consequently, management LTG forecasts do not significantly deviate from the analyst consensus LTG forecast in the month prior to guidance (i.e., *MDIFF* doesn't significantly differ from zero over the full sample). By contrast, the realized growth rate at the three year (five year) horizon has a mean of 5.8% (4.7%), with an interquartile range of -4.3% to 15.2% (-3.3% to 13.2%). Therefore, managers and analysts tend to exhibit similarly optimistic LTG expectations on average.

Table 5, Panel B provides distribution statistics for upward versus downward LTG guidance events. ¹³ In terms of guidance news frequency, upward guidance comprises 41.7% of observations, while downward guidance comprises 34.5% of the sample (confirming guidance comprises the remaining 23.8%). We also see that upward guidance firm-years tend to have higher management LTG forecasts and lower analyst consensus forecasts (mean and median differences are significant at the 5% level based on untabulated t-tests and Wilcoxon rank-sum tests, respectively). While downward guidance firm-years tend to have relatively high analyst LTG optimism, realized growth rates do not significantly differ between upward and downward guidance firm-years, resulting in significantly higher analyst LTG errors for downward guidance firm-years.

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¹³ We do not tabulate statistics for confirming guidance (i.e., management's LTG forecast equals the prevailing analysts consensus LTG forecast). Confirming guidance statistics are available upon request.

Table 6 provides the results of our estimations of equations 2a (Panel A) and 2b (Panel B). ¹⁴ In Panel A, when the dependent variable is *RDIFF* computed using three-year realized growth rates, the coefficient on *MDIFF* is 1.24 with a t-statistic of 3.44 (p-value < 0.01), consistent with news conveyed by LTG guidance improving upon the prevailing analyst consensus LTG forecast. When *RDIFF* is measured using five-year realized growth rates, the coefficient on *MDIFF* is 0.72 with a t-statistic of 2.38 (p-value < 0.05). While the loss of observations in moving from three to five-year *RDIFF* might contribute to the diminished coefficient on *MDIFF*, we also speculate that mangers' private LTG signal—which we assume is positively correlated with future realized LTG—is closer to the three-year rate relative to the five-year rate.

In Panel B, after partitioning *MDIFF* into *PosMDIFF* and *NegMDIFF*, we find that *NegMDIFF* has a significant positive relation to three-year *RDIFF* (coefficient = 1.70; t-statistic = 2.45), while no significant relation exists between *PosMDIFF* and three-year *RDIFF* (coefficient = 0.81; t-statistic = 1.50). Thus, based on three-year realized growth rates, it appears that only downward guidance significantly improves upon the prevailing analyst consensus LTG forecast. The lack of a significant association between *PosMDIFF* and *RDIFF* could either mean that upward guidance is purposefully uninformative or that realized growth rates are poor proxies for managers' LTG expectations (e.g., upward guidance firms are overly optimistic about growth). Regression results using five-year *RDIFF* provide similar, albeit weaker, findings (e.g., the coefficient on *NegMDIFF* is 0.91 with a t-statistic of 1.83). Again, we speculate that the weaker results based on five-year *RDIFFs* likely reflect five-year realized rates being poorer proxies of managers' private expectations of future earnings growth. Overall, the

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¹⁴ Control variable statistics are suppressed for space considerations, but are available upon request.

evidence in Table 6 suggests that, on average, news conveyed by LTG forecasts guide analysts closer to future realized growth rates, particularly for downward guidance.

4.2 Analyst Response to LTG Guidance

We next consider whether analysts revise their LTG forecasts in the direction of management LTG guidance and we further consider whether analyst response is congruent for upward and downward guidance. Since our determinants results in Section 3 suggest that analyst demand for LTG information significantly drives the guidance decision, we suspect that analysts will generally be receptive to guidance and adjust their LTG forecasts in the direction of managers' LTG forecasts. Nevertheless, as our analysis in Section 4.1 suggests that upward guidance does not significantly improve upon the prevailing analyst consensus forecast of long-term earnings growth, it is not clear whether analysts will revise their LTG forecasts in accordance with upward guidance, particularly if analysts are aware of their own preexisting bias.

To assess analyst responsiveness to LTG guidance, we estimate the following pooled cross-sectional OLS models using our guidance sample:

$$ADIFF = \beta_0 + \beta_1 MDIFF + News Variables + Controls + \varepsilon$$
 (4a)

$$ADIFF = \beta_0 + \beta_1 PosMDIFF + \beta_2 NegMDIFF$$
 (4b)

+ Good News Variables + Bad News Variables + Controls + ε

The dependent variable ADIFF is the difference between the median analyst LTG forecast in month m+1 and the median analyst LTG forecast in month m-1. MDIFF, PosMDIFF, and NegMDIFF were defined in Section 4.1. In equation (4a), if analysts revise their LTG forecasts in the direction of management LTG guidance, then we expect

 $\beta_1 > 0$. In equation (4b), if analysts recognize the general lack of informativeness of upward guidance, particularly when compared to the informativeness of downward guidance, then we predict $\beta_1 = 0$, $\beta_2 > 0$, and $\beta_2 > \beta_1$.

Notice that in addition to the *Controls* vector that was used in Section 4.1, we include additional control vectors News Variables in equation 4a and Good News Variables and Bad News Variables in equation 4b. The vector News Variables contains two forms of short-term earnings news: (1) actual earnings news (enews), defined as quarterly earnings minus the consensus analyst forecast two days prior to earnings announcement, scaled by quarter-end stock price, and (b) guidance earnings news (gnews), defined analogously using annual earnings guidance in place of actual earnings. 15 We set *enews* and *gnews* to zero if the variable's news date falls outside of the analyst LTG revision window (i.e., from the I/B/E/S publication date of the LTG consensus forecast in month m-1 to the corresponding publication date in month m+1). The vector Good News Variables (Bad News Variables) in equation 4b contains good news (bad news) specifications of *enews* and *gnews* (e.g., *pos_enews* equals *enews* when enews is positive, zero otherwise). When testing analyst responsiveness to LTG guidance, it is important to control for short-term earnings news since short-term news can prompt analysts to revise their prior beliefs on a firm's long-term growth prospects, particularly for larger magnitude short-term news.

¹⁵ For the sake of parsimony, we do not specify quarterly guidance news variables. Results throughout the paper are unaffected when we add quarterly guidance news variables to our models. Results are also unaffected when we employ a hierarchical approach whereby *gnews* uses the longest-horizon forecast (annual or quarterly) issued within the analyst revision window.

Table 5, Panel C provides descriptive statistics relevant for our tests of analyst responsiveness to LTG guidance. ¹⁶ Over the full sample, analyst revisions do not exhibit a significant tendency in either direction (mean = -0.06%; median = 0.00%) and while non-confirming guidance occurs 76.1% of the time (= 41.7% upward plus 34.4% downward, from Panel B), the median analyst LTG forecast is revised only 43.6% of the time. We also see that while there tends to be more upward guidance events than downward guidance events (41.7% upward versus 34.4% downward), the consensus analyst LTG forecast tends to be revised down slightly more often than it is revised up (23.5% versus 20.1%). These statistics provide a preliminary indication that analysts are hesitant to revise their LTG forecasts in the direction of upward guidance. Lastly, consistent with prior literature, we see that actual earnings news tends to convey good news (mean = 0.03), while annual guidance tends to convey bad news (mean = -0.05).

Table 5, Panel D provides similar descriptive analysis for upward and downward guidance events. We first note that upward guidance firms tend to have greater magnitude positive earnings news in the analyst revision window (confirmed by difference-in-means t-tests at the 5% level for both *pos_enews* and *pos_gnews*). We also see that the frequency of positive (negative) annual guidance is significantly higher (lower) for upward guidance firm-years. To the extent that upward LTG guidance is prompted by new information reflected in positive short-term earnings news, it will be important to control for short-term news when assessing analyst responsiveness to LTG guidance. When considering analyst revision tendencies, we see no significant difference in

¹⁶ Two observations from the guidance sample do not have analyst LTG forecasts in month m+1, so our analyst revision tests use a sample of 720 observations.

¹⁷ Distribution statistics for short-term earnings news variables (e.g., *enews* and *gnews*) are computed for <u>all</u> observations, including those where news does not occur within the analyst revision window (in which case news variables are set equal to zero).

revision frequency between upward guidance firms (47.7% of analysts revise) and downward guidance firms (51.2% of analysts revise). Furthermore, upward (downward) analyst revision frequencies are higher (lower) for upward guidance observations relative to downward guidance observations.

Table 7 presents the results of our estimations of equations 4a (Panel A) and 4b (Panel B). Looking at Panel A, the coefficient on *MDIFF* is 0.11 and highly significant (t-statistic = 6.16), consistent with analysts revising their LTG forecasts in the direction of LTG guidance. In economic terms, if we assume LTG guidance news has a magnitude of 2%, a coefficient of 0.11 implies that the consensus analyst LTG forecast will change 0.22% in the direction of guidance. ¹⁸ Coefficients on our short-term earnings news variables (*enews* and *gnews*) are statistically indistinguishable from zero at conventional levels, suggesting that analyst LTG revisions aren't strongly driven by concurrent short-term earnings news after controlling for LTG guidance news.

Turning to Panel B of Table 7, we see that the coefficients on upward guidance news (*PosMDIFF*) and downward guidance news (*NegMDIFF*) are both positive (0.10 and 0.14, respectively) and highly significant at the 1% level (t-statistics = 3.34 and 3.71, respectively). Furthermore, an F-test fails to reject the null of coefficient equality between upward and downward guidance news (F-stat = 0.38, p-value = 0.54). While we expected to see a significant positive coefficient on *NegMDIFF*, we were surprised to see a significant and similar magnitude coefficient on *PosMDIFF* since the average upward guidance forecast does not significantly improve upon the prevailing analyst consensus forecast. One possible explanation for analyst responsiveness to upward guidance is that

¹⁸ While this coefficient is somewhat low, we note that it is consistent with our earlier descriptive evidence that finds the consensus forecast is revised roughly 50% of the time following non-confirming guidance.

complementary short-term earnings news might make analysts more inclined to revise their LTG forecasts in the direction of upward guidance. Hutton, Miller and Skinner (2003) find that investors perceive bad news guidance to be inherently informative, whereas good news guidance is only informative when supplemented with verifiable (i.e., quantitative) forward-looking statements. In our setting, short-term earnings news, while not forward-looking *per se*, likely serves a similar credibility-bolstering role for analysts since managers' LTG optimism coincides with short-term earnings news that exceeded analysts' expectations. As our descriptive evidence in Table 5 suggests that upward guidance observations tend to exhibit more positive short-term earnings news than downward guidance observations, we speculate that there are likely to be significant interactions between long-term and short-term earnings news for upward guidance firms.

To explore the possibility that analyst responsiveness to upward LTG guidance depends on the availability of complementary short-term earnings news, Panel C presents the results of estimations of equation 4b using two subsets of our guidance sample: an earnings announcement window sample (reported at left) and a non-announcement window sample (reported at right). Earnings announcement window observations are those in which LTG guidance is issued in the 3-day window surrounding quarterly earnings announcement.¹⁹ We believe that earnings announcement windows provide a powerful setting to test for upward guidance interactions with concurrent disclosures since firms can disclose both actual earnings news and short-term guidance within announcement windows. Results for the earnings announcement window sample show that the coefficient on *PosMDIFF* is 0.13 (up from 0.10) and significant at the 1% level,

 $^{^{19}}$ Roughly two-thirds of our LTG guidance sample falls in the 3-day window surrounding quarterly earnings announcement.

while the coefficient on *NegMDIFF* is 0.12 (down from 0.14) and significant at the 5% level. However, results for the non-announcement window sample show that while the coefficient on *NegMDIFF* remains positive and highly significant, the coefficient on *PosMDIFF* is only 0.06 and insignificant at conventional levels. Therefore, it appears that analyst responsiveness to upward guidance is only significant when guidance is issued at earnings announcement, suggesting that concurrent information disclosed at earnings announcement may facilitate the credibility of upward guidance.

5. LTG Guidance Bundling With Quarterly Earnings Announcement Disclosures

5.1 LTG Guidance Bundling with Quantitative Short-Term Earnings News

We now turn to an examination of LTG guidance "bundling" with short-term earnings news disclosed at earnings announcement. Of particular interest is whether upward LTG guidance is deployed with complementary short-term earnings news as our analysis in Section 4 shows that analysts revise their LTG forecasts in the direction of upward LTG guidance even though such forecasts tend to be positively biased. As analyst responsiveness to upward guidance is only significant within earnings announcement windows, we suspect that the credibility of upward LTG guidance may be enhanced by complementary short-term earnings news disclosed at earnings announcement.

The following three models assess the relation between the direction of LTG guidance and (good and bad) quarterly earnings news for the subset of our LTG guidance firms that disclose guidance in a three-day earnings announcement window:

$$\log\left(\frac{\operatorname{Prob}(UpGuide) = 1}{1 - [\operatorname{Prob}(UpGuide) = 1]}\right) = \alpha_0 + \alpha_1 \text{ Good News Variables}$$
 (5a)

 $+\alpha_2$ Bad News Variables + Controls + ε

$$\log\left(\frac{\operatorname{Prob}(\operatorname{DownGuide}) = 1}{1 - [\operatorname{Prob}(\operatorname{DownGuide}) = 1]}\right) = \beta_0 + \beta_1 \operatorname{Good} \operatorname{News Variables}$$
 (5b)

 $+\beta_2$ Bad News Variables + Controls + ε

$$MDIFF = \gamma_0 + \gamma_1 Good News Variables + \gamma_2 Bad News Variables$$
 (5c)
$$+ Controls + \varepsilon$$

Equations 5a and 5b are logistic regression models that assess the determinants of upward LTG guidance (UpGuide) and downward LTG guidance (DownGuide). Coefficient vectors α_1 and α_2 (β_1 and β_2) capture the relation of our short-term earnings news variables with the issuance of upward (downward) LTG guidance.²⁰ If managers tend to disclose upward LTG guidance with complementary short-term earnings news, then we expect $\alpha_1 > 0$. We do not form predictions for α_2 , nor do we form predictions for the news coefficients in (5b). With respect to α_2 , while upward LTG guidance could provide a "silver lining" to concurrent earnings disappointments, it can also further damage the reputation of the firm if market participants view upward guidance to be self-serving in nature (Barton and Mercer 2005). With respect to the news coefficients in equation 5b, downward guidance tends to be inherently credible (Hutton, Miller and Skinner 2003), so strategic news bundling incentives are likely to be absent.

Equation 5c is a pooled cross-sectional OLS regression model that assesses whether LTG guidance news relates to positive and/or negative short-term earnings news.

²⁰ In subsequent analysis, we augment our news variables to include indicator variables for good and bad news (e.g., *pdum_gnews* =1 if LTG guidance is deployed with positive annual guidance, zero otherwise).

Based on the reasoning in the previous paragraph, we expect LTG guidance news to be increasing with positive short-term earnings news ($\gamma_1 > 0$) while we form no prediction with respect to LTG guidance news' relation with negative short-term earnings news.

Table 8 presents descriptive statistics for LTG guidance issued at earnings announcement. Panel A shows that positive earnings news occurs roughly 2.5 times more often than negative earnings news (mean values for *pdum_enews* and *ndum_enews* are 0.57 and 0.23, respectively). Given the higher frequency of positive earnings news, mean and median values of the magnitude of positive news (mean = 0.08, median = 0.03) tend to be larger than the corresponding values of negative news (mean = 0.04, median = 0.00). Panel B shows that while frequencies of positive and negative earnings news are very similar for upward and downward guidance firms (57% vs. 55% for positive news, 25% vs. 23% for negative news), upward guidance firms have significantly higher magnitude short-term earnings news (means = 0.07 vs. 0.02), driven by significantly higher magnitude positive news (means = 0.11 vs. 0.06). These results suggest that upward LTG guidance tends to be issued with higher magnitude short-term earnings news (driven by positive news) relative to downward guidance.

Table 9 presents results of our estimations of equations 5a, 5b, and 5c. Panel A contains results for our logistic models (5a and 5b), with determinants of upward guidance (5a) reported at left and determinants of downward guidance (5b) reported at right. Among firms issuing LTG guidance at earnings announcement, upward guidance is more likely with larger magnitude positive earnings news (significant at the 5% level based on a two-sided t-test) and with concurrent positive earnings guidance (significant at the 10% based on a two-sided t-test). Meanwhile, downward LTG guidance is *less* likely

to occur with larger magnitude positive earnings news and larger magnitude positive earnings guidance (both significant at the 10% level). Therefore, it appears that the sign of LTG guidance news relates positively to good, but not bad, short-term earnings news.

Panel B of Table 9 presents OLS regression results where the dependent variable is the news conveyed by LTG guidance (MDIFF). While we report the results of estimations of equation 5c at right, we report at left results for a regression that does not partition short-term news by the sign of the news (i.e., pos_enews and neg_enews is replaced by enews, etc.). The results at left show that the coefficient on enews is positive and significant at the 5% level (t-stat = 2.49) while the coefficient on gnews is positive and insignificant at conventional levels. When we partition enews and gnews by sign (reported at right), we see that the positive loading on enews is largely driven by good news (the coefficient on pos_enews is 1.63, which is significant at the 5% level).

Collectively, both panels suggest that LTG guidance issued at earnings announcement varies positively with concurrent good, but not bad, earnings news. In particular, it appears that upward LTG guidance is deployed in a manner that suggests it relates to performance developments underlying short-term earnings news. Analysts observing short-term performance that exceeds their expectations may then find upward LTG guidance more credible and thus they may be more receptive to revising their LTG forecasts in the direction of guidance, consistent with results in Table 7, Panels B & C.

5.2 LTG Guidance Bundling with Qualitative Disclosures at Earnings Announcement

In this section, we assess the relation of LTG guidance to concurrent qualitative information disclosed at earnings announcement. Prior research shows that qualitative information, such as the tone of a press release, can facilitate the prediction of future

performance (e.g., Davis, Pigor and Sedor 2012; Davis and Tama-Sweet 2012). Bozanic et al. (2015) find that qualitative forward-looking statements not only predict future performance, but they also arise under circumstances (e.g., high uncertainty) that differ from those that give rise to quantitative disclosures, such as management forecasts. Given the informative and distinct nature of qualitative disclosures, we investigate whether news conveyed by LTG guidance at earnings announcement relates to the following qualitative variables from Loughran and McDonald (2011) and Bozanic et al. (2015):

- 1. **Net positive tone** $(Pct_NetPos) = \frac{(\#positive\ words \#negative\ words)}{\#non-numeric\ words}$
- 2. **Net strong tone** ($Pct_NetStrong$) = $\frac{(\#strong\ words-\#weak\ words)}{\#non-numeric\ words}$
- 3. Forward looking words $(Pct_Fwd) = \frac{(\#forward\ looking\ words)}{\#non-numeric\ words}$

Table 8, Panel C reports distributional statistics for each qualitative variable over the earnings announcement sample and by LTG forecast venue (i.e., press release or conference call). All three qualitative variables have significantly higher means for conference call observations relative to press release observations. Therefore, it will be necessary to control for distributional differences in our qualitative variables across LTG forecast venues in our empircal analysis. In Panel D, we see that the tone variables have significantly higher means for downward guidance observations relative to upward guidance observations, particularly among conference call observations. Meanwhile, sample means for *Pct_Fwd* do not significantly vary by the sign of LTG guidance news.

In Table 10, we repeat the logistic and OLS analyses from Section 5.1 using our qualitative variables as regressors. To address the significant differences in qualitative variable sample means across LTG forecast venues, we perform two sets of analyses.

First, we estimate models using "de-meaned" qualitative variables. For each observation, we de-mean its qualitative variable by subtracting out the mean of the variable within the LTG forecast venue of the observation (e.g., Pct_NetPos minus the mean of PctNetPos in the press release sample if an observation comes from a press release). Second, we estimate models using only earnings conference call observations, which comprise 69% of our earnings announcement window observations. When estimating models, we use one qualitative variable at a time; therefore, each panel in Table 10 reports results for 6 estimations (= 3 qualitative variables x 2 sets of analyses).

Table 10, Panel A examines qualitative determinants of upward LTG guidance. While none of the de-meaned qualitative variables are significantly related to upward guidance, we see some weak evidence of stronger language *deterring* upward guidance within the conference call sample (p-value = 0.07). In Panel B, downward guidance issuance is increasing in both net positive tone (p-value = 0.047) and net strong tone (p-value = 0.085) using de-meaned variables, while the net strong tone effect is stronger and more significant in the conference call sample (p-value = 0.042). In Panel C, LTG guidance news is negatively related to all of our qualitative variables, though only Pct_Fwd in the conference call sample has a significant coefficient (p-value = 0.033).

Overall, it appears that qualitative information relates more strongly to downward, rather than upward, LTG guidance. In particular, relative to upward guidance, downward guidance accompanies earnings announcement disclosures that use more forward-looking statements with stronger and more optimistic language. One interpretation of the results in Tables 9 and 10 is that upward guidance arises in conjunction with quantitative short-term information that "corroborates" management's private signal of future growth,

whereas downward guidance arises when analysts exhibit excessive optimism about firms with relatively strong growth prospects. Therefore, the nature of LTG guidance bundling with concurrent disclosures at earnings announcement appears to depend on the sign of the news conveyed by LTG guidance.

6. Conclusion

We examined the determinants of management long-term earnings growth (LTG) forecasts and explored whether the news conveyed by LTG guidance is incrementally informative about future growth, both empirically and as perceived by analysts. We also examined whether the news conveyed by LTG guidance relates differentially to quantitative and qualitative disclosures made at earnings announcement. Overall, we found that LTG guidance arises under credible circumstances (e.g., stronger performance and high long-term growth prospects) to satisfy external demand for LTG information (e.g., among analysts providing LTG coverage and among industries with frequent LTG guidance activity). The news conveyed by LTG guidance generally improves upon the prevailing analyst consensus LTG forecast—especially for downward LTG guidance and analysts generally respond in the direction of guidance. Nevertheless, upward guidance does not significantly improve upon prevailing analyst LTG expectations, and while analysts sometimes understand this, they appear to significantly respond to upward guidance when guidance is issued within earnings announcement windows. Looking at LTG guidance issued within earnings announcement windows, though downward guidance relates positively to concurrent qualitative disclosures, upward guidance relates strongly to complementary quantitative information. We surmise that the bundling of upward guidance with positive earnings news may bolster the credibility of upward guidance, provoking analysts to upwardly revise their LTG forecasts.

Future research might further explore the industry-specific component of LTG guidance, as our determinants analysis suggests that industry membership is a strong driver of LTG guidance activity. Since we found that analysts do not always respond to LTG guidance, particularly stand-alone upward guidance, it may be interesting to examine whether analysts use industry peer guidance to assess the informativeness of LTG forecasts. Finally, we believe that there remain significant opportunities to further explore LTG guidance bundling with concurrent disclosures, particularly with regard to how bundling affects investor and analyst responses to guidance.

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Appendix A: Examples for LTG guidance sample construction

Retail Brief -- Wendy's International Inc.: Beef Costs, Baja Fresh Chain Are Expected to Pinch Profit, 3 February 2004, The Wall Street Journal (Copyright 2004, Dow Jones & Company, Inc.)

Wendy's International Inc. revised its **long-term earnings growth** rate, and said beef costs and its Baja Fresh Mexican chain will pinch profit in the near term. The operator of multiconcept restaurant chains said a "conservative **long-term** financial projection" calls for modifying its **earnings**-per-share **growth** rate to a range of 11% to 13% from 12% to 15% annualized over the next five years. That would translate into **earnings** of \$2.27 to \$2.32 a share this year. Last year, the Dublin, Ohio, company reported earnings of \$2.05 a share. Beef costs for its namesake hamburger chain are expected to jump 14% to 17% this year, with Wendy's expecting to pay \$1.34 a pound for beef this quarter, up from 99 cents a pound a year earlier. Wendy's expects its Baja Fresh Mexican fast-casual concept to cut earnings per share by five cents to seven cents. Last year Baja Fresh diluted earnings by nine cents a share, higher than **management** had **projected**. Wendy's is doubling its quarterly dividend this year to 12 cents from six cents.

AmerisourceBergen CEO: Will Deliver Long-Term Earnings 23 July 2004 Dow Jones News Service (Copyright 2004, Dow Jones & Company, Inc.)

PHILADELPHIA (Dow Jones)- AmerisourceBergen Corp. (ABC) expects to deliver "long-term, replicatable, sustainable earnings," Chief Executive R. David Yost said Thursday after the drug distributor reported fiscal third-quarter financial results that were hurt by the loss of a major customer. The Valley Forge, Pa., company expects to return next year to its long-term goals of 15% or greater increases in annual per-share earnings and a double-digit percentage revenue growth rate after the anniversary of the loss of the Department of Veterans Affairs drug-distribution contract.

General Mills Lowers Outlook, Plans Product Cuts 1 July 2004 The Wall Street Journal

General Mills Inc. reduced its **long-term** sales and **earnings** forecast and said it will eliminate 20% of its food items, as the **company** struggles with the higher cost of raw ingredients and weak sales in its bakeries and food-service division. After a weak performance this past fiscal year, the **company** pulled back growth projections through fiscal 2006. General Mills said it expects net sales will grow 3% to 4% annually, down from 5% to 6% in a previous forecast. Annual **growth** of **earnings** per share will be in the high single-digit percentage range, down from an earlier target of 11%. Plans to reduce the **company**'s debt by \$2 billion by the end of 2006 haven't changed. For fiscal 2005, the **company** expects it will earn \$2.75 to \$2.80 a share, compared with \$2.75 a share in fiscal 2004.

The Coca-Cola Co Reaffirms Long-Term Growth Objectives 13 December 2002 Dow Jones News Service

ATLANTA -(Dow Jones)- Coca-Cola Co. (KO) still expects to earn \$1.76 or \$1.77 a share in 2002, but noted it will no longer provide any quarterly or annual earnings guidance. In a press release Friday, the beverage giant said it will not update its outlook for full-year earnings per share expectations for 2003 as the year progresses. Instead, the **company** will provide perspective on its "value drivers, its strategic initiatives and those factors critical to understanding its business and operating environment."

"We believe that establishing short-term guidance prevents a more meaningful focus on the strategic initiatives that a **company** is taking to build its business and succeed over the long-run," said Chairman and **Chief Executive** Douglas Daft. "We are managing this business for the long-term."

The **company** also said it is confident in its **long-term earnings** per share growth goal of 11% to 12% and unit case volume growth of 5% to 6% over time. Coca-Cola Co. (KO) Chairman and Chief Executive E. Neville Isdell said Wednesday he is not satisfied with the soft drink giant's recent performance, but he remains "optimistic" regarding the company's long-term outlook. "Although it is not our practice to provide specific earnings guidance, we have made an exception today in the interest of clear and timely communication," Isdell said, during a conference call with analysts Wednesday. Previously, Coke stopped providing annual and quarterly earnings forecasts. Instead, the company said it expected to increase its earnings per share by 11% to 12% over the long term.

Appendix B: Variable Definitions

$ADIFF_{i,t}$	Analyst LTG forecast revision, defined as the median
	analyst LTG forecast in month $m+1$ minus the
	corresponding median analyst LTG forecast in month <i>m-1</i> .
$AdjRet_{i,t}$	The cumulative market-adjusted annual return ending on
	the last trading day of month m-2.
$AF_{i,t}$	The natural logarithm of 1 plus the number of analysts
1,1	providing LTG forecasts in month <i>m-1</i> .
$CAGR_{i,t}$	$[(IB_{t+5} - IB_t)/(IB_t)]^{1/5} - 1$, where IB is income before
	extraordinary items. Not defined if either <i>IB</i> term is
	negative. Also calculated at the 3 year horizon.
DED_Net _{i,t}	The number of shares owned by "dedicated" and "quasi-
	indexer" institutional investors less the number of shares
	owned by "transient" institutional investors scaled by total
	shares outstanding, measured as of the most recent fiscal
	quarter end relative to month <i>m-1</i> .
D:	1
$Disp_{i,t}$	The standard deviation of analysts' LTG forecasts in
T 1/1.	month m - 1 .
$EarnVolt_{i,t}$	The standard deviation of quarterly earnings per share over
	quarters q-8 through q-1.
$Enews_{i,t}$ ($Gnews_{i,t}$)	Actual earnings news (management earning guidance for
	the coming year-end) less the median analyst consensus
	forecast of earnings prior to the news date. News variables
	equal zero if the news occurs outside the analyst revision
	window (Table 7) or the 3-day earnings announcement
	window (Tables 8-10).
$IndProp_{i,t}$	The number of (Fama-French 48) industry peers that
	issued LTG guidance in calendar year <i>t-1</i> divided by the
	number of industry peers in year <i>t-1</i> with analyst LTG
	coverage.
$Litigation_{i,t}$	=1 if the firm was subject to a securities lawsuit in the past
	12 months (per the Stanford Securities Class Action
	Clearinghouse), zero otherwise.
$LossLagQ_{i,t}$	=1 if the firm reported negative earnings in quarter q -1,
0 ~ .,.	zero otherwise.
$MA_{i,t}$	=1 if the firm announced an acquisition (minimum
£,£	\$10MM deal value, with at least 50% ownership) in
	quarter q or $q+1$, zero otherwise.
$MDIFF_{i,t}$	LTG guidance news, defined as management's LTG
	forecast minus the median analyst LTG forecast in month
	<i>m-1</i> . The management LTG forecast is defined as (a) the
	point value for point forecasts, (b) the midrange for range
	forecasts, and (c) the lower (upper) bound value for lower
MiggEnn	(upper) bound forecasts.
$MissExp_{i,t}$	=1 if firm missed the consensus forecast of earnings for
161.20	quarter <i>q-1</i> , zero otherwise.
$Mkt2Book_{i,t}$	The natural logarithm of the ratio of a firm's market value
	of equity to its book value of equity as of the end of
	quarter q -1.

$NPriorGuide_{i,t}$	The number of prior fiscal quarters (out of the 8 most
	recent prior quarters) that contain a quantitative
	management LTG guidance event.
$Pct_Fwd_{i,t}$	Forward-looking words used divided by total non-numeric
	words used, following Bozanic et al. (2015).
$Pct_NetPos_{i,t}$	Positive words used minus negative words used divided by
	total non-numeric words used, following Loughran and
	McDonald (2011).
Pct_NetStrong _{i,t}	Strong words used minus weak words used divided by
	total non-numeric words used, following Loughran and
	McDonald (2011).
PctLoss8Q _{i,t}	The percentage of quarters during which the firm reported
	negative earnings (Compustat item IB) over quarters q-8
	through q -1.
$PctLTG_{i,t}$	The number of analysts providing LTG forecasts in month
,	<i>m-1</i> divided by the number of analysts providing short-
	term earnings forecasts in month $m-1$.
$Pos_Enews_{i,t} (Neg_Enews_{i,t})$	= <i>Enews</i> when <i>Enews</i> is > 0 (< 0), zero otherwise.
	Pos_Gnews and Neg_Gnews defined analogously.
$PosMDIFF_{i,t} (NegMDIFF_{i,t})$	= DIFF when $DIFF > 0$ (< 0), zero otherwise.
$PSalesGr_{i,t}$	Past annual sales growth, measured as (Sales _{t-1} – Sales _{t-2}) /
	$(Sales_{t-2})$
$RD_Dum_{i,t}$	=1 if the firm reports R&D charges in quarter q -1 (as
	measured by a non-zero value for the variable RDX in
	Compustat), zero otherwise.
$RDIFF_{i,t}$	Analyst LTG forecast error, defined as the realized
	compound annual growth rate in earnings at the 3 (or 5)
	year horizon (see <i>ECAGR</i> definition) minus the median
	analyst LTG forecast in month <i>m-1</i> .
$Restatement_{i,t}$	=1 if the firm issued a restatement within the past 12
	months, zero otherwise.
$Restrc_Dum_{i,t}$	=1 if the firm reports restructuring charges in quarter q -1
	(as measured by a non-zero value for the variable RCAQ
	in Compustat), zero otherwise.
$RWBadNews_{i,t}$	=1 if seasonally differenced quarterly earnings is negative
	in quarter q - l , zero otherwise.
$Sentiment_{i,t}$	The consumer sentiment index from the University of
	Michigan consumer sentiment survey for month <i>m-1</i> .
$SEO_{i,t}$	=1 if the firm issued a secondary offering of equity in
	quarter q or $q+1$, zero otherwise.
$Size_{i,t}$	The natural logarithm of the firm's market capitalization as
	of the end of quarter q -1 (where month m falls in quarter
	q).
$STG_Dum_{i,t}$	= 1 if firm issued short-term earnings guidance within the
	past 12 months, zero otherwise.
$UpGuide_{i,t}$ (DownGuide _{i,t})	=1 when $DIFF > 0$ (< 0), zero otherwise.

Table 1: Sample Selection

Observations with	Total	Unique firm- year- forecast	Control Sample 1*	Control Sample 2**
Quantitative LTG forecasts.	1,342	892		
Gvkey, permno, and IBES identifiers in 3-month window surrounding LTG guidance event.	1,290	850	3,804	34,243
Non-missing values for determinants variables, <i>excluding</i> analyst LTG variables.	1,188	772	3,093	23,999
Non-missing values for determinants variables, <i>including</i> analyst LTG variables.	1,135	726	2,662	16,946
Non-negative size, market-to-book, and valid institutional ownership data (e.g., dedicated investors cannot exceed total institutional investors).	1,128	722	2,487	12,684
Matches on size, fiscal year-end month, analyst following, and short-term guidance frequency status (frequent, infrequent, none).		636		636

^{*}Control Sample #1 = LTG guidance firms in non-guidance years (2001-2007).

^{**}Control Sample #2 = Characteristic-matched sample. We require control firms to match along fiscal year-end month, number of analysts providing year-ahead earnings forecasts on I/B/E/S in month *m-1*, short-term earnings guidance frequency classification following Brochet, Faurel and McVay 2011 (*frequent* = at least four quarterly forecasts over the prior eight quarters, including two forecasts over the prior four quarters; *infrequent* = at least one quarterly forecast over the prior eight quarters; non-guiders = no quarterly forecasts over the prior eight quarters) and prior quarter-end market capitalization, where in the latter case, we retain the closest size match.

Table 2: Sample Firm Characteristics

Panel A: Frequency of LTG Forecasts

	<u>Firm-date</u>	e-forecasts	<u>Firm-yea</u>	r-forecasts
# Events	# Firms	%	# Firms	%
1	234	49.7%	279	59.2%
2	91	19.3%	102	21.7%
3	49	10.4%	47	10.0%
4	29	6.2%	21	4.5%
5	15	3.2%	14	3.0%
6	12	2.5%	5	1.1%
7	9	1.9%	3	0.6%
8	5	1.1%		
9	4	0.8%		
10	4	0.8%		
11 or more	19	4.0%		
Total	471	100.0%	471	100.0%

Panel B: LTG Guidance Form

Year	# Point	%	# Range	%	# Lower bound	%	# Upper bound	%	Total
2001	20	37.7%	20	37.7%	13	24.5%	0	0.0%	53
2002	21	22.8%	51	55.4%	19	20.7%	1	1.1%	92
2003	23	31.5%	28	38.4%	22	30.1%	0	0.0%	73
2004	27	26.0%	53	51.0%	24	23.1%	0	0.0%	104
2005	37	26.2%	69	48.9%	35	24.8%	0	0.0%	141
2006	23	18.9%	64	52.5%	35	28.7%	0	0.0%	122
2007	30	21.9%	77	56.2%	28	20.4%	2	1.5%	137
Total	181	25.1%	362	50.1%	176	24.4%	3	0.4%	722

Table 2, Continued...

Panel C: Guidance Firm Industry Composition vs. Compustat Population

	#		#			#		#	
	LTG		Comp			LTG		Comp	
Industry	firms	%	firms	%	Industry	firms	%	firms	%
Util	121	16.8%	2,126	3.8%	Chips	6	0.8%	3,260	5.9%
Banks	74	10.2%	4,441	8.0%	Soda	5	0.7%	139	0.2%
Rtail	60	8.3%	2,279	4.1%	Smoke	5	0.7%	72	0.1%
Meals	54	7.5%	924	1.7%	Missing	5	0.7%	257	0.5%
Insur	39	5.4%	1,711	3.1%	Toys	4	0.6%	387	0.7%
Food	39	5.4%	740	1.3%	ElcEq	3	0.4%	706	1.3%
BusSv	36	5.0%	7,239	13.0%	RlEst	2	0.3%	563	1.0%
Drugs	31	4.3%	3,128	5.6%	Guns	2	0.3%	84	0.2%
Hshld	30	4.2%	726	1.3%	Autos	2	0.3%	711	1.3%
Whlsl	26	3.6%	1,710	3.1%	Aero	2	0.3%	220	0.4%
MedEq	19	2.6%	1,658	3.0%	Steel	1	0.1%	664	1.2%
Beer	19	2.6%	182	0.3%	Rubbr	1	0.1%	428	0.8%
Mach	16	2.2%	1,467	2.6%	Other	1	0.1%	314	0.6%
PerSv	14	1.9%	572	1.0%	Oil	1	0.1%	2,202	4.0%
Fin	14	1.9%	2,993	5.4%	Boxes	1	0.1%	133	0.2%
Hlth	13	1.8%	784	1.4%	Books	1	0.1%	425	0.8%
Clths	13	1.8%	619	1.1%	Txtls	0	0.0%	152	0.3%
Trans	10	1.4%	1,408	2.5%	Ships	0	0.0%	89	0.2%
Paper	9	1.2%	509	0.9%	Mines	0	0.0%	316	0.6%
Telcm	8	1.1%	2,252	4.0%	Gold	0	0.0%	338	0.6%
Cnstr	8	1.1%	493	0.9%	FabPr	0	0.0%	131	0.2%
Chems	8	1.1%	1,000	1.8%	Coal	0	0.0%	108	0.2%
Fun	7	1.0%	870	1.6%	BldMt	0	0.0%	770	1.4%
LabEq	6	0.8%	1,030	1.8%	Agric	0	0.0%	175	0.3%
Comps	6	0.8%	2,171	3.9%	Total	722	100.0%	55,676	100.0%

In Panel A, a "firm-date-forecast" is a unique observation for a firm on a particular date in a particular year. A "firm-year-forecast" is a unique observation for a firm in a particular year. We use the first forecast issued in a particular year if a firm issues LTG multiple forecasts in that year. In Panel B, a point forecast is an LTG forecast issued as a discrete rate of growth (e.g., 15%). A range forecast gives both a lower and upper bound for growth (e.g., 10-15%). A lower bound forecast is an open-range forecast with a given minimum point (e.g., 10% or higher). An upper bound forecast is an open-range forecast with a given maximum point (e.g., 10% or lower). In Panel C, we use the 48 industry classifications described in Fama and French (1997). The counts provided are based on SIC codes valid for the years 2001-2007.

Table 3: Descriptive Statistics for Determinants of LTG Guidance

	vs. LTC	Firms in I	Non-	vs. Chara	acteristic-N	/Iatched
	Guio	dance Year	S	F	Firm-Years	
	Guiders	Control	Pr > t	Guiders	Control	Pr > t
Adjret	0.09	0.09	0.8124	0.09	0.11	0.1960
AF	8.14	7.56	0.0040	7.81	6.91	0.0001
DED_net	0.32	0.28	<.0001	0.32	0.32	0.5774
DISP	2.42	2.82	<.0001	2.44	3.61	<.0001
Earnvolt	0.27	0.31	0.0075	0.28	0.30	0.2392
Indprop	0.03	0.01	<.0001	0.03	0.01	<.0001
Litigation	0.05	0.04	0.5307	0.05	0.05	0.9002
LosslagQ	0.05	0.11	<.0001	0.06	0.09	0.0076
MA	0.07	0.06	0.3693	0.06	0.07	0.4372
MissEXP	0.26	0.29	0.1309	0.26	0.25	0.6077
Mkt2Book	3.99	3.79	0.2719	3.94	3.51	0.0289
Pctloss8Q	0.04	0.08	<.0001	0.04	0.10	<.0001
PctLTG	0.65	0.66	0.1821	0.65	0.58	<.0001
Psalesgr	0.13	0.13	0.4566	0.14	0.14	0.8626
RD_dum	0.23	0.33	<.0001	0.23	0.30	0.0018
Restatement	0.04	0.03	0.0921	0.05	0.05	0.8940
Restrc_dum	0.20	0.21	0.6055	0.18	0.23	0.0274
Rwbadnews	0.27	0.34	0.0006	0.27	0.34	0.0089
SEO	0.07	0.06	0.4708	0.07	0.03	0.0004
Npriorguide	1.11	0.47	<.0001			
Sentiment	89.65	92.37	<.0001			
Size (Mkt Cap)	16,106	12,442	0.0022			
Stg_dum	0.83	0.74	<.0001			
n	722	2,487		636	636	

Table 3 compares sample means of the determinants variables for our LTG guidance firms with the corresponding means for our two control samples. Control Sample 1 consists of guidance firms in non-guidance years (years range from 2001-2007). Control Sample 2 consists of characteristic-matched firm years. We require matched firms to match along fiscal year-end month, number of analysts providing year-ahead earnings forecasts on I/B/E/S in month *m-1*, short-term earnings guidance frequency classification following Brochet, Faurel and McVay 2011 (*frequent* = at least four quarterly forecasts over the prior eight quarters, including two forecasts over the prior four quarters; *infrequent* = at least one quarterly forecast over the prior eight quarters; non-guiders = no quarterly forecasts over the prior eight quarters) and prior quarter-end market capitalization, where in the latter case, we retain the closest size match. Two-sided p-values are based on difference-in-means t-tests. See Appendix B for variable definitions.

Table 4: Determinants of LTG Guidance

Dependent Variable = Guide	LTG San Control Sa	1		LTG Sar Control S		
Independent Variables	Estimate	p-value		Estimate	p-value	
Adjret	0.1695	0.2446		-0.3924	0.0868	*
AF	0.2915	0.0177	**	0.0877	0.5996	
DED_net	-0.2256	0.3117		-0.0942	0.798	
DISP	-0.0344	0.1625		-0.1396	<.0001	***
Earnvolt	0.0604	0.6994		0.0824	0.7228	
Indprop	4.7905	0.0090	***	19.4183	<.0001	***
Litigation	0.0674	0.7771		0.1306	0.6689	
LossLagQ	0.0394	0.8769		0.6926	0.0319	**
MA	0.0277	0.8955		0.0243	0.9272	
MissEXP	0.0360	0.7664		0.1041	0.4942	
Mkt2Book	0.1500	0.0356	**	0.2924	0.0122	**
Pctloss8Q	-1.1701	0.0241	**	-2.3658	0.0002	***
PctLTG	-0.0649	0.7955		1.0905	0.0055	***
Psalesgr	0.4293	0.1584		0.2067	0.5859	
RD_dum	-0.4709	0.0002	***	0.1436	0.4223	
Restatement	-0.3056	0.1993		0.0912	0.7813	
Restrc_dum	-0.1769	0.1737		-0.1181	0.5141	
RWbadnews	-0.1430	0.2008		-0.437	0.003	***
SEO	0.0227	0.8935		1.0129	0.0006	***
Npriorguide	0.2161	<.0001	***			
Sentiment	-0.0516	<.0001	***			
Size	0.0957	0.0168	**			
Stg_dum	0.1983	0.0963	*			
n	3,209			1,272		
Rsq	0.1685			0.1468		

Table 4 presents the results of estimations of logistic regressions where the dependent variable *Guide* equals 1 if a firm issues an LTG forecast in year t, zero otherwise. Two estimations are presented above, each corresponding to a separate control sample case. Control Sample 1 consists of guidance firms in non-guidance years (years range from 2001-2007). Control Sample 2 consists of characteristic-matched firm years. We require matched firms to match along fiscal year-end month, number of analysts providing year-ahead earnings forecasts on I/B/E/S in month m-l, short-term earnings guidance frequency classification following Brochet, Faurel and McVay 2011 (*frequent* = at least four quarterly forecasts over the prior eight quarters, including two forecasts over the prior four quarters; *infrequent* = at least one quarterly forecast over the prior eight quarters) and prior quarter-end market capitalization, where in the latter case, we retain the closest size match. Two-sided p-values are based on chi-square statistics. Standard errors are clustered at the firm level and year fixed effects are employed. Independent variables are Winsorized at the 1st and 99th percentiles. See Appendix B for variable definitions.

Table 5: Descriptive Statistics for News Conveyed by LTG Guidance

Panel A: Forecasted and Realized Growth—Full Sample

Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev
Mgmt LTG (%)	722	13.28	10.00	12.50	15.00	5.96
Prior Analyst LTG (%)	722	12.99	10.00	13.00	15.00	5.36
Mgmt LTG - Prior Analyst LTG (MDIFF)	722	0.26	-1.00	0.00	1.50	3.56
Realized 3-yr LTG (%)	577	5.84	-4.30	6.29	15.23	23.36
Analyst 3-yr LTG Error	577	-7.00	-16.86	-4.74	3.12	23.59
Mgmt 3-yr LTG Error	577	-7.12	-16.95	-4.63	2.82	23.43
Realized 5-yr LTG (%)	531	4.73	-3.31	5.66	13.21	16.47
Analyst 5-yr LTG Error	531	-8.06	-15.51	-5.89	0.39	16.77
Mgmt 5-yr LTG Error	531	-8.22	-16.11	-5.89	0.41	16.67

Panel B: Forecasted and Realized Growth—Upward vs. Downward LTG Guidance

	Pct of N		Mean 25th		25th	th Pctl Med		Median		75th Pctl		Std Dev	
Variable	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	
Mgmt LTG (%)	41.7%	34.5%	14.41	11.92	10.00	10.00	14.00	10.00	17.50	15.00	6.78	4.64	
Prior Analyst LTG (%)	41.7%	34.5%	11.59	14.47	8.00	11.00	12.00	14.00	15.00	17.20	4.84	5.27	
Mgmt LTG - Prior Analyst LTG (MDIFF)	41.7%	34.5%	2.78	-2.61	1.00	-3.50	2.00	-2.00	3.30	-1.00	3.51	2.45	
Realized 3-yr LTG (%)	39.7%	35.2%	7.26	4.45	-4.45	-4.30	6.23	6.38	17.82	14.87	23.46	24.07	
Analyst 3-yr LTG Error	39.7%	35.2%	-4.23	-9.77	-15.69	-19.25	-3.33	-6.32	5.82	1.72	23.42	24.76	
Mgmt 3-yr LTG Error	39.7%	35.2%	-6.70	-7.31	-17.89	-16.06	-5.52	-3.50	2.82	4.62	23.53	24.54	
Realized 5-yr LTG (%)	39.4%	35.2%	5.11	4.74	-3.49	-2.66	5.28	6.34	13.76	13.01	17.56	16.57	
Analyst 5-yr LTG Error	39.4%	35.2%	-6.39	-9.46	-15.10	-16.89	-4.70	-6.21	2.09	-0.30	17.49	17.38	
Mgmt 5-yr LTG Error	39.4%	35.2%	-8.93	-7.07	-17.49	-14.46	-6.95	-4.11	-0.62	1.42	17.51	17.17	

Table 5, Continued...

Panel C: Analyst Response and Short-Term Earnings News—Full Sample

Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev
Change in Analyst LTG (ADIFF)	720	-0.06	0.00	0.00	0.00	1.40
Quarterly earnings news (enews)	720	0.03	-0.01	0.03	0.10	0.25
Short-term guidance (STG) news (gnews)	720	-0.05	-0.04	0.00	0.00	0.33
% of analysts revising						
up	20.1%					
down	23.5%					
total	43.6%					

Panel D: Analyst Response and Short-Term Earnings News— Upward vs. Downward LTG Guidance

	Pct	of N	Mean		25th Pctl		Median		75th Pctl		Std Dev	
Variable	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down
Change in Analyst LTG (ADIFF)	41.7%	34.4%	0.27	-0.42	0.00	-0.53	0.00	0.00	0.44	0.00	1.57	1.27
Qtly earnings news > 0 (pos_enews)	41.7%	34.4%	0.07	0.04	0.00	0.00	0.00	0.00	0.06	0.04	0.17	0.08
Qtly earnings news < 0 (neg_enews)	41.7%	34.4%	-0.03	-0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.10
STG news > 0 (pos_gnews)	41.7%	34.4%	0.05	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.14	0.09
STG news $< 0 (neg_gnews)$	41.7%	34.4%	-0.08	-0.10	0.00	-0.05	0.00	0.00	0.00	0.00	0.31	0.32
% of analysts revising	Up	Down							•		•	

% of analysts revising	Up	Down
up	29.7%	14.1%
down	18.0%	37.1%
total	47.7%	51.2%

Table 5, Continued...

enews and gnews Frequency	Up	Down
% enews > 0	39.2%	34.9%
% enews < 0	17.6%	14.5%
% gnews > 0	27.6%	18.5%
% gnews <0	23.3%	34.1%

Table 5 provides descriptive statistics pertaining to the news conveyed by LTG guidance relative to realized future growth rates (Panels A and B) and analyst responsiveness to LTG guidance news (Panels C and D). In Panel A, sample sizes decline because calculation of realized future growth in earnings requires non-negative EPS in years t and t+3 (or t+5). In Panel B, "Up" corresponds to upward LTG guidance, which occurs when the management LTG forecast is above the prevailing median analyst LTG forecast in month m-1; "Down" corresponds to downward LTG guidance, which occurs when the management LTG forecast is below the prevailing median analyst LTG forecast in month m-1. Numbers in **BOLD** indicate significant mean (median) differences based on two-sided t-tests (Z-tests) at the 5% level. See Appendix B for variable definitions.

Table 6: News Conveyed by LTG Guidance and Future Realized Earnings Growth

Panel A: Analyst LTG Forecast Error and LTG Guidance News

	Dependent	variable =	Dependent	variable =
	<u>RDIFI</u>	F (3yr)	<u>RDIFI</u>	7 (5yr)
Parameter	Estimate	t Value	Estimate	t Value
MDIFF	1.24	1.24 3.44		2.38
	Rsq	nobs	Rsq	nobs
	0.2044	577	0.0995	531

Panel B: Analyst LTG Forecast Error and the Sign of LTG Guidance News

	Dependent	variable =	Dependent	variable =
	<u>RDIFI</u>	F(3yr)	<u>RDIFI</u>	F (5yr)
Parameter	Estimate t Value		Estimate	t Value
PosMDIFF	0.81	1.50	0.55	1.13
NegMDIFF	1.70	2.45	0.91	1.83
	Rsq	nobs	Rsq	nobs
	0.2057	577	0.0999	531
	F value	Pr > F	F value	Pr > F
	0.80	0.37	0.21	0.65

Table 6 presents the results of pooled cross-sectional OLS regressions of analyst LTG forecast errors (RDIFF) on management LTG forecast news (MDIFF) as well as positive and negative management LTG forecast news (PosMDIFF and NegMDIFF, respectively). Control variables from Tables 3 and 4 are included but not reported. In Panel B, F-statistics (and p-values) are reported for tests of coefficient equality between PosMDIFF and NegMDIFF. Standard errors are clustered at the firm level and year fixed effects are employed. Independent variables are Winsorized at the 1st and 99th percentiles. See Appendix B for variable definitions.

Table 7: Analyst Response to LTG Guidance

Panel A: Regression of Analyst LTG Forecast Revisions (*ADIFF*) on LTG Guidance News and News Controls.

Parameter	Estimate	t Value
MDIFF	0.105	6.16
enews	-0.048	-0.25
gnews	0.107	0.85
	Rsq	nobs
	0.1830	720

Panel B: Regression of Analyst LTG Forecast Revisions (*ADIFF*) on Positive and Negative LTG Guidance and News Controls.

Parameter	Estimate	t Value
PosMDIFF	0.102	3.34
NegMDIFF	0.138	3.71
pos_enews	-0.191	-0.67
neg_enews	-0.043	-0.06
pos_gnews	0.227	0.60
neg_gnews	0.039	0.26
	Rsq	nobs
	0.1776	720
	F Value	Pr > F
	0.38	0.5404

Panel C: Regressions of Analyst LTG Forecast Revisions (*ADIFF*) on Positive and Negative LTG Guidance and News Controls—Earnings Announcement Effect.

	<u>Earn</u>	<u>ings</u>	Non Ea	<u>rnings</u>
	Announ	cement	Announ	cement
	Win	<u>dow</u>	Win	<u>dow</u>
Parameter	Estimate	t Value	Estimate	t Value
PosMDIFF	0.133	3.59	0.058	1.07
NegMDIFF	0.122	2.35	0.142	3.10
pos_enews	-0.292	-0.98	-0.194	-0.38
neg_enews	-0.213	-0.29	0.146	0.48
pos_gnews	0.424	0.84	-0.162	-0.24
neg_gnews	0.351	0.80	0.013	0.10
	Rsq	nobs	Rsq	nobs
	0.2335	480	0.2344	240
	F Value	Pr > F	F Value	Pr > F
	0.02	0.8812	1.05	0.3071

Table 7 presents the results of pooled cross-sectional OLS regressions of analyst LTG forecast revisions (ADIFF) on management LTG forecast news (MDIFF) as well as positive and negative management LTG forecast news (PosMDIFF and NegMDIFF, respectively). Control variables from Tables 3 and 4 are included but not reported. In Panels B & C, F-statistics (and p-values) are reported for tests of coefficient equality between PosMDIFF and NegMDIFF. Standard errors are clustered at the firm level and year fixed effects are employed. Independent variables are Winsorized at the 1st and 99th percentiles. See Appendix B for variable definitions.

Table 8: Descriptive Statistics for LTG Guidance Bundling With Concurrent Disclosures at Earnings Announcement

Panel A: LTG Guidance Bundling with Quantitative Short-term Earnings News

483

32.7%

32.7%

32.7%

ndum_gnews

ndum_enews

pdum_gnews

ndum_gnews

43.1%

43.1%

43.1%

Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev
DIFF	483	0.27	-1.00	0.00	1.50	2.80
enews	483	0.05	0.00	0.03	0.10	0.20
pos_enews	483	0.08	0.00	0.03	0.10	0.15
neg_enews	483	0.04	0.00	0.00	0.00	0.11
gnews	483	-0.01	-0.02	0.00	0.00	0.20
pos_gnews	483	0.04	0.00	0.00	0.00	0.12
neg_gnews	483	0.06	0.00	0.00	0.02	0.15
pdum_enews	483	0.57				
ndum_enews	483	0.23				
pdum_gnews	483	0.24				

0.23

0.24

0.30

Panel B: Upward vs. Downward LTG Guidance Bundling with Quantitative Short-term Earnings News

0.26

0.25

0.29

0.25

	Pct o	of N	Me	ean	25th	Pctl	Med	dian	75th	Pctl	Std 1	Dev
Variable	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down
DIFF	43.1%	32.7%	2.42	-2.37	1.00	-3.20	2.00	-1.95	3.00	-1.00	2.26	2.06
enews	43.1%	32.7%	0.07	0.02	-0.02	0.00	0.03	0.03	0.13	0.08	0.24	0.18
pos_enews	43.1%	32.7%	0.11	0.06	0.00	0.00	0.03	0.03	0.13	0.08	0.20	0.10
neg_enews	43.1%	32.7%	0.04	0.04	0.00	0.00	0.00	0.00	0.01	0.00	0.09	0.12
gnews	43.1%	32.7%	0.00	-0.03	0.00	-0.04	0.00	0.00	0.03	0.00	0.22	0.18
pos_gnews	43.1%	32.7%	0.06	0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.13	0.09
neg_gnews	43.1%	32.7%	0.06	0.06	0.00	0.00	0.00	0.00	0.00	0.04	0.16	0.14
pdum_enews	43.1%	32.7%	0.57	0.55								

Table 8, Continued...

Panel C: LTG Guidance Bundling with Qualitative Disclosures (PR = Press Release; CC = Conference Call)

Variable	N	Mean	25th Pctl	Median	75th Pctl	Std Dev
pct_netpos	483	0.37	0.04	0.37	0.73	0.55
pr_netpos	152	0.20	-0.16	0.15	0.56	0.53
cc_netpos	331	0.45	0.15	0.43	0.81	0.54
pct_netstrong	483	0.14	0.00	0.12	0.26	0.21
pr_netstrong	152	0.07	-0.03	0.05	0.16	0.19
cc_netstrong	331	0.17	0.03	0.17	0.30	0.21
pct_fwd	483	1.66	1.29	1.75	2.04	0.61
pr_fwd	152	1.06	0.64	0.88	1.30	0.61
cc_fwd	331	1.93	1.67	1.91	2.15	0.36

Note: BOLD font indicates significant differences in press release (PR) and conference call (CC) means.

Panel D: Upward vs. Downward LTG Guidance Bundling with Qualitative Disclosures (PR = Press Release; CC = Conference Call)

	Pct o	of N	Me	an	25th	Pctl	Med	lian	75th	Pctl	Std	Dev
Variable	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down	Up	Down
pct_netpos	43.1%	32.7%	0.30	0.47	-0.06	0.14	0.32	0.44	0.62	0.83	0.54	0.56
pr_netpos	43.4%	34.9%	0.12	0.30	-0.23	0.00	0.12	0.33	0.49	0.60	0.51	0.51
cc_netpos	42.9%	31.7%	0.39	0.55	0.08	0.20	0.39	0.49	0.71	0.99	0.53	0.58
pct_netstrong	43.1%	32.7%	0.13	0.17	-0.01	0.03	0.11	0.14	0.25	0.29	0.20	0.21
pr_netstrong	43.4%	34.9%	0.08	0.08	-0.03	0.00	0.05	0.08	0.19	0.15	0.18	0.18
cc_netstrong	42.9%	31.7%	0.15	0.21	0.00	0.08	0.15	0.20	0.27	0.31	0.21	0.22
pct_fwd	43.1%	32.7%	1.67	1.63	1.33	1.17	1.75	1.75	2.05	2.04	0.55	0.62
pr_fwd	43.4%	34.9%	1.13	1.05	0.71	0.68	1.02	0.86	1.43	1.20	0.55	0.60
cc_fwd	42.9%	31.7%	1.92	1.93	1.69	1.70	1.91	1.91	2.17	2.12	0.33	0.37

Table 8 provides descriptive statistics related to LTG guidance "bundling" with quantitative (Panels A&B) and qualitative (Panels C&D) disclosures made during quarterly earnings announcement windows. In Panel B, "Up" corresponds to upward LTG guidance, which occurs when the management LTG forecast is above the prevailing median analyst LTG forecast in month *m-1*; "Down" corresponds to downward LTG guidance, which occurs when the management LTG forecast is below the prevailing median analyst LTG forecast in month *m-1*. Numbers in **BOLD** indicate significant mean (median) differences based on two-sided t-tests (Z-tests) at the 5% level. See Appendix B for variable definitions.

Table 9: LTG Guidance Bundling with Quantitative Disclosures (Quarterly News and Annual Guidance) at Earnings Announcement

Panel A: Logistic Regressions

Prob (UpGuide = 1)

Prob (Down*Guide* =1)

Variable	Estimate	p-value		Estimate	p-value	
pos_enews	1.859	0.03	**	-2.532	0.05	*
neg_enews	-0.531	0.65		0.990	0.43	
pdum_enews	-0.426	0.21		0.008	0.98	
ndum_enews	0.143	0.71		-0.440	0.34	
pos_gnews	-0.317	0.80		-2.178	0.09	*
neg_gnews	0.981	0.34		-0.460	0.61	
pdum_gnews	0.632	0.09	*	0.551	0.13	
ndum_gnews	-0.139	0.66		0.401	0.23	
N	483			483	_	
R-Square	0.0998			0.2002		

Panel B: OLS Regressions

<u>Dependent Variable = *MDIFF*</u>

	=	Веренаене	, 4114	1/12/11		
Variable	Estimate	t-stat		Estimate	t-stat	
enews	1.509	2.49	**			
pos_enews				1.632	1.98	**
neg_enews				0.984	0.73	
gnews	0.685	1.03				
pos_gnews				1.687	1.64	
neg_gnews				0.076	0.08	
N	483			483		
R-Square	0.1075			0.1106		

Table 9 presents the results of logistic regressions (Panel A) and pooled cross-sectional OLS regressions (Panel B) of news conveyed by LTG guidance (*UpGuide*, *DownGuide*, and *MDIFF*) on continuous and discrete variables capturing concurrent quarterly earnings news (*enews*) and concurrent annual guidance (*gnews*). Control variables from Tables 3 and 4 are included but not reported. Standard errors are clustered at the firm level and year fixed effects are employed. Independent variables are Winsorized at the 1st and 99th percentiles. See Appendix B for variable definitions.

Table 10: LTG Guidance Bundling with Qualitative Disclosures at Earnings Announcement

Panel A: Qualitative Determinants of Upward LTG Guidance (UpGuide)

Case 1: De-Meaned Qualitative Variables

Case 2: Conference Call Sample

Variable	Est.	p-val		Est.	p-val									
pct_netpos	-0.363	0.118					-0.408	0.123						
pct_netstrong			-0.531	0.309					-1.092	0.070	*			
pct_fwd					0.21	0.352						-0.366	0.282	
N	484		484		484	1	331		331	•		331		
R-Square	0.0785		0.0739		0.0722	2	0.0858	•	0.0867	•		0.0805		

Panel B: Qualitative Determinants of Downward LTG Guidance (*DownGuide*)

Case 1: De-Meaned Qualitative Variables

Case 2: Conference Call Sample

Variable	Est.	p-val		Est.	p-val		Est.	p-val		Est.	p-val		Est.	p-val		Est.	p-val			
pct_netpos	0.472	0.047	**							0.457	0.112									
pct_netstrong				0.961	0.085	*							1.42	0.042	**					
pct_fwd							-0.085	0.764								0.225	0.586			
N	484			484	•		484			331			331			331	•			
R-Square	0.1865			0.1833	•		0.1786			0.2204	•		0.224	•		0.2132	•			

Panel C: OLS Regressions of LTG Guidance News (MDIFF) on Qualitative Variables

Case 1: De-Meaned Qualitative Variables

Case 2: Conference Call Sample

Variable	Est.	totat	Est.	totat	Est.	totat	Est.	totat	Est.	tatat	Est.	tatat	
v arrable	ESt.	tstat											
pct_netpos	-0.358	-1.19					-0.200	-0.52					
pct_netstrong			-0.794	-1.35					-1.033	-1.46			
pct_fwd					-0.300	-1.10					-0.954	-2.14	**
N	484		484		484		331		331		331		
Rsq	0.0934		0.0925		0.1048		0.1046		0.1081		0.1147		

Table 10 presents the results of logistic regressions (Panels A & B) and pooled cross-sectional OLS regressions (Panel C) of news conveyed by LTG guidance (*UpGuide*, *DownGuide*, and *MDIFF*) on qualitative variables. Control variables from Tables 3 and 4 are included but not reported. Standard errors are clustered at the firm level and year fixed effects are employed. Independent variables are Winsorized at the 1st and 99th percentiles. See Appendix B for variable definitions.