

**Managerial Disclosure vs. Analyst Inquiry:  
An Empirical Investigation of the Presentation and Discussion Portions of  
Earnings-Related Conference Calls**

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**Abstract:**

Using a sample of over 10,000 earnings-related conference call transcripts, we examine the determinants of within-firm variation in the length of managers' presentation and analyst discussion periods during earnings-related conference calls. We find that managers' presentations are longer when reporting poor performance and when earnings are a potentially downward-biased signal of future performance. This result contrasts with prior studies that generally find firms disclose more when performance is good, which is likely due to 1) the fact that the choice to host a conference call is a policy choice that is not easily changed and 2) analysts' direct involvement in the call temper managers' incentives to expound on good performance. We also find that analyst discussion periods are longer when market performance is poor, suggesting that the non-earnings related information disclosed in the presentation is insufficient for analysts' information needs. Finally, we find that longer calls are associated with larger price reactions, larger trading volume, larger analyst forecast revisions and improvements in analysts' forecast accuracy – indicating longer calls are more informative to the market.

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*Comments welcome.*

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## **1. Introduction**

Over the past decade, conference calls have become an increasingly common and important form of voluntary disclosure (Bushee, Matsumoto, and Miller 2003). One of the purported benefits to managers of this particular disclosure mechanism is the flexibility it provides managers to respond to analysts' questions (Frankel, Johnson, and Skinner, 1999). This flexibility is particularly beneficial when managers are unsure of the informational needs of analysts. Given this unique two-way form of corporate communication and the increasing importance of conference calls to the information environment, it is important to gain a better understanding of the different segments of the typical earnings-related conference call – the presentation portion put on by management (labeled “presentation”) and the question-and-answer segment (labeled “discussion”).

In this paper, we examine the determinants of greater management-provided disclosure during the presentation portion of the call as well as the determinants of longer discussion periods with analysts. As a mechanism for disclosure, conference calls differ from other forms of disclosure because of the important role analysts play in the forum. The mere presence of analysts on the call likely changes managers' disclosure strategy during the presentation. In addition, analysts play a direct role in eliciting information from managers during the discussion portion of the call. Thus, while prior studies examine circumstances that drive managers to provide more information to the capital market, our study also examines the circumstances that drive the capital markets (i.e., analysts) to elicit more information from managers.

In addition, our study focuses on quarter-specific factors (e.g., performance) that lead to variation in the amount of disclosure provided by a firm across time (i.e., within-firm variation in disclosure levels). Prior studies generally focus on firm-specific factors (e.g., size, analyst

following, industry membership) that drive variation in disclosure levels across firms (i.e., cross-sectional variation in disclosure levels). The relation between firm-specific factors and levels of disclosure have been documented in numerous prior studies (e.g., Lang and Lundholm 1993; Frankel et al. 1999; Tasker 1999). In contrast, the determinants of within-firm variation in levels of disclosure is less well-studied and, in particular, the factors driving the length of conference calls across time for a given firm has not been explored to date. Thus, we examine the determinants of the length of the presentation and discussion using a firm-fixed effects model, which focuses on within-firm variation in the length of calls.

We obtain transcripts of over 10,000 earnings-related conference calls from Voxant (via Factiva) for the period January 2003 to December 2005. We then determine the number of words in the presentation and discussion portions of the call. We find that managers provide more information during the presentation portion of the call when stock market performance is poor, and when reporting more negative special items and other exclusions. We find these relations after controlling for the absolute return associated with the earnings release and the absolute forecast error for the quarter.

The fact that firms provide more information when firm performance is poor contrasts with prior findings that find firms provide more disclosure when firm performance is good (Miller 2002). This difference is likely due to two factors. First, once a firm has established a policy of hosting regular earnings-related conference calls, it is difficult to discontinue this practice (i.e., it is difficult to cancel a conference call when firm performance is poor). Second, although managers may have an incentive to disclose more information when firm performance is good, the fact that analysts participate in the call and will likely demand explanations for poor

performance, likely tempers this incentive. These differences highlight the fact that not all disclosure decisions are similar.

We also find that the discussion period is longer when market performance is poor and when the firm misses analysts' expectations. These relations exist even after controlling for the length of the presentation period, suggesting that even though managers provide more information in the presentation portion of the call when performance is poorer, the information presented is not sufficient, resulting in longer discussion periods. Because our multi-variate analysis includes measures of earnings performance, our measure of stock market performance captures news that is orthogonal to accounting earnings. Thus, this finding suggests that managers provide insufficient information during the presentation portion of their call on non-earnings related news, which leads to longer discussion periods.

We do not, however, find a relation between the length of the discussion period and earnings performance or the sign or magnitude of special items and other exclusions, suggesting that management discussion of these items in the presentation portion of the call is sufficient for the market. Again, this finding suggests managers provide sufficient information regarding accounting performance but are, perhaps, less aware of analysts' informational needs with respect to non-earnings related information.

An underlying assumption in our study is that longer presentations and discussions represent more information to the market. To provide some evidence on the validity of this assumption, we examine the relation between the length of the presentation and discussion and 1) trading behavior during these periods and 2) attributes of analysts' forecasts. We find that the length of the presentation and discussion is related to the absolute return and trading volume during these periods. We also find that longer conference calls are associated with greater

absolute revisions in analysts' forecasts of next quarter's earnings (measured before and after the call). The fact that longer calls are associated with greater revisions in price and analyst forecasts as well as more trading volume suggests that longer calls provide more information to the market. However, it is also possible that the information provided to the market is misleading. For example, Li (2006) finds that MD&A disclosures are longer and less readable when firm performance is poor and interprets his findings as evidence that managers attempt to "hide" poor performance through long, complicated disclosures. If longer conference calls are the result of managers attempting to mislead investors by "obfuscating" poor performance (and this obfuscation is successful), it is possible price reactions, analysts' forecast revisions, and trading volume would be higher but that the disclosures are not truly informative. Our results do not suggest this is the case. Specifically, we find that longer calls are associated with greater increases in analyst forecast accuracy of next quarter's earnings (measured before and after the call). Overall these results suggest that longer calls are associated with greater information and are not consistent with longer disclosures being more confusing or less informative.

These results contribute to the literature in several ways. First, this is one of the first studies to examine the *amount* of disclosure in a firm's conference call.<sup>1</sup> Prior studies have only examined the *existence* of conference calls as a measure of firm disclosure (Frankel et al. 1999; Tasker 1999; Bowen et al. 2002).<sup>2</sup> This limits the type of analysis that can be conducted

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<sup>1</sup> In concurrent work, Frankel and Sun (2006) also examine the determinants of conference call length. Our study differs from their study in that we use a firm-fixed effects analysis and therefore, do not focus on firm-specific determinants of conference call length (such as litigation risk and analyst following). In addition, we examine market measures of performance (i.e., returns during the quarter and in the 24-hours prior to the call) while they focus on whether a firm misses analysts' expectations. We also segregate the call between the presentation and the discussion and examine the determinants of each while they do not. On the other hand, they examine the circumstances under which managers other than the CEO or CFO participate on the call while we do not. Finally, we examine the relation between the length of the call and 1) returns and trading volume during the presentation and discussion period and 2) changes in properties of analysts' forecasts.

<sup>2</sup> Prior to the passage of Regulation Fair Disclosure (Reg FD), in October 2000, many firms restricted access to their conference calls to financial analysts and institutional investors. Thus, transcripts of the calls were not widely

because firms generally adopt a *policy* of hosting conference calls and, therefore, there is little (or no) variation across time in a firm's use of conference calls. There is, however, variation across time in the *amount* of disclosure a firm presents in their call and, perhaps more importantly, in the discussion that follows this presentation. This variation allows us to examine firm-quarter specific factors that likely affect the level of disclosure in a particular quarter, which may differ from factors that lead a firm to adopt a policy of hosting conference calls. In fact, our results with respect to firm performance differ from those that examine the choice to host a conference call. We find that firms disclose more information in their conference calls when earnings performance is worse, while prior studies (Frankel et al. 1999) find that firms who host conference calls are more profitable than those that do not. Thus, factors that lead a firm to adopt a particular disclosure *policy* likely differ from the factors driving the amount of disclosure provided once that policy is adopted.

Second, this study adds to our understanding of the benefits of conference calls as a disclosure mechanism. The benefit of this two-way form of communication arises when managers are unsure of the informational needs of the capital markets. Our results suggest that managers do not always present all the information in the press release or in the presentation portion of the call that analysts need, resulting in longer discussion periods. In particular, managers appear to provide sufficient information about the firm's *earnings* performance but do not provide sufficient information about *non-earnings* performance (i.e., stock market performance), resulting in longer discussions.

Third, our evidence suggests that analysts require greater explanation when firms miss analysts' earnings expectations, consistent with survey evidence in Graham et al. (2005).

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available and existence of a call was the only data metric available. Since Reg FD, transcripts of calls are now widely available through sources like Voxant (available via Factiva).

According to Graham et al. (2005), managers have a strong incentive to avoid missing analyst expectations because of the additional time required to explain the firm's performance to the capital markets. Our evidence suggests that managers' perceptions of the additional time required to explain performance is in fact valid.

Overall, our results suggest that conference call presentations are not boiler-plate disclosures but vary across time for a given firm as a result of specific factors. In addition, analysts play an active role in uncovering information about the firm. Longer discussion periods are more informative to the capital market and the length of discussion is not a random event but is related to firm performance.

In the next section we discuss the prior literature and our hypotheses. We discuss our sample and variable measurement in section three. Section four presents the results of our analysis of the determinants of the length of the presentation and discussion, as well as our tests of the market and analyst reaction to conference call length. Section six concludes.

## **2. Prior Literature and Hypothesis Development**

Numerous prior studies have studied the determinants of various disclosure measures or decisions, including the determinants of analysts' ratings of firms' disclosures (Lang and Lundholm 1993), the determinants of a firm's decision to host a conference call (Frankel et al. 1999 and Tasker 1999), the determinants of a firm's choice to provide balance sheet data in their earnings press release (Chen et al. 2002), and the determinants of a firm's decision to warn of an impending negative earnings surprise (Kasznik and Lev 1995). Our study differs from these prior studies in two ways. First, most prior studies examine primarily management-driven disclosures – that is, the choice to disclose information is primarily driven by managers' incentives. While

rational managers will likely consider the choices/demands of the users of these disclosures, the primary determinants of these disclosure decisions likely arise from managers' incentives to provide more or less information. Conference call disclosures, in contrast, are unique in that analysts have the ability to question managers directly and therefore, are likely able to elicit information during the call that meets their needs/incentives. Thus, the level of disclosure during a conference call – particularly during conference call discussion periods – is at least partially driven by the demands of analysts. The determinants of these types of disclosures will likely reflect the incentives/information needs of this user group, which possibly differ from the incentives of managers to provide information.

Second, prior studies focus primarily on overall metrics of disclosure or tend to focus on disclosures that are “policy” choices – e.g., the decision to host a conference call. Disclosure policy choices have long-term implications and generally do not vary across time for a given firm. Similarly, overall metrics of disclosure (such as AIMR scores) are measured infrequently, making it difficult to examine within-firm variation in disclosure levels. As a result, most prior studies focus on firm-specific characteristics that drive disclosure levels, such as size, growth, and industry membership.<sup>3</sup> In contrast, we examine the factors that influence the amount of disclosure made within a particular policy (namely the policy to host a conference call) across time for a given firm. Examining within-firm variation in disclosure levels using a firm-fixed effects model furthers our understanding of managers' incentives to disclose information as a result of firm-quarter specific factors, such as firm performance.

We examine two main firm-quarter specific factors that likely influence the level of disclosure provided during a conference call: 1) firm performance, and 2) quality of the earnings signal.

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<sup>3</sup> Technically, size and growth are not static firm characteristics but empirically, these variables will not vary significantly over short-time periods, e.g., across quarters in a year.



## 2.1 *Firm performance*

Prior studies have generally found a positive relation between performance and disclosure. Lev and Penman (1990) find that firms issuing voluntary earnings forecasts have greater contemporaneous earnings performance than a matched sample of firms who do not issue forecasts. Lang and Lundholm (1993) find a positive relation between analysts' ratings of firms' disclosures and firm performance. For a relatively small sample of firms with increasing earnings performance, Miller (2002) examines a comprehensive set of firm-provided disclosures and finds increases in these disclosures when earnings increase and a decline in these disclosures for the sub-sample of firms with a subsequent decline in earnings performance. Finally, Frankel et al. (1999) find that firms hosting conference calls tend to be more profitable than those who do not.

These findings are consistent with managers' incentives to increase firm valuation by disclosing good news (Verrecchia 1983). However, the context of this study differs in that the choice not to disclose *any* information – i.e., to not host a conference call – is a costly choice if firms view hosting conference calls as a prior commitment.<sup>4</sup> Thus, while prior evidence suggests that firms choose to host conference calls when they are performing better (on average), this may not necessarily be the case once the decision to host a conference call has been made (due to prior commitment). In fact, it is possible that firms will disclose *more* information when they are performing poorly because of the need to explain the poor performance, particularly given the likely demand for explanations from the analyst community during the discussion phase of the call. In fact, survey evidence in Graham, Harvey and Rajgopal (2005) indicate that conference calls are longer when firms miss analysts' earnings forecasts. The authors report:

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<sup>4</sup> Survey evidence in Graham et al. (2005) indicates that one of the most common reasons managers limit voluntary disclosures is because of the precedent that is set once the firm engages in voluntary disclosure. Thus, it is likely that managers view hosting conference calls as a commitment that cannot easily be changed.

“The other statistically significant factor motivating managers to avoid missing earnings benchmarks relates to the time spent in explaining, *especially in conference calls to analysts*, why the firm missed the target.” (p. 32, emphasis added)

Finally, recent studies on supplemental disclosures made with earnings forecasts (Hutton, Miller, and Skinner 2003; Baginski, Hassell, and Kimbrough 2004) suggest that managers have incentives to provide supplemental disclosures or explanations – particularly, qualitative, non-verifiable discussions – when forecasting bad news.<sup>5</sup> Because the conference calls that we examine are conducted in conjunction with an earnings release (and the primary purpose of these calls are to discuss the earnings releases), at least a portion of the disclosures made in the call are, in a sense, “supplementing” the earnings release. Thus, consistent with prior studies, we would expect firms to supplement a bad news earnings release with additional explanation about the reason for the firm’s poor performance.

For these reasons, we predict a negative relation between firm performance and the level of disclosure managers provide in earnings-related conference calls<sup>6</sup>:

H1a: Managers provide more disclosure in the presentation portion of the conference call when the related earnings release reports poorer performance.

Whether this negative relation between firm performance and disclosure in the presentation portion of the call carries over into the discussion portion of the call depends on the extent to which managers fulfill the information needs of analysts. If analysts demand greater disclosure in the presence of bad news and managers fulfill this demand with greater disclosure, there should be

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<sup>5</sup> Baginski et al. (2004) find evidence consistent with this conjecture while Hutton et al. (2003) do not. However, in the Hutton et al. (2003) study, the direction of the effect (while not statistically significant) is in the direction predicted – firms forecasting bad news provide greater “soft talk” disclosures.

<sup>6</sup> An alternative reason for an association between poor performance and longer presentation is that managers are attempting to “obfuscate” their poor performance by providing extraneous information or using long, confusing language in their presentations. Li (2006) finds that poor performance is associated with longer and less readable MD&A disclosures and interprets this finding as evidence that managers strategically hide poor performance through the use of longer, more complicated disclosures. Conference call disclosures are different from MD&A disclosures in that they are spoken (vs. written) and analysts have the opportunity to “grill” managers in the discussion portion of the call if they are being unclear. Moreover, evidence presented later in the paper (section 4.2) do not suggest that longer calls are less informative or result in greater analyst dispersion, thus, we do not believe that a relation between poor performance and conference call length are driven by this “obfuscation” story.

no relation between firm performance and the amount of analyst discussion during the conference call. However, to the extent managers do not provide sufficient explanation during the presentation portion of the call, the length of the discussion period will likely be greater for firms reporting bad news. The explanations provided by managers in the presentation portion of the call may be insufficient for two reasons. First, analysts are likely trying to uncover the reasons or justification for their own performance in forecasting the firm's earnings and managers may be unaware of the information analysts need for this purpose. For example, analysts likely require information to adjust their forecasting model for future periods. Because analysts are likely more concerned about forecasting too high versus forecasting too low, they are likely more concerned about adjusting their forecasting model when a firm reports poor performance than when the firm reports good performance. Since managers may not know what information the analyst needs to make these adjustments, the discussion period will likely be longer, even if managers provide expanded disclosures in the case of poor performance. Second, in the presentation portion of the call, managers may be less inclined to expand on poor performance to the extent other stakeholders (e.g., employees) are listening to the call. Thus, we also expect the discussion periods to be longer for firms reporting bad news<sup>7</sup>:

H1b: Analyst discussion periods are longer when the related earnings release reports poorer performance.

## 2.2 *Quality of the Earnings Signal*

Prior research generally finds a relation between increased disclosure and the value relevance of earnings. Lang and Lundholm (1993) find a negative relation between analysts' ratings of firm's disclosures and the return-earnings correlation of the firm – suggesting that firms

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<sup>7</sup> Another reason for a relation between discussion length and poor performance is if managers attempt to “obfuscate” poor performance with longer, more confusing presentations, necessitating longer discussion periods to clarify managers' disclosures. As discussed in footnote 6, we do not believe the obfuscation story is driving our results.

disclose more information when earnings are less value relevant. Chen et al. (2002) find that firms in the high-tech industry and firms reporting losses are more likely to disclose balance sheet information along with their earnings press release, again suggesting that managers provide additional information when earnings are less value relevant. Finally, Lougee and Marquardt (2004) find some evidence that firms with lower value-relevance of earnings are more likely to report pro forma earnings numbers, arguably because GAAP earnings are less value-relevant.

In most of these studies, the value relevance of earnings is largely a firm-specific construct that does not vary considerably across quarters. However, there are likely firm-quarter specific factors that make the earnings reported in a particular quarter a better or worse signal of future performance. For example, when a firm incurs an unusual charge, earnings for the quarter may be a less relevant signal of future performance. In these cases, managers will likely provide greater disclosure to assist analysts in interpreting the earnings report.<sup>8</sup> Thus we predict:

H2a: Managers provide more disclosure in the presentation portion of the conference call when reported earnings are a poorer signal of future performance.

If the disclosures managers make during the presentation portion of the call are sufficient for analysts, the length of analyst discussion will be unrelated to the quality of the earnings signal. However, since one of the purported benefits of conference calls is the ability to respond to analyst questions when managers are unsure of the informational needs of analysts (Frankel et al. 1999), it is likely that managers are not perfectly aware of the information analysts require to interpret the earnings release – particularly under conditions when earnings are a poor signal of future performance. Thus, we predict:

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<sup>8</sup> Although analysts do not attempt to forecast special items, special items may have implications for on-going future earnings (e.g., restructuring charges). As such, analysts still require information to interpret the implications of these special charges for future earnings. Moreover, analysts likely want information to ensure the classification of something as a special item is appropriate – that is, that the item is truly a unusual or infrequent in nature.

H2b: Analyst discussion periods are longer when reported earnings are a poorer signal of future performance.

Because managers have an incentive to portray their firm's performance in the best possible light, it is likely that the extent of disclosure during the presentation portion of the call will depend on the "bias" in the earnings signal. For example, Schrand and Walther (2000) find that firms are more likely to "remind" readers in their press release about a prior period gain – resulting in a lower benchmark against which to compare the current period's earnings. In addition, Bowen, Davis and Matsumoto (2005) find that firms are more likely to emphasize in their press releases earnings metrics that portray firm performance more favorably. These findings suggest that managers may provide more explanation in the conference call when reported earnings provides a downward biased signal of future performance – for example, when the firm has a special charge against earnings (i.e., a negative special item). If analysts recognize this potential bias, the discussion periods will likely be longer in the case of earnings signals that are upwardly biased, as managers will not have provided sufficient information in the presentation portion of the call.<sup>9</sup> Thus, we predict:

H3a: Managers provide more disclosure in the presentation portion of the conference call when reported earnings provides a downward-biased signal of future performance.

H3b: Analyst discussion periods are longer when reported earnings provides an upward-biased signal of future performance.

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<sup>9</sup> It is possible that if managers provide biased explanations of, say, a special charge to earnings – for example, claiming that the charge is non-recurring when it is, in fact, recurring – that analysts may question managers about this interpretation during the discussion portion of the call. This would lead to longer discussions in the case of downward biased earnings signals (because of the biased explanations provided during the presentation portion of the call) as well as the upward biased earnings signal (because of the lack of explanation during the presentation portion of the call). The two effects would then lead to no difference in the length of the discussion based on the direction of the bias but would lead to longer discussions in the case of biased signals, consistent with Hypothesis 2b.

### **3. Data and Variable Measurement**

#### *3.1 Sample Selection*

We begin our sample selection process by identifying announcements of earnings-related conference calls held during trading hours (calls beginning after 9:30 a.m. and before 2:30 p.m. EST) by NYSE/NASDAQ firms between January 1, 2003 and December 31, 2005. This process yields approximately 19,000 potential conference calls. We limit our sample to calls held during trading hours because we include a market-based measure of news in the earnings announcement as an independent variable (explained in section 3.3) and because in later tests we examine price movements and trading behavior during the call period (section 4.2.1).<sup>10</sup> We then gather transcripts of calls from Voxant FD wire available through Factiva. We are unable to find transcripts for approximately 5,000 calls, leaving us with a sample of 14,086 conference call transcripts. We lose approximately 2,900 observations due to missing Trade and Quote (TAQ) data, I/B/E/S analyst forecast data, Compustat data, and/or CRSP data. Finally, because our main analysis is based on a firm-fixed effects model, we eliminate firms without at least four conference calls per firm (approximately 1,100 observations). Our final sample is 10,121 firm-quarters.

Table 1, Panel A details our sample selection process.

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<sup>10</sup> Of the initial sample of 36,074 calls, 39.6% of firms always hold calls during trading hours, 35.4% always hold calls after trading hours, 14.6% switched once during the three year period either from during to after or vice versa, and 10.4% switched more than once. Thus, it appears that the decision to hold calls during of after trading hours tends to be a policy decision that is firm-specific. We compared the four groups of firms on several dimensions including size, analyst following, market-to-book, leverage, performance, and length of presentation and discussion. The only differences that we find are: 1) firms that always hold calls during trading hours are larger and have more leverage than firms that always hold calls after trading hours; 2) firms that hold calls after trading hours have higher market-to-book ratios than firms that switch once. More importantly, none of the groups differ in terms of the length of the presentation or discussion. Given that the timing of calls tends to be firm-specific and we focus on within-firm variation in calls, the fact that we examine only calls held during trading hours likely does not bias our results. However, it may limit the generalizability of our results to the extent firms that host calls after hours behave differently than firms who host calls during trading hours.

Table 1, Panel B presents the distribution of our sample across calendar quarters.<sup>11</sup> We have the most observations in 2004, followed by 2005, and then 2003. The fact that the sample declines in 2005 appears to be due to missing transcripts on Factiva on a few days.<sup>12</sup> Panel C shows the distribution of calls per firm across our sample. We have all 12 conference calls (four per year for three years) for only a small fraction of firms. The reasons for this include missing Compustat, IBES, CRSP, or TAQ data; missing transcripts on Voxant; calls held outside of trading hours; and no conference call held in a particular quarter (possibly due to the initiation or discontinuation of conference call use and/or the fact that firms hold calls only semi-annually).<sup>13</sup>

Finally, Panel D of Table 1 presents the distribution of our sample across industries, using the North American Industry Classification System (NAICS). We also report the % of the population of NYSE and NASDAQ firms comprising each industry classification. Our sample spans a wide range of industries and, in general, reflects the general distribution of industries in the population. The one exception is the Finance and Insurance industry, which comprises only 18.1% of our sample but comprises 28.1% of the population of NYSE/NASDAQ firms.

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<sup>11</sup> The classification to a calendar quarter is based on when the conference call is held, not on the fiscal year-end of the company.

<sup>12</sup> For 2005 transcripts appear to be missing on April 22, April 26, and July 28. Thus, April and July show a lower number of calls compared to 2004. If we exclude these two months, the number of observations in 2005 is greater than in 2004. The decline in 2005 is not the result of firms hosting fewer conference calls in 2005 – the number of conference calls listed on Dow Jones calendar of corporate events shows a continuous increase over the three years (11,046 calls hosted in 2003, 11,880 in 2004 and 13,148). We do not believe these missing transcripts introduce any systematic bias into our analysis.

<sup>13</sup> If we had 12 calls for all 1,327 firms in our sample, we should have 15,924 observations. Of the 5,803 quarters missing from our sample, 13% are due to missing Compustat or IBES data, 28% are due to missing transcripts, 15% are due to calls held outside trading hours (see footnote 10), and 41% are due to no calls held during the quarter (as reported on the Dow Jones Calendar of Corporate Events). Of the latter group, it appears that 33% are due to the initiation or discontinuation of calls (i.e., calls are held either before or after the missing quarter date but not both); whereas 67% (1,588 quarters) have calls held both before and after the missing quarter date. These missing quarters are likely due to 1) firms that hold calls on a schedule other than quarterly (e.g., semi-annually), 2) incomplete coverage by Dow Jones, and 3) firms that do not have a policy for hosting calls on a regular basis. Given the relatively small number of observations in this latter group, we believe our assumption of conference calls being a policy choice is reasonable.

### 3.2 *Dependent Variable*

Our measure of disclosure is based on the length, in number of words, of the presentation and discussion portions of the conference call. To measure the number of words, we split the transcripts into the presentation and discussion portion of the call by searching for the first occurrence of the word "operator" after the first 1,500 characters of the transcript. We then check whether the transcripts were split appropriately by searching the first 400 characters of the discussion for key words or phrases that are typically associated with the start of the discussion – for example, "instructions", "question-and-answer", "the floor is now open", "at this time". For discussion transcripts that did not include any of the key words, we performed the split manually. In addition, each transcript includes a legal disclaimer at the end of the document. We removed this disclaimer from all transcripts.

We count the number of words in the presentation (PRES) and discussion (DISC) portion of the call and use these counts as our primary measure of disclosure during the call. The combination of PRES and DISC represents the length of the entire conference call (CC). Table 2, Panel A presents descriptive statistics on our dependent variables and Figure 1 presents a histogram of PRES (Panel A) and DISC (Panel B). Across our sample, the average length of the presentation is about 3,000 words and the average length of the discussion portion of the call is 4,600 words. The interquartile ranges for the presentation and discussion periods are approximately 1,600 and 2,900 words, respectively. Thus, discussion periods tend to be longer and are more variable in length than presentation periods.

To provide some perspective on the length of calls in minutes, we use a sub-sample of 1,263 conference calls (made between January and March 2005) for which we have exact start and end times of each segment of the call. We match these start and end times to our conference call



transcripts and calculate the number of words spoken per minute for the presentation (WPM-PRES) and discussion (WPM-DISC) portion of the call. Panel B of Table 2 presents descriptive statistics after eliminating the top and bottom 5% of the distribution. The average number of words spoken per minute is 163 and 165 for the presentation and discussion portions of the call, respectively. Also, the distributions are quite tight, with an interquartile range of only approximately 18 words per minute for both the presentation and discussion portions of the call.

In Panel C of Table 2, we provide the descriptive statistics on length of the presentation (PRES-MIN) and discussion (DISC-MIN) portions of the call in minutes. The average length of the presentation is approximately 18 minutes while the average length of the discussion is 28 minutes. The interquartile ranges are approximately 10 and 17 minutes for the presentation and discussion, respectively. Thus, while prior studies generally assume conference calls last for 60 minutes following the start time of the call (Frankel et al 2002; Bushee et al. 2003), there is significant cross-sectional variation in the length of calls in general and in discussion periods, particularly.

Finally, to provide some evidence on within firm variation in call length, we computed the interquartile range of PRES and DISC (IQPRES and IQDISC) by firm. Descriptive statistics are provided in Panel D, Table 2 and the distribution is depicted in Figure 2, Panels A and B. Several interesting observations arise from these descriptive statistics. First, within-firm variation in conference call length is significantly less than cross-sectional variation in length. For example, the average within-firm interquartile range for conference call length is approximately 1,900 words (or about 12 minutes), whereas the cross-sectional interquartile range is approximately 3,500 words (or 22 minutes). Second, the average within-firm interquartile range for discussion periods (1,743 words or about 11 minutes) is over twice as large as the average interquartile range for presentation periods (780 words or about 5 minutes) – indicating significantly greater within

firm variation in discussion period length. This difference is not surprising as firms have greater control over the length of presentations than over discussion periods. In addition, presentations are likely to follow a general pattern or template for a given firm, leading to less variation in presentations. The fact that cross-sectional variation in conference call length is greater than the within-firm variation suggests that firm-specific factors play a large part in explaining cross-sectional differences in conference call length. Nevertheless, prior empirical and theoretical research suggests that firm-quarter specific factors such as performance also likely play a role in determining disclosure levels and examining this relation using within-firm variations (i.e., using a firm-fixed effects model) controls for potential confounding effects from correlations with firm-specific factors (such as the correlation between performance and analyst following).

### 3.3 *Explanatory variables*

Hypothesis one posits a relation between disclosure levels and performance. We include two sets of measures for performance. First, we measure performance over the entire quarter, including a measure of earnings performance as well as market performance. Earnings performance is measured using return on assets (ROA), equal to earnings before extraordinary items (Compustat quarterly item 8) divided by ending total assets (Compustat quarterly item 44). Market performance is based on market-adjusted returns cumulated from calendar day -92 to day -2 relative to the conference call date ( $RET^{QTR}$ ), which approximates returns over the quarter.

Second, we measure the unexpected performance at the time of the earnings release. We measure returns ( $RET^{DAYB4}$ ) in the 24-hours prior to the conference call, as the quote midpoint at the start of the conference call ( $MID^{start}$ ) less the quote midpoint at the same time one trading day before the conference call ( $MID^{dayprior}$ ) divided by  $MID^{dayprior}$  (data obtained from the TAQ database). Companies generally release earnings shortly before hosting a conference call; therefore, this

measure should capture the market's interpretation of the earnings release. Finally, we measure unexpected earnings performance using a dummy variable (MISS), which is equal to 1 if actual EPS for the quarter (per IBES unsplit-adjusted actuals file) is less than the mean consensus forecasted EPS for the quarter (per IBES unsplit-adjusted summary file) and zero otherwise.<sup>14</sup>

Hypothesis two posits a relation between disclosure levels and the quality of the earnings signal. We posit that unusual and/or infrequently occurring items make it more difficult to interpret earnings signals. Although these types of items are generally considered transitory, not all unusual or infrequently occurring items are interpreted similarly by the market. For example, Francis, Hanna, and Philbrick (1996) find that inventory write-offs are viewed negatively by the market while restructuring charges are viewed positively. Given the varied nature of these types of gains and losses, we consider firms with unusual and/or infrequently incurring items as possessing a lower quality earnings signal.

We break-down unusual and/or infrequently occurring items into two categories: 1) special items, and 2) other exclusions. We calculate special items and other exclusions in a manner similar to Doyle, Lundholm, and Soliman (DLS, 2003).<sup>15</sup> Total exclusions (TOTEXCL) equals actual EPS (as reported on IBES unsplit-adjusted actuals file) less basic EPS excluding extraordinary items ( $EPS^{basic}$ , Compustat quarterly item 19) if the EPS reported on IBES is primary earnings per share, and less diluted EPS excluding extraordinary items ( $EPS^{diluted}$ , Compustat quarterly item 9) if the EPS reported on IBES is diluted earnings per share. Special items (SI) are then defined as earnings per share from operations (Compustat quarterly item 177)

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<sup>14</sup> Given survey findings in Graham et al. (2004) suggesting that missing expectations requires significant explanation to the capital markets, we use a dummy variable rather than a continuous variable like forecast error. We obtain inferentially similar results if we use forecast error in place of MISS.

<sup>15</sup> We adjust the definitions in DLS so that negative special items and other exclusions have a negative sign.

less either  $EPS^{basic}$  or  $EPS^{diluted}$ , as appropriate.<sup>16</sup> Other exclusions (OTHEXCL) are defined as total exclusions less special items (TOTEXCL – SI). Thus, special items represent the difference between GAAP earnings (excluding extraordinary items) and operating earnings – the most common differences arising from things like restructuring charges, asset write-offs and gains/losses on the sale of assets. Other exclusions represent differences between operating income as reported on Compustat and “actual” EPS reported on IBES, which excludes items that are not included in analysts’ earnings forecasts. We separate these two types of items because managers may have a propensity to expand disclosure in the case of special items (which are generally disclosed either on the face of the financial statements or in the notes thereto) whereas analysts may be more concerned with exclusions that they themselves have defined as unusual when forecasting earnings.

For the purposes of testing hypothesis two, we use the absolute value of special items ( $|SPITEM|$ ) and the absolute value of other exclusions ( $|OTHEXCL|$ ). Hypothesis three posits a differential increase in disclosure for downward vs. upward biases in the earnings signal. Positive (negative) values of SI and OTHEXCL represent amounts that increase (decrease) the reported earnings signal and therefore, when SI and OTHEXCL are positive (negative) reported earnings potentially represents an upward- (downward-) biased signal of future performance. Thus, as explained more fully below, we allow different slope coefficients for negative values of SI and OTHEXCL.

### 3.4 *Control variables*

We also include several control variables in our empirical tests. The length of the presentation and discussion period during a conference call will be dependent to a large degree on

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<sup>16</sup> In cases where earnings are reported on a diluted basis, earnings from operation is defined as Compustat quarterly item 177 \* (Common shares used to calculate EPS (Compustat annual item 54) / Common shares used to calculate diluted EPS (Compustat annual item 171)).

economic events that occur during the quarter – that is, if nothing significant occurs during the quarter, there will be less for managers to present and for analysts to discuss. Thus, we include four measures to control for the level of news during the quarter – 1) the absolute value of returns during the quarter ( $|RET^{QTR}|$ ), 2) the absolute value of returns during the 24-hours prior to the call ( $|RET^{DAYB4}|$ ), 3) the absolute value of the forecast error ( $|FE|$ ), defined as the absolute value of actual EPS (from IBES unsplit-adjusted actuals file) less the last mean consensus forecast prior to the earnings announcement (from IBES unsplit-adjusted summary file) scaled by the stock price at the start of the conference call (from TAQ) and 4) the absolute value of extraordinary items ( $|EXITEM|$ ) (Compustat quarterly item 119).

In addition, while our main analyses are based on a firm-fixed effects model (which controls for static firm-specific characteristics such as industry membership), it does not eliminate the impact of other firm-specific characteristics that are not completely static – for example, analyst following, firm size, etc.<sup>17</sup> Since many of these latter characteristics have previously been shown in the literature to be related to disclosure, we include three additional control variables. First, to proxy for growth, we include the seasonally-adjusted growth in sales ( $\Delta SALES$ ), defined as current quarter sales (Compustat quarterly item 2) less sales in the same quarter one year earlier, scaled by total assets (Compustat quarterly item 44). Second, we include a measure of analyst following (AF), equal to the number of analysts that issued an EPS forecast for the current quarter (from IBES summary file). Third, we include a measure of firm size equal to the log of total assets (LNASSETS, Compustat quarterly item 44).

Table 3, Panel A provides descriptive data on our explanatory and control variables. The mean ROA for the sample is less than 1%. The mean return over the prior quarter is -0.9% and

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<sup>17</sup> A firm-fixed model likely reduces the impact of these variables significantly because the cross-sectional variation in these variables is far greater than the within-firm variation.

returns in the 24-hours prior to the call are, on average, close to zero (0.1%). However, the majority of firms met or exceeded analysts' expectations – only 28% miss expectations. The distribution of special items and other exclusions appears skewed – the mean of special items (other exclusions) is approximately 7 (6) cents/share while the median is only 1 cents/share. As discussed further below, we address issues of skewness by running regressions in ranks.

Table 3, Panel B presents a correlation matrix of our explanatory and control variables, after subtracting the within-firm mean from each variable (spearman correlations reported above the diagonal and pearson correlations reported below the diagonal). Using the non-parametric spearman correlation, ROA is negatively correlated with MISS, and positively correlated with returns over the quarter ( $RET^{QTR}$ ) and with returns over the prior 24-hours ( $RET^{DAYB4}$ ). ROA is also negatively correlated with  $|SPITEM|$  and  $|OTHEXCL|$  – an indication that the larger magnitude exclusions tend to be negative (or income-decreasing) in nature.

## 4. Empirical Tests

### 4.1 Determinants of presentation and discussion length

To test our main hypotheses, we run the following models:

$$\begin{aligned}
 PRES = & \beta_0 + \beta_1 ROA + \beta_2 RET^{QTR} + \beta_3 RET^{DAYB4} + \beta_4 MISS + \beta_5 |SPITEM| \\
 & + \beta_6 |OTHEXCL| + \beta_7 NEGSPITEM + \beta_8 NEGSPITEM * |SPITEM| \\
 & + \beta_9 NEGOTHEXCL + \beta_{10} NEGOTHEXCL * |OTHEXCL| + \beta_{11} |RET^{QTR}| \\
 & + \beta_{12} |RET^{DAYB4}| + \beta_{13} |FE| + \beta_{14} |EXITEM| + \beta_{15} \Delta SALES + \beta_{16} AF + \beta_{17} LNASSETS \\
 & + \beta_{18} QTR2 + \beta_{19} QTR3 + \beta_{20} QTR4 + \beta_{21} Y2004 + \beta_{22} Y2005 + \varepsilon
 \end{aligned} \tag{1}$$

$$\begin{aligned}
DISC = & \beta_0 + \beta_1 ROA + \beta_2 RET^{QTR} + \beta_3 RET^{DAYB4} + \beta_4 MISS + \beta_5 |SPITEM| \\
& + \beta_6 |OTHEXCL| + \beta_7 NEGSPITEM + \beta_8 NEGSPITEM * |SPITEM| \\
& + \beta_9 NEGOTHEXCL + \beta_{10} NEGOTHEXCL * |OTHEXCL| + \beta_{11} |RET^{QTR}| \\
& + \beta_{12} |RET^{DAYB4}| + \beta_{13} |FE| + \beta_{14} |EXITEM| + \beta_{15} \Delta SALES + \beta_{16} AF + \beta_{17} LNASSETS \\
& + \beta_{18} QTR2 + \beta_{19} QTR3 + \beta_{20} QTR4 + \beta_{21} Y2004 + \beta_{22} Y2005 + \beta_{23} PRES + \varepsilon
\end{aligned} \tag{2}$$

NEGSPITEM (NEGOTHEXCL) is a dummy variable equal to 1 if SPITEM (OTHEXCL) is negative, and 0 otherwise. Thus,  $\beta_8$  and  $\beta_{10}$  in each of the above equations captures any differential relation between length of presentation/discussion and negative (or income-decreasing) special items and other exclusions relative to positive (or income-increasing) special items and other exclusions. Hypothesis 3a posits that managers provide more information in the presentation portion of the call when earnings provide a downward-biased signal of future performance (e.g., when reporting negative special items). Thus, Hypothesis 3a predicts a positive coefficient on  $\beta_8$  and  $\beta_{10}$  in equation 1. Hypothesis 3b posits that analysts will question potential upward-biases in earnings signals, suggesting a negative coefficient on  $\beta_8$  and  $\beta_{10}$  in equation 2.

We also include fiscal quarter dummy variables (QTR2, QTR3, and QTR4) to control for differences across quarters in the length of calls. Y2004 and Y2005 represent year dummy variables to control for trends over time in the length of calls. Finally, in our analysis of discussion length, we control for the length of the presentation because if managers provide more information during the presentation portion of the call, analysts will likely have fewer questions.

As discussed previously, we run the above model including firm-fixed effects. In addition, because of potential non-linearities in the data, we run the regressions in ranks. Specifically, we transform all variables (with the exception of dummy variables) into percentile ranks, with the smallest magnitude observation having a value of 0 and the largest magnitude observation having a value of one.

The results of the analyses are presented in Table 4. The first set of columns presents the results of equation 1 (presentation length), while the second set of columns presents the results of equation 2 (discussion length). Consistent with Hypothesis 1a, we find that conference call presentations are longer when firms report poor market performance. The coefficient on  $RET^{QTR}$  and  $RET^{DAYB4}$  are significantly negative ( $p=0.000$  and  $0.039$ , respectively). However, we find only marginal evidence that firms provide more information when reporting poor earnings performance – the coefficient on ROA is marginally significantly negative ( $p=0.057$ , one-tailed) but the coefficient on MISS is insignificant at traditional probability levels.<sup>18</sup>

We depict the impact of poor performance on conference call length in Figure 3, Panel A. Specifically, we plot the distribution of conference call length for observations in the top and bottom decile of  $RET^{QTR}$ .<sup>19</sup> The distribution of call length for observations in the bottom decile of  $RET^{QTR}$  is to the left of the distribution of observations in the top decile, indicating the greater presentation length for firms with worse market performance. We also depict the within-firm effect in Panel B of Figure 3: for each firm, we take the best and worst quarter based on  $RET^{QTR}$  and plot the length of the conference call. The distribution of call length for the quarter with the worst market performance is visibly to the left of the distribution for the best quarter.

Our results do not indicate that managers provide more information during the presentation portion of the call when earnings are a poorer signal of future performance, in general, although they do appear to provide more information in cases where the earnings signal is downward biased. The coefficients on  $|SPITEM|$  and  $|OTHEXCL|$  are not significant but the coefficients on

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<sup>18</sup> If we exclude the SPITEM and OTHEXCL variables, the coefficient on ROA is significantly negative, consistent with managers providing more disclosures when earnings performance is poor. However, it appears this negative relation is driven primarily by unusual income items and not normal, recurring earnings.

<sup>19</sup> We plot the conference call length vs. the presentation length because the impact of  $RET^{QTR}$  is similar for the discussion period as it is for the presentation period (as discussed next). A plot of presentation length alone is similar in appearance.



the interaction terms,  $\text{NEGSPITEM} * |\text{SPITEM}|$  and  $\text{NEGOTHEXCL} * |\text{OTHEXCL}|$  are significantly positive ( $p=0.000$  and  $0.011$ , respectively). Thus, it appears that for positive special items and other exclusions, there is little relation between the magnitude of the special items and the length of the presentation. But for negative special items and other exclusions, larger magnitudes result in longer presentations. However, we also find a negative coefficient on the intercept terms –  $\text{NEGSPITEM}$  ( $p=0.000$ ) and  $\text{NEGOTHEXCL}$  ( $p=0.067$ ) – indicating that the main effect for negative exclusions is a *shorter* presentation relative to positive exclusions. However, because a number of observations have zero special items, even small special items have relatively large percentile ranks, resulting in a positive overall effect. For example, the median value of negative special items is  $-0.03$ , which translates into a percentile rank (for  $|\text{SPITEM}|$ ) of  $0.7313$ . This value would result in a positive incremental effect over a positive special item of similar magnitude ( $-0.0553 + (0.0927 * 0.7313) = 0.0125$ ).

Figure 4 provides a visual depiction of the difference in presentation length. Panel A plots the distribution for observations with positive and negative SPITEM. The distribution of presentation length for observations with negative special items is visibly to the left of the distribution of observations with positive special items. In Panel B, we take the firm-quarter with the highest and lowest special item for each firm and plot the distributions. The firm-quarters with the lowest special items tend to have longer presentations than firm-quarters with higher special items. Overall, our results provide support for the idea that managers provide more information in the case of downward biased earnings signals (hypothesis 3a). It does not appear that managers necessarily provide more information in the case of poor quality earnings signals in general (i.e., both downward biased and upward biased earnings signals as posited in Hypothesis 2a).<sup>20</sup>

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<sup>20</sup> Li (2006) finds that profitable firms with longer, more complicated MD&A disclosures have lower earnings persistence, suggesting that profitable firms whose earnings are less likely to persist hide this low persistence within

Turning to the results for equation 2, we find that discussion length is longer when market performance is poor and when the news in the earnings release is negative. The coefficient on returns during the quarter ( $RET^{QTR}$ ) is significantly negative, as is the coefficient on returns during the prior 24-hour period ( $RET^{DAYB4}$ ) (both p-values = 0.00). We also find that discussions are longer when firms miss analysts' expectations (MISS significantly negative at p=0.04). These results are consistent with Hypothesis 1b. The coefficient on ROA is insignificant, suggesting that analyst discussion periods do not vary based on the level of earnings performance.

Inconsistent with Hypothesis 2b, we do not find that discussion periods are longer when firms report special items or other exclusions – suggesting that managers provide sufficient information on these items during the presentation portion of the call. We also do not find evidence that analysts question managers more when earnings are an upwardly biased signal of future performance (inconsistent with Hypothesis 3b).

Overall, it appears that managers' disclosures of earnings-related information – the level of performance and negative special items – are sufficient for analysts. However, disclosures of non-earnings related information (as captured by market returns) is not sufficient for analysts' information needs.

With respect to the control variables, we find that managers provide more information and analyst discussion periods are longer when the earnings release is more surprising – especially when measured using absolute returns. We also find that larger firms have longer presentations and discussion periods and firms with greater analyst following have significantly longer

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longer, more complicated disclosures. Our findings here suggest that managers provide longer disclosures in cases where earnings are a downward-biased signal of future earnings in an attempt to highlight the lower persistence of these special items. If longer presentations were the result of managers attempting to “obfuscate” performance, we would expect longer calls in the case of positive special items and shorter, more concise disclosures in the case of negative special items. We do not find that to be the case, suggesting that longer calls are the result of managers attempting to clarify and explain these special items.

discussion periods. The presentations and discussion periods related to the first fiscal quarter's earnings release tend to be shorter, while the fourth fiscal quarter tends to be longer. Finally, when managers provide more information in the presentation portion of the call, the discussion periods tend to be shorter. While it is possible this relation is due to analysts adjusting their level of inquiry as a result of managers' disclosures, it is also likely to be at least partially due to time constraints – that is, if a firm has set ending time for the conference call, longer presentations will naturally lead to shorter discussion periods.<sup>21</sup>

Overall, our results suggest that managers provide more information during the presentation portion of the call when reporting bad news and when earnings are a downward-biased signal of future performance. However, the increased disclosure associated with bad news is not always sufficient for analysts, particularly when stock market performance is poorer and when the firm misses analysts' expectations, since we also find that analysts' discussion periods are longer in these cases. It appears that managers generally provide sufficient information to analysts when earnings are a poorer signal of future performance and that analysts do not perceive a bias in this presentation that would result in longer discussion periods when the earnings signal is upwardly-biased.

#### *4.2 Are longer calls more informative?*

In the above analysis, we assume that longer presentation and discussion periods represent greater information. However, it is possible that managers simply “talk a lot” without revealing any true information. This possibility seems relatively unlikely, particularly in a firm-fixed effects setting where cross-sectional variation in managerial “verbosity” is controlled for.

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<sup>21</sup> To provide some evidence on this, we re-ran our analysis including only firms that demonstrate reasonable variation in the length of the entire conference call. Excluding firms with a difference of less than 2460 words (approximately 15 minutes) between their longest and shortest call (approximately 15% of the sample), we no longer find a significantly negative coefficient on PRES in our DISC regression (results on the other variables remain similar). Thus, it appears that the negative coefficient on PRES is largely due to time constraints on the call length.

To provide some empirical evidence on this issue, we examine the relation between call length and 1) trading behavior during the call and 2) attributes of analysts' forecasts.

#### 4.2.1 Call length and trading behavior

We first examine whether longer presentations and discussion periods are associated with greater absolute returns and abnormal trading volume during these periods. Specifically, we estimate the following equations using a firm-fixed effects model on percentile ranks, similar to our prior analyses:

$$\begin{aligned} |RET^{PRES}|, AVOL^{PRES} = & \beta_0 + \beta_1 PRES + \beta_2 ROA + \beta_3 RET^{QTR} + \beta_4 RET^{DAYB4} + \beta_5 MISS \\ & + \beta_6 |SPITEM| + \beta_7 |OTHEXCL| + \beta_8 NEGSPITEM + \beta_9 NEGSPITEM * |SPITEM| \\ & + \beta_{10} NEGOTHEXCL + \beta_{11} NEGOTHEXCL * |OTHEXCL| + \beta_{12} |RET^{QTR}| + \beta_{13} |RET^{DAYB4}| \\ & + \beta_{14} |FE| + \beta_{15} |EXITEM| + \beta_{16} \Delta SALES + \beta_{17} AF + \beta_{18} LNASSETS + \beta_{19} QTR2 + \beta_{20} QTR3 \\ & + \beta_{21} QTR4 + \beta_{22} Y2004 + \beta_{23} Y2005 + \varepsilon \end{aligned} \quad (3)$$

$$\begin{aligned} |RET^{DISC}|, AVOL^{DISC} = & \beta_0 + \beta_1 DISC + \beta_2 ROA + \beta_3 RET^{QTR} + \beta_4 RET^{DAYB4} + \beta_5 MISS \\ & + \beta_6 |SPITEM| + \beta_7 |OTHEXCL| + \beta_8 NEGSPITEM + \beta_9 NEGSPITEM * |SPITEM| \\ & + \beta_{10} NEGOTHEXCL + \beta_{11} NEGOTHEXCL * |OTHEXCL| + \beta_{12} |RET^{QTR}| + \beta_{13} |RET^{DAYB4}| \\ & + \beta_{14} |FE| + \beta_{15} |EXITEM| + \beta_{16} \Delta SALES + \beta_{17} AF + \beta_{18} LNASSETS + \beta_{19} QTR2 + \beta_{20} QTR3 \\ & + \beta_{21} QTR4 + \beta_{22} Y2004 + \beta_{23} Y2005 + \varepsilon \end{aligned} \quad (4)$$

$|RET^{PRES}|$  ( $|RET^{DISC}|$ ) is the absolute returns during the presentation (discussion) portion of the call. Specifically,  $|RET^{PRES}|$  ( $|RET^{DISC}|$ ) equals the absolute value of the difference between the quote midpoint at the start of the presentation (discussion) and the quote midpoint at the end of the presentation (discussion), scaled by the quote midpoint at the start of the presentation (discussion).  $AVOL^{PRES}$  ( $AVOL^{DISC}$ ) is the abnormal trading volume during the presentation (discussion) period, defined as the number of shares traded during the presentation (discussion) less the mean number of shares traded during the same period on all other trading days during the quarter, scaled by the mean number of shares traded during the same period on all other trading days during the quarter.

The start of the presentation is assumed to be 116 seconds after the scheduled start time of the conference call, which is the average time spent on the introduction to the conference call (based on our sub-sample of 1,263 calls with exact start and end times). The end of the presentation period is determined based on the number of words in the presentation and the median number of words spoken per second, based on our sub-sample of conference calls with start and end times. The beginning of the discussion is assumed to start 28 seconds after the end of the presentation, which is the average time between the end of the presentation and the start of the discussion based on our sub-sample (generally for instructions by the operator). The end of the discussion period is similarly determined based on the number of words in the discussion. We include the determinants of presentation and discussion length to control for factors that lead to longer presentation and discussion periods that might also lead to higher absolute returns or higher abnormal trading volume.<sup>22</sup>

The results of these analyses are presented in Table 5. Panel A presents the results for absolute returns and abnormal trading volume during the presentation portion of the call, while Panel B presents the results for the discussion period. For both presentation and discussion periods, we find that length is related to absolute returns and abnormal trading volume. These results suggest that longer presentations and discussion periods result in greater information to the market.

With respect to the control variables, we also find that absolute returns and abnormal trading volume during the presentation and discussion periods have a strong positive relation with the magnitude of the surprise during the earnings announcement – the coefficient on the coefficient on  $|RET^{DAYB4}|$  is significantly positive. It appears that when the earnings release is more surprising, the conference call is more informative. We also find a negative coefficient on

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<sup>22</sup> Excluding these other factors results in similar findings – presentation (discussion) length is positively related to absolute returns and abnormal trading volume during the presentation (discussion).

$RET^{DAYB4}$  suggesting that bad news in the earnings release results in greater information content in the presentation and discussion periods of the call.

#### 4.2.2 *Call length and analysts' forecasts*

The fact that we find a positive relation between conference call length and price changes and trading volume during the call suggests that longer calls are more informative. However, it is possible that the greater trading volume is the result of greater confusion among market participants and/or that the information provided is misleading. For example, Li (2006) finds that managers' disclosures in the MD&A section of the annual report are longer and more difficult to read when a firm reports poor performance. He interprets his findings as consistent with managers attempting to hide poor performance by providing unclear disclosures. An alternative assessment of the informativeness of conference call disclosures would be to examine the impact on analysts' forecasts. The downside of this type of analysis is that we are not able to assess the impact of presentation and discussion length separately.<sup>23</sup> Thus, we focus on the impact of total conference call length (CC) on analysts' forecasts.

We examine three changes in analysts' forecasts of the subsequent quarter's earnings (quarter  $q+1$ ): 1) the absolute forecast revision ( $|FREV|$ ), 2) the change in analyst forecast accuracy, and 3) the change in analyst forecast dispersion. For each analysis, our sample of forecasts includes only analysts who issue at least one forecast for quarter  $q+1$  in the 90 days prior and 90 days subsequent to the conference call for quarter  $q$ . We then retain the last forecast issued prior and first forecast issued after the call for each analyst.

We run the following three regressions using firm-fixed effects and percentile ranks, as in prior analyses

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<sup>23</sup> To assess the separate impact of these two disclosures would require analysts to issue forecasts after the presentation and then again after the discussion. Since analysts issue only one forecast after the earnings announcement, we can not disentangle the effects of the presentation and disclosure on analysts' forecasts.

$$\begin{aligned}
|FREV|, \Delta FE, \Delta DISP = & \beta_0 + \beta_1 CC + \beta_2 ROA + \beta_3 RET^{QTR} + \beta_4 RET^{DAYB4} + \beta_5 MISS \\
& + \beta_6 |SPITEM| + \beta_7 |OTHEXCL| + \beta_8 NEGSPITEM + \beta_9 NEGSPITEM * |SPITEM| \\
& + \beta_{10} NEGOTHEXCL + \beta_{11} NEGOTHEXCL * |OTHEXCL| + \beta_{12} |RET^{QTR}| + \beta_{13} |RET^{DAYB4}| \quad (5) \\
& + \beta_{14} |FE| + \beta_{15} |EXITEM| + \beta_{16} \Delta SALES + \beta_{17} AF + \beta_{18} LNASSETS + \beta_{19} QTR2 + \beta_{20} QTR3 \\
& + \beta_{21} QTR4 + \beta_{22} Y2004 + \beta_{23} Y2005 + \varepsilon
\end{aligned}$$

$|FREV|$  is the absolute value of the difference between the median forecast issued before the conference call and the median forecast issued after the conference call scaled by price at start conference call. If longer calls are more informative to analysts, we expect analysts to revise their forecasts more, resulting in a positive coefficient on CC.  $\Delta FE = (FE^{POST} - FE^{PRE}) / P^{start}$ , where  $FE^{POST}$  ( $FE^{PRE}$ ) is the absolute value of the difference between actual earnings for quarter q+1 and the median forecast for quarter q+1 issued after (before) the conference call and  $P^{start}$  equals price at the start of the call. Thus, negative values represent increased forecast accuracy and positive values represent decreased accuracy. If longer conference calls provide analysts with information that increases their forecast accuracy, we expect the coefficient on CC to be negative.  $\Delta DISP = DISP^{POST} - DISP^{PRE}$ , where  $DISP^{POST}$  ( $DISP^{PRE}$ ) is the standard deviation of forecasts issued for quarter q+1 after (before) the conference call divided by the median forecast issued after (before) the conference call. If longer conference calls result in greater consensus among analysts, we expect the coefficient on CC to be negative. Alternatively, if conference call length is the result of managers' attempt to confuse investors, we would expect the coefficient on CC to be positive. All forecast and actual data are obtained from the IBES unsplit-adjusted detail file.

Results of this analysis are presented in Table 6. We find that longer calls are associated with greater absolute forecast revisions of next quarter's earnings (coefficient on CC in  $|FREV|$  regression significant at  $p=0.000$ ) as well as greater accuracy (coefficient on CC in  $\Delta FE$  regression significant at  $p=0.005$ ). We do not find that longer calls result in more or less

forecast dispersion. It also appears that analysts revise their forecasts to a greater degree when firms report bad news. Interestingly, it also appears that in the case of negative earnings surprises (measured either by market returns,  $RET^{DAYB4}$ , or by analysts' forecasts, MISS), these revisions result in increased forecast accuracy.

Overall, our results suggest that longer calls represent more information to analysts – they revise their forecasts more when calls are longer and these revised forecasts are more accurate. The latter finding, in particular, is inconsistent with the idea that the additional disclosures are intended to obfuscate poor performance since analysts' forecast accuracy improves more when calls are longer.

## **5. Conclusions**

We examine the determinants of the length of management's presentations during conference calls as well as the determinants of the length of the ensuing discussion with analysts. Our results suggest that managers provide more information during the presentation portion of the call when firm performance is poor – both in terms of earnings performance as well as stock market performance. This finding differs from prior studies that generally find firms disclose more information when performing well. The two critical differences in our setting are 1) that the decision to provide disclosures (i.e., to host a conference call) is constrained by prior precedent and 2) analysts' direct involvement in the call tempers managers incentives to expound on good performance. Thus, it appears that the incentives to disclose information differ depending on prior commitment and the forum through which information is disclosed.

We also find that managers provide more disclosures when reporting larger negative special items and other exclusions. This latter finding is consistent with managers providing



greater explanations when earnings are perhaps a downward biased signal of future performance but not when earnings are an upward-biased signal of future performance.

We also find that analyst discussion periods are longer when stock market performance is poor and when firms report earnings that fail to meet or beat analysts' expectations. We do not find any relation between the level of earnings and discussion length or between the magnitude or sign of special items and discussion length. Overall, these results suggest that managers provide sufficient disclosures of earnings-related information but insufficient disclosures of non-earnings related news.

Additional analyses support our assumption that longer calls are more informative. Longer calls are associated with greater absolute price revisions, greater trading volume, greater absolute forecast revisions, and increased analyst forecast accuracy. Thus, in contrast to findings in Li (2006), our evidence does not suggest that the longer calls associated with poor performance are the result of managers attempting to hide this poor performance with long, complicated disclosures.

Overall, our results suggest that conference call presentations are not "boiler-plate" disclosure but, in fact, vary across time for a given firm as a result of specific factors such as performance and the quality of the earnings signal. In addition, conference calls allow analysts to play an active role in uncovering information about the firm, likely resulting in a richer information environment than might otherwise exist.

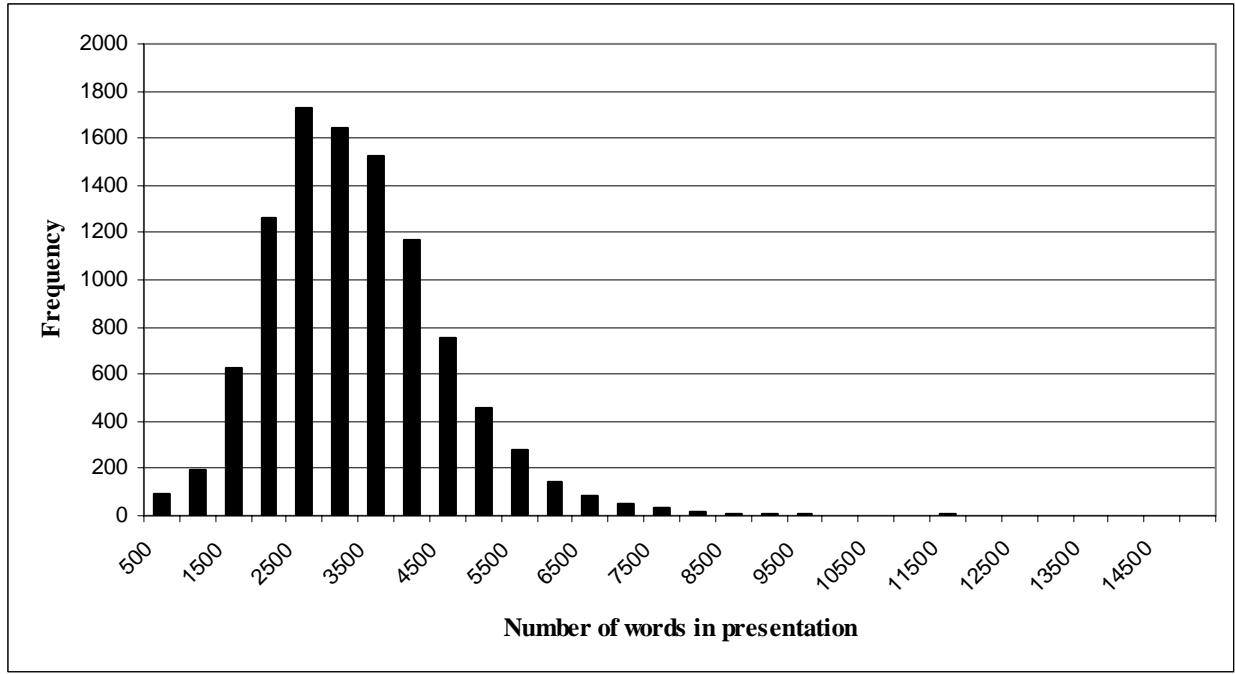
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Figure 1  
Distribution of Conference Call Length (in words)

Panel A: Distribution of presentation length (PRES)



Panel B: Distribution of discussion length (DISC)

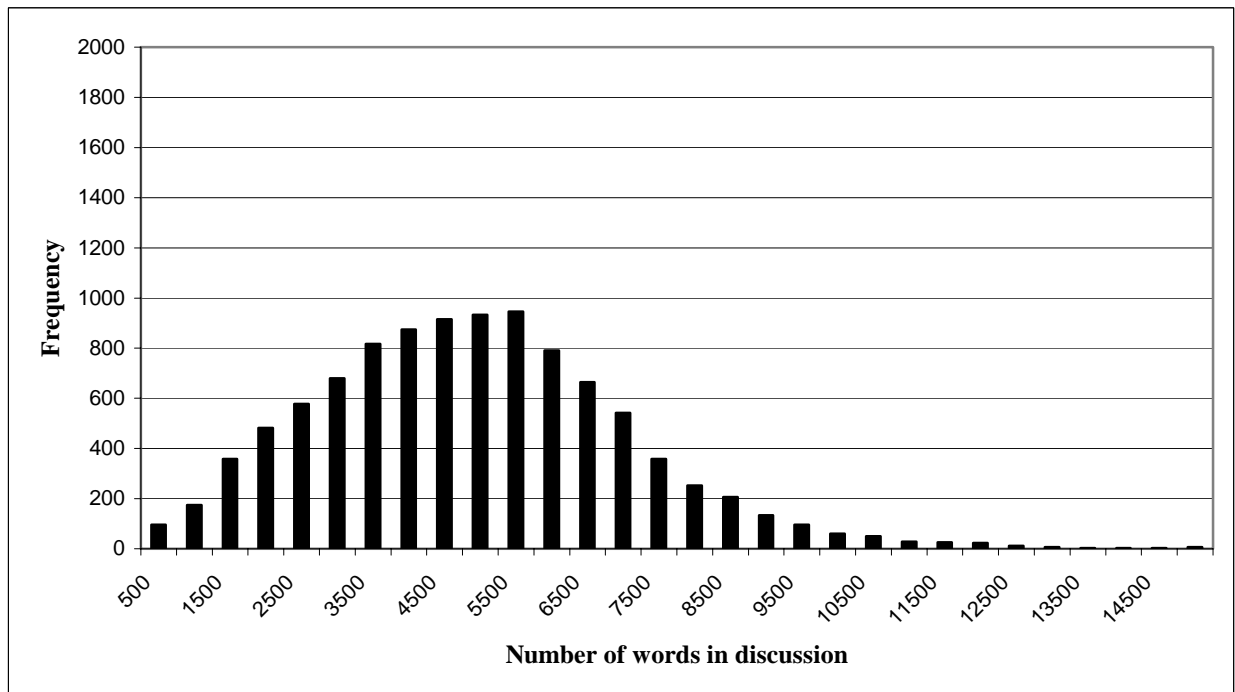
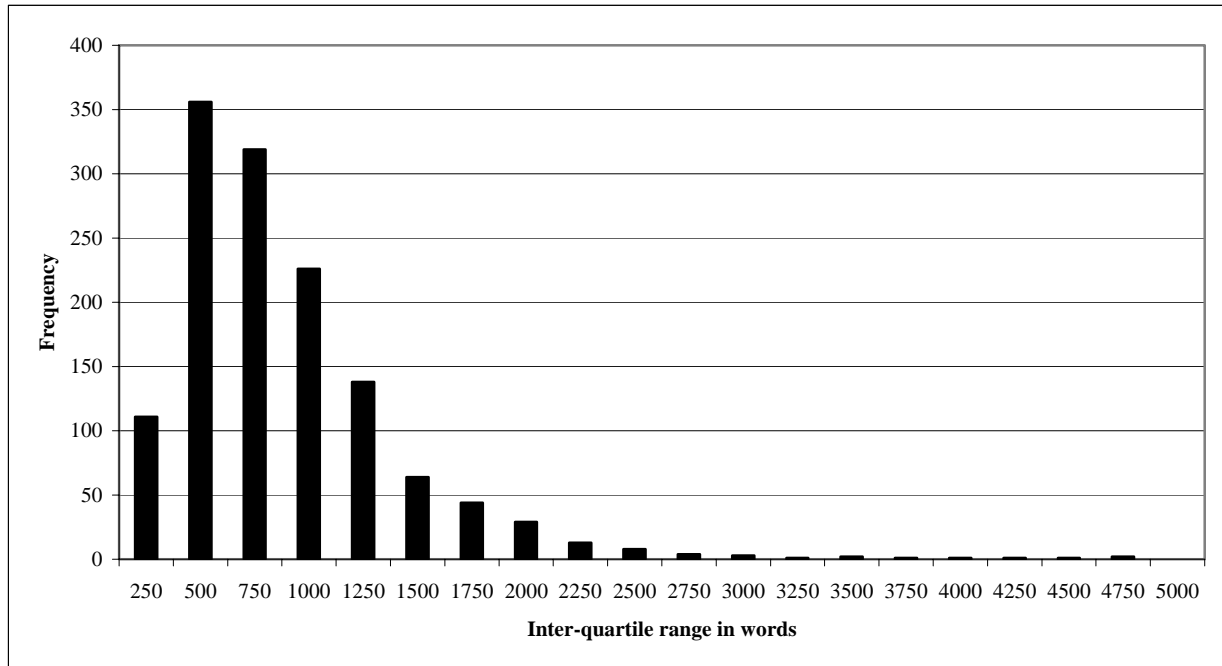


Figure 2  
Distribution of Within-Firm Inter-quartile Range in Call Length

Panel A: Within-Firm Inter-quartile Range of Presentation Length



Panel B: Within-Firm Inter-quartile Range of Discussion Length

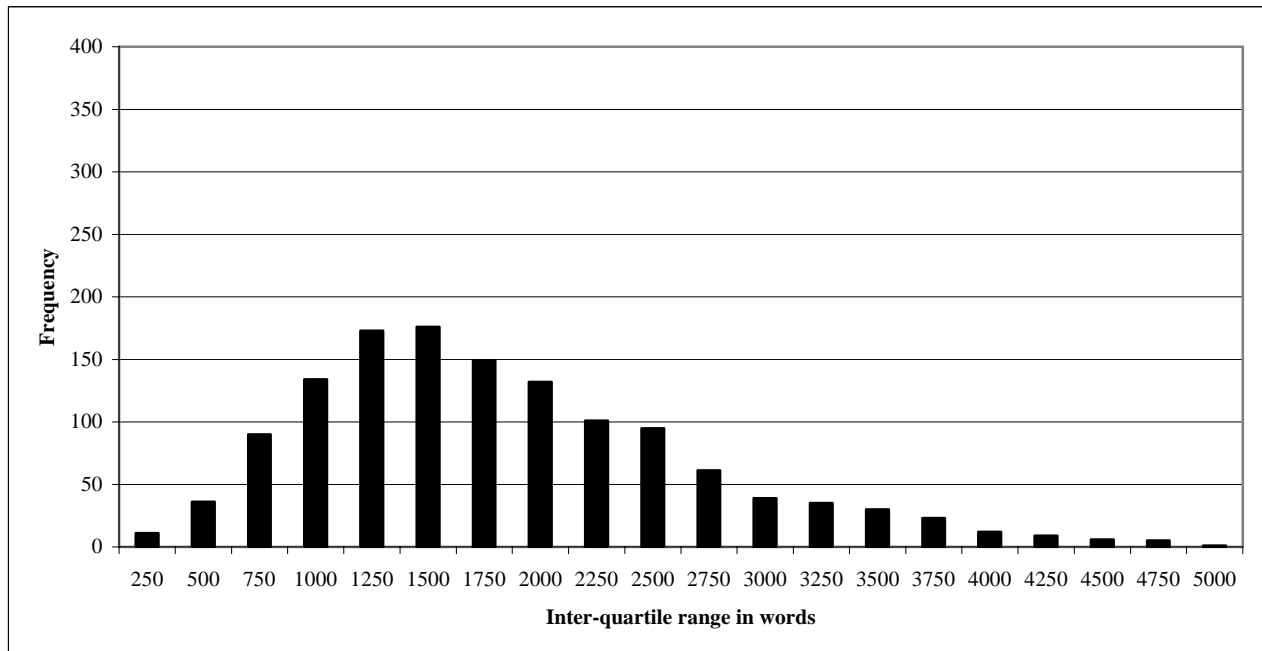
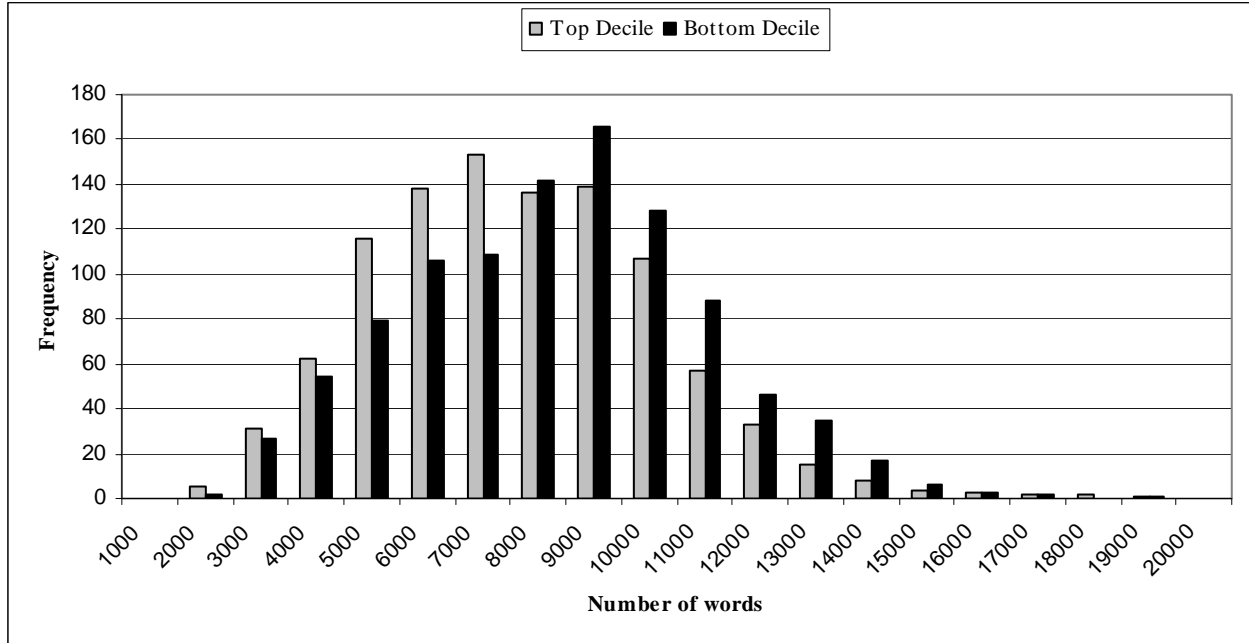


Figure 3  
Comparison of Call Length for “Good” vs. “Bad” News

Panel A: Conference Call Length by Top and Bottom Decile of  $RET^{QTR}$



Panel B: Conference Call Length for Firm-quarter with Best and Worst Performance (based on  $RET^{QTR}$ )

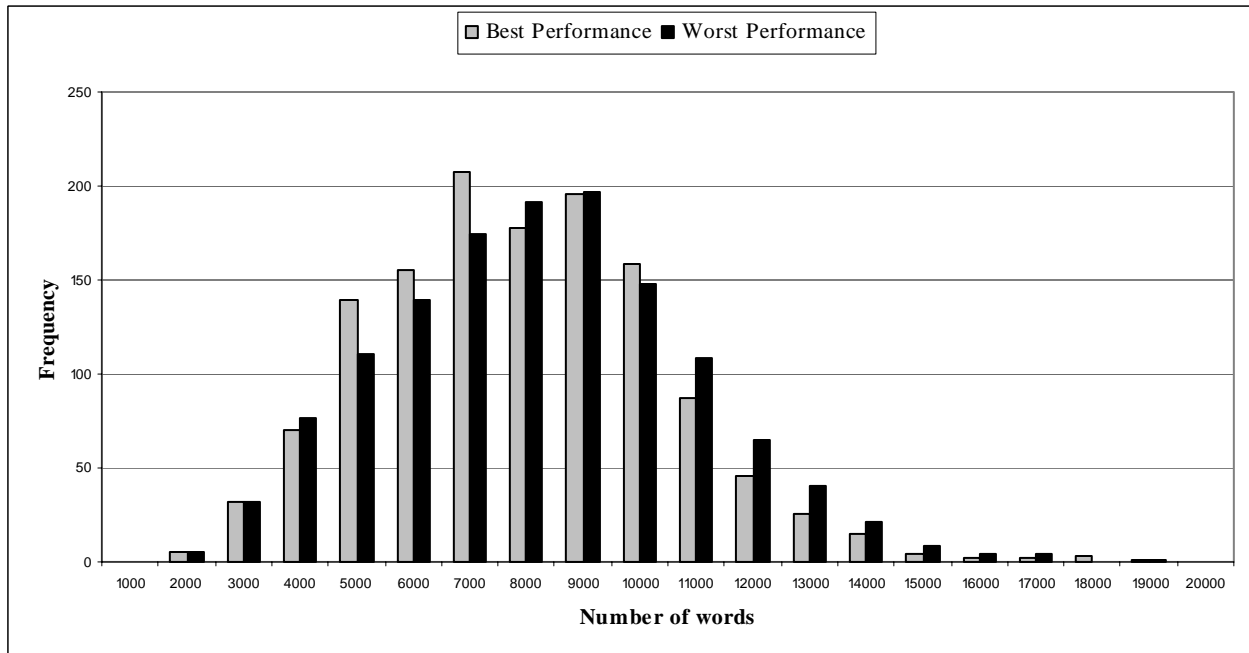
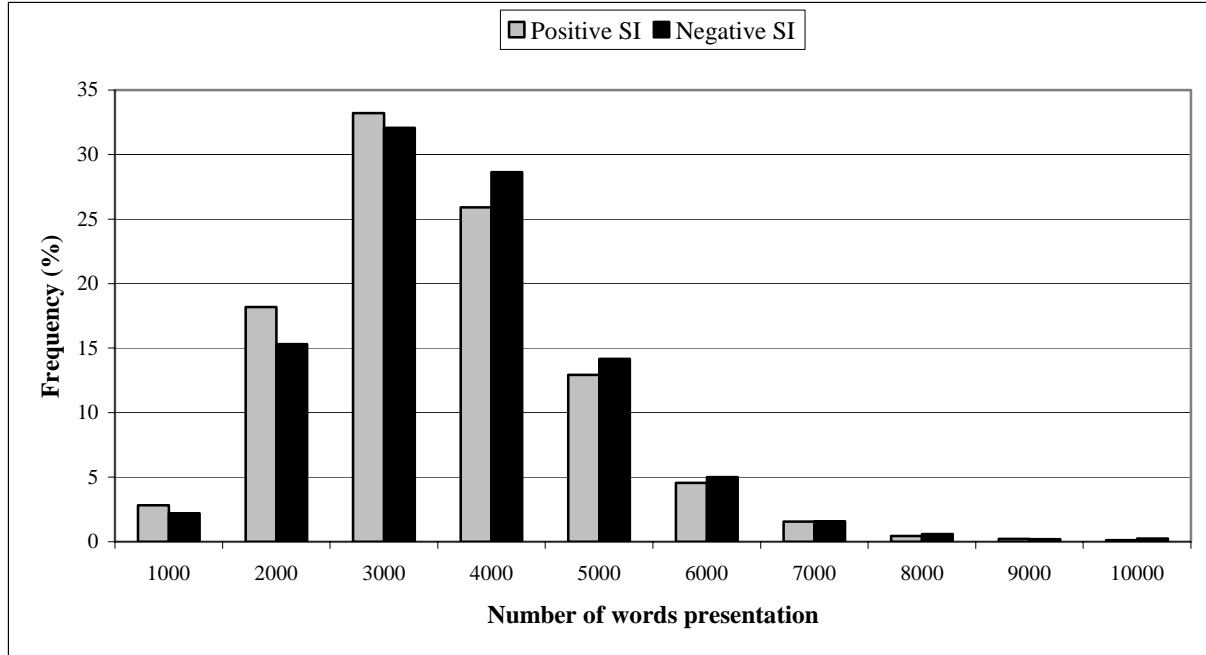


Figure 4  
Comparison of Presentation Length for High and Low Special Items

Panel A: Presentation Length by Positive and Negative SPITEM



Panel B: Presentation Length for Firm-quarter with Highest and Lowest SPITEM

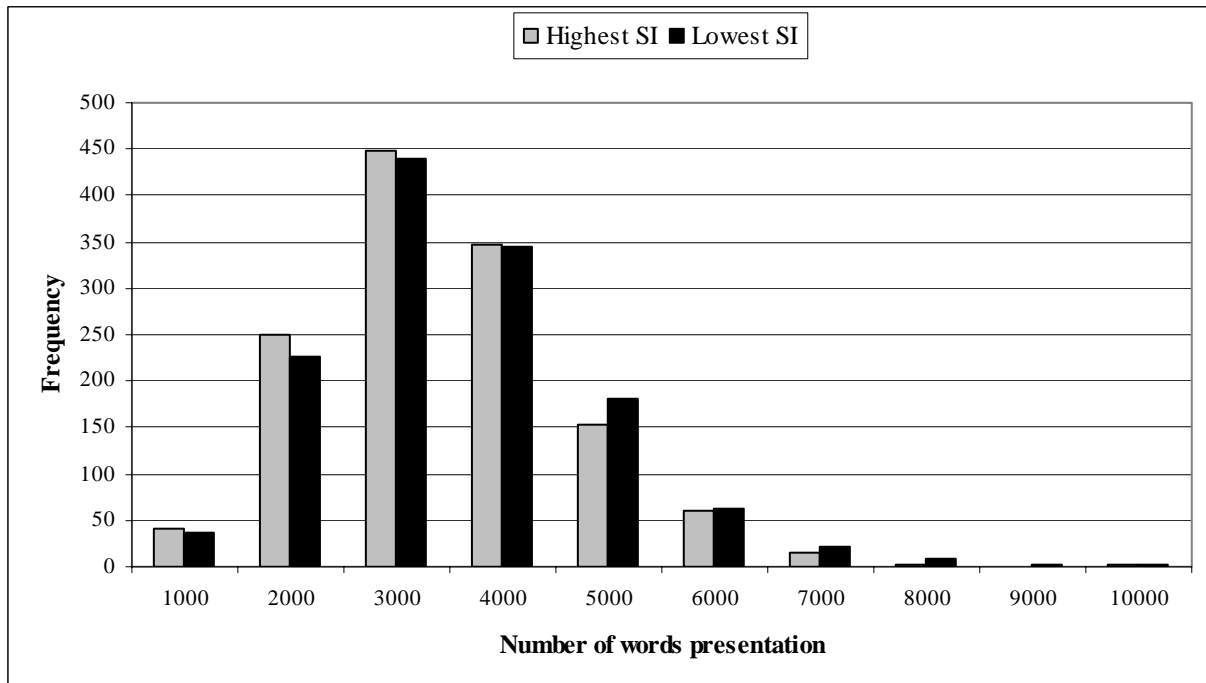


Table 1  
Sample Selection and Descriptive Data

Panel A: Sample Attrition

Earnings related conference calls held during trading hours	19,040
Transcripts not available on Voxant FD Wire	(4,954)
Missing data on TAQ or stock price < \$1.00	(503)
Missing analyst forecast data on IBES	(1,875)
Missing Compustat data	(437)
Missing CRSP data	(25)
Less than four conference calls per firm	<u>(1,125)</u>
Final Sample	<u><u>10,121</u></u>

Panel B: Sample distribution across calendar quarters

Panel C: Calls per firm

Year		No. of Obs	% of Obs	Calls Per Firm	No. of Firms	Total Calls
2003	January-March	675	6.67	4	165	660
2003	April-June	617	6.10	5	122	610
2003	July-September	814	8.04	6	135	810
2003	October-December	778	7.69	7	188	1,316
2004	January-March	901	8.90	8	208	1,664
2004	April-June	1,019	10.07	9	200	1,800
2004	July-September	1,013	10.01	10	171	1,710
2004	October-December	832	8.22	11	105	1,155
2005	January-March	1,016	10.04	12	<u>33</u>	<u>396</u>
2005	April-June	829	8.19		<u>1,327</u>	<u>10,121</u>
2005	July-September	775	7.66			
2005	October-December	<u>852</u>	<u>8.42</u>			
		<u>10,121</u>	<u>100.00</u>			



Table 1 (con't)  
Sample Selection and Descriptive Data

Panel D: Distribution of observations across industry

NAICS <sup>1</sup> Industry	No. of Obs.	% of Obs	% of Population <sup>2</sup>
Accommodation and Food Services	237	2.34	1.67
Administrative and Support, Waste Management and Remediation Services	294	2.90	1.75
Agriculture, Forestry, Fishing and Hunting	13	0.13	0.31
Art, Entertainment and Recreation	73	0.72	0.42
Construction	184	1.82	1.02
Educational Services	69	0.68	0.31
Finance and Insurance	1,831	18.09	28.09
Health Care and Social Assistance	210	2.07	1.41
Information	647	6.39	10.37
Manufacturing	3,587	35.44	34.11
Mining	481	4.75	3.12
Other Services	84	0.83	0.38
Professional, Scientific and Technical Services	398	3.93	4.16
Real estate and Leasing	143	1.41	1.51
Retail Trade	556	5.49	3.96
Transportation and Warehousing	304	3.00	2.36
Unclassified Establishments	9	0.09	0.21
Utilities	335	3.31	2.26
Wholesale Retail	290	2.87	2.58
Missing NAICS Code	376	3.72	
	<u>10,121</u>	<u>100.00</u>	<u>100.00</u>

<sup>1</sup> NAICS stands for the North American Industry Classification System.

<sup>2</sup> % of Population is the percent of firms on the NYSE and NASDAQ in each NAICS industry classification.

Table 2  
Descriptive Statistics on Conference Call Length

Panel A: Descriptive statistics on length in words (n=10,121)

Variable <sup>1</sup>	Mean	1st Quartile	Median	3rd Quartile	Std Deviation	IQ Range
PRES	3004.02	2099.00	2855.00	3704.00	1345.70	1,605.00
DISC	4641.88	3099.00	4549.00	5956.00	2178.29	2,857.00
CC	7645.90	5779.00	7603.00	9307.00	2621.64	3,528.00

Panel B: Descriptive statistics on words spoken per minute (sub-sample of 1,263 calls)

Variable <sup>1</sup>	Mean	1st Quartile	Median	3rd Quartile	Std Deviation	IQ Range
WPM-PRES	163.07	153.80	163.08	172.13	12.86	18.33
WPM-DISC	165.30	155.78	164.95	173.77	12.32	17.99

Panel C: Descriptive statistics on length in minutes (n=10,121)

Variable <sup>1</sup>	Mean	1st Quartile	Median	3rd Quartile	Std Deviation	IQ Range
PRES-MIN	18.41	12.86	17.49	22.70	8.25	9.83
DISC-MIN	28.13	18.78	27.57	36.10	13.20	17.32
CC-MIN	48.94	37.61	48.71	59.04	15.94	21.43

Panel D: Descriptive statistics on within firm variation in call length (in words)

Variable <sup>1</sup>	Mean	1st Quartile	Median	3rd Quartile	Std Deviation
IQPRES	778.07	409.00	642.00	982.00	608.36
IQDISC	1,744.32	1,101.00	1,585.00	2,240.50	913.15
IQCC	1,928.03	1,189.00	1,736.00	2,476.00	1,034.38

<sup>1</sup> PRES and DISC are the number of words spoken during the presentation and discussion portions of the conference call, respectively. CC is the number of words spoken during the entire conference call. WPM-PRES and WPM-DISC are the number of words spoken per minute during the presentation and discussion portions of the conference call, respectively, based on a sub-sample of 1,263 calls for which we have the exact start and end times of the call. PRES-MIN, DISC-MIN, and CC-MIN are the estimated number of minutes of the presentation, discussion, and entire conference call, respectively, based on the median number of words spoken per minute estimated in Panel B. IQPRES, IQDISC, and IQCC are the firm-specific interquartile ranges of the number of words in the presentation, discussion, and entire conference call, respectively.

Table 3  
Statistics on explanatory and control variables

Panel A: Univariate statistics

Variable <sup>1</sup>	Mean	1 <sup>st</sup> Quartile	Median	3rd Quartile	Std Deviation
ROA	0.008	0.003	0.010	0.020	0.043
RET <sup>QTR</sup>	-0.009	-0.102	-0.016	0.075	0.170
RET <sup>DAYB4</sup>	0.001	-0.020	0.001	0.023	0.051
MISS	0.284	0.000	0.000	1.000	0.451
SPITEM	0.069	0.000	0.010	0.030	0.347
OTHEXCL	0.059	0.000	0.010	0.040	0.193
RET <sup>QTR</sup>	0.122	0.043	0.090	0.162	0.120
RET <sup>DAYB4</sup>	0.034	0.009	0.022	0.045	0.038
FE	0.005	0.000	0.001	0.003	0.024
EXITEM	0.519	0.000	0.000	0.000	12.268
ΔSALES	0.026	0.001	0.015	0.041	0.065
AF	7.329	3.000	6.000	10.000	5.898
LNASSETS	7.272	6.047	7.184	8.373	1.788

<sup>1</sup> ROA is earnings before extraordinary items (Compustat quarterly item 8) divided by ending total assets (Compustat quarterly item 44). RET<sup>QTR</sup> is the market-adjusted returns cumulated from day -92 to day -2 relative to the conference call date. RET<sup>DAYB4</sup> is the quote midpoint at the start of the conference call (MID<sup>start</sup>) less the quote midpoint at the same time one trading day before the conference call (MID<sup>dayprior</sup>) divided by MID<sup>dayprior</sup> (from the TAQ database). MISS is a dummy variable that is equal to 1 if actual EPS for the quarter (per IBES unsplit-adjusted actuals file) is less than the mean consensus forecasted EPS for the quarter (per IBES unsplit-adjusted summary file) and zero otherwise. SI is earnings per share from operations (Compustat quarterly item 177) less either EPS<sup>basic</sup> (Compustat quarterly item 19) or EPS<sup>diluted</sup> (Compustat quarterly item 9) as appropriate. OTEXCL is TOTEXCL less SI, where TOTEXCL equals actual EPS (as reported on IBES unsplit-adjusted actuals file) less EPS<sup>basic</sup> if the EPS reported on IBES is primary earnings per share, and less EPS<sup>diluted</sup> if the EPS reported on IBES is diluted earnings per share. |FE| is the absolute value of actual EPS (from IBES unsplit-adjusted actuals file) less the last mean consensus forecast prior to the earnings announcement (from IBES unsplit-adjusted summary file) scaled by the stock price at the end of quarter (Compustat quarterly item 14). |EXITEM| is the absolute value of extraordinary items (Compustat quarterly item 119). ΔSALES is current quarter sales (Compustat quarterly item 2) less sales in the same quarter one year earlier, scaled by total assets (Compustat quarterly item 44). AF is the number of analysts that issued an EPS forecast for the current quarter (from IBES summary file). LNASSETS is the log of total assets (Compustat quarterly item 44).

Table 3 (con't)  
Statistics on explanatory and control variables

Panel B: Correlation Matrix<sup>1</sup>

Variables <sup>2</sup>	ROA	RET <sup>QTR</sup>	RET <sup>DAYB4</sup>	MISS	SPITEM	OTHEXCL	RET	FE	EXITEM	ΔSALES	AF	LNASSETS
ROA	1.00	0.05	0.09	-0.18	-0.14	-0.03	0.02	-0.04	0.00	0.24	0.07	0.08
RET <sup>QTR</sup>	-0.01	1.00	-0.05	-0.07	-0.02	0.00	0.00	-0.04	0.00	0.05	0.00	0.08
RET <sup>DAYB4</sup>	0.03	-0.07	1.00	-0.27	0.00	-0.01	0.03	0.05	0.02	0.09	-0.04	-0.01
MISS	-0.08	-0.08	-0.28	1.00	0.02	0.02	0.06	0.16	0.02	-0.10	0.03	0.03
SPITEM	-0.31	0.03	-0.01	0.02	1.00	0.38	0.01	0.08	0.03	0.02	0.00	0.02
OTHEXCL	-0.20	0.00	0.00	0.02	0.18	1.00	-0.01	0.13	0.04	0.01	0.02	0.04
RET <sup>DAYB4</sup>	0.04	-0.02	-0.05	0.07	0.00	0.00	1.00	0.12	-0.03	0.01	0.02	0.04
FE	-0.05	-0.03	0.00	0.05	0.05	0.09	0.04	1.00	0.00	-0.01	-0.04	-0.03
EXITEM	0.00	0.03	0.02	-0.01	0.00	0.03	0.00	0.00	1.00	0.01	-0.03	-0.03
ΔSALES	0.11	0.01	0.06	-0.07	-0.01	0.00	0.02	0.01	0.01	1.00	0.02	0.10
AF	0.02	-0.02	-0.03	0.02	0.00	0.03	0.02	-0.01	-0.01	-0.02	1.00	0.27
LNASSETS	0.02	0.00	-0.02	0.03	0.01	0.04	0.04	-0.02	0.00	0.04	0.25	1.00

<sup>1</sup> Spearman correlations shown above the diagonal; Pearson correlations shown below the diagonal.

<sup>2</sup> See Table 3, Panel A for variable definitions. For purposes of this table, we subtract the firm-mean from each variable (because subsequent analyses are based on firm-fixed effect models).

Table 4  
Determinants of Presentation and Discussion Period Length

Variable <sup>2</sup>	PRES <sup>1</sup>				DISC			
	Pred Sign	Coeff.	t-stat	p-value <sup>3</sup>	Pred Sign	Coeff.	t-stat	p-value <sup>2</sup>
ROA	–	-0.0172	-1.58	0.057	–	0.0148	1.09	0.862
RET <sup>QTR</sup>	–	-0.0203	-3.38	0.000	–	-0.0356	-4.77	0.000
RET <sup>DAYB4</sup>	–	-0.0107	-1.76	0.039	–	-0.0407	-5.36	0.000
MISS	+	0.0049	1.12	0.132	+	0.0093	1.72	0.043
SPITEM	+	0.0158	1.43	0.077	+	-0.0105	-0.77	0.222
OTHEXCL	+	-0.0054	-0.55	0.708	+	-0.0118	-0.95	0.171
NEGSPITEM	?	-0.0553	-4.10	0.000	?	-0.0239	-1.42	0.155
NEGSPITEM* SPITEM	+	0.0927	4.50	0.000	–	0.0340	1.33	0.908
NEGOTHEXCL	?	-0.0235	-1.83	0.067	?	-0.0094	-0.59	0.558
NEGOTHEXCL* OTHEXCL	+	0.0445	2.29	0.011	–	0.0233	0.96	0.833
RET <sup>QTR</sup>	+	-0.0062	-1.00	0.840	+	0.0068	0.89	0.187
RET <sup>DAYB4</sup>	+	0.0123	1.95	0.026	+	0.0466	5.98	0.000
FE	+	0.0133	1.76	0.040	+	0.0137	1.47	0.071
EXITEM	+	0.0642	2.40	0.008	+	-0.0092	-0.28	0.391
ΔSALES	?	0.0021	0.24	0.808	?	0.0035	0.34	0.737
AF	?	0.0107	0.55	0.581	?	0.3228	13.41	0.000
LNASSETS	?	0.1721	2.60	0.009	?	0.1598	1.94	0.052
QTR2	?	0.0336	7.52	0.000	?	0.0202	3.64	0.000
QTR3	?	0.0379	8.32	0.000	?	0.0137	2.42	0.016
QTR4	?	0.0891	19.47	0.000	?	0.0254	4.38	0.000
Y2004	?	0.0279	6.59	0.000	?	0.0070	1.34	0.181
Y2005	?	0.0114	2.33	0.020	?	0.0137	2.25	0.024
PRES					–	-0.0519	-3.92	0.000
N = 10,121, R <sup>2</sup> = 0.76					N = 10,121, R <sup>2</sup> = 0.63			

<sup>1</sup> Results from a firm fixed-effects regression of presentation length (PRES) and discussion length (DISC) measured in number of words. Dependent and independent variables are converted into percentile ranks to control for outliers and non-linearities in the data.

<sup>2</sup> See variable definitions on Table 3. QTR2, QTR3, and QTR4 are dummy variables equal to 1 if the conference call relates to fiscal quarter 2, 3, and 4, respectively. Y2004 and Y2005 are dummy variables equal to 1 if the conference call is held in 2004 and 2005, respectively.

<sup>3</sup> P-values are one-tailed for variables with directional predictions and two-tailed otherwise.

Table 5  
Relation Between Length and Information Content

Panel A: Relation between presentation length and absolute returns and trading volume

Variable <sup>2</sup>	$ \text{RET}^{\text{PRES}} $ <sup>1</sup>			$\text{AVOL}^{\text{PRES}}$ <sup>1</sup>		
	Coeff.	t-stat	p-value <sup>3</sup>	Coeff.	t-stat	p-value <sup>3</sup>
PRES	0.2507	13.97	0.000	0.1381	8.27	0.000
ROA	0.0107	0.58	0.561	0.0680	3.99	0.000
$\text{RET}^{\text{QTR}}$	-0.0231	-2.28	0.023	0.0012	0.12	0.902
$\text{RET}^{\text{DAYB4}}$	-0.0543	-5.28	0.000	-0.0287	-3.00	0.003
MISS	-0.0005	-0.07	0.947	0.0128	1.88	0.060
$ \text{SPITEM} $	0.0120	0.65	0.516	0.0046	0.27	0.790
$ \text{OTHEXCL} $	-0.0164	-0.98	0.327	0.0015	0.10	0.923
NEGSPITEM	-0.0140	-0.61	0.539	-0.0114	-0.54	0.589
$\text{NEGSPITEM} *  \text{SPITEM} $	0.0132	0.38	0.703	0.0096	0.30	0.765
NEGOTHEXCL	-0.0119	-0.55	0.581	-0.0021	-0.10	0.918
$\text{NEGOTHEXCL} *  \text{OTHEXCL} $	0.0252	0.77	0.441	-0.0103	-0.34	0.735
$ \text{RET}^{\text{QTR}} $	0.0217	2.09	0.037	0.0065	0.68	0.498
$ \text{RET}^{\text{DAYB4}} $	0.1027	9.73	0.000	0.3198	32.56	0.000
$ \text{FE} $	0.0258	2.03	0.043	0.0602	5.09	0.000
$ \text{EXITEM} $	-0.0079	-0.18	0.861	0.0037	0.09	0.930
DSALES	0.0146	1.03	0.302	0.0236	1.79	0.073
AF	0.0345	1.06	0.290	0.0865	2.85	0.004
LNASSETS	0.2906	2.61	0.009	0.1983	1.91	0.056
QTR2	-0.0150	-1.99	0.047	0.0186	2.66	0.008
QTR3	-0.0277	-3.60	0.000	0.0198	2.76	0.006
QTR4	-0.0179	-2.28	0.023	0.0073	1.00	0.315
Y2004	0.0219	3.07	0.002	0.0200	3.02	0.003
Y2005	0.0051	0.62	0.534	0.0376	4.91	0.000
	n = 10,121, $R^2 = 0.31$			n = 10,121, $R^2 = 0.40$		

<sup>1</sup> Results from a firm fixed-effects regression of absolute returns ( $|\text{RET}^{\text{PRES}}|$ ) and trading volume ( $\text{AVOL}^{\text{PRES}}$ ) on presentation length and the determinants of presentation length (analyzed in Table 4).  $|\text{RET}^{\text{PRES}}| = |\text{MID}^{\text{start}} - \text{MID}^{\text{end}}| / \text{MID}^{\text{start}}$ , where  $\text{MID}^{\text{start}}$  is the quote midpoint at the start of the presentation and  $\text{MID}^{\text{end}}$  is the quote midpoint at the end of the presentation.  $\text{AVOL}^{\text{PRES}}$  is the number of shares traded during the presentation less the mean number of shares traded during the same period on all other trading days during the quarter, scaled by the mean number of shares traded during the same period on all other trading days during the quarter. Dependent and independent variables are converted into percentile ranks to control for outliers and non-linearities in the data.

<sup>2</sup> See variable definitions on Table 3. QTR2, QTR3, and QTR4 are dummy variables equal to 1 if the conference call relates to fiscal quarter 2, 3, and 4, respectively. Y2004 and Y2005 are dummy variables equal to 1 if the conference call is held in 2004 and 2005, respectively.

<sup>3</sup> P-values are one-tailed for variables with directional predictions and two-tailed otherwise.

Table 5 (con't)  
Relation Between Length and Information Content

Panel B: Relation between discussion length and absolute returns and trading volume

Variable <sup>2</sup>	RET <sup>DISC</sup>   <sup>1</sup>			AVOL <sup>DISC</sup>		
	Coeff.	t-stat	p-value <sup>3</sup>	Coeff.	t-stat	p-value <sup>3</sup>
DISC	0.2540	17.70	0.000	0.1512	11.38	0.000
ROA	0.0053	0.29	0.773	0.0806	4.78	0.000
RET <sup>QTR</sup>	-0.0233	-2.32	0.020	-0.0109	-1.17	0.243
RET <sup>DAYB4</sup>	-0.0490	-4.79	0.000	-0.0317	-3.35	0.001
MISS	0.0053	0.73	0.463	0.0100	1.49	0.137
SPITEM	0.0104	0.57	0.571	-0.0148	-0.87	0.385
OTHEXCL	0.0143	0.86	0.388	0.0127	0.83	0.408
NEGSPITEM	-0.0490	-2.17	0.030	-0.0344	-1.65	0.099
NEGSPITEM* SPITEM	0.0589	1.71	0.087	0.0553	1.74	0.082
NEGOTHEXCL	-0.0175	-0.82	0.414	0.0046	0.23	0.817
NEGOTHEXCL* OTHEXCL	0.0221	0.68	0.497	0.0099	0.33	0.742
RET <sup>QTR</sup>	0.0122	1.19	0.236	0.0002	0.02	0.982
RET <sup>DAYB4</sup>	0.1179	11.23	0.000	0.2962	30.45	0.000
FE	0.0064	0.51	0.613	0.0534	4.58	0.000
EXITEM	0.0104	0.23	0.816	-0.0097	-0.23	0.814
DSALES	0.0243	1.73	0.084	0.0243	1.87	0.062
AF	-0.0465	-1.42	0.155	0.0365	1.21	0.228
LNASSETS	0.2128	1.93	0.054	0.1361	1.33	0.183
QTR2	0.0063	0.84	0.401	0.0148	2.14	0.032
QTR3	-0.0084	-1.10	0.272	0.0119	1.69	0.091
QTR4	0.0010	0.13	0.895	0.0044	0.62	0.536
Y2004	0.0044	0.62	0.536	0.0230	3.51	0.000
Y2005	0.0025	0.30	0.762	0.0424	5.62	0.000
	n = 10,121, R <sup>2</sup> = 0.32			n = 10,121, R <sup>2</sup> = 0.42		

<sup>1</sup> Results from a firm fixed-effects regression of absolute returns ( $|RET^{DISC}|$ ) and trading volume ( $AVOL^{DISC}$ ) on discussion length and the determinants of discussion length (analyzed in Table 4).  $|RET^{DISC}| = |MID^{start} - MID^{end}| / MID^{start}$ , where  $MID^{start}$  is the quote midpoint at the start of the discussion and  $MID^{end}$  is the quote midpoint at the end of the discussion.  $AVOL^{DISC}$  is the number of shares traded during the discussion less the mean number of shares traded during the same period on all other trading days during the quarter, scaled by the mean number of shares traded during the same period on all other trading days during the quarter. Dependent and independent variables are converted into percentile ranks to control for outliers and non-linearities in the data.

<sup>2</sup> See variable definitions on Table 3. QTR2, QTR3, and QTR4 are dummy variables equal to 1 if the conference call relates to fiscal quarter 2, 3, and 4, respectively. Y2004 and Y2005 are dummy variables equal to 1 if the conference call is held in 2004 and 2005, respectively

<sup>3</sup> P-values are one-tailed for variables with directional predictions and two-tailed otherwise.

Table 6  
Relation Between Length and Analyst Forecast Properties

Variables <sup>2</sup>	FREV  <sup>1</sup>			$\Delta FE$ <sup>1</sup>			$\Delta DISP$ <sup>1</sup>		
	Coeff.	t-stat	p-value <sup>3</sup>	Coeff.	t-stat	p-value <sup>3</sup>	Coeff.	t-stat	p-value <sup>3</sup>
CC	0.0658	4.45	0.000	-0.0527	-2.82	0.005	0.0278	1.30	0.903
ROA	-0.0952	-5.41	0.000	0.0305	1.37	0.172	-0.0377	-1.38	0.168
RET <sup>QTR</sup>	-0.0695	-7.20	0.000	0.0070	0.57	0.567	0.0055	0.37	0.713
RET <sup>DAYB4</sup>	-0.0725	-7.38	0.000	0.0344	2.77	0.006	-0.0494	-3.31	0.001
MISS	0.0363	5.14	0.000	-0.0155	-1.73	0.083	0.0186	1.71	0.088
SPITEM	-0.0068	-0.39	0.698	0.0056	0.25	0.799	0.0172	0.66	0.508
OTHEXCL	0.0590	3.74	0.000	-0.0096	-0.48	0.631	0.0004	0.02	0.988
NEGSPITEM	0.0016	0.08	0.939	-0.0045	-0.17	0.863	0.0064	0.21	0.830
NEGSPITEM* SPITEM	-0.0124	-0.39	0.696	0.0083	0.21	0.835	-0.0066	-0.14	0.887
NEGOTHEXCL	0.0035	0.18	0.861	-0.0080	-0.31	0.754	-0.0044	-0.15	0.879
NEGOTHEXCL* OTHEXCL	-0.0344	-1.12	0.264	0.0185	0.48	0.635	0.0074	0.16	0.870
RET <sup>QTR</sup>	0.0267	2.70	0.007	-0.0122	-0.98	0.328	-0.0532	-3.55	0.000
RET <sup>DAYB4</sup>	0.0543	5.44	0.000	-0.0409	-3.24	0.001	0.0089	0.59	0.553
FE	0.1455	12.17	0.000	-0.0986	-6.51	0.000	0.0314	1.73	0.084
EXITEM	0.0514	1.23	0.217	0.0628	1.19	0.232	-0.0061	-0.10	0.917
DSALES	-0.0501	-3.69	0.000	-0.0107	-0.62	0.535	0.0169	0.80	0.425
AF	-0.1134	-3.74	0.000	0.0155	0.40	0.687	-0.0110	-0.25	0.802
LNASSETS	0.1502	1.42	0.156	-0.2145	-1.60	0.110	0.0234	0.15	0.882
QTR2	0.0214	3.07	0.002	-0.0267	-3.02	0.003	0.0161	1.53	0.125
QTR3	0.0415	5.78	0.000	-0.0218	-2.39	0.017	-0.0009	-0.09	0.931
QTR4	0.0418	5.59	0.000	-0.0134	-1.42	0.157	-0.0009	-0.08	0.935
Y2004	-0.0189	-2.77	0.006	0.0085	0.98	0.325	-0.0137	-1.31	0.190
Y2005	-0.0178	-2.24	0.025	0.0213	2.12	0.034	-0.0099	-0.81	0.418
	n = 7,984, R <sup>2</sup> = 0.52			n = 7,946, R <sup>2</sup> = 0.23			n = 5,751, R <sup>2</sup> = 0.21		

<sup>1</sup> Results from firm fixed-effects regressions of absolute forecast revisions (|FREV|), change in absolute forecast error ( $\Delta FE$ ), and change in forecast dispersion ( $\Delta DISP$ ) on conference call length and the determinants of length (analyzed in Table 4). The sample of forecasts includes only analysts who issue at least one forecast for quarter q+1 in the 90 days prior and 90 days subsequent to the conference call for quarter q. For each analyst, we retain the last forecast issued prior and first forecast issued after the call. |FREV| is the absolute value of the difference between the median forecast issued prior to the call and the median forecast issued after the call scaled by price at start of the conference call.  $\Delta FE = (FE^{POST} - FE^{PRE}) / \text{Price at start conference call}$ , where  $FE^{POST}$  ( $FE^{PRE}$ ) is the absolute value of the difference between actual earnings for quarter q+1 and the median forecast in our sample issued after (before) the conference call.  $\Delta DISP = DISP^{POST} - DISP^{PRE}$ , where  $DISP^{POST}$  ( $DISP^{PRE}$ ) is the standard deviation of forecasts in our sample issued after (before) the conference call scaled by the median of forecasts issued for quarter q+1 after (before) the conference call. Forecast and actual data are obtained from the IBES unsplit-adjusted detail file. Dependent and independent variables are converted into percentile ranks to control for outliers and non-linearities in the data.

<sup>2</sup> See variable definitions on Table 3. QTR2, QTR3, and QTR4 are dummy variables equal to 1 if the conference call relates to fiscal quarter 2, 3, and 4, respectively. Y2004 and Y2005 are dummy variables equal to 1 if the conference call is held in 2004 and 2005, respectively.

<sup>3</sup> P-values are one-tailed for variables with directional predictions and two-tailed otherwise.



