

The Effect of Manager-specific Optimism on the Tone of Earnings Conference Calls*

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Abstract:

The use of more or less optimistic language in corporate disclosures has been the subject of increased interest in the academic literature. We add to this stream of research by examining the manager-specific component in the tone of earnings-announcement related conference calls. We find that the tone of conference calls that is not explained by current performance, future performance, and strategic incentives has a significant manager-specific component. We also find that tone is significantly associated with manager-specific factors such as early career experiences, and involvement in charitable organizations. Taken together, our findings indicate that, in addition to reflecting current and future performance, the use of more or less optimistic language in conference calls is significantly influenced by a manager-specific tendency to be optimistic or pessimistic. We also find some evidence of a manager-specific component to conference call returns, which is consistent with manager-specific optimism impacting investors' interpretation of disclosures made in conference calls.

Key Words: Conference Call, Tone, Managerial Style.

JEL Classifications: M41

1. Introduction

In recent years, numerous studies have used linguistic analysis tools to examine various dimensions of corporate disclosures.¹ Perhaps the most common aspect examined in prior studies is the “tone” of the language used – i.e., the use of optimistic versus pessimistic language. Prior studies have examined the market reactions to and determinants of the tone of earnings press releases (Davis et al. 2012; Demers and Vega 2011; Huang et al. 2013), conference calls (Frankel et al. 2009; Price et al. 2012), and MD&A disclosures (Davis and Tama-Sweet 2012). The findings from these studies generally indicate that the market reacts positively to the level of optimism in these disclosures, after controlling for the information contained in the numerical measures of performance (e.g., the earnings surprise). These studies also show that the tone of these disclosures is related to both current and future firm profitability, consistent with the notion that managers use tone to convey their private information about the expected future performance of the firm. In addition, a recent working paper by Huang et al. (2013) shows that managers use their discretion over tone for strategic purposes such as “hyping” a stock prior to a seasoned-equity offering. In this paper, we explore an alternative determinant of tone, namely manager-specific optimism.²

¹ One of the first such studies was Li (2008), which examined the readability of annual report disclosures. Other studies have examined the risk sentiment disclosed in annual reports (Li 2007), level of perceived competition disclosed in MD&A disclosures (Li et al. 2010), and deceptive language used in conference calls (Larcker and Zakolyukina 2012).

² We use the term “manager-specific optimism” to refer to a manager-specific tendency to be relatively optimistic in describing the performance of the firm. Because we include numerous control variables that would normally be expected to impact the use of positive language during conference calls (e.g., the level of firm performance and strategic incentives), our measure of manager-specific optimism can be interpreted as the *unexpected* use of positive language given a firm’s circumstances. We consider such unexpected use of positive language as indicative of manager-specific optimism. While it is possible other manager-specific cognitive characteristics might also impact a manager’s use of positive language, we believe the most likely cognitive characteristic impacting the use of positive language is managerial optimism. This tendency is likely unintentional (we discuss this point further in section 2) but need not be. The key is that it is distinct from decisions to use optimistic tone for strategic reasons. Thus, our study is distinct from the Huang et al. (2013) paper in our focus on manager-specific optimism.

Prior research on the tone of corporate disclosures implicitly assumes that different managers make similar language choices in the same circumstances, generally in response to economic incentives. This assumption seems reasonable given the potential litigation costs (Rogers et al. 2011) as well as reputational costs associated with using overly optimistic (or pessimistic) language. Corporate disclosures are likely to be carefully vetted prior to release. Such a vetting would limit the impact of manager-specific dispositional traits on corporate disclosures such as conference calls.

However, recent studies have found manager-specific effects on firms' accounting choices (Ge et al. 2011), forecasting choices (Bamber et al. 2010; Yang 2010), and tax aggressiveness (Dyreng et al. 2010). The general conclusion from these studies is that manager-specific factors impact firms' financial reporting and disclosure choices, beyond the economic factors that are specific to the firm. Given the limited constraints that exist with respect to the choice of language and the difficulty of verifying the legitimacy of language ex post, tone is likely to be particularly prone to the effects of manager-specific factors (Hambrick 2007). We test this proposition by examining the research question: to what extent does manager-specific optimism impact the language used in firms' conference calls? To the extent language in conference calls is particularly prone to manager-specific effects, our tests provide a particularly strong setting to examine the determinants of manager-specific optimism.

We focus our examination on earnings-announcement related conference calls because of the importance of these calls as a voluntary disclosure mechanism (Frankel et al. 1999; Bowen et al. 2002; Kimbrough 2005). In addition, the unstructured and unregulated nature of these calls provides greater opportunity for manager-specific factors to influence the use of language.³ By

³ Earnings press releases are also relatively unregulated (compared to audited financial statements) but these releases are potentially the product of numerous agents of the firm and not just the CEO or CFO (e.g., investor relations and

focusing only on conference calls related to earnings announcements, we are also able to control for the underlying economic news communicated in the disclosure (i.e., the earnings surprise). Further, Price et al. (2012) has demonstrated that language choice in conference calls has a significant impact on market returns. Therefore, to the extent the market reacts to managers' choice of language, documenting the impact of manager-specific optimism on the tone of earnings conference calls is important because of the potential effects on market participants.

We adopt two complementary approaches to examine the effect of manager-specific optimism on the tone of conference calls. We start with utilizing a methodology similar to that used in prior studies (Bertrand and Schoar 2003; Ge et al. 2011; Bamber et al. 2010; Dyreng et al. 2010) – following managers across firms to measure a manager-specific fixed effect.⁴ We then examine whether observable manager-specific characteristics that are likely associated with optimism (e.g., gender, age, educational and career experiences) explain the use of optimistic language in conference calls. These observable characteristics likely capture individual

legal department personnel). Thus, the ability of a specific manager such as the CEO or CFO to affect the tone in press releases based on their personal style is likely to be more limited. Arguably, the presentation portion of a conference call is also not the sole product of the managers participating on the call but the manager's influence over tone in a presentation is likely greater than the tone in a press release.

⁴ Following a manager across firms allows us to disentangle static firm effects from manager-specific effects. However, to the extent management turnover systematically coincides with a simultaneous change in the company's economic environment or disclosure policy that impacts the use of optimistic language, we could improperly attribute this time-varying firm effect to the manager. The inclusion of twelve time-varying control variables in addition to firm, year, and quarter fixed effects in our regressions helps to alleviate this concern. In particular, to the extent that management turnover is associated with firm performance, we control for current and future firm performance in all the regressions. We recognize, however, that it is difficult to rule out the possibility that time-varying firm effects impact our results. This issue is echoed in a recent study by Fee et al. (2013) that questions the manager-fixed effect methodology employed by Bertrand and Schoar (2003). To further address these criticisms of the methodology, we conduct two robustness tests. The first is based on a regression of average tone residuals across the different firms for which a manager works. The second is based on out-of-sample estimations of the effect of manager-specific optimism on tone (see Section 4). The criticism in Fee et al. (2013) also stems from the fact that they fail to find evidence of a significant change in firm policies upon the appointment of a new CEO if the manager change was due to an exogenous shock (e.g., death of a CEO). However, the lack of change in firm policies in this circumstance may simply reflect the fact that the new CEO has a similar style to that of the former CEO. Finally, it is important to note that our evidence does not address the optimality of a manager's style with respect to tone. It is possible that firms select managers based on their styles to meet firms' needs (i.e., there is an optimal sorting of manager styles to the firms for which they work).

managers' cognitive characteristics (e.g., over-optimism) and therefore, provide further evidence that manager-specific optimism underlies the manager-effect on tone that we document

We identify a sample of managers (either CEOs or CFOs) who have worked for at least two different firms and for which we are able to obtain conference call transcripts for 1) at least two quarters during the manager's tenure at each firm and 2) at least two quarters before or after the manager joins the firm. We then estimate the tone of the language used by managers in the call by counting the frequency of positive and negative words as defined by three different wordlists: 1) the DICTION wordlist used in Davis et al. (2012), 2) the wordlist developed in Henry (2006), and 3) the wordlist developed by Loughran and McDonald (2009).

We first demonstrate the extent to which managers exhibit a particular style in their choice of language by estimating manager fixed effects with respect to tone. Because we are interested in managers' use of language to *describe* the economic events of the firm, we include in our analysis measures of current and future performance to control for the effects of the economic events themselves on our measures of tone. We also control for variables that capture strategic incentives (e.g., equity offerings, merger and acquisitions), as well as firm, year, and quarter fixed effects. Our primary interest is in the joint significance of the manager fixed effects. The results of our analysis indicate that manager-specific optimism is a statistically significant determinant of tone. Adding manager fixed effects to a base model that does not include manager fixed effects increases the adjusted R^2 's by 6 to 7% across our three tone measures. These increases are statistically significant, indicating that manager-specific optimism influences the tone of language used in conference calls (beyond the influence of current performance, future performance, and strategic incentives).⁵

⁵ While these increases in R^2 's may appear small, they are larger than those reported in Ge et al. (2011) (average increase of 2%) and Bertrand and Schoar (2003) and in line with those reported by Bamber et al. (2010).

We then examine whether observable manager-specific characteristics (e.g., gender, age, educational and career experiences) explain variation in tone. We find some evidence that female managers use less optimistic language than their male counterparts. We also find that managers who previously worked for an investment bank use less optimistic language than those without such experience. It is possible that involvement in an investment bank makes managers particularly sensitive to the negative consequences of inflating investors' expectations. Further, consistent with recent evidence by Schoar and Zuo (2011) that managers who begin their careers during recession periods adopt more conservative corporate policies, we find that such managers also use less optimistic language during conference calls. Finally, we find that managers involved in charitable organizations use more optimistic language, consistent with the relation between dispositional optimism and volunteerism suggested in psychology studies. Taken together, this evidence further supports our contention that manager-specific optimism influences the tone of earnings conference calls.

These results suggest that manager-specific optimism could potentially impact the market reaction to earnings announcements. In further analysis, we also demonstrate a manager-specific effect on earnings announcement returns, albeit a much weaker effect than the manager-specific effect on language choice. This evidence, however, is consistent with managers influencing the market's interpretation of the firm's performance based on their choice of language.⁶

Our study contributes to the literature in two ways. First, our paper considers an alternative determinant of the tone expressed by managers in corporate disclosures. Prior research primarily considers the potential for tone to signal managers' private information about

⁶ Because our primary research interest is on the effect of managerial style on conference call tone, our sample focuses on managers who move across firms. As a result, our sample sizes are relatively small (3,500 firm-quarters) relative to prior studies that examine market reactions to tone (e.g., 18,000 observations in Huang et al. (2013) and 23,017 observations in Davis et al. (2012)). Thus, we consider these analyses as descriptive and not the central focus of the paper.

future performance. However, tone is also potentially subject to managerial biases – both those that are strategic in nature (Huang et al., 2013) as well as those that are non-strategic. Our results suggest that manager-specific optimism is likely to influence the tone used in corporate disclosures. More generally, our evidence suggests that measures of tone do not simply reflect the economic events of the firm but also a manager’s choice of words used to describe these events and their implications for future performance. Although prior studies control for quantifiable current performance (e.g., reported earnings) when examining the relation between tone and market returns, these measures do not necessarily capture all events that occur during the quarter. Thus, it is not clear from these prior studies whether measures of tone simply reflect events that occurred during the quarter (content) or the words used to describe them (language). Because our measures of tone capture a manager’s unexpected use of positive language given a firm’s economic circumstances, our results suggest that tone is affected by managers’ word choices.

We also contribute to the managerial “style” literature by identifying certain observable, manager-specific characteristics that explain the use of optimistic language. While prior studies have provided evidence on managerial style over various corporate reporting choices, little is known about person-specific factors that influence the formation of certain managerial styles. For example, both Ge et al. (2011) and Dyreng et al. (2010) find limited (and mixed) evidence that observable manager characteristics explain the accounting choices examined in their studies. It is possible that the effect of managerial style on the choices examined in these prior studies is weaker, making it more difficult to identify the underlying manager-specific characteristics that determine a manager’s style. By providing a potentially stronger setting, our study sheds light on the determinants of having a relatively optimistic/pessimistic managerial style. In addition,

we identify a relatively unexplored manager-specific characteristic that appears related to managerial optimism: involvement in charitable organizations.

The remainder of the paper is organized as follows. In the next section we discuss the related literature and our empirical predictions. In Section Three we discuss our sample selection process, measurements of tone and research design. In Section Four we present our analysis of the manager-specific effects on tone. In Section Five we examine determinants of manager-specific optimism. Section Six provides additional analysis and Section Seven concludes.

2. Prior Literature and Predictions

A number of prior studies have examined the determinants and market reactions to the tone in various corporate disclosures. Both Davis et al. (2012) and Demers and Vega (2010) examine tone in earnings press releases and find that 1) tone is related to current and future performance and 2) the market reacts positively to the relative optimism expressed in earnings press releases. Price et al. (2012) find similar evidence for earnings conference calls. These studies generally interpret their results as consistent with the notion that managers use tone to communicate their private information about the expected future performance of the firm. In addition, a recent (concurrent) study by Huang et al. (2013) investigates whether managers use their discretion over tone for strategic purposes. Specifically, they examine whether “abnormal” tone is related to meeting/beating benchmarks, restatements, equity offerings and stock option grants. Their evidence supports the conclusion that managers use tone for strategic purposes.

Building on this line of research, we examine the effect of manager-specific optimism on the tone of earnings conference calls. Manager-specific optimism refers to a manager-specific

tendency to be relatively optimistic in describing firm performance. Until recently, the possibility that manager-specific factors might impact corporate level decisions has not been widely recognized in the accounting literature. Traditionally, managers were viewed as homogeneous and perfect substitutes – responding to their economic circumstances in rational and systematic ways. In contrast, the management literature – specifically, upper echelons theory (Hambrick and Mason, 1984; Hambrick, 2007) – has long recognized the likelihood that individual-specific attributes of top managers can influence their decisions and potentially impact corporate level decisions. This potential impact was first demonstrated in the finance literature by Bertrand and Schoar (2003) with respect to investment and financing decisions of the firm (e.g., investment to cash flow sensitivity, leverage). Their results indicate an identifiable manager-specific component to these types of corporate decisions.

More recently, in the accounting literature, studies have found similar identifiable manager-specific components related to 1) a variety of accounting choices, including discretionary accruals, pension rate assumptions, the use of operating versus capital leases, and meeting/beating behavior (Ge et al. 2011), 2) forecasting behavior, including the frequency, precision, accuracy and bias associated with management forecasts (Bamber et al. 2010), and 3) tax aggressiveness, specifically GAAP effective tax rates and cash effective tax rates (Dyreng et al. 2010). These studies support the notion that manager-specific factors can affect financial reporting decisions, even though many of these decisions are constrained by factors such as Generally Accepted Accounting Principles, external auditors, and regulators.

Despite these prior findings, the extent to which manager-specific factors affect optimistic language in conference calls is an open question. On the one hand, conference call tone may be particularly susceptible to the influence of manager-specific factors because the

choice of language is relatively unconstrained and difficult to verify ex-post when compared to audited financial statements and explicit management forecasts. Managers are obviously constrained from making statements that are verifiably false, but positioning factual statements in a more or less positive fashion is less likely to cause regulatory intervention. One of the main factors that upper echelons theory predicts will moderate a manager's ability to impart his style on corporate decisions is the level of managerial discretion (Hambrick and Finkelstein 1987). Ge et al. (2010) find evidence consistent with this theory – manager style is less evident when the firms they work for have industry-expert auditors, which should limit managerial discretion. To the extent language choice in conference calls is relatively unconstrained, there is a greater likelihood that manager-specific factors influence this choice.

However, constraints on language choice do exist. Using language that is consistently more optimistic (or pessimistic) than is warranted by future performance is costly in terms of potential litigation costs as well as reputational costs. Prior studies have demonstrated a market reaction to the tone of corporate disclosures, suggesting that overly optimistic or pessimistic language can bias investors' beliefs (Davis et al. 2012; Demers and Vega 2010; Price et al. 2012; Huang et al. 2013).⁷ More recently, Rogers et al. (2011) present evidence that optimistic language in corporate disclosures increases the likelihood of class action lawsuits. Rogers et al. show that plaintiffs of the class action lawsuits actually target optimistic language (i.e., choose to quote such language) used in earnings announcements. Further, at a minimum, being systematically optimistic is likely to damage a manager's reputation. Thus, being overly

⁷ It is important to note, however, that most of these studies do not directly control for future performance in their market reaction tests. Thus, the market reaction to tone is potentially due to managers' use of tone to signal future performance. Whether the market reacts to the portion of tone that is *not* supported by future performance is an empirical question. Huang et al. (2013) provide some evidence that this is true – they find that an abnormally positive tone in an earnings press release results in a positive stock return at the time of the announcement and negative returns in the subsequent two quarters. This evidence, however, is contrary to that found in Demers and Vega (2011) and Price et al. (2012), both of which find a *positive* relation between unexpected tone and post-announcement returns, suggesting an *underreaction* to tone rather than an *overreaction*.

optimistic or pessimistic in conveying the performance of the firm is likely costly, both to the manager as well as to the firm. Given these costs, it is likely firms expend resources to monitor managers' language during conference calls, constraining managers' ability to exert their style. In addition, if managers themselves recognize these costs, they are unlikely to exhibit a consistent "style" in their use of language.

The above discussion, however, assumes that managers knowingly exert their style in their choice of tone. Alternatively, it is possible managers' use of optimistic or pessimistic language is the result of unintentional biases that come from their personalities, prior experiences, and values. Within the psychology literature, optimism – or the belief that good (as opposed to bad) things will generally occur in one's life – is often considered a dispositional trait that is relatively stable across time and situations (Scheier and Carver 1993).⁸ Studies in psychology have demonstrated the tendency for optimists to focus on positive factors in the face of negative events, such as the loss of a loved one (Davis et al. 1998) or gambling losses (Gibson and Sanbonmatsu 2004). Other studies have demonstrated that optimists exhibit an unconscious attentional bias toward positive stimuli as demonstrated by performance on the emotional Stroop task (Segerstrom 2001).⁹ While these studies are far removed from decisions about corporate disclosures, they suggest the possibility that an individual's pre-disposition toward optimism influences his or her assessment of current events and their implications for future performance, and therefore affects an individual's language choice in describing events in public disclosures.

⁸ Studies on dispositional optimism often measure this construct using the Life Orientation Test (or LOT). Longitudinal studies have noted high correlations in LOT scores across time, consistent with optimism being a personality trait (Scheier and Carver 1993). In addition, studies of identical twins raised separately and together suggest a strong hereditary component to optimism/pessimism (Plomin et al. 1992).

⁹ The emotional Stroop task involves having subjects identify the ink color of a list of words that vary in emotional significance, ignoring the word's meaning. Ignoring the meaning of words with high emotional significance is more difficult, leading to response latency in identifying the ink color (referred to as "interference"). This study examined the relation between interference associated with positive and negative words and subjects' scores on the LOT test (discussed in footnote 8).

Given the above evidence, we predict that manager-specific optimism influence their use of language during conference calls. In particular, we expect that the net optimism expressed in conference calls (that is unrelated to current and future performance) is influenced by manager-specific tendencies toward optimism. In other words, there is a manager-specific component to the tone of earnings conference calls.

3. Measures of Tone and Sample Construction

3.1 Measures of Tone

We evaluate whether managers' language is positive or negative using frequency counts of "positive" and "negative" words. Prior studies have used different sources for their wordlists, some of which are based on linguistic software packages while other are designed specifically for financial contexts. There is currently no consensus in the literature regarding which wordlist is the most appropriate for the analysis of language in contexts such as financial disclosures. Therefore, to ensure that our results are not driven by one particular wordlist, we rely on three wordlists that have been examined in prior research.

The first wordlist we use is from the textual analysis software DICTION, which is a dictionary-based program that counts types of words most frequently used in contemporary American public discourse (Hart, 1984). Davis et al. (2012) and Demers and Vega (2011) use the DICTION wordlist to count optimistic words and pessimistic words in the full texts of earnings press releases. Davis et al. (2012) suggest that the DICTION wordlist is appropriate in analyzing earnings press releases because managers' narrative disclosures and public discourse often share common themes.

However, one limitation of general wordlists such as the one from DICTION is that they do not analyze language in the context of financial disclosures.¹⁰ To overcome this limitation, we also use two wordlists specifically designed for financial disclosures: 1) a wordlist developed by Henry (2006, 2008) that was specifically designed for analyzing language in earnings press releases and 2) a wordlist developed by Loughran and McDonald (2009) that was designed for analyzing language in 10-K filings.¹¹ We obtain the Henry wordlist from Figure 1 of Henry (2008) and the Loughran and McDonald wordlist from the authors' website (http://www.nd.edu/~mcdonald/Word_Lists.html).

We use the above-mentioned three wordlists to count both optimistic words and pessimistic words used in each conference call transcript. We use a textual analysis programming language to extract the comments made by a specific manager in the presentation portion and the Question and Answer (Q&A) portion of the conference call.¹² Our language measure, *TONE*, is calculated as the difference between the positive words and the negative words spoken by the manager, scaled by the total words spoken by the manager. *TONE_D*, *TONE_H*, and *TONE_LM* correspond to the measures based on wordlists from DICTION, Henry (2008), and Loughran and McDonald (2009) respectively.

¹⁰ For example, some words have positive or negative meaning within the setting of financial disclosures but are not included in the DICTION wordlist (for example, the word "record" has a positive meaning in a financial reporting context but is not included in the DICTION wordlist).

¹¹ Henry and Leone (2009) show that the tone measure derived from the Henry wordlist outperforms other tone measures designed for general contexts (i.e., the DICTION wordlist and the General Inquirer wordlist) in terms of the statistical and economic significance of associations between tone measures in earnings press releases and stock market reactions. Loughran and McDonald (2009) compare their wordlist with the wordlist from General Inquirer and find that the tone measure of 10-K texts based on their wordlist is significantly associated with the stock returns around the 10-K filing date while the tone measure based on the General Inquirer wordlist is not.

¹² Because the presentation portion of the call generally consists of prepared remarks, which may or may not be read by the individual manager, it is possible that the CEO influences the remarks made by the CFO during the presentation portion of the call and vice versa. If this is the case, we should use all comments made during the presentation rather than just the comments made by our manager of interest. We tested the sensitivity of our results to using the tone of the entire presentation transcript along with the tone of the specific comments made by the manager during the Q&A. Results are inferentially similar.

3.2 *Sample construction*

We construct a manager-firm matched panel dataset – tracking the same manager across different firms over time as well as including data for the same firm under different managers. We focus on CEOs and CFOs because they are the managers who are usually in charge of conference calls. We are able to estimate both manager and firm fixed effects using this dataset; therefore the impact of the managers on conference calls can be disentangled from the underlying factors that are specific to the firm.

To construct this sample, we use Execucomp to track the names of the CEOs and CFOs in 1,500 publicly traded U.S. firms from 2002 through 2009.¹³ We first merge Execucomp with Quarterly Compustat to keep the observations that have data for total assets, sales, common shares outstanding, income before extraordinary items, and stock price at the end of quarter. We identify a total of 206 CEOs and CFOs who have worked for at least two companies at the CEO or CFO position for at least one year.¹⁴ Table 2 Panel A reports the results of our sample selection procedure. Next, the firms in our sample have to appear under more than one CEO or CFO to enable us to separate the firm effect from the manager effect. Therefore, we also include data for the same firm in the quarters prior to the starting quarter of the manager and the quarters following the final quarter of the manager at the firm. We call these quarters “filler quarters” and call the sample excluding the filler quarters our “manager-firm matched sample.”¹⁵

¹³ We start our sample period from 2002 because the CQ FD Disclosure database only provides earnings conference call transcripts for conference calls that occurred since 2001.

¹⁴ We use the variable “titlean” in Execucomp to identify the CFO of the firm. The following key words are chosen: “Chief Financial Officer,” “CFO,” “Vice President in Finance,” “VP Finance,” etc. Note that Execucomp collects data from proxy statements; therefore, it only includes CFOs who are in the top five paid executives and have compensation higher than \$100,000. Among all CEO and CFO job changes on Execucomp from 2002 through 2009, 77 of them are at the CEO position in both firms they have worked for, 120 of them are at the CFO position in both firms, 9 of them moved from the CFO position to the CEO position at the second firm, and 3 of them moved from the CEO position to the CFO position at the second firm.

¹⁵ Execucomp is an annual database and does not identify the exact month that a CEO or a CFO joins a company; therefore we read each conference call transcript to ensure that the name of the manager is mentioned in the

We next obtain earnings announcement dates from Quarterly Compustat and collect conference call transcripts from the CQ FD Disclosure database through Factiva.¹⁶ We remove observations with missing conference call transcripts, resulting in the loss of 32 managers from our sample. Of the remaining 174 managers in the sample, we exclude 53 managers when there are fewer than two filler quarters for a firm or when there are fewer than two quarters of conference call transcripts for one of their two firms. The resulting manager-firm matched sample (i.e., excluding the “filler” observations) contains 2,098 firm-quarters, 225 firms, and 121 individual managers.

Table 2 Panel B reports the frequency of manager-firm pairs based on the number of quarters of conference call transcripts that we have for a given manager at a given firm. For about 80 percent of our manager-firm pairs, we have conference call transcripts available for at least four quarters). The average number of quarters of conference call transcripts of a manager at a given firm in our sample is 8.63 quarters.

Table 2 Panel C presents the distribution of the sample firms based on the number of distinct managers in our sample. Only 17 out of the 225 firms in the sample have two or more distinct managers. The majority of the firms have only one manager in the manager-firm matched sample. As discussed previously, we need the observations of the firm under a different manager in order to disentangle the manager fixed effect from the firm fixed effect. Therefore, we add 2,966 filler quarter observations to our sample. Table 2 Panel D tabulates the distribution of managers based on how many times they have changed jobs. All of the managers in our

transcript and this manager participates in the conference call. If not, we consider that firm-quarter observation as a “filler quarter.”

¹⁶ The CQ FD Disclosure database occasionally provides only an event brief for a conference call. We require the availability of full transcripts to be included in our sample.

sample have assumed the CEO or CFO position in at least two companies, and only one of them has changed jobs more than once.

[Table 2]

4. The effect of individual managers on the tone of conference calls

4.1 Research design

We analyze the effects of individual managers on conference call tone using the following regression specification. We regress each tone variable (i.e, $TONE_D$, $TONE_H$, and $TONE_LM$) on firm, year, quarter and manager fixed effects while controlling for our measures of current and future performance and incentive variables.

$$\begin{aligned}
 TONE_{it} = & \alpha_0 + \alpha_1 MBE_{it} + \alpha_2 SURP_{it} + \alpha_3 LOSS_{it} + \alpha_4 RETURN_{it} + \alpha_5 GROWTH_{it} + \alpha_6 ROA_{it} \\
 & + \alpha_7 ROA_{it+1} + \alpha_8 ROA_{it+2} + \alpha_9 ROA_{it+3} + \alpha_{10} ROA_{it+4} + \alpha_{11} SEO_{t+1} + \alpha_{12} MA_{t+1} \\
 & + FIRM_i + YEAR_t + QTR_k + MANAGER_j + \varepsilon_{it}
 \end{aligned} \tag{1}$$

$TONE_i$ is based on words spoken by the specific manager in whom we are interested.

We include six contemporaneous quarterly firm performance variables to capture the effects of current performance on managers' tone:

- An indicator variable equal to one if the firm meets or beats the analyst forecast for a given quarter (MBE), which prior studies have suggested can impact the tone of a conference call (Frankel et al. 2009).
- The earnings surprise measured as the difference between quarterly EPS and the consensus analyst forecast deflated by stock price at the beginning of the quarter ($SURP$).
- An indicator variable equal to one for firms reporting negative earnings in the fiscal quarter ($LOSS$).

- The firm's market-adjusted stock return during the fiscal quarter (*RETURN*), which captures current firm performance that goes beyond earnings numbers (e.g., the release of a new product).
- The firm's quarterly sales growth relative to the same quarter last year (*GROWTH*).
- Current quarterly return on assets (*ROA*), calculated as quarterly earnings before extraordinary items deflated by beginning assets.

We also include measures of future performance in Equation (1) to capture the impact of future prospects on a manager's tone. Specifically, we include return on assets in each of the next four quarters ($ROA_{t+1}, ROA_{t+2}, ROA_{t+3}, ROA_{t+4}$).¹⁷ We expect a manager's tone to be positively related to both contemporaneous firm performance and future performance; therefore, we expect positive coefficient estimates on α_1 to α_{10} , with the exception of α_3 (the coefficient on *LOSS*), which we expect to be negative.

In addition, we control for the potential effects of firms' strategic incentives on managers' tone. Huang et al. (2013) document that abnormal tone of earnings press releases tends to be higher for firms that issue new equity or undertake merger and acquisitions, suggesting that strategic incentives cause managers to use more optimistic language in earnings press releases. Thus, we control for two variables that capture such incentives: *SEO* and *MA*. *SEO* is an indicator variable equal to one if the firm has a seasoned equity offering in the next quarter. *MA* is an indicator variable equal to one if the firm makes a merger or acquisition announcement in the next quarter.¹⁸ We obtain the data from Thomson Reuters' SDC Platinum.

¹⁷ Because the market is forward looking, the variable *RETURN* should also capture expectations of future performance.

¹⁸ Our main results are robust to modifying the *MA* and *SEO* variables to allow for a longer horizon – i.e., redefining *MA* (*SEO*) as equal to one if the firm makes a merger/acquisition (seasoned equity offering) in any of the next four quarters and zero otherwise.

The firm fixed effects ($FIRM_i$) control for static firm-specific factors that might impact the tone expressed in conference calls. The year and quarter fixed effects ($YEAR_t$ and QTR_k) control for time-specific factors and fiscal quarter factors that might influence the tone in conference calls. Thus, the manager fixed effects ($MANAGER_j$) capture commonalities in tone across the various firms for which a manager works that is distinct from 1) the average tone that occurs across time for a given firm, 2) the average tone that occurs across firms in a given year, 3) the average tone that occurs across firms in a particular fiscal quarter, 4) tone that is associated with current or future performance and 5) tone that is associated with seasoned equity offerings and merger and acquisition activity. To test our prediction that manager-specific factors influence the tone in conference calls, we perform an F-test for the joint significance of the manager indicator variables.

4.2 Descriptive Statistics

Table 3, Panel A presents summary statistics for the variables used in our analyses and Panel B compares the means and medians to the Compustat universe between 2002 and 2009. The means of our tone measures are 1.54%, 1.95%, and 0.59% for $TONE_D$, $TONE_H$, and $TONE_LM$, respectively, suggesting that on average the language used by the managers in our sample is optimistic.^{19,20}

[Table 3]

¹⁹ By construction, $TONE_D$, $TONE_H$, and $TONE_LM$ are weighted averages of the net optimistic language used by managers in the presentation and Q&A portions of the call; that is, the sum of the net optimistic words used in the presentation and Q&A portions divided by the total number of words used in both portions of the call. In untabulated analysis, we find that the average net optimistic language during the presentation (Q&A) portion of the call is 1.67% (1.34%), 2.22% (1.43%), and 0.76% (0.34%) using $TONE_D$, $TONE_H$, and $TONE_LM$. Thus, the average optimism expressed by managers during the presentation portion of the call is generally higher than the average optimism expressed during the Q&A.

²⁰ The lower mean for $TONE_LM$ (relative to the other two measures) is likely due to the nature of the L&M wordlist, which has a significantly higher number of negative words (2,337) versus positive words (353) compared to those of DICTION (914 negative, 697 positive) and Henry (98 negative 188 positive).

In terms of total assets (*ASSETS*), firms in our sample appear to be significantly larger than the Compustat average. This difference is not surprising because our main data source is Execucomp, which covers relatively large firms.²¹ The average firm in our sample also has better performance than an average Compustat firm, as reflected in higher current and future return on assets, a higher likelihood of meeting or beating analyst forecast, a smaller likelihood of having losses, and higher stock returns. Finally, a higher percentage of firms in our sample have seasoned equity offerings and merger and acquisition activities than the Compustat average.

4.3 *Results of empirical analysis of manager-specific optimism*

Table 4 Panel A presents the regression results for our analysis of the effects of individual managers on conference call tone. For each of our dependent variables (*TONE_D*, *TONE_H*, and *TONE_LM*), we first report the results of estimating Equation (1) excluding the manager fixed effect to provide a benchmark against which to compare our full model. We then report results of estimating Equation (1) including the manager fixed effects along with an F-test that the manager fixed effects are different from zero.

Across the six columns of the table, the coefficient estimate on *MBE* is consistently significantly positive at a less than one percent significance level, suggesting that meeting/ beating market expectations leads to more optimistic use of language during conference calls. The coefficient estimate on *LOSS* is significantly negative for all regressions, indicating that managers are less optimistic when firms have losses. In addition, the coefficient estimates on *RETURN*, *GROWTH*, and *ROA* are positive and statistically significant in all the regressions. Earnings surprise (*SURP*) is only positively associated with the conference call tone in three out

²¹ Also, our sample only consists of firms whose manager moves to another publicly traded firm. This procedure would result in larger firms because CEOs and CFOs from larger firms are more likely to move between public firms. CEOs and CFOs from smaller firms might move to a private firm or to a divisional position in a large firm.

of six regression specifications; however, this is likely due to the positive correlations between *SURP* and other contemporaneous performance variables.²²

Turning to the future performance variables (ROA_{t+1} to ROA_{t+4}), we find that the coefficient estimates on one- and two-quarter ahead return on assets are significantly positive for *TONE_H* and *TONE_LM*, suggesting that managers' tone during conference calls is predictive of future operating performance. This result is consistent with the finding in Davis et al. (2012) that tone in earnings press releases is associated with future earnings. However, the coefficients on the future ROA variables are not significant for *TONE_D*, which is surprising given that Diction is the linguistic dictionary used by Davis et al. (2012). One possible explanation is that our analysis is based on manager-specific comments rather than the entire conference call transcript. Thus, depending on the manager represented in the sample, certain remarks that are commonly made during conference calls (e.g., a recap of the financial performance in the prior quarter) are not included in our analysis.²³

As to firms' strategic incentives, we find that merger and acquisitions (*MA*) has a significantly positive association with *TONE_H* and *TONE_LM*, but not with *TONE_D*. This result is consistent with that in Huang et al. (2013) since they rely on the wordlists in Loughran and McDonald. However, contrary to the findings in Huang et al. (2013), the coefficient estimate on seasoned equity offerings (*SEO*) is not significant. This difference might be due to sample differences or the fact that Huang et al. (2013) focus on tone in earnings press releases rather than earnings conference calls.

²² Consistent with this conjecture, when we exclude *MBE* from the regression, the coefficient on *SURP* is positively associated with our tone variables and generally significant.

²³ In untabulated analysis, we examined the relation between the tone of the entire presentation comments and current and future performance. In this analysis, the coefficients on one- and two- quarter ahead ROA are significantly positive for all three tone measures, and the coefficients on three-quarter ahead ROA are significant for the Henry and LM tone measures.

In terms of manager-specific effects on conference call tone, the F-tests of the manager fixed effects are highly significant across all three tone measures (p-values < 0.01). The adjusted R^2 in the base regression for our first tone measure, *TONE_D*, is 38 percent. Adding manager fixed effects increases the adjusted R^2 's by 7 percent to 45 percent. The adjusted R^2 increases by 6 percent for *TONE_H* and 7 percent for *TONE_LM*. These increases are larger than the average increase (of 2%) reported in Ge et al. (2011). Based on the above evidence, we reject the null hypothesis of no manager fixed effect on the tone of earnings conference calls.²⁴

For each of our tone measures, we also count the number of manager fixed effects estimated in Panel A that are statistically significant to ensure that the significance of our F-tests are not driven by just a small number of manager effects. These frequencies are reported in Panel B of Table 4. The average percent of manager fixed effects that are significant at the 5 percent level across our three tone measures is 29.7 percent (i.e., ranging from 25 percent to 32 percent) and at the ten percent level is 38.7 percent (i.e., ranging from 35 percent to 41 percent). These percentages are much higher than expected under the null of no manager fixed effects on tone. They are also much higher than the percentages reported in Ge et al. (2011) related to CFO fixed effects on accounting choices (i.e., an average of 9 percent at the 5 percent significance level), consistent with the conjecture that manager-specific factors have a greater effect on relatively unconstrained language choices than on more constrained accounting choices.

Finally, Panel C of Table 4 reports the mean, median, lower quartile, and upper quartile values of the manager fixed effects estimated in Panel A of Table 4. We weigh each fixed effect by the inverse of its standard error to account for estimation error. The interquartile ranges of the manager fixed effects are 0.751, 1.136, and 0.639 for *TONE_D*, *TONE_H*, and *TONE_LM*,

²⁴ In a robustness test, we find that our results are robust to clustering standard errors at the firm level. Similar to Dyreng et al. (2010), we actually find stronger test statistics on manager fixed effects.

respectively. The average number of words spoken by a manager during conference calls is 2,604, which translates into a difference of roughly 17 to 30 more optimistic than pessimistic words spoken by managers at the third quartile relative to the first quartile.²⁵

[Table 4]

4.4 Robustness tests

We test the robustness of our results using two alternative research designs. A recent study by Fee et al. (2013) questions the validity of the manager fixed effect research design and suggests that a more appropriate test conducted by Bertrand and Schoar (2003) is based on a regression of residuals across the firms for which a manager works. Specifically, we first regress our tone measures on our control variables along with firm, year, and quarter fixed effects (as in Equation 1). We then average the residuals for each manager-firm pair in our manager-firm matched sample and regress each managers' average residual from the second firm for which a manager works (firm 2) on the average residual from the first firm (firm 1). A positive coefficient on the firm 1 average residual indicates that the manager carries his "optimistic tone" with him to the new firm. As reported in Column (1) of Table 5 Panel A, results of this analysis indicate a positive and statistically significant coefficient on the firm 1 average residuals for our *TONE_D* and *TONE_LM* measures ($p < 10\%$) but not for our *TONE_H* measure. The evidence from these tests generally corroborates our prior findings, albeit with weaker results. However, because this analysis averages the residuals across all quarters for a given manager-firm pair, the number of observations for this analysis is quite small (equal to the total number of managers in our sample). In addition, while this specification eliminates possible problems with serial

²⁵ We also examine the correlations among manager fixed effects based on the three different tone measures. The average Spearman correlation is 0.62, suggesting that manager-specific optimism measured using the three dictionaries are similar, although not perfect substitutes.

correlation across quarters for a given manager-firm pair, it also eliminates serial correlation *caused* by the manager-specific effect.²⁶

To further examine the active influence of managers on the conference call tone, we also conducted placebo regressions and the results are reported in Column (2) of Table 5 Panel A. Specifically, we regress the average residuals for each manager's first firm on the average residuals for the second firm *three years prior* to the manager joining this firm. We do not expect to observe a significant correlation between the two residuals using the placebo data if managers have an active influence on the tone of conference calls. As shown in Column (2) of Table 5 Panel A, none of the first firm's residual has a significant association with the second firm's residual with the placebo data. These results corroborate our earlier findings of the manager effects on the tone of conference calls and suggest that specific manager effects do influence the use of language in conference calls.

Finally, we conduct an analysis using a less stringent research design that uses all firm-quarter observations but follows a similar prediction framework as the residual regression. This analysis examines the ability of estimated manager fixed effects to predict out-of-sample tone. For each manager, we exclude one quarter's observation from estimating this manager's fixed effect using Equation (1). We repeat this process for each quarter for a given manager, and then regress the tone measures of the excluded manager-quarters on the corresponding estimated manager fixed effects (which excluded that manager-quarter). For example, if manager i has 15 quarters across two different firms, we exclude the observation of manager i in quarter t from estimating Equation (1) and generate an estimated fixed effect for manager i excluding quarter t ($Fixed\ Effect_{i,excluding\ t}$). We do this analysis for all 15 quarters and generate 15 estimated fixed

²⁶ In other words, one would expect that a certain amount of serial correlation across quarters is caused by the manager-specific effect.

effects for manager i . We then regress $TONE_{i,t}$ on $Fixed\ Effect_{i, excluding\ t}$. The results are reported in Table 5 Panel B. We find that the coefficient on the estimated manager fixed effect is significantly positive ($p < 1\%$) for all three tone measures.²⁷

In summary, our results suggest that a significant portion of managers have a measurable optimistic style when it comes to their choice of language during conference calls. Adjusted R^2 's increase, on average, 7% from including manager fixed effects, which are greater increases than those found in Ge et al. (2011) with respect to CFOs' effects on accounting choices. It appears that manager-specific factors have a statistically and economically significant influence over the tone of their language during earnings conference calls. In other words, managers appear to be consistent in their choice of language across the firms for which they work – either portraying their firms' prospects in an overly optimistic or pessimistic way, relative to actual performance.

[Table 5]

5. Determinants of Manager-Specific Optimism

In this section, we explore the potential determinants of manager-specific optimism. While recent studies document the impact of manager styles on various firm reporting choices, there is much less evidence on how managers' personal characteristics influence the formation of their styles. Both Ge et al. (2011) and Dyreng et al. (2010) find little evidence of a relation between observable manager characteristics (e.g., gender, age and education) and the extent to which managers make aggressive accounting/tax choices.²⁸ The results of our prior analysis,

²⁷ The number of observations of this analysis drops from 3,996 to 1,683 because we do not estimate fixed effects for our filler managers.

²⁸ Bamber et al. (2010) does find some evidence on the impact of military and educational background on management forecast characteristics, although results vary across the different forecast properties. However, because this study examines a variety of forecast properties – including frequency, accuracy, bias, precision, and direction of news – the underlying cognitive characteristics associated with their measures of style are likely varied

however, are stronger than those in prior studies (i.e., in terms of the percentage of significant managers and incremental R^2 's), suggesting that the choice of language is likely to be particularly prone to the impact of manager-specific factors. Thus our study provides a stronger setting in which to examine the impact of observable managerial characteristics on the formation of an optimistic managerial style.

5.1 *Measures and predictions*

We examine three dimensions of manager characteristics – gender, age, and experiences. Experiences are divided into three categories: 1) educational, 2) career-related, and 3) charitable involvement. We next discuss the measures we use and our predictions for each.

A substantial body of literature in sociology and psychology suggests that women tend to be less optimistic, less overconfident, and more risk averse than men (Maccoby and Jacklin, 1974, Halpern, 2000; Prince, 1993; Lundeberg, Fox, and Puncochar, 1994; Fellner and Maciejovsky, 2007).²⁹ We therefore expect female managers to use less optimistic language in conference calls than male managers. We define the variable *WOMEN* as equal to one if the manager is a woman and zero otherwise.

(e.g., optimism is not likely the cognitive characteristic driving manager-specific forecast accuracy). The variable most closely related to our tone measure is forecast bias. They find one manager-specific characteristic associated with forecast bias: having a finance or accounting background. Thus, the evidence in Bamber et al. (2010) is equally limited.

²⁹ Note that we do not make a distinction between optimism, over-confidence and risk-aversion. Any of these three cognitive characteristics potentially lead to the use of more optimistic language in conference calls. The psychology literature defines over-confidence as one's "assuredness" about one's own judgments (Reber, 1995). Thus, at the construct level, over-confidence is "non-directional" – i.e., one could be over-confident about the possibility of negative outcomes for the firm. However, one might argue that managers generally have positive expectations of the firm and therefore, empirically, overconfident managers will use more positive words. In fact, Ben-David, Graham and Harvey (2006) find evidence consistent with over-confidence being related to optimism in that overconfident managers tend to hold optimistic views about the future of the U.S. economy. In addition, because being overly optimistic in disclosures could be costly to firms and managers in terms of legal costs (Rogers et al. 2010) as well as reputational costs, risk-averse managers are likely to make less optimistic language choices than risk-seeking managers. We believe it is beyond the scope of this paper to distinguish between these three underlying cognitive characteristics.

It is also well-documented in the psychology literature that risk aversion increases with age (e.g., Cohn, Lewellen, Lease, and Schlarbaum, 1975; Palsson 1996). Therefore, if older managers are more risk-averse, we predict that older managers will be less likely to make optimistic statements than younger managers. *AGE* is defined as the age of the manager as of the year of the conference call.

Prior experiences – whether educational, career-related or other – potentially explain variation in managerial style either because they reflect managers' innate cognitive characteristics (i.e., self-selection) or because these experiences directly affect and have long-lasting impact on managers' cognitive characteristics. With regard to education, we examine three particular backgrounds: whether the manager has 1) an accounting or finance undergraduate or graduate degree (*ACC_FIN_EDU*), 2) an MBA (*MBA*), or 3) a juris doctorate degree (*GRAD_LAW*). Overall, the evidence in the existing literature is limited and occasionally mixed regarding the connection between educational background and specific cognitive characteristics. Graham, Harvey, and Puri (2009) suggest that the individuals who choose to obtain an MBA are likely more conservative because aggressive individuals might consider an MBA degree unnecessary, while Chevalier and Ellison (1999) document that mutual fund managers with MBAs appear to take more risk by holding portfolios with higher systematic risk. Bamber et al. (2010) provide some evidence that managers who have accounting or finance backgrounds tend to be more conservative in their forecasts of earnings. Finally, a recent study by Goodman-Delahunty et al. (2010) finds that on average lawyers are overconfident in predicting the likelihood that they would meet their litigation goals. However, because this evidence is rather limited (and occasionally mixed), we do not state directional predictions with regard to the effect of educational experiences on the use of optimistic language.

In terms of career experiences, we examine both when a manager began his career and whether he/she worked in particular industries. Recent work by Schoar and Zuo (2011) find that CEOs who began their career during a recession tend to make more conservative corporate decisions (e.g., lower capital and R&D expenditures, lower leverage, etc.). Beginning one's career in a recession could lead one to become less optimistic, less overconfident, and more risk averse; therefore, we expect managers who start their careers during recession periods to use less optimistic language in conference calls. Following Schoar and Zuo (2011), we define an indicator variable (*RECESSION*) equal to one if the manager enters the labor force (based on year of birth plus 22 years) during a recession year. We define a recession year as one with more than six recession months, where recession months are defined as the month following a business cycle peak to the month of a business cycle trough (as defined by the National Bureau of Economic Research).

The three particular industries we identify and code when examining managers' prior work experience are auditing, consulting and investment banking. These industries were chosen largely because classifying firms into these categories based on the firm names listed in the managers' biography was relatively straightforward. Overall, there is limited evidence in the prior literature regarding the impact of particular prior work experiences on optimism, overconfidence, or risk-aversion; therefore, we do not provide specific directional predictions related to these variables.³⁰ We define three indicator variables equal to one if the manager has worked as an auditor at an accounting firm (*AUDITOR*), worked for a consulting firm (*CONSULTING*), or an investment bank (*INVESTBANK*), and zero otherwise.

³⁰ For example, it is not clear how investment banking experiences are associated with managers' cognitive characteristics. On one hand, it is possible that investment bankers are more optimistic due to the "sales" nature of their job. On the other hand, these managers (especially those who have worked as financial analysts in investment banks) are likely highly aware of the negative consequences of disappointing investors (e.g., reduced institutional ownership or legal costs).

Our final experience-related variable is involvement in a charitable organization. Prior research suggests a positive relation between dispositional optimism and volunteerism (Mellor et al. 2008). In addition, prior studies have shown both that happier people are more likely to engage in charitable behavior and that charitable activities increase happiness (Anik et al. 2009). Since psychology studies have also suggested a positive correlation between happiness and optimism (Cummins and Nistico 2002), we expect charitable activities to be associated with optimism. Thus, we expect managers involved in charitable organizations to use more optimistic language during conference calls. We code the variable *CHARITY* equal to one if the manager is involved in a charitable organization (excluding trade or industry groups) and zero otherwise.

5.2 Empirical analysis and results

To analyze how manager characteristics impact language choices, we estimate the following model:

$$\begin{aligned}
TONE_{it} = & \alpha_0 + \alpha_1 MBE_{it} + \alpha_2 SURP_{it} + \alpha_3 LOSS_{it} + \alpha_4 RETURN_{it} + \alpha_5 GROWTH_{it} + \alpha_6 ROA_{it} \\
& + \alpha_7 ROA_{it+1} + \alpha_8 ROA_{it+2} + \alpha_9 ROA_{it+3} + \alpha_{10} ROA_{it+4} + \alpha_{11} SEO_{t+1} + \alpha_{12} MA_{t+1} \\
& + FIRM_i + YEAR_t + QTR_k + \gamma_1 WOMAN_{it} + \gamma_2 AGE_{it} + \gamma_3 RECESSION_{it} \\
& + \gamma_4 CHARITY_{it} + \gamma_5 MBA_{it} + \gamma_6 ACC_FIN_EDU_{it} + \gamma_7 GRAD_LAW_{it} + \gamma_8 AUDITOR_{it} \\
& + \gamma_9 CONSULTING_{it} + \gamma_{10} INVESTBANK_{it} + \beta_0 CEO_INDICATOR_{it} + \varepsilon_{it}
\end{aligned} \tag{2}$$

The model in equation (2) is similar to the analysis conducted in Table 4 except that we replace our manager-specific indicator variables with our manager characteristic variables. Because CEOs and CFOs are often responsible for different aspects of the conference call, it is possible their tone measures will differ due to content differences. Therefore, we include a CEO indicator variable (i.e., equal to one if the manager is the CEO and zero otherwise). All data on managers' characteristics are gathered from Boardex and Capital IQ. We read through each biography document and combine the information from both databases. We collect manager-specific data for both the 121 managers we track across time and for the managers of our filler-

year observations. The inclusion of the filler managers allows us to control for firm effects through the inclusion of firm indicator variables. Standard errors are clustered by manager.

Table 6 Panel A reports descriptive statistics of manager characteristics. Overall, we collected data for 526 managers.³¹ All three tone measures suggest that CEOs' tone is more positive than CFOs' tone (e.g., the mean of *TONE_D* is 1.87 for CEOs and 1.24 for CFOs). Only a small proportion of the managers in our sample are women (six percent). These managers have a mean age of 51; CFOs appear to be younger than CEOs on average, with a mean age of 49 versus 53 for CEOs. With respect to education, 33 percent of managers have a finance or accounting degree and 43 percent received MBA degrees. These proportions are smaller for CEOs: 17 percent with a finance or accounting degree and 36 percent with an MBA. Not surprisingly, a much greater percent of CFOs have worked as auditors (41 percent) relative to CEOs (14 percent). Finally, 39 percent of managers are involved in charitable organizations (60 percent of CEOs and 26 percent of CFOs).

We next estimate Equation (2) using our three tone measures to examine the incremental effect of each manager characteristic on tone. Because of the high correlations between our education variables and our work experience variables, we run our regressions including these sets of variables independently, resulting in two sets of regressions for each tone measure.³²

Panel B of Table 6 reports the multivariate regression results for equation (2). This table suggests three main findings. First, the coefficient on *RECESSION* is significantly negative at the one percent level across all columns, indicating that managers who begin their careers in a recession year use less optimistic language. This result complements the evidence found in

³¹ There are 212 CEOs and 325 CFOs in the sample, with 11 managers who worked as both a CEO and a CFO (thus, 212 CEO's + 325 CFO's - 11 duplicates = 526 distinct managers).

³² For example, the Pearson correlation between *ACC_FIN_EDU* and *AUDITOR* is 0.62 (not tabulated). It is reasonable to expect that most auditors have had an accounting degree.

Schoar and Zuo (2011). Second, in all the six regression specifications, *CHARITY* is positively associated with the tone variables at a significance level of less than one percent. It appears that managers who are involved in charitable organizations speak more optimistically in conference calls than those who are not. Given prior evidence in psychology studies (i.e., a positive relation between optimism and volunteerism), our finding suggests that managers' dispositional optimism (as shown by their charity involvement) influences their language choices. Third, with respect to work experience variables, we find that *INVESTBANK* is significantly negatively associated with all three tone variables ($p < 0.01$). It is possible that managers with investment banking experience are more sensitive to the costs (e.g., legal costs) associated with missing expectations by using optimistic language during a conference call. In addition, managers with consulting experience appear to be more optimistic in their language choices, perhaps due to the business development aspects of their prior careers.

The evidence on women CEOs being less optimistic with their language choices is weaker; we only find a significantly negative coefficient on *WOMEN* in two of the six specifications (*TONE_D*). We do not find *AGE* to be significantly associated with any of our tone variables. We also do not find any consistent significant effects for our education variables. Finally, *CEO_INDICATOR* is significantly positive in all six specifications ($p < 0.01$), suggesting that CEOs are more optimistic with their language choices than CFOs.

The descriptive statistics presented in Panel A of Table 6 suggest that CEOs and CFOs exhibit systematic differences in their background (e.g., 60 percent of CEOs are involved in charitable organizations while 26 percent of CFOs are similarly involved). Therefore, to examine whether the main results in Panel B of Table 6 are primarily driven by CEOs or CFOs, we analyze the associations between manager characteristics and the tone of conference calls for

CEOs and CFOs separately (untabulated). In all six specifications, we find a significantly negative relation between *RECESSION* and the use of optimistic language by CEOs during conference calls, but not CFOs. In addition, we find strong results for CFOs' involvement in charities – CFOs involved in charities use much more optimistic language during conference calls than those who are not similarly involved; these results are stronger than those for CEOs. Finally, the results for *INVESTBANK* are similarly strong for CEOs and CFOs; the coefficient on *INVESTBANK* is significantly negative for all three tone variables. Taken together, it appears that our main results on *RECESSION* in Panel B of Table 6 are primarily driven by CEOs, while the main results on *CHARITY* are driven by CFOs.

Overall, the results presented in Table 6 are much stronger than those documented in prior research. Our findings suggest that certain observable managerial characteristics play a strong role in explaining optimistic language choices, further supporting our contention that manager-specific optimism influences the tone of conference calls.

[Table 6]

6. Additional Analyses

6.1 *Sample Managers' Effect on Overall Tone*

The fact that manager-specific optimism appears to influence the way managers portray their firms' performance, combined with the fact that the market appears to react to managers' language choices, suggests that manager-specific optimistic language choices can impact market reactions to firms' disclosures. However, it is important to note that the market reacts to the tone of the entire text of the conference call and not just the comments of a specific manager. Thus, it is not necessarily the case that a manager with an optimistic or pessimistic language style will

influence the market reaction to a firm's conference call, unless the manager influences the overall tone of the language used by all participants on the call.

To provide evidence on this issue, we examine the correlation between the tone of the specific manager in our sample and all other participants on the call, other than the manager in our sample (i.e., other managers and analysts). We find significant correlations (untabulated) across all measures of tone (Spearman (Pearson) correlations are 0.218 (0.221) for the Diction measure, 0.352 (0.343) for the Henry measure, and 0.233 (0.219) for the L&M measure). It is possible, however, that these correlations are partially attributable to economic events occurring at the firm that influence the tone of both the manager and other participants on the call. To address this issue, we examine these same correlations except using measures of “residual tone” – i.e., the residual from a regression of the managers' (other participants') tone on our control variables including firm-, year-, and quarter-fixed effects. Correlations continue to be highly significant across all our measures (Spearman (pearson) correlations are 0.110 (0.111) using Diction, 0.216 (0.203) using Henry, and 0.156 (0.149) using L&M). These results suggest that managers' tone influences other conference call participants' tone and therefore the overall tone of the language used in the conference call.

6.2 *Manager Effects on Earnings Announcement Returns*

The evidence in the paper thus far indicates that 1) manager-specific factors influence managers' use of optimistic language in the conference calls of the various firms for which they work and 2) a CEO/CFO's particular optimistic language style impacts the overall tone of the language used during conference calls. Given prior evidence that the market reacts to the overall tone of the language used during conference calls (Price et al. 2012), our findings imply that the

market reaction to conference calls may also exhibit a manager-specific effect.³³ That is, that there will be a systematic positive or negative market reaction to conference calls across the various firms for which the manager works.

We test this implication by conducting similar tests to those conducted in Section 4 and presented in Table 4 with respect to manager-specific tone, except using announcement returns as our dependent variable (rather than $TONE_i$). Specifically, we run the following regression (analogous to Equation 1):

$$\begin{aligned} CAR_{it} = & \alpha_0 + \alpha_1 MBE_{it} + \alpha_2 SURP_{it} + \alpha_3 LOSS_{it} + \alpha_4 RETURN_{it} + \alpha_5 GROWTH_{it} + \alpha_6 ROA_{it} \\ & + \alpha_7 ROA_{it+1} + \alpha_8 ROA_{it+2} + \alpha_9 ROA_{it+3} + \alpha_{10} ROA_{it+4} + \alpha_{11} SEO_{it+1} + \alpha_{12} MA_{it+1} \\ & + FIRM_i + YEAR_t + QTR_k + MANAGER_j + \varepsilon_{it} \end{aligned} \quad (3)$$

CAR is the value-weighted market-adjusted return for the two-day window (0, +1) centered around the conference call date. As before, the manager fixed effects ($MANAGER_j$) capture commonalities in CAR across the various firms that a manager works and that are distinct from 1) the average CAR that occurs for a given firm across time, 2) the average CAR occurring across firms during a given year, 3) the average CAR occurring across firms in a particular fiscal quarter, 4) the CAR associated with current and future performance, and 5) the CAR associated with strategic management incentives. We then perform an F-test for the joint

³³ We confirm prior findings that the market reacts to tone using our sample of conference calls. Specifically, we regress two-day (t, t+1) value-weighted market-adjusted returns centered around the conference call date on 1) $TONE_i^{ALL}$ 2) measures of current performance (MBE , $SURP$, $LOSS$, $RETURN$, and ROA), 2) measures of future performance ($ROA_{t+1} - ROA_{t+4}$), and 3) measures of firms' strategic incentives (SEO and MA). Consistent with prior research, we find a positive and statistically significant coefficient on $TONE_i^{ALL}$ (using all three measures of $TONE$), suggesting that the market reacts to the portion of tone that is unrelated to current and future realized performance and firms' strategic incentives. We also examine whether tone is negatively associated with future stock returns (suggesting that investors correct their initial pricing error). Specifically, we regress value-weighted market-adjusted returns (t+2, t+121) on our tone measures and control variables. We find that, across all three tone measures, the coefficient on manager's tone is significantly negative, consistent with unwarranted optimistic tone misleading investors at the time of conference call dates. These results are consistent with a concurrent working paper by Huang et al. (2013) that provide evidence of price reversals associated with the tone in earnings announcement press releases.

significance of the manager indicator variables to determine whether manager specific factors influence the market reaction to conference calls.

Results of this analysis are presented in Table 7, Panel A. The first row reports the adjusted R^2 from a base regression excluding the manager indicator variables. The second row reports the F-statistic and associated p-value from a test of the joint significance of the manager fixed effect, as well as the adjusted R^2 from the full regression. The adjusted R^2 from the base regression is 9.95%, which increases to 10.6% with the addition of manager fixed effects. The F-test of the joint significance of the manager fixed effects is significant at less than five percent, suggesting that manager-specific effects are evident in the market reactions to conference calls. However, we note that strength of the manager effect over CAR is far less than the strength of the manager effect over language as demonstrated in Table 4. The increase in R^2 's is less than one percent, far smaller than the increases related to tone (average increase of 7 percent). This result is perhaps not surprising given that 1) language is only one of many determinants of market reactions to conference calls and 2) we are measuring the commonality induced by only one particular manager on the call, while the market likely reacts to the language of all participants on the call. Nevertheless, the results are consistent with manager-specific factors inducing a commonality in the market's reactions to a firm's conference call.

Presumably, if the manager-specific CAR effect is driven by manager-specific tone, the two manager-specific effects should be correlated. Panel B of Table 7 reports a correlation matrix of our manager-specific tone effects with our manager-specific CAR effects. Similar to the analysis in Table 4 Panel C, we weigh each fixed effect (including the manager-specific CAR effect) by the inverse of its standard error to account for estimation error. Spearman (Pearson) correlations are shown above (below) the diagonal. Both the Spearman and Pearson correlations

suggest a positive and significant correlation ($p < 5\%$) between our manager-specific CAR effect and our manager-specific tone effect using the L&M measure of tone, but not the other two measures. Thus, we find some evidence consistent with our documented manager-specific CAR effect being driven by manager-specific language choices, although the results are not evident for the Diction measure and the Henry measure.

[Table 7]

7. Conclusion

This paper examines the impact of manager-specific optimism on the tone used in conference calls. We find evidence that manager-specific factors play a significant role in the optimistic/pessimistic tone of earnings related conference calls. This evidence adds to our understanding of the determinants of tone in conference calls and suggests that tone does not simply reflect a manager's private information about future performance or firms' strategic incentives. Rather, the tone used in conference calls also reflects idiosyncratic, manager-specific tendencies to be optimistic or pessimistic. Moreover, we provide evidence on certain observable factors (e.g., early career experiences and charitable involvement) that are associated with manager-specific optimistic language use.

We also find that individual managers' optimistic language styles affect the overall tone in conference calls, suggesting that a manager's style can impact the market's reaction to one of the most important disclosure events of a firm. Moreover, we provide some evidence of a manager's effect on market reactions to conference calls by demonstrating a manager-specific effect on returns around the conference call. Thus, our study adds to our understanding of the market's ability to detect and incorporate information about manager-specific style differences.

Overall, our study contributes to our understanding of both the determinants of and market reactions to tone as well as to our understanding of the effect of managerial style on disclosure choices.

References

- Anik, L., L. Aknin, M. Norton, and E. Dunn. 2009. Feeling good about giving: The benefits (and costs) of self-interested charitable behavior. Working paper, Harvard Business School.
- Bamber, L., Jiang, J., Wang, I., 2010. What's my style? The influence of top managers and their personal backgrounds on voluntary corporate financial disclosure. *The Accounting Review* 85: 1131-1162.
- Ben-David, I., J. Graham, and C. Harvey, 2006. Managerial overconfidence and corporate policies. Working paper. University of Chicago and Duke University.
- Bertrand, M., Schoar, A., 2003. Managing with style: The effect of managers on firm policies. *The Quarterly Journal of Economics* 118: 1169-1208.
- Bowen, R., A. Davis, and D. Matsumoto. 2002. Do conference calls affect analysts' forecasts? *The Accounting Review* 77 (2): 285-316.
- Chevalier, J., Ellison, G. 1999, Are some mutual fund managers better than others? Cross-sectional patterns in behavior and performance, *Journal of Finance*, 875-899.
- Chuk, E., D. Matsumoto, and G. Miller. 2009. Assessing methods of identifying management forecasts: CIG versus Researcher Collected. Working paper, University of Southern California, University of Washington, and University of Michigan.
- Cohn, R. A., Lewellen, W. G., Lease, R. C., and Schlarbaum, G. G., 1975. Individual investor risk aversion and investment portfolio composition. *The Journal of Finance* 30(2) 605-620.
- Cummins, R. A. and H. Nistico. 2002. Maintaining life satisfaction: The role of positive cognitive bias. *Journal of Happiness Studies* 3: 37-69.
- Davis, A., J. Piger, and L. Sedor. 2012. Beyond the numbers: Measuring the information content of earnings press release language. *Contemporary Accounting Research* 29(3): 845-868.
- Davis, A. and I. Tama-Sweet. 2012. Managers' use of language across alternative disclosure outlets: Earnings press releases versus MD&A. *Contemporary Accounting Research* 29(3): 804-837.
- Davis, G. S. Nolen-Hoeksema, and J. Larson. 1998. Making sense of loss and benefiting from the experience: Two construals of meaning. *Journal of Personality and Social Psychology* 75(2): 561-574.
- Demers, E. and C. Vega. 2011. Soft information in earnings announcements: News or noise? Working paper, INSEAD.

- Ditto, P., J. Scepansky, G. Munro, A. Apanovitch, and L. Lockhart. 1998. Motivated sensitivity to preference-inconsistent information. *Journal of Personality and Social Psychology*. 75(1): 53-69.
- Doyle, J., Lundholm, R., and Soliman, M., 2003. The predictive value of expenses excluded from pro forma earnings. *Review of Accounting Studies* 8, 145-174.
- Dyreng, S. D., Hanlon, M., and Maydew, E. L., 2010. The effects of managers on corporate tax avoidance. *The Accounting Review* 85: 1163-1189.
- Fee, C. E., C. Hadlock, J. Pierce. 2013. Managers with and without style: Evidence using exogenous variation. *Review of Financial Studies* 26: 1-35.
- Fellner, G., Maciejovsky, B., 2007. Risk attitude and market behavior: Evidence from experimental asset markets. *Journal of Economic Psychology* 28: 338-250.
- Frankel, R., M. Johnson, and D. Skinner. 1999. An empirical examination of conference calls as a voluntary disclosure medium. *Journal of Accounting Research* 37 (1): 133-150.
- Frankel, R., W. Mayew, and Y. Sun. 2009. Do pennies matter? Investor relations consequences of small negative earnings surprises. *Review of Accounting Studies* 15(1): 220-242.
- Ge, W., D. Matsumoto, and J. Zhang. 2011. Do CFOs have style? An empirical investigation of the effect of individual CFOs on accounting practices. *Contemporary Accounting Research*, forthcoming.
- Gibson, B. and D. Sanbonmatsu. 2004. Optimism, pessimism, and gambling: The downside of optimism. *Personality and Social Psychology Bulletin* 30(2): 149-160.
- Goodman-Delahunty, J., P. Granhag, M. Hartwig, E. Loftus, 2010. Insightful or wishful: Lawyers' ability to predict case outcomes. *Psychology, Public Policy, and Law* 16(2): 133-157.
- Graham, J., Harvey, C., and Puri, M., 2009. Managerial attitudes and corporate actions. Working paper, Duke University and National Bureau of Economic Research
- Hales, J., X. Kuang, and S. Venkataraman, 2011, Who believes the hype? An experimental examination of how language affects investor judgments, *Journal of Accounting Research* 49 (1): 223-255.
- Halpern, D., 2000. Sex differences in cognitive abilities. Psychology Press.
- Hambrick, D. C., 2007. Upper echelons theory: An update. *Academy of Management Review* 32: 334-343.
- Hambrick, D. C., Mason, P. A., 1984. The seasons of a CEO's tenure. *Academy of Management Review* 9: 193-206.

- Henry, E. 2006. Market reaction to verbal components of earnings press releases: Event study using a predictive algorithm. *Journal of Emerging Technologies in Accounting* 3: 1-19.
- Henry, E. 2008. Are investors influenced by how earnings press releases are written? *Journal of Business Communication* 45 (4): 363-407.
- Henry, E. and A. Leone. 2009. Measuring qualitative information in capital markets research. Working paper, University of Miami.
- Hilton, J., J. Klein, and W. von Hippel. 1991. Attention allocation and impression formation. *Personality and Social Psychology Bulletin* 17(5): 548-559.
- Huang, X., S. H. Teoh, and Y. Zhang. 2013. Tone management. Working paper, University of California-Irvine and The Chinese University of Hong Kong.
- Hutton, A. and P. Stocken. 2009. Prior forecasting accuracy and investor reaction to management earnings forecasts. Working paper, Boston College and Dartmouth College.
- Kimbrough, M. 2005. The Effect of Conference Calls on Analyst and Market Underreaction to Earnings Announcements. *The Accounting Review* 80(1): 189-219.
- Larcker, D. and A. Zakolyukina. 2012. Detecting deceptive discussions in conference calls. *Journal of Accounting Research* 50(2): 495-540.
- Li, F. 2007. Do stock market investors understand the downside risk sentiment of corporate annual reports? Working paper, University of Michigan.
- Li, F. 2008. Annual report readability, current earnings, and earnings persistence. 2008. *Journal of Accounting and Economics* 45(2-3):221-247.
- Li, F., R. Lundholm, and M. Minnis. 2010. The impact of perceived competition on the profitability of investments and future stock returns. Working paper, University of Michigan and University of British Columbia.
- Loughran, T. and B. McDonald. 2011. When is a liability not a liability? Textual analysis, dictionaries, and 10-Ks. *Journal of Finance* LXVI(1): 35-65.
- Lundeberg, M. A., Fox, P. W., and Puncochar, J., 1994. Highly confident, but wrong: Gender differences and similarities in confidence judgments. *Journal of Educational Psychology* 86: 114-121.
- Maccoby, E. and C. Jacklin, 1974. The psychology of sex differences. Stanford, CA: Stanford University Press.

- Matsumoto, D. 2002. Management's incentives to avoid negative earnings surprises. *The Accounting Review* 77(3): 483-514.
- Mellor, D., Y. Hayashi, L. Firth, M. Stokes, S. Chambers, and R. Cummins. 2008. Volunteering and well-being: Do self-esteem, optimism, and perceived control mediate the relationship? *Journal of Social Service Research* 34(4): 61-70.
- Palsson, A., 1996. Does the degree of relative risk aversion vary with household characteristics? *Journal of Economic Psychology* 17: 771-787.
- Plomin, R., M. Scheier, C. Bergeman, N. Pedersen, J. Nesselroade, and G. McClearn. 1992. Optimism, pessimism, and mental health: A twin/adoption analysis. *Personality and Individual Differences* 13(8): 921-930.
- Price, S., J. Doran., D. Peterson, B. Bliss. 2012. Earnings conference calls and stock returns: The incremental informativeness of textual tone. *Journal of Banking and Finance* 36(4): 992-1011.
- Prince, M., 1993. Women, men and money styles. *Journal of Economic Psychology* 14: 175-182.
- Rogers, J. A. Van Buskirk, S. Zechman. 2011. Disclosure tone and shareholder litigation. *The Accounting Review* 86(6): 2155-2183.
- Scheier, M. and C. Carver. 1993. On the power of positive thinking: The benefits of being optimistic. *Current Directions in Psychological Science* 2(1): 26-30.
- Schoar, A. and L. Zuo, 2011. Shaped by booms and busts: How the economy impacts CEO careers and management style. Working paper, MIT.
- Segerstrom, S. 2001. Optimism and attentional bias for negative and positive stimuli. *Personality and Social Psychology Bulletin* 27(10): 1334-1343.
- Skinner, D., and R. Sloan. 2002. Earnings surprise, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. *Review of Accounting Studies* 7: 289-312.
- Yang, H. 2012. Capital market consequences to managers' voluntary disclosure styles. *Journal of Accounting and Economics* 53(1/2): 167-183.

Table 1
Variable Definitions

<i>Variable</i>	<i>Definition</i>
Conference call tone measures	
<i>TONE_D</i>	the difference between the positive words and the negative words spoken by the manager, scaled by the total words spoken by the manager, based on wordlists from DICTION
<i>TONE_H</i>	the difference between the positive words and the negative words spoken by the manager, scaled by the total words spoken by the manager, based on wordlists from Henry (2008)
<i>TONE_LM</i>	the difference between the positive words and the negative words spoken by the manager, scaled by the total words spoken by the manager, based on wordlists from Loughran and McDonald (2009)
<i>TONE^{ALL}</i>	<i>TONE_D</i> , <i>TONE_H</i> , and <i>TONE_LM</i> , measured over the entire conference call; that is, optimistic words less pessimistic words in the full conference call transcript, scaled by total words in the full transcript.
Manager characteristics	
<i>WOMAN</i>	an indicator variable that is equal to one if the manager is a woman and zero otherwise
<i>AGE</i>	the age of the manager
<i>RECESSION</i>	an indicator variable equal to one if the manager enters the labor force during a recession (i.e., year of birth plus 22 years).
<i>CHARITY</i>	an indicator variable equal to one if the manager is involved in a charitable organization during any time period, and zero otherwise
<i>MBA</i>	an indicator variable, equal to one if the manager has an MBA and zero otherwise
<i>ACC_FIN_EDU</i>	an indicator variable equal to one if the manager has an undergraduate or graduate degree in accounting or finance and zero otherwise
<i>GRAD_LAW</i>	an indicator variable equal to one if the manager has juris doctorate degree and zero otherwise
<i>AUDITOR</i>	an indicator variable equal to one if the manager has worked as an auditor at an accounting firm and zero otherwise
<i>CONSULTING</i>	an indicator variable equal to one if the manager has worked for a consulting firm and zero otherwise
<i>INVESTBANK</i>	an indicator variable equal to one if the manager has worked for an investment bank, and zero otherwise
Other variables	
<i>MBE</i>	an indicator variable equal to one if the firm meets or beats the mean consensus analyst forecast for a given quarter ($EPS \geq \text{Meanest}$), where Meanest is the last consensus forecast for the quarter)
<i>SURP</i>	the earnings surprise measured as the difference between quarterly EPS and the mean consensus analyst forecast deflated by stock price at the beginning of the quarter ($EPS_t - \text{Meanest}_t$) / $PRCCQ_{t-1}$
<i>LOSS</i>	an indicator variable equal to one for firms reporting negative earnings in the fiscal quarter and zero otherwise ($NIQ < 0$)
<i>RETURN</i>	the firm's value weighted market-adjusted stock return during the fiscal quarter

<i>GROWTH</i>	sales growth, defined as percentage change in total sales relative to the same quarter last year: $(\text{saleq}_t - \text{saleq}_{t-4}) / \text{saleq}_{t-4}$
<i>ROA</i>	return on assets ratio, defined as earnings before extraordinary times deflated by beginning total assets ($\text{IBQ}_t / \text{ATQ}_{t-1}$)
<i>ROA_{t+1}</i>	one-quarter ahead return on assets ratio
<i>ROA_{t+2}</i>	two-quarter ahead return on assets ratio
<i>ROA_{t+3}</i>	three-quarter ahead return on assets ratio
<i>ROA_{t+4}</i>	four-quarter ahead return on assets ratio
<i>CAR</i>	the value weighted market-adjusted return for the two-day window (0, +1) around the earnings conference call date
<i>SEO_{t+1}</i>	an indicator variable equal to one if the firm has seasoned equity offering in the next quarter and zero otherwise
<i>MA_{t+1}</i>	an indicator variable equal to one if the firm makes a merger and acquisition announcement in the next quarter and zero otherwise

Table 2
Sample Selection and Sample Description

Panel A: Sample Selection

	Firm-manager matched sample		
	Number of firm- quarters	Number of distinct firms	Number of distinct CEOs and CFOs
Manager-firm matched sample for CEOs and CFOs that worked for at least two firms for one year from Execucomp (years 2002 to 2009) that have total assets, sales, common shares outstanding, income before extraordinary items, and end of quarter stock price.	3,326	395	206
Less: Firm-quarters that have missing conference call transcripts and where managers do not participate at conference call	(436)	(72)	(32)
Less: Firm-quarters with less than two filler quarters and managers who worked in a firm for which there are fewer than two quarters' conference call transcripts	(792)	(98)	(53)
Manager-firm matched sample	2,098	225	121

Table 2
Sample Selection and Sample Description (continued)

Panel B: Frequency of managers based on the number of quarters at each firm

N of quarters in each firm	N of manager-firm pairs	Percentage (%)
2	18	7.41
3	26	10.7
4	19	7.82
5	23	9.47
6	22	9.05
7	20	8.23
8	26	10.7
9	15	6.17
10	3	1.23
11	8	3.29
12	8	3.29
13	6	2.47
14	9	3.7
15	3	1.23
16	6	2.47
17	5	2.06
18	3	1.23
19	7	2.88
20 and above	16	6.57
Total	243	100

Panel C: Frequency of firms based on the number of different managers

N of different managers	Freq of firms	Percentage (%)	N of manager-firm pairs
1	208	92.4	208
2	16	7.1	32
3	1	0.5	3
Total	225	100	243

Table 2
Sample Selection and Sample Description (continued)

Panel D: Frequency of managers based on the number of changes

N of changes	Freq of managers	Percentage (%)	N of manager-firm pairs
1	120	99	240
2	1	1	3
Total	121	100	243

Panel A of Table 2 presents our sample selection process. Panel B presents the frequency of the managers for the manager-firm matched sample based on how many quarters they worked for each firm. Panel C presents the frequency of the firms for the manager-firm matched sample, based on how many different managers have worked with each firm. Panel D presents the frequency of managers for the manager-firm matched sample, based on how many times they have changed their jobs.

Table 3
Descriptive Statistics

Panel A. Variables used in the regressions

Variable	N	Min	Q1	Mean	Median	Q3	Max	Std. Dev.
<i>ASSETS</i>	3,996	119.268	859	14,889	2,147	7,927	287,864	38,989
<i>ROA</i>	3,996	-0.1181	0.0028	0.0103	0.0095	0.0194	0.0810	0.0238
<i>ROA_{t+1}</i>	3,996	-0.1238	0.0026	0.0102	0.0094	0.0193	0.0810	0.0242
<i>ROA_{t+2}</i>	3,996	-0.1315	0.0026	0.0099	0.0094	0.0193	0.0789	0.0247
<i>ROA_{t+3}</i>	3,996	-0.1275	0.0028	0.0100	0.0095	0.0192	0.0789	0.0245
<i>ROA_{t+4}</i>	3,996	-0.1237	0.0028	0.0101	0.0095	0.0194	0.0789	0.0237
<i>SURP</i>	3,996	-0.0696	-0.0003	0.0001	0.0005	0.0020	0.0247	0.0094
<i>MBE</i>	3,996	0	0	0.7297	1	1	1	0.4442
<i>LOSS</i>	3,996	0	0	0.1732	0	0	1	0.3784
<i>RETURN</i>	3,996	-0.3857	-0.0970	0.0071	-0.0001	0.0965	0.4914	0.1709
<i>GROWTH</i>	3,996	-0.5237	-0.0215	0.1085	0.0719	0.1793	1.3762	0.2691
<i>SEO_{t+1}</i>	3,996	0	0	0.0200	0	0	1	0.1401
<i>MA_{t+1}</i>	3,996	0	0	0.2195	0	0	1	0.4139
<i>TONE_D</i>	3,996	-0.3057	0.9083	1.5363	1.4752	2.0917	4.0363	0.8819
<i>TONE_H</i>	3,996	-0.6300	1.2198	1.9453	1.8927	2.6404	4.8373	1.0823
<i>TONE_LM</i>	3,996	-1.4794	0.00002	0.5918	0.5341	1.1155	2.9036	0.8448
<i>TONE_D^{ALL}</i>	3,924	0.6744	1.5402	1.8913	1.8730	2.2237	3.2064	0.5179
<i>TONE_H^{ALL}</i>	3,924	0.3532	1.3261	1.7751	1.7376	2.1813	3.5444	0.6527
<i>TONE_LM^{ALL}</i>	3,924	-0.9965	-0.0010	0.3397	0.3334	0.6680	1.6988	0.5238
<i>CAR</i>	3,994	-0.5453	-0.0327	0.0068	0.0035	0.0464	0.6029	0.0840

Table 3
Descriptive Statistics (continued)

Panel B. Comparison with Compustat

<i>Variable</i>	Our sample		Compustat		Difference in mean (sample vs. Compustat)
	Mean	Median	Mean	Median	
<i>ASSETS</i>	14,889	2,147	3,592.74	207.37	11,296.6***
<i>ROA</i>	0.0103	0.0095	-0.0345	0.0025	0.0448***
<i>ROA_{t+1}</i>	0.0102	0.0094	-0.0345	0.0025	0.0446***
<i>ROA_{t+2}</i>	0.0099	0.0094	-0.0345	0.0025	0.0444***
<i>ROA_{t+3}</i>	0.0100	0.0095	-0.0344	0.0025	0.0444***
<i>ROA_{t+4}</i>	0.0101	0.0095	-0.0336	0.0025	0.0437***
<i>SURP</i>	0.0001	0.0005	-0.0028	0.0003	0.0027***
<i>MBE</i>	0.7297	1	0.6540	1	0.0757***
<i>LOSS</i>	0.1732	0	0.4161	0	-0.2430***
<i>RETURN</i>	0.0071	-0.0001	0.0023	-0.0068	0.0048*
<i>GROWTH</i>	0.1085	0.0719	0.1339	0.0685	-0.0255***
<i>SEO_{t+1}</i>	0.0200	0	0.0110	0	0.0094***
<i>MA_{t+1}</i>	0.2195	0	0.0667	0	0.1528***

“Our sample” refers to the set of firm-quarter observations for firms that have at least one manager observed in multiple firms. This sample includes observations for these firms in the quarters in which they have other managers that we do not observe in multiple firms. “Compustat” is a comparison sample of all listed firms on Compustat over the period 2002 to 2009. *ASSETS* is total assets of a firm-quarter observation. All other variables are described in Table 1. Each of the continuous variables is winsorized at 1% and 99% to mitigate outliers.

Table 4
Manager Effects on Tone of Earnings Conference Calls
Panel A: F-tests on manager fixed effects

		Dependent Variable					
	Predicted sign	<i>TONE_D</i>	<i>TONE_D</i>	<i>TONE_H</i>	<i>TONE_H</i>	<i>TONE_LM</i>	<i>TONE_LM</i>
		(1)	(2)	(3)	(4)	(5)	(6)
<i>MBE</i>	+	0.162*** [0.000]	0.152*** [0.000]	0.227*** [0.000]	0.207*** [0.000]	0.175*** [0.000]	0.171*** [0.000]
<i>SURP</i>	+	1.647 [0.145]	2.201* [0.072]	1.503 [0.210]	1.563 [0.193]	2.510** [0.045]	2.553** [0.038]
<i>LOSS</i>	-	-0.124*** [0.000]	-0.086** [0.017]	-0.082** [0.050]	-0.062* [0.099]	-0.228*** [0.000]	-0.204*** [0.000]
<i>RETURN</i>	+	0.176*** [0.005]	0.176*** [0.003]	0.384*** [0.000]	0.371*** [0.000]	0.326*** [0.000]	0.307*** [0.000]
<i>GROWTH</i>	+	0.078* [0.065]	0.094** [0.032]	0.317*** [0.000]	0.370*** [0.000]	0.093** [0.030]	0.128*** [0.004]
<i>ROA</i>	+	1.186** [0.050]	1.104* [0.056]	2.905*** [0.000]	2.781*** [0.001]	2.018*** [0.000]	1.749*** [0.004]
<i>ROA_{t+1}</i>	+	0.420 [0.245]	0.322 [0.288]	3.513*** [0.000]	3.407*** [0.000]	2.013*** [0.000]	1.702*** [0.001]
<i>ROA_{t+2}</i>	+	0.297 [0.305]	-0.022 [0.516]	1.890*** [0.005]	1.571*** [0.010]	1.258*** [0.010]	0.915** [0.044]
<i>ROA_{t+3}</i>	+	0.351 [0.275]	0.143 [0.401]	0.754 [0.140]	0.339 [0.310]	0.060 [0.455]	-0.208 [0.649]
<i>ROA_{t+4}</i>	+	0.712 [0.120]	0.573 [0.163]	0.575 [0.210]	0.538 [0.221]	0.492 [0.195]	0.434 [0.218]
<i>SEO_{t+1}</i>	+	-0.047 [0.715]	-0.021 [0.605]	0.080 [0.205]	0.102 [0.141]	0.066 [0.200]	0.107* [0.078]
<i>MA_{t+1}</i>	+	0.022 [0.240]	0.019 [0.259]	0.101*** [0.005]	0.104*** [0.002]	0.049** [0.045]	0.055** [0.024]
<i>F-statistics of Manager Fixed Effects</i>			5.27 (<.001, 114)		4.33 (<.001, 114)		4.95 (<.001, 114)
<i>Firm, Year, and Quarter Fixed Effects</i>		Included	Included	Included	Included	Included	Included
Adjusted R ²		38%	45%	42%	48%	39%	46%
Number of Obs.		3,996	3,996	3,996	3,996	3,996	3,996

Table 4 (Continued)
Manager Effects on Tone of Earnings Conference Calls

Panel B: Percentage of significant manager fixed effect estimates

	at the 5% Level	at the 10% level
<i>EFFECT_TONE_D</i>	0.32	0.41
<i>EFFECT_TONE_H</i>	0.25	0.35
<i>EFFECT_TONE_LM</i>	0.32	0.41

Panel C: Summary Statistics on the manager fixed effect estimates

	Q1	Mean	Median	Q3
<i>EFFECT_TONE_D</i>	-0.390	-0.048	-0.019	0.361
<i>EFFECT_TONE_H</i>	-0.605	-0.018	-0.027	0.531
<i>EFFECT_TONE_LM</i>	-0.345	0.003	0.022	0.294

This table reports the regression results for Equation One. P-values are based on one-tailed tests and are reported in the brackets below the coefficient estimates. Significance at the 10%, 5%, and 1% levels is shown with an *, **, and *** respectively. All the variables are defined in Table 1. Each of the continuous variables is winsorized at 1% and 99% to mitigate outliers. Panel A of this table reports the test results for manager fixed effects. Reported is the F-test for the joint significance of the manager fixed effects. For each F-test we report the value of the F-statistic and, in parentheses, the associated p-value and number of constraints. Panel B reports the frequency of the significant manager fixed effects (at the 5% level and the 10% level) estimated in Panel A. Panel C reports mean, median, lower quartile, and upper quartile values of the estimated manager fixed effects. Each fixed effect is weighted by the inverse of its standard error to account for estimation error.

Table 5
Manager Effects on Tone of Earnings Conference Call: Robustness Tests

Panel A: Persistence of Manager Effects: Real Data and Placebo Data

	Predicted Sign	Real data (1) Coefficient estimate (p-value)	Placebo data (2) Coefficient estimate (p-value)
<i>TONE_D_AVG_RESIDUAL</i>	+	0.143* (0.07)	-0.164 (0.965)
<i>TONE_H_AVG_RESIDUAL</i>	+	-0.043 (0.395)	0.078 (0.175)
<i>TONE_LM_AVG_RESIDUAL</i>	+	0.140* (0.10)	-0.058 (0.725)

Panel B: Robustness test that excludes one quarter's observation of a manager from estimating this manager's fixed effect

	Predicted sign	<i>TONE_D</i> (1)	<i>TONE_H</i> (2)	<i>TONE_LM</i> (3)
<i>MBE</i>	+	0.211*** [0.000]	0.380*** [0.000]	0.210*** [0.000]
<i>SURP</i>	+	-0.410 [0.877]	-0.825 [0.990]	-0.177 [0.743]
<i>LOSS</i>	-	-0.266** [0.000]	-0.277*** [0.000]	-0.299*** [0.000]
<i>RETURN</i>	+	0.251** [0.022]	0.327*** [0.005]	0.200** [0.019]
<i>GROWTH</i>	+	-0.059 [0.760]	0.162*** [0.027]	-0.055 [0.803]
<i>ROA</i>	+	0.787 [0.211]	2.092** [0.017]	2.311*** [0.001]
<i>ROA_{t+1}</i>	+	0.098 [0.456]	1.597** [0.037]	0.771 [0.130]
<i>ROA_{t+2}</i>	+	-1.563 [0.970]	0.708 [0.197]	0.773 [0.113]
<i>ROA_{t+3}</i>	+	0.646 [0.218]	0.362 [0.332]	0.354 [0.289]
<i>ROA_{t+4}</i>	+	-0.200 [0.595]	-1.197 [0.925]	0.209 [0.372]
<i>SEO_{t+1}</i>	+	0.150 [0.214]	0.170 [0.184]	0.055 [0.351]
<i>MA_{t+1}</i>	+	0.162*** [0.004]	0.269*** [0.000]	0.181*** [0.000]
<i>Estimate</i>		0.611*** [0.001]	0.598*** [0.001]	0.496*** [0.001]
<i>Firm, Year, and Quarter Fixed Effects</i>		Included	Included	Included
Adjusted R ²		13.8%	17.9%	19.6%
Number of Obs.		1,683	1,683	1,683

Table 5 (Continued)

***, **, * Significantly different from zero at the 1%, 5%, and 10% levels, respectively (one tailed t-tests). Sample is the manager-firm matched panel data set. In Panel A of this table, each entry in this table corresponds to a different regression. In Column 1 of Panel A we report the results of regressing a manager's average residual at FIRM 2 on his average residual at FIRM 1. In Column 2 of Panel A we regress for each of tone variables on an average residual based on three years prior to the manager joining the second firm on his true average residual in his first firm. The first number in each cell is the estimated coefficient on the first job residual, the second number is the one-tailed P-value (in parentheses) for each regression. In Panel B, for each manager-quarter observation, we exclude one quarter's observation of a manager from estimating this manager's fixed effect using Equation (1). We then regress the tone measures of the excluded manager-quarters on the corresponding estimated manager fixed effects (which excluded that manager-quarter). For example, if manager i has 15 quarters across two different firms, we exclude the observation of manager i in quarter t from estimating Equation (1) and generate an estimated fixed effect for manager i excluding quarter t ($\text{Fixed Effect}_{i,\text{excluding } t}$). We do this analysis for all 15 quarters and generate 15 estimated fixed effects for manager i . We then regress $\text{TONE}_{i,t}$ on $\text{Fixed Effect}_{i,\text{excluding } t}$.

Table 6
Manager Characteristics and Tone of Earnings Conference Calls

Panel A: Summary Statistics

<i>All Managers</i>						<i>CEOs</i>					<i>CFOs</i>				
Variable	N	Q1	Mean	Med	Q3	N	Q1	Mean	Med	Q3	N	Q1	Mean	Med	Q3
<i>TONE_D</i>	526	0.95	1.49	1.45	1.97	212	1.45	1.87	1.89	2.28	325	0.84	1.24	1.13	1.58
<i>TONE_H</i>	526	1.24	1.83	1.80	2.43	212	1.66	2.16	2.27	2.64	325	1.06	1.61	1.58	2.17
<i>TONE_LM</i>	526	0.06	0.52	0.47	0.94	212	0.40	0.86	0.90	1.29	325	-0.09	0.30	0.30	0.58
<i>WOMAN</i>	526	0	0.06	0	0	212	0	0.05	0	0	325	0	0.06	0	0
<i>AGE</i>	520	45	51	51	56	212	48	53	53	58	319	44	49	49	53
<i>RECESSION</i>	520	0	0.17	0	0	212	0	0.19	0	0	319	0	0.16	0	0
<i>CHARITY</i>	526	0	0.39	0	1	212	0	0.60	1	1	325	0	0.26	0	1
<i>ACC_FIN_EDU</i>	526	0	0.33	0	1	212	0	0.17	0	0	325	0	0.43	0	1
<i>MBA</i>	526	0	0.43	0	1	212	0	0.36	0	1	325	0	0.47	0	1
<i>GRAD_LAW</i>	526	0	0.06	0	0	212	0	0.10	0	0	325	0	0.03	0	0
<i>AUDITOR</i>	526	0	0.30	0	1	212	0	0.14	0	0	325	0	0.41	0	1
<i>CONSULTING</i>	526	0	0.07	0	0	212	0	0.06	0	0	325	0	0.08	0	0
<i>INVESTBANK</i>	526	0	0.12	0	0	212	0	0.14	0	0	325	0	0.10	0	0

All the variables are defined in Table 1.

Table 6: Manager Characteristics and Tone of Earnings Conference Calls (continued)

Panel B: Regression Results

	Predicted Sign	Manager characteristics including education			Manager characteristics including work experience		
		(1) <i>TONE_D</i>	(2) <i>TONE_H</i>	(3) <i>TONE_LM</i>	(4) <i>TONE_D</i>	(5) <i>TONE_H</i>	(6) <i>TONE_LM</i>
<i>WOMAN</i>	-	-0.193*** [0.010]	-0.057 [0.277]	-0.088 [0.141]	-0.165** [0.028]	-0.043 [0.321]	-0.048 [0.287]
<i>AGE</i>	-	-0.00001 [0.499]	-0.001 [0.425]	0.001 [0.608]	0.001 [0.605]	0.001 [0.580]	0.002 [0.703]
<i>RECESSION</i>	-	-0.157*** [0.010]	-0.184** [0.011]	-0.142** [0.011]	-0.155*** [0.006]	-0.152** [0.016]	-0.136*** [0.008]
<i>CHARITY</i>	+	0.270*** [0.000]	0.234*** [0.001]	0.236*** [0.000]	0.258*** [0.000]	0.236*** [0.001]	0.232*** [0.000]
<i>MBA</i>	?	0.008 [0.880]	0.048 [0.472]	0.132*** [0.008]			
<i>ACC_FIN_EDU</i>	?	0.043 [0.436]	0.005 [0.941]	0.054 [0.313]			
<i>GRAD_LAW</i>	?	0.323*** [0.012]	0.056 [0.677]	0.087 [0.415]			
<i>AUDITOR</i>	?				-0.098* [0.087]	-0.044 [0.554]	-0.107* [0.052]
<i>CONSULTING</i>	?				0.186* [0.094]	0.300** [0.045]	0.245** [0.025]
<i>INVESTBANK</i>	?				-0.415*** [0.000]	-0.379*** [0.000]	-0.372*** [0.000]
<i>CEO_INDICATOR</i>	?	0.492*** [0.000]	0.406*** [0.000]	0.393*** [0.000]	0.211*** [0.000]	0.091*** [0.000]	0.334*** [0.000]
<i>Control Variables</i>		Included	Included	Included	Included	Included	Included
<i>Firm Fixed Effects</i>		Included	Included	Included	Included	Included	Included
<i>Year and Quarter Fixed effects</i>		Included	Included	Included	Included	Included	Included
Number of observations		4,017	4,017	4,017	4,017	4,017	4,017
Adj.R ²		41.78%	43.82%	41.89%	42.30%	44.42%	42.53%

***, **, * indicate statistical significance at the 0.01, 0.05, 0.10 level, respectively, under one-tailed tests for variables with predicted signs and two-tailed tests for variables without predicted signs. Standard errors are clustered by manager. All the variables are defined in Table 1.

Table 7
Manager Effects on Announcement Returns

$$CAR_{it} = \alpha_0 + \alpha_1 MBE_{it} + \alpha_2 SURP_{it} + \alpha_3 LOSS_{it} + \alpha_4 RETURN_{it} + \alpha_5 GROWTH_{it} + \alpha_6 ROA_{it} + \alpha_7 ROA_{it+1} + \alpha_8 ROA_{it+2} + \alpha_9 ROA_{it+3} + \alpha_{10} ROA_{it+4} + \alpha_{11} SEO_{it+1} + \alpha_{12} MA_{it+1} + FIRM_i + YEAR_t + QTR_k + MANAGER_j + \varepsilon_{it}$$

Panel A: F-tests on fixed effects

	F-statistics	N	Adj. R ²
<i>RESIDUAL_CAR</i>		3,994	9.94%
<i>RESIDUAL_CAR</i>	1.24 (.045, 114)	3,994	10.59%

Panel B: Correlation between Tone Effects and CAR effects

	<i>EFFECT_TONE_D</i>	<i>EFFECT_TONE_H</i>	<i>EFFECT_TONE_LM</i>	<i>EFFECT_CAR</i>
<i>EFFECT_TONE_D</i>	1.000	0.590 (<i><.0001</i>)	0.707 (<i><.0001</i>)	-0.022 (<i>0.590</i>)
<i>EFFECT_TONE_H</i>	0.634 (<i><.0001</i>)	1.000	0.646 (<i><.0001</i>)	0.087 (<i>0.177</i>)
<i>EFFECT_TONE_LM</i>	0.722 (<i><.0001</i>)	0.685 (<i><.0001</i>)	1.000	0.186 (<i>0.024</i>)
<i>EFFECT_CAR</i>	-0.047 (<i>0.621</i>)	0.064 (<i>0.248</i>)	0.158 (<i>0.046</i>)	1.000

Panel A of this table reports the test results for manager fixed effects on CAR [0,+1]. The fixed effects included are row 1: firm, year, and quarter fixed effects; row2: firm, year, quarter and manager fixed effects. Reported is the F-test for the joint significance of the manager fixed effects. For the F-test we report the value of the F-statistic and, in parentheses, the associated p-value and number of constraints. Also reported are the number of observations and Adj. R²s for each regression. Panel B reports the correlation coefficients (Pearson on the lower left and Spearman on the upper right) between the manager effects on residual tone and on residual CAR. Each fixed effect is weighted by the inverse of its standard error to account for estimation error. One-tailed P-values are reported in the second row. Coefficients that are significant at the 10 percent level are highlighted in bold. All variables are described in Table1.