

Implicit/Explicit Incentives and Management Earnings Forecasts

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Abstract

We examine the relationship between implicit/explicit incentives and the likelihood of management earnings forecasts. Implicit incentives arising from managerial career concerns are measured by CEO age and CEO gender. Explicit incentives are measured by the CEO's proportion of equity compensation and CEO's equity holding. We hypothesize and find that both implicit and explicit incentives are positively associated with the likelihood of earnings forecasts. We also find that both implicit and explicit incentives are associated with a higher likelihood of management earnings forecasts especially for good news. For bad news, CEO age is not associated with a higher likelihood of management earnings forecasts, indicating that voluntary disclosure of bad news is likely due to litigation concerns. We finally show that both implicit and explicit incentives are associated with quantitative forecasts, and not associated with qualitative forecasts.

1. Introduction

Nagar et al. (2003) examines the agency problem of managers' reluctance to disseminate private information and finds that explicit incentives in the form of CEO stock-based compensation is positively associated with the frequency of management earnings forecasts. This suggests that explicit incentives mitigate the agency problem of managers' reluctance to make voluntary disclosure. In general, implicit incentives such as those arising from managerial career concerns are just as important as explicit incentives for mitigating agency problems. The objective of this study is to examine whether implicit incentives mitigate the agency problem of managers' reluctance to disseminate private information.

Implicit incentives in the form of career concerns, broadly speaking, include long-horizon effects such as promotion opportunities within and outside the firm and potential prestigious appointments in other organizations. Hermalin and Weisbach (2007) analytically examine a managerial career concern setting and show that disclosure quality improves with more career concerns. We consider CEO age as a proxy for implicit incentive: Young CEOs are likely to have more career concerns than their older counterparts, because of their longer-horizon. As such, we hypothesize that young CEOs are more likely to provide earnings forecasts than old CEOs.

The management literature has consistently documented the gender gap especially in executive and CEO positions. For example, Daily et al. (1999) examine the extent to which female executives have overcome the glass ceiling and find that women's representation in CEO

positions remains small. Eagly and Carli (2003) find that female CEOs have to overcome strong barriers, and as such they are expected to demonstrate a higher level of ability/competence (also see Atkinson et al. [2003]). This literature suggests that compared to their male counterparts, female CEOs are likely to have greater career concern in the form of being under pressure to build their reputation and trust with various stakeholders including investors. Thus, we hypothesize that female CEOs are more likely to provide earnings forecasts than their male counterparts: CEO gender is an implicit incentive for providing voluntary disclosures.

Data on CEO age and gender are obtained from Standard and Poor's ExecComp database. Whenever the data on CEO age is missing in ExecComp, which occurs in roughly 30% of the cases, we obtain the data on CEO age from either the firm's proxy statements or news reports from Factiva. We rank-order CEOs age into deciles in descending order, i.e., the higher rank indicates higher implicit incentives. CEO gender is an indicator variable if the CEO is a female. Following Nagar et al. (2003), we measure explicit incentives as the percentage of CEO's equity compensation from grants of stocks and options, and the value of CEO's equity holding.

We use the quarterly management earnings forecasts from Thompson First Call for the period 1993 to 2005. In particular, we consider a firm-quarter to have a management earnings forecast if there is at least one management earnings forecast in the period between the last quarter's earnings announcement and the end of the current fiscal quarter. We find that firms with young CEOs provide earnings forecasts 23% of the time, while firms with old CEOs

provide earnings forecasts 18% of the time: a difference of roughly 30% $= [(23 - 18)/18]$.

Similarly, female CEOs provide earnings forecast 41% of the time, while their male counterparts provide earnings forecasts 21% of the time: a difference of roughly 50%.

We examine the association between the incidence of management earnings forecasts and implicit and explicit incentives after controlling for other demand- and supply-side factors that have been shown by prior research to be related to management's earnings forecasts. We find that both explicit and implicit incentives are positively associated with managers' earnings forecasts. In particular, we find that the marginal probability that young (female) CEOs provide earnings forecasts compared to their old (male) counterparts is 3% (11%), *ceteris paribus*. We also find that the percentage of CEO compensation in equity and option grants is positively associated with managers' earnings forecasts: the marginal probability of the CEO with highest proportion of stock-based compensation providing earnings forecasts, compared to the CEO with the lowest proportion, is 3% controlling for other factors.

We also consider an alternative research design to control for firm characteristics that influence the likelihood of management earnings forecasts as Nagar et al. (2003) stress the importance of controlling for firm characteristics. In this alternative research design, we consider a subsample of firms with at least two different CEOs. In other words, we compare the management forecast difference for two different CEOs who work for the same firm at the different points in time. We examine the association between the proportion of firm-quarters that a firm-CEO combination provides an earnings forecast, with the average implicit and explicit

incentives after controlling for the other demand- and supply side factors as control variables.

We find that both implicit and explicit incentives are positively associated with management earnings forecasts.

Predicting that founder-CEOs may not have as strong career concerns as non-founder-CEOs do, we also partition the sample into one with founder-CEOs and the one without. Compared to the non-founder-CEO, founder-CEOs have a longer horizon and the Type I agency problems arising from the separation of ownership and control are less severe (see Ali et al. [2007], Anderson and Reeb [2003]). It follows that compared to non-founder-CEOs, the investors are less likely to demand voluntary disclosures from founder-CEOs. Consistent with these arguments we find that both implicit and explicit incentives are associated with the likelihood of management earnings forecasts for non-founder-CEO firms, but not for the founder-CEO firms.

For career concerns, the implication from a good news disclosure would be different from a bad news disclosure, we then examine the relationship between explicit/implicit incentives and the type of news, i.e., good versus bad news. Kothari et al. (2008) argues that managers have the incentives to forecast good news due to managerial career concerns, and show evidence consistent with managers using private channels of communication for good news. Kasznik and Lev (1995) and Skinner (1995), on the other hand, show that managers are more likely to provide earnings forecasts for bad news, than good news due to litigation concerns. As such, examining the relationship between implicit incentives and management earnings forecasts will provide

insights into the career concern argument of Kothari et al. (2008), and the litigation/reputation argument for bad news forecasts. We find that young CEOs are more likely to issue good news quarterly earnings forecasts than their older counterparts, while the likelihood of issuing bad news earnings forecasts for young CEOs is similar to that of old CEOs. Female CEOs are more likely to issue both good news and bad news earnings forecasts, than their male counterparts. These findings collectively suggest that the managerial career concern (litigation) hypothesis is consistent with issuing good (bad) news forecasts.

We finally provide exploratory evidence on implicit/explicit incentives and the nature of forecasts, i.e., quantitative and qualitative forecasts. We find that compared to non-forecasters both explicit and implicit incentives are positively associated with the likelihood of issuing quantitative forecasts. However, only female CEOs are more likely to issue qualitative forecasts. Among the firms that provide earnings forecasts, both implicit and explicit incentives are not associated with the nature of disclosure. This suggests that while incentives motivate managers to provide forecasts, it does not appear to affect the nature of their forecast.

We contribute to the literature that relates managerial incentives to voluntary disclosure. First, we empirically document the how implicit incentives (career concerns) would motivate CEOs to voluntarily provide private information. We thus extend Nagar et al. (2003) who show that equity-based explicit incentives motivate CEOs to make more earnings forecasts. In addition, implicit incentives in the form of career concerns demonstrate the link between the labor market forces and the mitigation of the agency problem on disclosure. Second, we provide

direct evidence on the insights over the adverse selection problem documented by Kothari et al. (2008). Kothari et al. (2008) develop the argument relating managerial career concerns and channels of disclosure and test the hypothesis using stock price reactions. The advantage of their research design is that the stock price reaction includes not only publicly disclosed earnings forecasts, but also private communications. This helps them to infer that CEOs “leak” the good news. In contrast, we directly examine CEOs’ disclosure behavior and tie them to their implicit incentives. We thus provide insights into whether CEOs provide more earnings forecasts due to career concerns. Lastly, by implication our results provide a rationale for a general observation that female managers’ compensation is lower than their male counterparts (see Bertrand and Hallock [2001], Bertrand et al. [2008]). In particular, the results suggest that implicit incentives for reputation building with investors by female CEOs is associated with more earnings forecasts. As such, female CEOs’ reputation on average is lower, which potentially leads to lower compensation (the gender gap).

The rest of the paper proceeds as follows. We discuss the research question and develop our hypotheses in section 2. Section 3 then provides the empirical analyses and finally, we provide our concluding remarks in section 4.

2. Research Question and Hypotheses Development

2.1 Research Question

Nagar et al. (2003) characterize the agency problem of managers’ reluctance to disclose private information. While managers acquire private information they are reluctant to disclose

them to investors because doing so will enhance the investors' ability to discipline managers. In particular, they argue that not disclosing private information enables managers to (a) deter their replacement (Shleifer and Vishny [1989]), (b) enhance their rent-seeking activities (Edlin and Stiglitz [1995]), and (c) prevent the labor market from reassessing their ability (Nagar [1999]). They argue that stock-based incentives can effectively encourage disclosure and show that the frequency of management earnings forecasts is positively associated with equity-based incentives. This suggests that explicit incentives in the form of CEO stock-based compensation provide incentives for managers to disclose private information.

Gibbons and Murphy (1992) suggest that implicit incentives such as managerial career concerns also help to mitigate agency problems. Managerial career concerns is likely to influence voluntary disclosures because the information provided by the managers can be used to value not only the firm, but also the managers' talent and ability (see Nagar [1999], Verrecchia [2001], Jensen [2005], Kothari et al. [2006]). As such, for those CEOs whose talent or ability level is less known to the market, voluntary disclosure is a mechanism to help reassess their ability.¹ Implicit incentives or career concerns have long been recognized and documented to affect managers' behavior (see Fama [1980], Lazear and Rosen [1981] or Chevalier and Ellison [1999]).

¹ Graham et al. (2005) in their survey of CFOs find that an important motivation for voluntary disclosure is to build reputation with the investors, which is a form of managerial career concerns. They quote the following statement from a CFO: 'developing a reputation for transparent reporting is the key factor in motivating voluntary disclosures.' They add that 'one CFO mentions that such a reputation buys him/her the flexibility to take strategic actions that the Street will trust.' Thus, Graham et al.'s (2005) survey of CFOs also suggests the relationship between implicit incentives and voluntary disclosure.

However, the relationship between implicit incentives and the agency problem of disclosure has not been directly examined.² We thus examine whether implicit incentives, in addition to explicit incentives help to mitigate the manager's reluctance to provide private information. In particular, our objective is to examine whether implicit incentives related to managerial career concerns are associated with management earnings forecasts.

2.2 Hypothesis Development

Companies' corporate disclosure policy guidelines suggest that even though the general counsels (CLOs), CFOs and CEOs are part of the voluntary disclosure team, the CEOs have the ultimate decision-right on disclosures (for example see Nexen's Policy Number 160 on External Communications).³ Accordingly, we examine managerial career concerns and reputation building with investors by considering some personal traits of CEOs.

2.2.1 CEO Age and Voluntary Disclosure

Young CEOs in general have more years ahead before their retirement than old CEOs. The longer horizon of young CEOs, compared to old CEOs translates into more unearned potential for their human capital. Voluntary disclosure will help to increase the value of human capital by building reputation with the investors (Verrecchia [2001]). As such, compared to the old CEOs, the young CEOs are likely to reap more benefits by building reputation that affects

² Gibbons and Murphy (1992) examine the relation between explicit and implicit incentives by showing that when career concerns are high, the monetary incentive could be low.

³ A typical practice is for such policy guidelines to be suggested/ prepared by the Disclosure Review Committee and approved by the Board of Directors. See also a recent event about how former general council of Bank of America (Timothy J. Mayopoulos) got fired right before its merger with Merrill Lynch.

the value of future human capital. Or stated differently, old CEOs are likely to be ‘well-known’ to investors reducing their incentive for voluntary disclosure to build reputation.

Hermalin and Weisbach (2007) make this notion precise. They consider a model with managerial career concerns, where the manager’s ability is not known to either the manager or the investors. Consequently, as the manager learns about his unknown ability, he has the incentive to communicate it to investors. They show that young managers will have stronger incentives to improve transparency, i.e., provide more information voluntarily due to their career concerns.⁴

To summarize, compared to old CEOs, young CEOs are likely to have less of a track record. If voluntary disclosure helps build reputation of young CEOs in terms of his/her ability to demonstrate that they are ‘in control’ of the goings-on in their enterprise, then we expect young CEOs to provide more voluntary disclosures than old CEOs. These arguments are summarized in the following hypothesis stated in alternative form.⁵

H1: Compared to old CEOs, young CEOs are more likely to provide earnings forecasts, ceteris paribus.

⁴ Gibbons and Murphy (1992) relate implicit and explicit incentives. They consider a manager with unknown ability and compare the evolution of explicit incentives in a moral hazard setting. They show that explicit incentives are higher at the end of the manager’s tenure than that at the beginning of their tenure. In other words, the effects of managerial career concerns are likely to be stronger for young CEOs than old CEOs. The implicit incentives argument is also consistent with the notion of herding and career concerns. Stein (2003) states young CEOs with less track record would have more to gain from trying to manipulate the market’s assessment of their ability. It follows that herding behavior is more likely among young managers than old managers (also see Perndergast and Stole [1996]), which is also a reputation effect.

⁵ Boone et al. (2008) make similar arguments when they document that CEO personal traits such as age and tenure are associated with board characteristics.

There could be other factors for the young CEOs that drive the association hypothesized in H1. For instance, young CEOs may be less risk averse than old CEOs. Bertrand and Schoar (2003) show that the older managers are more conservative in firm's investment decision and financial policies than younger ones. Similarly, Beber and Fabbri (2008) document that firms with young CEOs are more risk-taking in foreign exchange speculation. If the young CEOs do not internalize the litigation risk and/or the proprietary costs associated with disclosure due to either their higher risk-tolerance or overconfidence (Barber and Odean [2001]), they may choose voluntarily disclose more than old CEOs. We address this alternative explanation (risk-averse) and gain additional insights into career concerns by using CEO gender as an additional personal trait to examine the association between career concern and voluntary disclosure. The reason is that females are in general perceived to be more risk-averse than males (see Eagly and Carli [2003]), and thus with this second measure we mitigate concerns of this alternative explanation.⁶

2.2.2 CEO gender and voluntary disclosure

The gender gap especially in CEO positions has been widely documented. For example, Daily et al. (1999) examine the extent to which women have to overcome the glass ceiling and find that women's representation in CEO positions remains small. Eagly and Carli (2003) argue that women in male-dominated positions such as the office of CEOs have to overcome strong barriers, and as such they are expected to demonstrate a higher level of ability/competence. That

⁶ Taylor (2009) shows that female managers in general underestimate their performance evaluation they receive from their bosses and others while male managers would overestimate.

is, female CEOs facing more career barriers (the so called “glass ceiling”), may need to do more in order to prove that they are up-to-the-mark, i.e., a form of career concern. Consistent with this notion, Atkinson et al. (2003) document that even though there is no difference in performance between male and female mutual fund managers, the fund inflow is on average lower for female fund managers than male fund managers. If voluntary disclosure is a mechanism that a CEO can use to build reputation, then we expect that female CEOs provide more earnings forecasts than their male counterparts.⁷ These arguments are summarized in the following hypothesis.

H2: Compared to male CEOs, female CEOs are more likely to provide earnings forecasts, ceteris paribus.

2.2.3 Competing models

Prior research suggests some competing hypothesis between voluntary disclosure and implicit incentives. First, Ajinkya and Gift’s (1984) expectations adjustment hypothesis implies that managers will voluntarily disclose information to align market’s expectations whenever the market’s expectations deviate materially from their own. Under this expectation adjustment hypothesis, it follows that incentives or agency problems should not be associated with management earnings forecasts. However, given Nagar et al.’s (2003) evidence we state the hypothesis in the fashion we have done above.

⁷ Adams and Ferreira (2009) shows evidence consistent with the notion that female directors appear to be ‘better monitors.’ If female CEOs want to convey the enhanced ability of monitoring to the investors, then female CEOs can be more transparent to show that they are in-control of the goings-on in the enterprise.

Second, CEO tenure likely affects the association between implicit incentive and voluntary disclosure. Gibbons and Murphy (1992) use CEO tenure as a proxy for career concerns to examine the relationship between implicit and explicit incentives. Thus, hypothesis H1 can be equivalently stated in terms of CEO tenure. However, CEO tenure may capture the managers' career concern with the particular firm he/she works with, but it does not reflect the CEO's career concerns over his/her professional career. In addition, CEO's early years with a company, i.e., short CEO tenure could indicate either a high career concern or a high ability because a firm could hire an old reputable CEO. Thus, CEO tenure may not be a good proxy for implicit incentives for voluntary disclosure. However, ignoring the CEO tenure effect can lead to a correlated omitted variable bias in the empirical investigation. As such, we control for CEO tenure in the research design.

Third, Brochet et al. (2008) argue that managers with less expertise will be reluctant to voluntarily disclose information. Consistent with this notion, they document a drop of management earnings forecasts after CFO turnovers. To the extent that either CEO age or gender measures CEOs' experience or expertise, we expect an opposite association between implicit incentives (age and gender) and voluntary disclosure from our hypotheses.

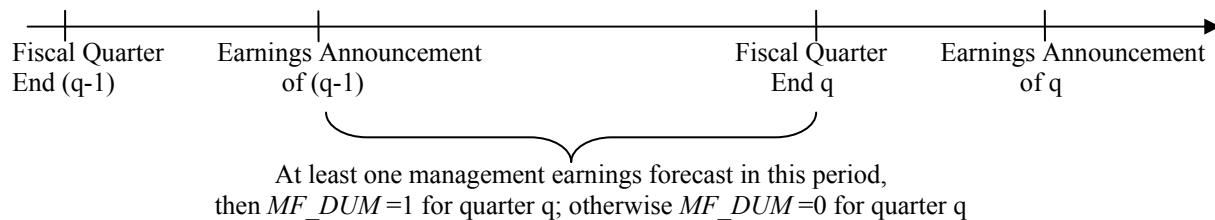
3. Variable Definitions, Research Design and Empirical Analysis

3.1 Variable Definitions

3.1.1 Test Variables

We use the management’s quarterly earnings forecast as the measure of voluntary disclosure. In particular, consistent with previous studies that use earnings forecasts, we obtain the quarterly management forecast data from Thompson First Call (see for example, Ali et al. [2007]). We consider a firm-quarter to have a management earnings forecast if there is at least one management forecast between the last quarter’s earnings announcement and the end of the current fiscal quarter. In essence, we do not consider earnings pre-announcements as management forecasts.⁸ Thus, *MF_DUM* is a dummy variable that is one if there is a management forecast in a firm-quarter, and zero otherwise.

Figure 1: Timeline for Defining *MF_DUM*



As discussed earlier, we proxy for implicit incentives with CEO age and gender. We obtain CEO age and gender variables from ExecuComp. Whenever the CEO age or gender is not available in ExecuComp, which occurs in more than thirty percent of the cases, we gather data from the Proxy statements or the Factiva news announcements on firing or hiring a CEO. We then rank CEO’s age into deciles in descending order from one to zero, with one indicating the

⁸ Including preannouncements as management earnings forecasts does not affect the results qualitatively.

youngest CEO and 0 indicating the oldest CEO (label the variable as *AGE_RANK*).⁹ *FEMALE* is a dummy variable with one indicating a female CEO, and zero indicating a male CEO.

Following, Nagar et al (2003), explicit incentives are proxied using (a) the percentage of CEO's stock-based compensation to total compensation (*COMP*), and (b) the amount of equity held by the CEO (*WEALTH*). Using Execucomp data, we compute the ratio of the sum of total value of stock option grants plus the value of restricted stock grants to total direct CEO compensation. Total direct CEO compensation includes bonus, salary, other annual cash awards, value of restricted stock grants, net value of stock options grants, long-term incentive payout, and all other compensation in a year. The value of the stock option grants is based on Standard and Poor's modified Black-Scholes options valuation methodology. *WEALTH* is the log of the dollar value of the CEO's shareholdings. We rank *COMP* and *WEALTH* into ten deciles each year, scaled such that the highest (lowest) decile *COMP* and *WEALTH* is one (zero).

3.1.2 Control Variables

We include numerous firm-specific factors affecting disclosure as control variables based on prior studies.

Firm size, risk and growth

Firm-size is measured as the natural log of market capitalization at the beginning of the fiscal quarter (*SIZE*). *SIZE* is found to be positively related to the likelihood of management forecasts, probably because of economies of scale (Lang and Lundholm [1993]) as well as

⁹ We rank this for each year separately, and obtain qualitatively similar results.

proprietary costs (Bamber and Cheon [1998]). *BTM* is the book-to-market ratio computed as the book value of equity at the beginning of the quarter divided by the market capitalization at the beginning of the quarter. *BTM* is included to control for risk as well as growth and is expected to be positively associated with earnings forecasts. We also use the firms' financial distress as an additional control variable for risk. *DISTRESS* is an indicator variable that equals one if Altman-Z score is less than 1.8, and zero otherwise. *SEO* is one if the firm issues a seasoned equity offering in the quarter, and zero otherwise. The issue of seasoned equity offering is a signal for higher growth opportunities. In our study, young CEOs are likely to be with smaller sized companies with higher growth options, i.e., lower book-to-market ratio and more likely to have seasoned equity offering with greater distress. As such, it is important to control for these effects on disclosure.

Hightech and Regulated Industries

HIGHTECH is an indicator variable that equals one if the firm operates in any of the following industries: Drugs, Computers, Electronics, Programming, zero otherwise. Firms operating these industries have a higher likelihood of exposure to shareholder lawsuits due to larger price fluctuations (Kasznik and Lev [1995]). As such, *HIGHTECH* is expected to be negatively associated with disclosures due to litigation exposure, but positively associated with disclosures due to higher information asymmetry. *REGULATED* is an indicator variable that equals one if the firm operates in any of the following industries: Telephone, TV, Cable, Communications, Gas, Electricity, Water, and zero otherwise. Firms operating in regulated

industries are likely to have a smaller demand for management forecasts because of regulated firms' practice of providing considerable amount of information to the regulatory body and therefore indirectly to the investors. As such, *REGULATED* is expected to be negatively associated with earnings forecasts (Kasznik and Lev [1995]). In our study, given that younger CEOs are possibly to be founder members of companies in the high-tech industry, especially during the dotcom period and are less likely to be associated with regulated industries, it is important to control for these variables.

Earnings News and Profitability

We control for the earnings news: *CH_EPS* is the change in earnings per share from that of the same quarter in the previous fiscal year, deflated by stock price at the beginning of the quarter. Both Kasznik and Lev (1995) and Skinner (1994) argue and show that firms' litigation exposure induces preemptive disclosure of bad news, compared to good news. As such, *CH_EPS* is expected to be negatively associated with earnings forecasts. *ROA* is return on asset [#8 / #44] is a control for profitability and controls for the effect of profitability on the likelihood of management forecast (Ali et al. [2007]).

CEO tenure and firmage

As discussed earlier with the competing hypothesis, CEO tenure is likely to be correlated with CEO age. In particular, longer CEO tenure is likely to also be a CEO who is older, and vice versa. As such, the association between CEO age and earnings forecasts could be due to the correlated omitted variable, CEO tenure. *TENURE* is the number of years the CEO has been in

the office measured from Execucomp and the hand-gathered data. We expect CEO tenure to be negatively associated with earnings forecasts.¹⁰ *FIRMAGE* is the number of years that the firm has been covered in Compustat. We control for firm-age because it is likely that young CEOs are likely to be associated with younger firms. Also, to the extent that younger firms are likely to have more information asymmetry, the association between CEO age and earnings forecasts due to the correlated omitted variable, firm-age.

Accounting Quality

Prior studies indicate that firms' accounting quality is associated with earnings forecasts (Hutton and Stocken [2007]). We measure accounting quality using the following variables: *EINFO* is the earnings informativeness measured as the adjusted R^2 from a regression of 12-month stock returns on annual earnings and changes in earnings for all firms in the same 4-digit SIC code for the time period 1993 – 2005. *SPEITEM* is special item (#17) scaled by average total assets.¹¹ *LACC_BDEP* is lagged accrual before depreciation $[(#123 - #308 + #14) / \text{average total asset}]$. *LDEP* is lagged depreciation $[#14 / \text{average total asset}]$. *PERSIST* is earnings persistence computed as the first-order autocorrelation coefficient of realized earnings. *VOLEPS* is earnings volatility, the standard deviation of annual earnings using up to 15 years of prior earnings realizations. In our study, to the extent that younger CEOs are likely to manage firms with

¹⁰ As noted earlier, given that small CEO tenure need not necessarily be associated with career concerns, we do not interpret this expectation as related to career concern.

¹¹ The # refers to the Compustat data item.

different accounting quality characteristics than their older counterparts (such as the dotcom firms), we need to control for these effects.

Investor Demand

We control for investor demand for information using analyst following and institutional investor holdings (Lang and Lundholm [1993]). *ANAFOL* is the number of analysts following the firm and *INST* is the percentage of institutional investors' shareholding at the beginning of the quarter. This captures demand for information from the firm by the sophisticated investors.

Other control variables

Regulation Fair Disclosure (RFD), which became effective in 2000, has effectively shut down the private channels of communication between managers and selected analysts/investors, and as such resulted in a drastic increase in public voluntary disclosures across board. Anilowski et al. (2007) find that management earnings forecasts have increased substantially after RFD. In particular, while roughly 10% of firms provided earnings forecasts in the mid-1990s, i.e., before RFD, 25% of firms provide earnings forecasts in 2001-2003, i.e., after RFD. Thus, we include a control variable for the regime change: *FD* is an indicator variable that equals one if year is after 2001 (inclusive), and zero otherwise.

3.2 Sample and Descriptive Statistics

We obtain the quarterly management forecast data from Thompson First Call, quarterly financial statement data from Compustat, and analysts' quarterly forecast from I/B/E/S. We delete observations with values greater (less) than (1%) 99% of the empirical distribution for any

of the continuous variable. The final sample contains 41,807 firm-quarter observations from 1993 to 2005.

Table 1 compares the characteristics of firms with CEOs age and gender. For this purpose, we classify firm-quarters into three groups based on CEO age: young, middle-aged and old, with the bottom (top) third considered young (old) CEOs. Firms with young (old) CEOs provide earnings forecasts in 23% (18%) of the firm-quarters: young CEOs are roughly 30% ($=(23-18)/18$) more likely to provide earnings forecasts than old CEOs which is consistent with hypothesis H1. Female CEOs are twice as likely to provide earning forecasts, than their male counterparts, which is consistent with hypothesis H2. On average, the age of the young CEO group is 47 years, while the age of the old CEO group is 63 years. Thus, the horizon of the young CEOs is considerably longer than that of old CEOs. The young CEOs' tenure with the firm is roughly 4 years, while the old CEOs tenure with the firm is roughly 8 years. Interestingly, 2.6% of the young CEOs are females, while less than 0.1% of the old CEOs are females.

Though the young CEOs' proportion of stock-based compensation to total compensation is higher than that of the old CEOs, their wealth tied to the firm is lower than the old CEOs consistent with their tenure statistics. Similarly, while the female CEO's proportion of stock-based compensation to total compensation is higher than that of their male counterparts, the female CEOs wealth tied to the firm is lower. This shows that *COMP* which is a flow measure of explicit incentives is negatively related to CEO age and gender, while *WEALTH* which is a stock measure of explicit incentives is positively related with CEO age and gender.

Firms with young or female CEOs have lower book-to-market ratios, indicating that they are high growth and more intangible intensive firms. Firms with young or female CEOs are also smaller in market capitalization, i.e., size, than firms with old and male CEOs. Firms with young or female CEOs are more (less) likely to be high technology (regulated) industry than firms with old and male CEOs. Firms with old CEOs have higher profitability as indicated by the *ROA*. Firms with young CEOs have more noisy earnings than with old CEOs, as such there may be increasing demand for voluntary disclosures. The other demand factors such as analyst following, institutional investor holding and seasoned equity offering are similar for young and old CEOs, and male and female CEOs. Overall, the differences in the demand and supply of voluntary disclosure characteristics across firms with young and old, and male and female suggest that these factors are important controls in our tests of hypotheses one and two.

3.3 Multivariate Test of Hypotheses

To test H1 and H2, we augment the model in Ali et al. (2007) and estimate the following logistic regression.

$$\begin{aligned}
 MF_DUM_{it} = & \alpha_0 + \alpha_1 AGE_RANK_{it} + \alpha_2 FEMALE_{it} + \alpha_3 COMP_{it} + \alpha_4 WEALTH_{it} + \\
 & \alpha_5 BTM_{it} + \alpha_6 SIZE_{it} + \alpha_7 HIGHTECH_{it} + \alpha_8 REGULATED_{it} + \alpha_9 ROA_{it} + \\
 & \alpha_{10} CH_EPS_{it} + \alpha_{11} FIRMAGE_{it} + \alpha_{12} EINFO_{it} + \alpha_{13} SPEITEM_{it} + \\
 & \alpha_{14} LACC_BDEP_{it} + \alpha_{15} LDEP_{it} + \alpha_{16} PERSIST_{it} + \alpha_{17} VOLEPS_{it} + \\
 & \alpha_{16} DISTRESS_{it} + \alpha_{17} ANAFOL_{it} + \alpha_{18} INST_{it-1} + \alpha_{19} SEO_{it} + \alpha_{20} TENURE_{it} + \\
 & \alpha_{21} FD_{it} + \varepsilon_{it}
 \end{aligned} \tag{1}$$

where all variables are defined in the Appendix.

Table 2 reports the logistic regression results of equation (1). We adjust the standard errors from the estimation using the Huber-White procedure. The columns on the right side of

the table provide the benchmark with only the explicit incentives. We find that while *COMP* is positively associated with earnings forecasts, *WEALTH* is not statistically significant. This suggests that explicit incentives measured as a flow are more strongly associated with earnings forecasts.¹² As discussed in Nagar et al. (2003) while we would like to measure the exposure of the CEOs wealth tied to the firm, the CEOs total wealth is not available. As such, the stock measure may not capture the explicit incentives appropriately. More importantly, the wealth variable also measures the CEO holdings: higher CEO holdings may be associated with less demand for disclosure and vice versa (see Nagar et al.'s [2003] discussion on insider holding). This may also be the reason for the no association between CEO wealth and earnings forecasts.

The left column provides the estimates of equation (1). The coefficient on *AGE_RANK* is 0.228 (p-value=0.040), indicating that young CEOs are more likely than old CEOs to provide earnings forecasts. The marginal probability is computed as the difference in estimated probability between *AGE_RANK*=1 and *AGE_RANK*=0 holding all the other variables at the average level. The incremental probability of a youngest CEO making an earnings forecast compared to the oldest CEO making an earnings forecast is 3.1%. The coefficient on *FEMALE* is 0.668 (p-value=0.008), indicating that female CEOs are more likely to provide earnings forecasts than their male counterparts. This coefficient estimate translates to an incremental probability of 11% that a female CEO provides earnings forecasts compared to male CEOs,

¹² Nagar et al. (2003) also show stronger result for equity compensation variable than for wealth variable.

ceteris paribus. This is consistent with implicit incentives in the form of managerial career concerns mitigating the agency problem of disclosure and supports hypotheses H1 and H2.

Consistent with Nagar et al.'s (2003) finding the coefficient estimate on *COMP_RANK* is 0.223 (p-value=0.013) indicating that explicit incentive is positively associated with earnings forecasts. The incremental probability of the CEO with lowest percentage of stock-based compensation providing earnings forecasts, compared to the CEO with highest percentage of stock-based compensation is 3%. The coefficient estimate on *WEALTH_RANK* is -0.067 (p-value=0.613) indicating that CEO wealth is not associated with earnings forecasts. As discussed earlier CEO wealth is positively associated with the incentive to provide forecasts, but negatively associated with the demand for forecasts (see also Nagar et al.'s [2003] discussion). The results suggest that both implicit incentives and explicit incentives have positive effect on management earnings forecasts.

Also consistent with Kasznik and Lev (1995) and Ali et al. (2007), the coefficients on *BTM* is positive, and on *REGULATED* and *CH_EPS* are negative. The coefficient on *FIRMAGE* is positive, suggesting that older firms tend to release more earnings forecast, ceteris paribus. The coefficients on *SPEITEM*, *PERSIST*, *VOLEPS*, and *DISTRESS* are negative, and on *LDEP* is positive, suggesting that firms with higher earnings quality and better financial health have lower demand to make earnings forecasts. The coefficient on *ANAFOL* is positive, consistent with the positive association between analysts forecast and voluntary disclosure documented by Lang and Lundholm (1996). The coefficient on *INST* is negative, suggesting that higher institutional

holding results in lower demand on public earnings forecasts, since institutional holders may have more private channels to collect information. The coefficient on *TENURE* is negative, suggesting that CEOs with shorter tenure have more incentive to provide earnings forecasts than CEOs with longer tenure. The coefficient on *FD* is positive, consistent with the notion that Regulation Fair Disclosure has effectively shut down the private channels of communication between managers and analysts/investors, and as such resulted in an increase in public voluntary disclosures (Anilowski et al. [2007]).

3.4 Alternative Research Design to Control for Firm Characteristics

Prior studies suggest that firm characteristics such as accounting quality, size, growth and financing needs influence investor demand for and managerial supply of disclosure (Bamber and Cheon [1998], Lang and Lundholm [1993]). While we have controlled for the firm characteristics that are likely to be correlated with explicit/implicit incentives and earnings forecasts above, now we consider a subsample where we control for the firm and examine the difference in CEO characteristics. In particular, we consider a subsample of firms with at least two CEOs over the years: Each firm in this subsample has two CEOs. We average all variables over the CEOs span with the company. Thus, there is one observation for each CEO, and two observations for each firm. We estimate equation (1) using ordinary least squares with the proportion of quarters with management forecast under each CEO as the dependant variable and all test and control variables are the averages for each CEO. We include an additional control regime *AFTER* to separate out the disclosure effects of the two CEOs.

Table 3 reports the OLS regression for the subsample of firms with two different CEOs: the standard errors for computing the t-statistics are corrected using the Huber-White-Sandwich procedure with clusters at a firm level. The coefficient on *MAGE_RANK* is 0.058 (p-value = 0.033), consistent with hypothesis H1. The coefficient on *MCOMP_RANK* is 0.061 (p-value = 0.027) indicating that explicit incentives are positively associated with earnings forecasts. The coefficient on *MFEMALE* is -0.010 (p-value = 0.878): this is likely because in this subsample there are not many changes in firms from male to female CEO and vice versa. As such the *MFEMALE* variable (which by definition is one or zero) lacks statistical power. Overall, the result provides support for both implicit and explicit incentives being positively related to voluntary disclosures. The additional variable *AFTER* is an indicator variable that is one for the new CEO. The coefficient on *AFTER* is -0.040 (p-value=0.071) indicating that new CEOs are less likely to disclosure voluntarily consistent with Brochet et al. (2008).

3.5 Founder CEO, Implicit/Explicit Incentives and Earnings Forecasts

Founder CEOs are entrepreneurs who started and manage their own businesses, and thus by definition are not likely to be influenced by career concerns. We thus examine firms with founder CEO and non-founder-CEO separately, so as to provide additional triangulating evidence on the relationship between implicit incentives and management earnings forecasts.

Anderson and Reeb (2003) argue and find that firms that are substantially owned by the founder entrepreneurs and their family outperform their counterparts, due to less severe agency Type I agency problems, i.e., agency problems arising from separation of ownership and control.

Villalonga and Amit (2006) find that even for companies that are owned substantially by the founding family members, companies without founding CEO have severe Type II agency problems, i.e., agency problems arising from conflicts between controlling and non-controlling shareholders. Anderson and Reeb (2003) argue that founder CEOs' knowledge about the business and expertise enables them to outperform other firms. However, due to their entrepreneurial nature, their implicit incentive to provide more disclosure when they are young or females is not likely to apply. In other words, their entrepreneurial spirit and ownership in itself signals their expertise. This prediction is consistent with recent findings by Ali et al. (2007) and Chen et al. (2008): firms owned by founding family members do not provide additional voluntary disclosures.

Table 4 reports the logistic regression results of equation (1) for firms with founder CEOs and firms with non-founder-CEOs separately. For non-founder (founder-) CEOs, the coefficient on *AGE_RANK* is 0.252 with p-value = 0.039 (0.045 with p-value = 0.875), indicating that young non-founder CEO firms are more likely than old non-founder CEOs to provide earnings forecasts; for founder CEO firms the age of the CEO is not related to the likelihood of management earnings forecasts. Similarly, for non-founder (founder-) CEOs, the coefficient on *FEMALE* is 0.761 with p-value = 0.002 (-2.120 with p-value = 0.110), indicating that female non-founder CEOs are more likely than male non-founder CEOs to provide earnings forecasts; for founder CEO firms the gender is negatively related to management earnings forecasts and weakly statistically significant. This suggests that female founder CEOs are even less likely than

their male counterparts to provide voluntary disclosure. This could occur because there are relatively fewer female founder CEOs, and hence a lack of statistical power; or, female founder CEOs have even less career concerns, i.e., more agency problems of disclosure. However, overall the results are consistent with our prediction that implicit incentives are associated with management earnings forecasts only when career concerns are relevant. This provides indirect evidence that age and gender does indeed capture elements of career concerns.

Interestingly, the relationship between explicit incentives and management earnings forecasts are also exhibit a similar pattern: explicit incentives are related to management earnings forecasts only for non-founding CEO firms. This is largely consistent with Chen et al.'s (2008) argument that family controlled firms do not have incentives to provide earnings forecasts due to their long horizon. As such motivating them through compensation is not likely to motivate them to provide earnings forecasts.

Overall, the results show that our measures of implicit incentives appear to capture the construct of career concerns.

3.5 Good/Bad News, Implicit/Explicit Incentives and Earnings Forecasts

For good news, if career concerns of building reputation with investors are captured by CEO age and gender, then implicit and explicit incentives are likely to be positively associated with earnings forecasts (Cheng and Warfield [2005]). Kasznik and Lev (1995) and Skinner (1995) show that managers are more likely to provide earnings forecasts for bad news, than good news. This is consistent with the litigation exposure hypothesis: pre-empting bad news helps

managers decrease the class action period and thereby limit potential damages, as well as mitigate a sharp drop in share prices. Kasznik and Lev (1995) and Skinner (1995) provide evidence consistent with the notion that litigation is the driving force for disclosing bad news. It follows that neither implicit nor explicit incentives are likely to be associated with bad news earnings forecasts.¹³ We thus expect that both implicit and explicit incentives are positively associated with management forecasts for good news, but not so for bad news.

Table 5 reports the estimation of equation (1) for the subsample of firm-quarters with good and bad news, separately. The reference point for good and bad news is the extent of private information that the CEO possesses. We consider two benchmarks which implicitly assume that the CEO knows the actual earnings perfectly. In Panel A, good/bad news are defined based on the change in earnings per share, *CH_EPS* computed as actual earnings per share (EPS) minus EPS in the same quarter of the prior year. An observation is classified as a good news observation if *CH_EPS* is non-negative. The set of columns on the left side of Table 5, Panel A contains the results of estimating equation (1) when *CH_EPS* is non-negative, i.e., good news. The coefficient on *AGE_RANK* is 0.340 (p-value=0.007) and the coefficient on *FEMALE* is 0.646 (p-value=0.022), suggesting that given good news, young and female CEOs are more likely to make earnings forecasts. The coefficient estimate on *COMP_RANK* is 0.141

¹³ This is consistent with the opportunistic motive of managers to provide forecasts to decrease the stock price so as to obtain more stock options (Aboody and Kasznik [2000], McAnally et al. [2008]). However, such opportunistic behavior cannot be sustained in equilibrium. As Aboody and Kasznik (2000) note, rational investors will eventually recognize such opportunistic disclosures and discipline the managers. Skinner (1995) argues that managers build reputation by providing bad news forecasts in a timely fashion (see also Ali et al. [2007]).

(p-value=0.193) which is weakly significant. The set of columns on the right side of Table 5, Panel A contains the results of estimating equation (1) when CH_EPS is negative, i.e., bad news. The coefficient on AGE_RANK is 0.046 (p-value=0.699) and the coefficient on $FEMALE$ is 0.687 (p-value=0.015), suggesting that given bad news, while female CEOs are more likely to make earnings forecasts, CEO age does not affect earnings forecast behavior. In Panel B of Table 5, we define good/bad news based on Actual EPS minus Mean analysts' earliest earnings forecast for the quarter, $SURP_E$. In other words, the benchmark for expected earnings is the analysts' earnings forecast. The results are qualitatively similar to that discussed in Panel A. These results imply that young CEOs are more likely to provide earnings forecasts than their old counterparts, when they have good news. Young CEOs are similar to their older counterparts when they have bad news, indicating that litigation rather than reputation building is likely the dominant explanation for disclosure of bad news. However, female CEOs are likely to make forecasts irrespective of good or bad news, indicating stronger reputation concerns.

3.6 Quantitative/Qualitative Forecasts and Implicit/Explicit Incentives

In this section, we examine the association between implicit/explicit incentives and the type of forecast, i.e., quantitative versus qualitative. On the one hand, given that young CEOs are likely to be less experienced, they may be inclined to provide qualitative forecasts (see Brochet et al., [2008]). This is because the litigation concerns will outweigh the benefits of providing a quantitative forecast. On the other hand, if young CEOs build their reputation by providing forecasts, then they are likely to build their reputation with investors in a more credible fashion

by providing quantitative forecasts (see discussion with hypothesis H1). As such, we provide an exploratory and descriptive analysis of the nature of forecasts that young CEOs and Female CEOs provide.

First, we focus on the comparison between firm-quarters with qualitative (quantitative) forecasts and firm-quarters without any earnings forecast, and count the number of forecasts that a firm makes in each quarter. For this purpose, we use the definition of Anilowski et al. (2007) to classify forecasts as quantitative and qualitative.¹⁴ When a firm makes both a quantitative and a qualitative forecast we treat it as quantitative forecast-firm-quarter. Out of 41,807 firm-quarter observations, there are 8,194 (461) firm-quarter observations classified as quantitative (qualitative) forecasts; correspondingly, and 33,152 firm-quarter observations have no forecasts. Panel A of Table 6 reports the relationship between frequency of qualitative forecasts and incentives, implicit and explicit. For this analysis, we include the non-disclosing firms and firms with qualitative forecasts in the subsample. The left set of columns presents the frequency of qualitative forecasts when the sample is independently sorted on implicit incentive, *AGE_RANK* and explicit incentive, *COMP*. In total, from out of 33,466 firm-quarter observations, there are 461 qualitative forecasts, representing 1.38%: thus, the incidence of qualitative forecasts is not

¹⁴ The following Alpha-codes in Thompson First Call are classified as Qualitative: ‘5. Meets or exceeds expectations’; ‘P. Above expectations’; ‘Q. S. Revenue/sales above expectations’; ‘D. Below expectations’; ‘J. May not meet expectations’; ‘K. May be below expectations’; R. T. Revenue sales below expectations’; ‘O. OK with expectations’; ‘N. Sundry qualitative statements’. When a forecast is classified in multiple categories, and if at least one category pertains to quantitative forecasts, then we classify such a forecast as quantitative forecast for the analysis where we examine quantitative versus qualitative forecasts.

large. The young CEOs provide qualitative forecasts 1.56% of the time as compared to Old CEOs who provide qualitative forecasts 1.19% of the time. This suggests that compared to non-disclosing firms implicit incentives as measured by CEO age provides incentives for qualitative disclosures. The CEOs who have high explicit incentives, *COMP* are twice as likely to provide qualitative forecasts as CEOs who have low explicit incentives: High *COMP* CEOs provide qualitative forecasts 2.06% of the time, while Low *COMP* CEOs provide qualitative forecasts 0.95% of the time. Female CEOs are three times as likely to provide qualitative forecasts as their male counterparts: Female CEOs provide qualitative forecasts 4.01% of the time, while male CEOs provide qualitative forecasts 1.35% of the time. Overall, both explicit and implicit incentives are positively associated with the frequency of qualitative forecasts, with age being less strong than gender.

Panel B of Table 6 reports the relationship between frequency of quantitative forecasts and incentives, implicit and explicit. The left set of columns presents the frequency of quantitative forecasts when the sample is independently sorted on implicit incentive, *AGE_RANK* and explicit incentive, *COMP*. In total, from out of 41,199 firm-quarter observations, there are 8,194 quantitative forecasts, representing 19.89%. The young CEOs provide quantitative forecasts 22.31% of the time as compared to Old CEOs who provide quantitative forecasts 16.92% of the time: thus, young CEOs are roughly 1.31 times as likely as their older counterparts in providing quantitative forecasts. The CEOs who have high explicit incentives, *COMP* are twice as likely to provide quantitative forecasts as CEOs who have low

explicit incentives: High COMP CEOs provide quantitative forecasts 26.20% of the time, while Low COMP CEOs provide quantitative forecasts 14.18% of the time. Female CEOs are also twice times as likely to provide quantitative forecasts as their male counterparts: Female CEOs provide quantitative forecasts 38.41% of the time, while male CEOs provide quantitative forecasts 19.68% of the time. Overall, similar to qualitative forecasts both explicit and implicit incentives are positively associated with the frequency of quantitative forecasts, with age being less strong than gender.

Table 6, Panel C reports the results of estimating equation (1) to examine the relationship between implicit and explicit incentives and the nature of earnings forecasts. For this analysis, we consider the subsample of qualitative forecasts and non-forecasters; and quantitative forecasters and non-forecasters. This presumes that in a firm-quarter the CEO chooses between non-disclosure and qualitative disclosure, or non-disclosure and quantitative disclosure. While the research design assumes this type of choice model, the purpose of the analysis is to gain insights into the association between incentives and nature of disclosure controlling for other factors that influences the decision to disclose. For the set of columns on the left the dependent variable is the indicator variable for qualitative earnings forecast, *QUAL_DUM*, in the sample with non-disclosure firm-quarters and qualitative forecasts firm-quarters: the firm-quarters with quantitative forecasts are not considered. The coefficient on *AGE_RANK* is 0.096 (p-value=0.656) and that on *FEMALE* is 1.184 (p-value=0.001), suggesting that age is not associated with qualitative disclosures, but female CEOs are more likely to issue qualitative

forecasts compared to their male counterparts. The coefficient estimates on *COMP* and *WEALTH*, i.e., proxies for explicit incentives are both not statistically significant. These results suggest that both explicit and implicit incentives are not associated with the likelihood of qualitative forecasts.

For the set of columns on the right of Table 6, Panel C, the dependent variable is the indicator variable for quantitative earnings forecast, *QUAN_DUM*. The coefficient on *AGE_RANK* is 0.246 (p-value=0.033), and the coefficient on *FEMALE* is 0.617 (p-value=0.019), suggesting that implicit incentives based on managerial career concerns are positively associated with the likelihood of quantitative forecasts. The coefficient estimate on *COMP* is positive and statistically significant, while that on *WEALTH* is not statistically significant. This is largely consistent with explicit incentives being positively associated with quantitative forecasts. The results of quantitative forecasts are similar to those discussed in Table 2. This is so because most of the forecasts are quantitative forecasts. Collectively the results of Tables 6 show that both implicit and explicit incentives are positively associated with quantitative forecasts.

Finally, we investigate how implicit and explicit incentives affect the choice of forecast nature, qualitative and quantitative forecasts, given that the firm wants to make earnings forecast. This research design considers the nature of disclosure as a sequential choice: A CEO decides to make a disclosure and then chooses either quantitative or qualitative forecasts. Panel A of Table 7 reports the results of univariate analysis, and Panel B of Table 7 reports the results of the logistic regression. Overall, the results show that both implicit and explicit incentives are not

associated with qualitative and quantitative forecasts. This suggests that given that a firm wants to issue earnings forecasts, implicit or explicit incentives do not affect the nature of forecasts.

4. Concluding remarks

We examined the relationship between implicit/explicit incentives and the likelihood of management earnings forecasts. We consider two personal traits as proxies for implicit incentives: CEO age and CEO gender. Similar to Nagar et al. (2003) we consider stock price based proxies as explicit incentives: CEO's percentage of equity compensation to total compensation, and CEO's equity holdings. We hypothesize and find that both implicit and explicit incentives are positively associated with the likelihood of earnings forecasts. Implicit and explicit incentives are associated with a higher likelihood of management earnings forecasts for good news. The positive association between implicit incentive and management forecast became stronger for good news. For bad news, implicit incentives proxied by CEO age is not associated with earnings forecasts, suggesting that young and old CEOs alike are likely to disclose bad news. This is likely to occur due to litigation concerns. However, for bad news, female CEOs are more likely to provide earnings forecasts than their male counterparts. This indicates that female CEOs are under more pressure to establish their reputation through voluntary disclosure. Finally, we explore the relation between explicit/implicit incentives and the nature of forecasts, qualitative and quantitative forecasts. We find that both explicit and implicit incentives are associated with quantitative forecasts, but not so for qualitative forecasts. This

could occur because there are substantially fewer qualitative earnings forecasts than quantitative earnings forecasts. The fewer qualitative forecasts may in turn reduce the power of the econometric tests. Future research could examine the content of the press releases and/or conference calls that are the mechanisms to issue such forecasts, and relate the content to managers' incentives.

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Appendix: Variable Definition

Variable	Definition
MF_DUM	an indicator variable that equals one if a firm makes any management forecast in a quarter, and zero otherwise.
AGE_RANK	scaled descending decile rank of CEO's age.
FEMALE	an indicator variable that equals one if CEO is female, and zero otherwise.
COMP	the percentage of CEO's equity compensation (grants of stocks and options) to the total compensation. Decile ranking of this variable is used in the analysis.
WEALTH	the natural log of CEO's equity holding value (including both stock and option). Decile ranking of this variable is used in the analysis.
BTM	the book-to-market ratio, defined as book value of equity at the beginning of the quarter divided by the market capitalization at the beginning of the quarter.
SIZE	the natural log of market capitalization at the beginning of the fiscal quarter.
HIGHTECH	an indicator variable that equals one if the firm operates in any of the following industries: Drugs, Computers, Electronics, Programming, and zero otherwise.
REGULATED	an indicator variable that equals one if a firm operates in any of the following industries: Telephone, TV, Cable, Communications, Gas, Electricity, Water, and zero otherwise.
ROA	return on asset.
CH_EPS	the change in earnings per share from that of the same quarter in the previous fiscal year, deflated by stock price at the beginning of the quarter.
SURP_E	earnings surprise, defined as [(Actual EPS – Initial Analyst Consensus Forecasted EPS) / quarterly beginning stock price].
CAR	the cumulative abnormal return in the period from earnings announcement date of last quarter to earnings announcement date of current quarter.
FIRMAGE	firm's age, defined as the number of years that a firm appears in COMPUSTAT database.
EINFO	earnings informativeness, defined as adjusted R^2 from a regression of 12-month stock returns on annual earnings and changes in earnings for all firms in the same 4-digit SIC code industry.
SPEITEM	special item scaled by average total assets.
LACC_BDEP	lagged accrual before depreciation scaled by average total asset.
LDEP	lagged depreciation scaled by average total assets.
PERSIST	earnings persistence, defined as the first-order autocorrelation coefficient of realized earnings.
VOLEPS	earnings volatility, defined as the standard deviation of annual earnings using up to 15 years of prior earnings realizations.
DISTRESS	an indicator variable that equals one if Altman-Z score is less than 1.8, and zero otherwise.
ANAFOL	the number of analysts following the firm, defined as the average number of analysts of the consensus forecasts in a quarter.
INST	the institutional holding, defined as the percentage of outstanding shares hold by institutions.
SEO	an indicator variable that equals one if a firm issues seasoned equity offerings in the quarter, and zero otherwise.
TENURE	the number of years of CEO staying in the position.
FD	an indicator variable that equals one if year is after 2001 (inclusive), and zero otherwise.
AGE	CEO's age.

Table 1 Descriptive Statistics

	FULL SAMPLE	CEO AGE					CEO GENDER			
		YOUNG	MEDIUM	OLD	Difference (young - old)	p-value	FEMALE	MALE	Difference (female - male)	p-value
<i>Variables of Interest</i>										
MF_DUM	0.211	0.234	0.216	0.180	0.054	<.0001	0.407	0.208	0.198	<.0001
<i>Implicit Incentives</i>										
AGE	54.95	46.64	55.07	63.09	-16.449	<.0001	49.38	55.02	-5.640	<.0001
FEMALE	0.012	0.026	0.009	0.001	0.025	<.0001	1.000	0.000	1.000	<.0001
<i>Explicit Incentives</i>										
COMP	0.427	0.474	0.435	0.370	0.103	<.0001	0.529	0.426	0.104	<.0001
WEALTH	9.878	9.671	9.772	10.211	-0.540	<.0001	9.588	9.882	-0.293	0.000
<i>Control Variables</i>										
BTM	0.401	0.391	0.402	0.411	-0.020	<.0001	0.373	0.402	-0.029	0.002
SIZE	7.564	7.326	7.677	7.665	-0.339	<.0001	7.337	7.566	-0.229	0.047
HIGHTECH	0.229	0.299	0.203	0.192	0.107	<.0001	0.276	0.229	0.047	0.319
REGULATED	0.047	0.044	0.049	0.049	-0.005	0.067	0.031	0.047	-0.016	0.791
ROA	0.015	0.014	0.015	0.016	-0.002	<.0001	0.017	0.015	0.002	0.841
CH_EPS	0.001	0.001	0.000	0.000	0.000	0.399	0.001	0.000	0.001	0.399
SURP_E	0.000	0.000	0.000	0.000	0.000	0.121	0.000	0.000	0.000	0.332
FIRMAGE	33.537	29.574	34.396	36.454	-6.881	<.0001	30.639	33.571	-2.932	<.0001
EINFO	0.121	0.112	0.122	0.127	-0.015	<.0001	0.113	0.121	-0.008	0.004
SPEITEM	-0.012	-0.015	-0.012	-0.009	-0.006	<.0001	-0.015	-0.012	-0.003	0.072
LACC_BDEP	-0.006	-0.011	-0.006	-0.003	-0.008	<.0001	-0.021	-0.006	-0.014	0.001
LDEP	0.046	0.047	0.045	0.045	0.002	<.0001	0.046	0.046	0.000	0.050
PERSIST	0.327	0.304	0.320	0.357	-0.054	<.0001	0.343	0.327	0.017	0.006
VOLEPS	1.143	1.012	1.200	1.205	-0.193	<.0001	0.849	1.146	-0.298	<.0001
DISTRESS	0.092	0.092	0.090	0.094	-0.001	0.709	0.077	0.092	-0.015	0.178
ANAFOL	9.018	8.982	9.231	8.798	0.185	0.018	8.461	9.024	-0.563	0.923
INST	0.527	0.514	0.539	0.525	-0.011	0.004	0.417	0.528	-0.111	<.0001
SEO	0.012	0.015	0.011	0.011	0.004	0.007	0.008	0.012	-0.004	0.467
TENURE	5.57	3.85	5.08	7.88	-4.033	<.0001	2.55	5.61	-3.056	<.0001
FD	0.461	0.487	0.452	0.445	0.042	<.0001	0.637	0.459	0.178	0.000

Table 2 CEO Age, Gender and Management Forecast

Dependent Variable = MF_DUM						
	Implicit & explicit incentives			explicit incentives only		
	Coefficient	p-value	Marginal	Coefficient	p-value	Marginal
<i>Implicit Incentives</i>						
AGE_RANK	0.228**	0.040	0.031			
FEMALE	0.668***	0.008	0.111			
<i>Explicit Incentives</i>						
COMP_RANK	0.223**	0.013	0.030	0.257***	0.004	0.035
WEALTH_RANK	-0.067	0.613	-0.009	-0.090	0.492	-0.012
<i>Control Variables</i>						
BTM	0.485***	0.010	0.025	0.474**	0.011	0.024
SIZE	0.033	0.452	0.031	0.030	0.488	0.029
HIGHTECH	0.065	0.457	0.009	0.079	0.375	0.011
REGULATED	-1.428***	<.0001	-0.125	-1.423***	<.0001	-0.125
ROA	1.862*	0.053	0.004	1.936**	0.045	0.004
CH_EPS	-6.544***	<.0001	0.000	-6.498***	<.0001	0.000
FIRMAGE	0.001	0.625	0.006	0.001	0.814	0.003
EINFO	0.117	0.588	0.002	0.107	0.621	0.002
SPEITEM	-1.993***	0.003	-0.003	-2.052***	0.002	-0.003
LACC_BDEP	-0.136	0.731	0.000	-0.216	0.583	0.000
LDEP	2.745***	0.010	0.016	2.800***	0.009	0.017
PERSIST	-0.197***	0.008	-0.009	-0.195***	0.009	-0.009
VOLEPS	-0.094**	0.021	-0.015	-0.097**	0.017	-0.016
DISTRESS	-0.385***	0.001	-0.047	-0.389***	0.001	-0.048
ANAFOL	0.048***	<.0001	0.051	0.048***	<.0001	0.051
INST	-0.165	0.172	-0.012	-0.195	0.107	-0.015
SEO	-0.336**	0.019	-0.041	-0.341**	0.018	-0.041
TENURE	-0.009	0.148	-0.007	-0.013**	0.031	-0.010
FD	1.768***	<.0001	0.264	1.776***	<.0001	0.258
Likelihood Ratio						
Chi-square		6,469.8			6,397.4	
p-value		<.0001			<.0001	
Max rescaled R ²		0.2230			0.2207	
No. of Obs.						
Response = 1		8,803			8,803	
Response = 0		33,004			33,004	
Total		41,807			41,807	

Notes: The sample spans the period 1993-2005, and contains 41,807 firm-quarter observations. The standard errors are corrected using the Huber-White-Sandwich procedure. The marginal probability for the indicator variables is the difference in probability of forecast evaluated at one minus zero, with all other variables held at their respective mean values. The marginal probability for continuous variables is the difference in probability of forecast evaluated at the mean minus zero, with all other variables held at their respective mean values. *: 0.1 level significance; **: 0.05 level significance; ***: 0.01 level significance. Variable definitions are in the Appendix.

Table 3 CEO Age, Gender and Management Forecast: Firms with Different CEOs

<i>Dependent Variable = AVERAGE_MF_DUM</i>		
	<u>Coefficient</u>	<u>p-value</u>
INTERCEPT	-0.064	0.362
<i>Implicit Incentives</i>		
MAGE_RANK	0.058**	0.033
MFEMALE	-0.010	0.878
<i>Explicit Incentives</i>		
MCOMP_RANK	0.061**	0.027
MWEALTH_RANK	0.007	0.833
<i>Control Variables</i>		
AFTER	-0.040*	0.071
MBTM	0.079	0.108
MSIZE	0.010	0.335
MHIGHTECH	0.020	0.351
MREGULATED	-0.114***	0.000
MROA	0.747*	0.087
MCH_EPS	-0.227	0.833
MFIRMAGE	0.000	0.586
MEINFO	-0.109	0.164
MSPEITEM	-0.612	0.109
MLACC_BDEP	0.224	0.275
MLDEP	0.158	0.586
MPERSIST	-0.032	0.156
MVOLEPS	0.004	0.606
MDISTRESS	-0.063**	0.043
MANAFOL	0.008***	0.000
MINST	-0.133***	<.0001
MSEO	-0.040	0.856
MTENURE	-0.001	0.493
MFD	0.238	<.0001
Adj. R ²	0.2513	
Number of obs.	962	

Notes: The sample spans the period 1993-2005, and contains firms with a CEO change. For each firm-CEO regime, the mean value of the firm-quarter observations is used. The ordinary least square procedure is used for estimating the equation (1). The standard errors are corrected using the Huber-White-Sandwich procedure. *: 0.1 level significance; **: 0.05 level significance; ***: 0.01 level significance. Variable definitions are in the Appendix.

Table 4 CEO Age, Gender and Management Forecast: Founder, Non-founder Subsample

Dependent Variable = MF_DUM						
	Subsample of Non-founder			Subsample of Founder		
	Coefficient	p-value	Marginal	Coefficient	p-value	Marginal
<i>Implicit Incentives</i>						
AGE_RANK	0.252**	0.039	0.017	0.045	0.875	0.003
FEMALE	0.761***	0.002	0.042	-2.120	0.110	-0.346
<i>Explicit Incentives</i>						
COMP_RANK	0.273***	0.006	0.018	-0.141	0.479	-0.011
WEALTH_RANK	-0.059	0.678	-0.005	-0.153	0.735	-0.012
<i>Control Variables</i>						
BTM	0.375*	0.059	0.011	1.403***	0.007	0.031
SIZE	0.001	0.977	0.001	0.360***	0.002	0.076
HIGHTECH	0.032	0.740	0.002	0.429**	0.056	0.034
REGULATED	-1.401***	<.0001	-0.065	-1.348	0.117	-0.062
ROA	1.710	0.104	0.002	1.263	0.569	0.001
CH_EPS	-7.212***	<.0001	0.000	-1.390	0.670	0.000
FIRMAGE	0.003	0.393	0.007	-0.025**	0.031	-0.054
EINFO	0.159	0.491	0.001	-0.161	0.766	-0.001
SPEITEM	-1.759**	0.017	-0.002	-2.543*	0.095	-0.003
LACC_BDEP	-0.290	0.492	0.000	0.670	0.525	0.000
LDEP	3.059**	0.016	0.010	2.444	0.314	0.008
PERSIST	-0.181**	0.029	-0.005	-0.296*	0.085	-0.006
VOLEPS	-0.095**	0.026	-0.009	-0.092	0.377	-0.005
DISTRESS	-0.351***	0.005	-0.024	-0.694**	0.015	-0.005
ANAFOL	0.051***	<.0001	0.029	0.017	0.327	0.011
INST	-0.170	0.187	-0.007	-0.032	0.918	-0.001
SEO	-0.215	0.157	-0.015	-1.199***	0.007	-0.002
TENURE	-0.003	0.749	-0.001	-0.029**	0.032	-0.022
FD	1.747***	<.0001	0.146	1.955***	<.0001	0.041
Likelihood Ratio		5628.2			947.8	
Chi-square						
p-value		<.0001			<.0001	
Max rescaled R ²		0.2205			0.2715	
No. of Obs.						
Response = 1		7,874			929	
Response = 0		28,660			4,344	
Total		36,534			5,273	

Table 5 CEO Age, Gender and Management Forecast: Good vs. Bad News

Panel A: Benchmark for classifying news is EPS in the same quarter of prior year (CH_EPS)

Dependent Variable = MF_DUM						
	Good News CH_EPS≥0			Bad News CH_EPS<0		
	Coefficient	p-value	Marginal	Coefficient	p-value	Marginal
<i>Implicit Incentives</i>						
AGE_RANK	0.340***	0.007	0.040	0.046	0.699	0.008
FEMALE	0.646**	0.022	0.095	0.687**	0.015	0.136
<i>Explicit Incentives</i>						
COMP_RANK	0.141	0.193	0.017	0.333***	0.001	0.056
WEALTH_RANK	0.039	0.801	0.005	-0.170	0.228	-0.028
<i>Control Variables</i>						
BTM	0.308	0.161	0.013	0.539***	0.008	0.039
SIZE	0.017	0.741	0.015	0.071	0.111	0.075
HIGHTECH	0.050	0.623	0.006	0.095	0.311	0.016
REGULATED	-1.325***	<.0001	-0.102	-1.579***	<.0001	-0.169
ROA	2.584*	0.065	0.007	2.445**	0.036	0.000
CH_EPS	-3.436	0.102	-0.003	-4.515**	0.026	0.009
FIRMAGE	0.000	0.951	0.001	0.004	0.265	0.019
EINFO	0.065	0.791	0.001	0.169	0.514	0.003
SPEITEM	-1.176	0.209	-0.001	-1.940***	0.010	-0.007
LACC_BDEP	-0.811	0.102	-0.001	0.906*	0.056	0.000
LDEP	2.906**	0.011	0.015	1.837	0.165	0.014
PERSIST	-0.210**	0.022	-0.009	-0.140*	0.070	-0.007
VOLEPS	-0.084*	0.070	-0.011	-0.129***	0.004	-0.027
DISTRESS	-0.363**	0.011	-0.038	-0.413***	0.000	-0.063
ANAFOL	0.049***	<.0001	0.045	0.044***	<.0001	0.057
INST	-0.238*	0.084	-0.016	-0.006	0.966	0.000
SEO	-0.218	0.199	-0.024	-0.535**	0.037	-0.076
TENURE	-0.013*	0.098	-0.009	-0.004	0.544	-0.004
FD	2.033***	<.0001	0.269	1.337***	<.0001	0.090
Likelihood Ratio		4,859.3			1,712.9	
Chi-square		<.0001			<.0001	
p-value		0.2532			0.1759	
Max rescaled R ²						
No. of Obs.						
Response = 1		5,437			3,366	
Response = 0		22,792			10,212	
Total		28,229			13,578	

Panel B: Benchmark for classifying news is the earliest mean analyst forecasts, (SURP_E)

Dependent Variable = MF_DUM						
	Good News SURP_E ≥ 0			Bad News SURP_E < 0		
	Coefficient	p-value	Marginal	Coefficient	p-value	Marginal
<i>Implicit Incentives</i>						
AGE_RANK	0.329**	0.014	0.043	0.072	0.523	0.010
FEMALE	0.627**	0.032	0.099	0.727***	0.002	0.126
<i>Explicit Incentives</i>						
COMP_RANK	0.140	0.195	0.018	0.338***	0.001	0.047
WEALTH_RANK	-0.075	0.632	-0.010	0.023	0.873	0.003
<i>Control Variables</i>						
BTM	0.212	0.336	0.010	0.667***	0.001	0.037
SIZE	0.041	0.419	0.037	0.059	0.188	0.052
HIGHTECH	0.071	0.494	0.009	0.034	0.706	0.005
REGULATED	-1.312***	<.0001	-0.112	-1.639***	<.0001	-0.138
ROA	0.636	0.582	0.002	2.334**	0.019	0.003
SURP_E	-31.294**	0.015	-0.006	-50.053***	<.0001	0.022
FIRMAGE	0.000	0.897	0.002	0.003	0.348	0.013
EINFO	0.096	0.705	0.001	0.088	0.730	0.002
SPEITEM	-1.727**	0.047	-0.002	-2.742***	0.000	-0.006
LACC_BDEP	-0.819*	0.077	-0.001	1.712***	0.000	0.000
LDEP	2.932**	0.024	0.016	2.346**	0.033	0.014
PERSIST	-0.213**	0.017	-0.009	-0.154*	0.066	-0.007
VOLEPS	-0.077*	0.096	-0.012	-0.154***	0.001	-0.027
DISTRESS	-0.332**	0.031	-0.039	-0.513***	<.0001	-0.063
ANAFOL	0.040***	<.0001	0.043	0.059***	<.0001	0.057
INST	-0.215	0.118	-0.016	-0.027	0.837	-0.002
SEO	-0.268	0.101	-0.032	-0.405	0.152	-0.049
TENURE	-0.006	0.442	-0.004	-0.017**	0.017	-0.013
FD	2.169***	<.0001	0.294	1.299***	<.0001	0.197
Likelihood Ratio		4,980.4			1,792.7	
Chi-square						
p-value		<.0001			<.0001	
Max rescaled R ²		0.2648			0.1740	
No. of Obs.						
Response = 1		5,692			3,111	
Response = 0		20,830			12,174	
Total		26,522			15,285	

Notes: The sample spans the period 1993-2005, and contains 41,807 firm-quarter observations. The standard errors are corrected using the Huber-White-Sandwich procedure. The marginal probability for the indicator variables is the difference in probability of forecast evaluated at one minus zero, with all other variables held at their respective mean values. The marginal probability for continuous variables is the difference in probability of forecast evaluated at the mean minus zero, with all other variables held at their respective mean values. *: 0.1 level significance; **: 0.05 level significance; ***: 0.01 level significance. Variable definitions are in the Appendix.

Table 6: Explicit/Implicit Incentives and Nature of Forecast

Panel A: Sample of Non-Disclosure and Qualitative Forecast

		Total	CEO AGE			GENDER	
			Young	MED	Old	FEMALE	MALE
HIGH	Number of Obs.	11,156	4,681	3,677	2,798	151	11,005
	Number of Qualitative Forecast	230	93	85	52	6	224
	Percentage of Qualitative Forecast	2.06%	1.99%	2.31%	1.86%	3.97%	2.04%
MED	Number of Obs.	11,155	3,606	3,821	3,728	64	11,091
	Number of Qualitative Forecast	125	40	38	47	2	123
	Percentage of Qualitative Forecast	1.12%	1.11%	0.99%	1.26%	3.13%	1.11%
LOW	Number of Obs.	11,155	3,426	3,392	4,337	84	11,071
	Number of Qualitative Forecast	106	50	26	30	4	102
	Percentage of Qualitative Forecast	0.95%	1.46%	0.77%	0.69%	4.76%	0.92%
Total	Number of Obs.	33,466	11,713	10,890	10,863	299	33,167
	Number of Qualitative Forecast	461	183	149	129	12	449
	Percentage of Qualitative Forecast	1.38%	1.56%	1.37%	1.19%	4.01%	1.35%

Panel B: Sample of Non-Disclosure and Quantitative Forecast

		Total	CEO AGE			GENDER	
			Young	MED	Old	FEMALE	MALE
HIGH	Number of Obs.	13,732	5,328	5,063	3,341	255	13,477
	Number of Quantitative Forecast	3,598	1520	1255	823	114	3484
	Percentage of Quantitative Forecast	26.20%	28.53%	24.79%	24.63%	44.71%	25.85%
MED	Number of Obs.	13,735	3,803	5,537	4,395	101	13,634
	Number of Quantitative Forecast	2,649	744	1124	781	39	2610
	Percentage of Quantitative Forecast	19.29%	19.56%	20.30%	17.77%	38.61%	19.14%
LOW	Number of Obs.	13,732	3,713	4,835	5,184	110	13,622
	Number of Quantitative Forecast	1,947	601	764	582	26	1,921
	Percentage of Quantitative Forecast	14.18%	16.19%	15.80%	11.23%	23.64%	14.10%
Total	Number of Obs.	41,199	12,844	15,435	12,920	466	40,733
	Number of Quantitative Forecast	8,194	2,865	3,143	2,186	179	8,015
	Percentage of Quantitative Forecast	19.89%	22.31%	20.36%	16.92%	38.41%	19.68%

Panel C: Multivariate Analysis

Dependent variable =	Non-Forecasters and Qualitative Forecasters			Non-Forecasters and Quantitative Forecasters		
	QUAL_DUM			QUAN_DUM		
	Coefficient	p-value	Marginal	Coefficient	p-value	Marginal
<i>Implicit Incentives</i>						
AGE_RANK	0.096	0.656	0.001	0.246**	0.033	0.031
FEMALE	1.184***	0.001	0.021	0.617**	0.019	0.095
<i>Explicit Incentives</i>						
COMP_RANK	-0.084	0.648	-0.001	0.258***	0.006	0.032
WEALTH_RANK	0.219	0.326	0.002	-0.067	0.625	-0.008
<i>Control Variables</i>						
BTM	-0.015	0.971	0.000	0.507***	0.008	0.024
SIZE	0.251***	0.006	0.008	0.006	0.894	0.005
HIGHTECH	0.333**	0.044	0.004	0.029	0.749	0.001
REGULATED	-1.380***	0.000	-0.008	-1.411***	<.0001	-0.009
ROA	0.422	0.843	0.000	1.952**	0.050	0.004
CH_EPS	-20.395***	<.0001	0.000	-5.471***	<.0001	0.000
FIRMAGE	-0.005	0.355	-0.002	0.002	0.541	0.008
EINFO	-1.441***	0.010	-0.002	0.197	0.372	0.003
SPEITEM	-1.076	0.474	0.000	-1.937***	0.006	0.003
LACC_BDEP	0.649	0.512	0.000	-0.146	0.721	0.000
LDEP	4.085**	0.024	0.002	2.593**	0.019	0.014
PERSIST	-0.256*	0.095	-0.001	-0.189**	0.016	-0.008
VOLEPS	0.042	0.500	0.000	-0.104**	0.014	-0.016
DISTRESS	-0.302	0.166	-0.003	-0.392***	0.001	-0.044
ANAFOL	0.042***	0.003	0.003	0.047***	<.0001	0.046
INST	-0.376*	0.068	-0.002	-0.152	0.224	-0.010
SEO	0.111	0.782	0.001	-0.374**	0.013	-0.041
TENURE	-0.028**	0.043	-0.002	-0.007	0.271	-0.005
FD	-0.011	0.941	0.000	1.935***	<.0001	0.262
Likelihood Ratio		361.2			6,670.6	
Chi-square						
p-value		<.0001			<.0001	
Max rescaled R ²		0.0793			0.2368	
No. of Obs.						
Response = 1		461			8,194	
Response = 0		33,005			33,005	
Total		33,466			41,199	

Notes: The sample spans the period 1993-2005, and contains 41,807 firm-quarter observations. The standard errors are corrected using the Huber-White-Sandwich procedure. The marginal probability for the indicator variables is the difference in probability of forecast evaluated at one minus zero, with all other variables held at their respective mean values. The marginal probability for continuous variables is the difference in probability of forecast evaluated at the mean minus zero, with all other variables held at their respective mean values. *: 0.1 level significance; **: 0.05 level significance; ***: 0.01 level significance. Variable definitions are in the Appendix.

Table 7: Explicit/Implicit Incentives and Nature of Forecast, Forecasting Firm-Quarters only

Panel A: Univariate Analysis

		Total	CEO AGE			GENDER		
			Young	MED	Old	FEMALE	MALE	
COMP		Number of Obs.	2,885	1,277	887	721	97	2,788
	HIGH	Number of Qualitative Forecasts	184	62	75	47	5	179
		Percentage of Forecast	6.38%	4.86%	8.46%	6.52%	5.15%	6.42%
		Number of Obs.	2,885	920	979	986	60	2,825
	MED	Number of Qualitative Forecasts	126	38	35	53	3	123
		Percentage of Forecast	4.37%	4.13%	3.58%	5.38%	5.00%	4.35%
		Number of Obs.	2,885	822	1,031	1,032	34	2,851
	LOW	Number of Qualitative Forecasts	151	54	42	55	4	147
		Percentage of Forecast	5.23%	6.57%	4.07%	5.33%	11.76%	5.16%
	Number of Obs.	8,655	3,019	2,897	2,739	191	8,464	
Total	Number of Qualitative Forecasts	461	154	152	155	12	449	
	Percentage of Forecast	5.33%	5.10%	5.25%	5.66%	6.28%	5.30%	

Panel B: Multivariate Analysis

Dependent = QUAL_DUM

	<u>Coefficient</u>	<u>p-value</u>	<u>Marginal</u>
<i>Implicit Incentives</i>			
AGE_RANK	-0.158	0.521	-0.005
FEMALE	0.432	0.259	0.016
<i>Explicit Incentives</i>			
COMP_RANK	-0.160	0.392	-0.005
WEALTH_RANK	0.430*	0.080	0.013
<i>Control Variables</i>			
BTM	-0.699*	0.081	-0.010
SIZE	0.187**	0.039	0.025
HIGHTECH	0.370**	0.037	0.013
REGULATED	0.062	0.910	0.002
ROA	-1.679	0.454	-0.001
CH_EPS	-10.122**	0.011	0.000
FIRMAGE	-0.010*	0.095	-0.013
EINFO	-1.456***	0.005	-0.007
SPEITEM	0.537	0.753	0.000
LACC_BDEP	0.796	0.416	0.000
LDEP	2.052	0.291	0.003
PERSIST	-0.184	0.267	-0.002
VOLEPS	0.201***	0.001	0.006
DISTRESS	0.012	0.961	0.000
ANAFOL	-0.006	0.709	-0.002
INST	-0.379*	0.068	-0.007
SEO	0.774	0.111	0.035
TENURE	-0.025	0.108	-0.004
FD	-1.900***	<.0001	-0.108
Likelihood Ratio Chi-square		564.3	
p-value		<.0001	
Max rescaled R ²		0.1855	
<i>No. of Obs.</i>			
Response = 1		461	
Response = 0		8,194	
Total		8,655	

Notes: The sample spans the period 1993-2005, and contains 8,655 firm-quarter observations with at least one earnings forecast. The standard errors are corrected using the Huber-White-Sandwich procedure. The marginal probability for the indicator variables is the difference in probability of forecast evaluated at one minus zero, with all other variables held at their respective mean values. The marginal probability for continuous variables is the difference in probability of forecast evaluated at the mean minus zero, with all other variables held at their respective mean values. *: 0.1 level significance; **: 0.05 level significance; ***: 0.01 level significance. Variable definitions are in the Appendix.