

# **Cover Me: Managers' Response to Decreases in Analyst Coverage\***

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August 2008

## **ABSTRACT**

We show that managers increase the volume of public financial guidance in response to decreases in analyst coverage of their firms. This result is driven by the post-Regulation Fair Disclosure period, and is stronger for firms with higher sales growth and firms with lower resulting levels of coverage. On the other hand, managers' guidance response to increases in analyst coverage is generally smaller and less significant. Our results suggest that managers perceive analyst coverage to be valuable and that they expend resources to attract and maintain a certain level of analyst coverage.

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\* We thank seminar participants at Columbia University and University of Southern California for helpful comments and suggestions.

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# Cover Me: Managers' Response to Decreases in Analyst Coverage

*“How can under-covered firms persuade independent analysts to publish research on them? CFOs and investor relations experts agree that coverage is driven not only by a good story and growth potential, but also by regular communication and intelligent targeting of the analyst community.”*

----CFO.com<sup>1</sup>

## **1. Introduction**

Academic research has documented that analyst coverage stimulates investor interest and improves liquidity (e.g., Merton [1987], Irvine [2003], Roulstone [2003]), which in turn leads to a more accurate share price and a truer company valuation (Rana [2008]). Anecdotal evidence suggests that as firms compete for both capital and investors' attention, CEOs and CFOs value analysts and are concerned with losing analyst coverage of their companies (Rana [2008]). However, despite anecdotal evidence suggesting that managers consider analyst coverage to be important, little empirical research has examined whether corporate executives passively enjoy the benefits associated with existing analyst coverage, or actively seek to attract and maintain a certain level of analyst coverage to ensure the associated benefits.

Our paper seeks to address this issue by examining the effects of analysts' coverage decisions on managerial behaviour. We focus on managerial decisions on voluntary disclosures, specifically in the form of public managerial guidance of prospective key financial information such as earnings or cash flows, in response to changes in analyst coverage. We focus on managerial guidance responses since academic research as well as surveys of market participants indicates that the quality and quantity of disclosures, including financial guidance from

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<sup>1</sup> See Rana [2008].

managers, are key drivers of analysts' interest in and willingness to cover a firm (Previts, Bricker, Robinson and Young [1994], Lang and Lundholm [1996], Craig [2003]). Therefore, if managers consider analyst coverage to be valuable and are concerned with losing analysts, we expect to observe increases in managerial guidance in response to decreases in analyst coverage, presumably in order to prevent further losses in coverage and attract other analysts to cover the firm. While we are interested primarily in managers' response to decreases of analyst coverage, we also examine their response to increases of analyst coverage to complement our main analyses.

We perform our empirical analyses in three steps. First, we model the determinants of changes in analyst coverage. We then assess managerial responses, in terms of changes in the volume of guidance provided, to decreases and increases in analyst coverage separately. Finally, we examine whether the managerial response to changes in analyst coverage varies by the advent of Regulation Fair Disclosure (Reg FD) and with observable firm characteristics that are expected to affect the value of analyst coverage to the firms.

We employ two key research design features in order to rule out the alternative explanation that the changes in guidance volume and the changes in analyst coverage are both endogeneously caused by other contemporaneous changes in the firms' business environment.<sup>2</sup> First, we focus on whether changes in analyst coverage are *followed* by changes in managerial guidance. Even though a chronological ordering of events does not conclusively establish causality, observing that changes in analyst coverage are followed by predictable changes in

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<sup>2</sup> Prior research suggests that many factors that affect analyst coverage also affect managerial voluntary disclosures in the same direction. For example, improved operating performance or increased institutional ownership leads to higher analyst coverage, as well as higher guidance volume (e.g., O'Brian and Bhushan [1990], Ajinkya, Bhojraj and Sengupta [2005]). However, our main results indicate that firms experiencing decreases in analyst coverage subsequently *increase* guidance. Therefore, it is unlikely that our results are driven by other contemporaneous changes in the firms' business environment such as operating performance.

managerial guidance would suggest that changes in coverage are driving guidance decisions. Second, when examining managerial guidance response to changes in analyst coverage, we control for a host of potential underlying economic factors that could have driven the changes in analyst coverage.

Based on a sample of 9307 firm-years over the period 1997 to 2006, we find that changes in analyst coverage are positively associated with sales growth, volume of managerial guidance, changes in market value, changes in book-to-market ratio, changes in institutional ownership, incidence of mergers and acquisitions, as well as intensity of capital and R&D expenditures. On the other hand, changes in analyst coverage are negatively associated with dispersion in analysts' forecasts, and the incidence of reporting losses or of missing analysts' forecasts. These results suggest that analysts' coverage decisions are associated with firms' operating performance, information environment, forecasting difficulty, as well as analysts' own incentives to generate fees and commissions from trading and investment banking deals.

Turning to our main research question, we examine how managers respond to changes in analyst coverage after controlling for these determinants. We find that following a decrease in analyst coverage, managers respond by significantly increasing the volume of guidance they provide. Following an increase in analyst coverage, on the other hand, the increase in guidance is insignificant and also considerably smaller in magnitude. In further partition tests, we find that the increase in managerial guidance following decreases in analyst coverage is primarily driven by the post-Regulation FD period, when private communications between managers and select groups of market participants are no longer permitted. This result implies that in the pre-FD period, managers may have been using private communications in trying to attract analysts to the firm.

We examine next how managers' response to decreases in analyst coverage varies with firm characteristics that are expected to affect the value of analyst coverage. We perform these cross-sectional analyses with post-FD data only, in light of our results from the pre- and post-FD sub-period analysis. We find that the increase in guidance in response to decreases in analyst coverage is stronger for high-growth firms and muted for low-growth firms. We also find that managers' response to decreases in coverage is stronger for firms that are currently thinly covered and muted for firms that still have substantial coverage even after the decrease in coverage.

Taken together, our results provide compelling evidence that managers increase the volume of voluntary financial guidance in response to decreases in analyst coverage. The results also show an asymmetric response from managers to decreases versus increases in analyst coverage, implying that managers perceive higher costs associated with decreases in analyst coverage. This is consistent with the view that managers perceive analyst coverage to be valuable and are concerned with losing analyst coverage. Further, our cross-sectional analyses suggest that managers' response to decreases in analyst coverage is stronger when the perceived cost of decreases in analyst coverage (or the value of analyst coverage) to managers is higher, as in the case of high growth firms or firms that have become relatively thinly-covered.

There are two possible explanations why managers may increase their guidance upon observing decreases in analyst coverage. First, managers may hope to use the increased communication levels to prevent further losses in coverage and attract other analysts, so that their firms can continue to enjoy the benefits associated with higher analyst coverage, such as increased liquidity and investor recognition. Alternatively, managers may simply want to use the increased guidance to communicate directly with investors, and thus fill the information gap left

by the analysts who dropped coverage of the firm. In order to understand the value of analysts to corporate managers, it is important to differentiate between these two explanations. Specifically, the second explanation suggests that increased managerial voluntary disclosures can potentially substitute for the role played by analysts, whereas the first explanation suggests that managers view analysts as indispensable information intermediaries and are willing to expend resources in order to attract them to the firm.

Our empirical analysis of the effects of Reg FD offers the opportunity to differentiate between these two explanations. The second explanation – that managers are simply using increased guidance to directly communicate with investors and substitute for the role played by analysts – would predict that the increase in public managerial guidance in response to decreases in analyst coverage should be observed both before and after Reg FD. However, our results show that the increase in managers' public guidance following decreases in analyst coverage is observed only in the post-FD period. The absence of such a managerial response in the pre-FD period suggests that it is unlikely that managers are increasing their guidance in an effort to directly target investors. On the other hand, to the extent that the insignificant response to decreases in analyst coverage pre-FD is due to private communications between managers and analysts, our results are more consistent with the first explanation that managers are primarily concerned with providing information to analysts and hope to at least regain the previous level of analyst coverage. Thus, our finding of different managerial responses pre- and post-FD to decreases in analyst coverage suggests that corporate managers view analysts as playing an irreplaceable and crucial role in the information environment of the firm.

Our study contributes to several streams of research. First, our paper adds to the literature that examines the role of analysts, or more specifically, analyst coverage, in the capital market.

Prior research in this literature has primarily focused on the determinants and effects of *levels* of analyst coverage. We first extend this literature by providing a comprehensive model of determinants of *changes* of analyst coverage.<sup>3</sup>

More importantly, we provide the first empirical evidence that managers value analyst coverage and respond to decreases in analyst coverage. Prior research focusing on levels of analyst coverage documents that in the cross section, firms followed by more analysts have significantly higher liquidity and greater informational efficiency (Chung and Jo [1996], Roulstone [2003], Frankel and Li [2004]). A few recent studies focus specifically on firms that have lost all analyst coverage (Kelly and Ljungqvist [2007], Khorana, Mola and Rau [2008]) and find that these “orphaned” firms show significant declines in operating and stock price performance, and suffer reductions in the informational efficiency of their stock. These studies suggest that analyst coverage is important to both investors and firms’ cost of capital. However, little research has directly examined whether corporate managers value analyst coverage.<sup>4</sup> By providing robust empirical evidence that managers increase the volume of guidance in response to decreases in analyst coverage, we provide a confirmative answer to this question, supplementing anecdotes that corporate executives care about analyst coverage and spend time and energy in actively attracting and maintaining analyst coverage.

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<sup>3</sup> A few studies examine analysts’ decisions to initiate or drop coverage of a firm (e.g., Irvine [2003], Shon and Young [2008]). However, these studies focus on individual analysts’ decisions and do not examine the change in a firm’s overall coverage level.

<sup>4</sup> Indirect evidence is provided by Krigman, Shaw and Womack [2001] who provide survey-based evidence that firms switch lead underwriters mainly in order to obtain higher-quality and more frequent analyst coverage; and by Cliff and Denis [2004], who show that IPO firms essentially pay for higher-quality analyst coverage by accepting greater underpricing of their IPOs. However, both studies speak to the very specialized settings of IPOs and SEOs, which may not generalize to the entire cross section of firms. Further, neither study focuses on the level and/or change of analyst coverage in general.

Our cross-sectional analyses also suggest that the value of analyst coverage is not constant across firms. The results suggest that the value of analyst coverage is greater for growth firms that are in greater need of investor attention as well as capital, and for firms with low resulting levels of coverage. This latter result suggests that the relation between the level of analyst coverage and its value is non-linear; the perceived marginal value of coverage from an additional analyst appears to decrease with prevailing level of analyst coverage.

Our study also contributes to the large literature on voluntary disclosure. While ample research has examined the determinants of managers' decisions to provide voluntary disclosure or guidance, most of this literature focuses on the level of disclosure or guidance in the cross section (e.g., Lang and Lundholm [1993]). Specifically related to the role of analyst coverage, prior research (e.g., Lansford, Lev and Tucker [2007]) finds that the level of corporate disclosure is significantly higher for firms with higher analyst coverage. However, the level of analyst following for a firm and the firm's disclosure policies are likely to be a function of a host of factors operating contemporaneously in the firm's environment. It is possible that the relations between firms' disclosure levels and the characteristics of their information environments, including the level of analyst following, are jointly determined by omitted variables, which makes results difficult to interpret (Lang [1999]). We focus on changes in analyst coverage, and examine how managers respond to these changes by changing their disclosure policies. Our changes-on-changes analysis allows us to draw cleaner and more powerful inferences of how analyst following affects managerial disclosure choices. In fact, while the positive relation between levels of analyst coverage and levels of managerial guidance documented by prior "level" studies may imply that higher coverage leads to more guidance and lower coverage leads

to less guidance, we find that this is not the case, as our results show that managers actually increase their guidance in response to decreases in analyst coverage.

Another body of literature documents that increases in the quality or quantity of voluntary disclosures are followed by increases in analyst following (e.g., Lang and Lundholm [1996], Healy, Hutton and Palepu [1999]). These studies approach the interaction between managerial disclosures and analyst coverage from the perspective that analysts increase coverage after managers' decisions to expand disclosures. However, the relationship between corporate managers and financial analysts is a dynamic one. After controlling for the determinants of changes in analyst coverage, we show that managers also respond to changes in analyst coverage. In particular, they increase guidance in response to dwindling analyst coverage. Therefore, our study contributes to this literature by demonstrating a new dimension to the dynamics between managers and analysts.

The remainder of the paper proceeds as follows. Section 2 describes the sample and discusses descriptive statistics on variables related to analyst coverage and managerial guidance. Section 3 examines the determinants of changes in analyst coverage. Section 4 investigates our main research question related to managers' guidance decisions in response to increases and decreases of analyst coverage. Section 5 concludes.

## ***2. Sample and Descriptive Statistics***

### **2.1 SAMPLE SELECTION**

We start our sample selection process with analyst coverage data for U.S. firms in the I/B/E/S summary file during the period 1996-2006.<sup>5</sup> We use annual forecasts data and delete

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<sup>5</sup> Our final sample is from 1997 to 2006. We keep data from 1996 to obtain the initial level of analyst coverage for the year of 1997.

firm-years for which the latest consensus date is after the corresponding earnings announcement date or for which the earnings announcement date is more than 90 days after the corresponding fiscal year end, as these observations are likely to be data errors. As the timeline in Figure 1 illustrates, our “initial” coverage level COV1 measures analyst coverage (i.e., number of individual analysts) as of three months after the end of year  $t-1$ , when the annual financial information has become available. Similarly, our “new” coverage level COV2 measures analyst coverage as of three months after the end of year  $t$ . We are interested in the effects of the changes in analyst coverage from COV1 to COV2 on managerial guidance decisions in the subsequent year.

Next, we obtain managerial guidance information from FirstCall’s Company Issued Guidance (CIG) database. This database contains public guidance issued by corporate managers regarding prospective key financial information such as earnings and cash flows. We delete an observation if the guidance date is more than 90 days after the corresponding fiscal period end, as it is likely to be a data error. We include all remaining guidance in the database, regardless of its type (e.g., earnings per share or cash flow per share), horizon (e.g., for the current quarter or for the next year), or nature (e.g., qualitative or quantitative). In other words, every entry in the database is considered as one separate unit of guidance from managers, even though this information may be released on the same date. In this manner, we incorporate in our metric of disclosure both the frequency of guidance and its richness or scope. For example, in response to changes in analyst coverage, managers may not change the frequency of their guidance (e.g., once every quarter) but may expand the information set they provide at each guidance date by providing information such as cash flow guidance in addition to earnings guidance.

Again as illustrated in Figure 1, we measure the initial level of guidance as the number of individual units of guidance issued from the fourth month after the end of year  $t-1$  to the third month after the end of year  $t$ , and call this GUIDE1. We then count the number of individual units of guidance from the fourth month after the end of year  $t$  till the third month after the end of year  $t+1$ , and call this GUIDE2. We measure the change in guidance using the difference between GUIDE1 and GUIDE2. Note that we construct our variables such that the change in guidance is measured for the 12-month period following the change in analyst coverage. This construction should help to isolate changes in managerial guidance that are in response to changes in analyst coverage, and mitigate concerns that both changes in guidance and changes in coverage are driven by other common factors operating contemporaneously in the firm's business environment.

As we explain in more detail in the next sub-section, we only consider firm-years with both COV1 and COV2 greater than 1, and both GUIDE1 and GUIDE2 greater than 0. We also obtain additional information from Compustat, CRSP, or Thomson Financial to construct variables to measure the determinants of changes in analyst coverage, analyzed in Section 3. We delete observations with missing determinant variables. Our final sample consists of 9307 firm-years spanning the period of 1997-2006, with the number of observations per year ranging from 450 in 1997 and 1150 in 2005.

## 2.2 RESEARCH DESIGN CHOICES

As mentioned above, we only consider firm-years with both COV1 and COV2 greater than 1, and both GUIDE1 and GUIDE2 greater than 0. There are two reasons for these choices. First, Anilowski, Feng and Skinner [2007] and Chuk, Matsumoto and Miller [2008] show that

the CIG database is relatively incomplete and that while the completeness of the CIG coverage has generally increased over our sample period, this trend is not monotonic. Their results suggest that it is problematic to interpret a mere absence of guidance in the CIG database as no guidance. Therefore, to minimize noise and potential bias in our measures of guidance variables, we require that both GUIDE1 and GUIDE2 be greater than 0 to ensure that the firm is covered both before and after by the CIG database. Further, Chuk, Matsumoto and Miller [2008] show the completeness of CIG coverage is substantially higher for firms followed by at least one analyst and that the completeness increases with analyst following (see also Anilowski, Feng and Skinner [2007]). Thus, we require our sample firms to have at least two analysts both before and after to increase the accuracy of our guidance measures.<sup>6</sup>

Second, while it is interesting to examine why analysts, as a group, initiate (i.e.,  $COV1=0$  and  $COV2>0$ ) or completely drop (i.e.,  $COV1>0$  and  $COV2=0$ ) coverage of a firm or why firms initiate (i.e.,  $GUIDE1=0$  and  $GUIDE2>0$ ) or completely stop (i.e.,  $GUIDE1>0$  and  $GUIDE2=0$ ) guidance, such decisions are more likely to be due to fundamental changes in the company's business environment or strategy, than are decisions to simply increase or decrease the level of coverage or the volume of guidance. Therefore, we focus on firms with greater-than-zero analyst coverage and greater-than-zero managerial guidance both before and after, in order to increase the homogeneity of our sample. However, this design choice implies that our findings may only generalize to firms with sustained analyst coverage and a continued commitment to voluntary disclosure in the form of managerial guidance.

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<sup>6</sup> The requirement for  $COV1$  and  $COV2$  to be at least 2, as opposed to 1, is for the calculation of analyst forecast dispersion which is a determinant/control variable in our subsequent analysis. Requiring coverage to be at least 1 and excluding the dispersion variable from the analysis yields unchanged inferences.

## 2.3 DESCRIPTIVE STATISTICS

Table 1 displays descriptive statistics of our analyst coverage and managerial guidance variables. Panel A presents changes in analyst coverage. As described above, COV1 and COV2 are the levels of analyst coverage three months after the end of year t-1 and t respectively. Our sample firms have a mean (median) initial analyst coverage of 9.5 (7) and a mean (median) new coverage of 9.7 (8).  $\Delta\text{COV}$  measures the raw change in coverage (i.e.,  $\text{COV2} - \text{COV1}$ ). On average, our sample firms experience a slight increase in analyst coverage (0.18), although the median firm experiences no changes (0) in coverage. The first and third quartiles of  $\Delta\text{COV}$  are -1 and 2 respectively, suggesting some shifts in analyst coverage across firms.  $\text{LN}_{\Delta\text{COV}}$  represents the natural logarithm of  $\text{COV2}/\text{COV1}$ , with a mean of about 0.02 and a median of 0. We use this variable in our analysis of the determinants of changes in analyst coverage because of the better distribution properties of the log-transformed variable and also to control for nonlinearities in the relationship between coverage variables and other variables.  $\text{DECR}_{\text{COV}}$  is a variable that takes the absolute value of  $\text{LN}_{\Delta\text{COV}}$  if the firm has experienced a decrease in coverage, and zero otherwise. Similarly,  $\text{INCR}_{\text{COV}}$  takes the absolute value of  $\text{LN}_{\Delta\text{COV}}$  if the firm has experienced an increase in coverage, and zero otherwise.  $\text{DECR}_{\text{COV}}$  and  $\text{INCR}_{\text{COV}}$  have a mean value of 0.13 and 0.14 respectively; both variables have a median of zero. These two variables are used as key independent variables of interest when we analyze how managers respond to changes in analyst coverage, as we are interested in managers' response to decreases and increases in analyst coverage separately.

Panel B of Table 1 describes the managerial guidance variables.  $\text{GUIDE1}$  and  $\text{GUIDE2}$  are the initial and new levels of guidance, measured over the 12-month period ending three months after the end of year t and t+1 respectively. On average, our sample firms issue about 5.2

units of guidance initially, and a slightly higher 5.3 units of guidance in the subsequent year. The medians are 4 in both years.  $\Delta\text{GUIDE}$  measures the raw change in guidance (i.e.,  $\text{GUIDE2} - \text{GUIDE1}$ ), with a mean of about 0.1 and a median of zero. The firm at the first quartile reduces guidance by 2 units and the firm at the third quartile increases guidance by 2 units.  $\text{LN\_}\Delta\text{GUIDE}$  is the natural logarithm of  $\text{GUIDE2} / \text{GUIDE1}$ , and is used as our primary dependent variable in the analysis of managerial responses to changes in analyst coverage. The mean of  $\text{LN\_}\Delta\text{GUIDE}$  is 0.04 and the median is 0. We also have an indicator variable  $\text{D\_}\Delta\text{GUIDE}$  that equals to 1 if the firm increases its guidance volume (i.e., if  $\Delta\text{GUIDE} > 0$ ) and 0 otherwise. Overall, 41.7% of our sample firms increase the volume of their guidance in year  $t+1$ .

Panel C of Table 1 displays a contingency table showing the interaction between changes in analyst coverage and subsequent changes in managers' guidance. About 37.6% of firms in the sample experience decreases in analyst coverage, and 43.5% experience increases, indicating that these firms experience frequent analyst turnover. Similarly, 39.3% of firms reduce the volume of guidance over the subsequent period, whereas 41.7% of firms increase the volume of guidance that they provide. There is a slightly higher percentage of firms that decrease guidance among firms with decreased coverage (42.6%) than among firms with increased coverage (41.9%) or firms with no change in coverage (39.7%), although the contingency table overall does not reveal any significant pattern in the relationship between changes in coverage and changes in guidance. However, this analysis focuses only on univariate relationships. We turn next to our multivariate analyses.

### ***3. Determinants of Changes in Analyst Coverage***

#### **3.1 EMPIRICAL PREDICTIONS**

In this section we analyze the determinants of changes in analyst coverage. We motivate our determinant variables largely based on the literature on the determinants of levels of analyst coverage. Detailed variable definitions are in Appendix A.

#### *Operating performance*

McNichols and O'Brien [1997] document that analysts provide recommendations and forecasts selectively, based upon whether their expectations of firm performance are favourable (see also Das, Guo and Zhang [2006]). One implication of these results is that analysts are more likely to drop coverage of firms with unfavourable news and add coverage of firms with favourable news. Similarly, Rana [2008] provides anecdotal evidence that analysts tend to stop following a company when the firm has poor performance or fails to meet earnings targets. Therefore, we hypothesize that analyst coverage is positively correlated with operating performance. We measure operating performance using year-on-year earnings growth (EGROW) and sales growth (SGROW). We also incorporate an indicator variable that sets to one if the firm reports a loss in year  $t$  and zero otherwise (LOSS), and another indicator variable that sets to one if the firm misses its last consensus analyst forecast for year  $t$  and zero otherwise (MISS). We expect analyst coverage to be positively correlated with EGROW and SGROW, and negatively correlated with LOSS and MISS.

#### *Information environment*

We expect that changes in analyst following are associated with the richness of the firm's information environment. Lang and Lundholm [1996] show that analysts tend to follow firms with more informative disclosure practices. We hypothesize that analysts will move towards firms with more forthcoming voluntary disclosures in the form of managerial guidance. We measure the level of firm disclosure by the volume of managerial guidance (GUIDE1) provided

by the firm in year  $t$  and expect it to be positively correlated with changes in analyst coverage. We also incorporate changes in firm size ( $\Delta\text{SIZE}$ ) to proxy for the change in the richness of the firm's information environment and expect this variable to be positively associated with changes in analyst coverage.<sup>7</sup>

#### *Analysts' incentives*

Analyst research by itself typically does not generate revenue for brokerage houses, which instead rely on fees and commissions from trading and investment banking deals. A large literature has documented that analysts' coverage decisions and the properties of their forecasts and recommendations are affected by pressures to garner trading and investment banking business (e.g., Lin and McNichols [1998], Ljungqvist, Marston and Wilhelm [2006], Clarke, Khorana, Patel and Rau [2007]). Therefore, a target firm's potential to generate trading commissions and investment banking revenues for the brokerage house is expected to be an important determinant of analysts' decisions to add or drop coverage. We incorporate proxies for the intensity of the firm's mergers and/or acquisitions activity ( $\text{MERGE}$ ) and equity issuance activity ( $\text{EQUITY}$ ), to capture the attractiveness of these firms as potential investment banking clients.<sup>8</sup> We hypothesize that the intensity of mergers and/or acquisitions and equity issuance activities will be positively associated with changes in analyst coverage.

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<sup>7</sup> Our use of "change", as opposed to "level," measure for size (and for book-to-market ratio below) follows Bhushan and Cho [1996] who examine changes in analyst coverage around mergers and acquisitions. We recognize that the levels of size and book-to-market ratio can also play an important role in changes in analysts' coverage decisions. In untabulated sensitivity tests, we replace the change measures of size and book-to-market ratio with their level counterparts. The inferences are substantially unchanged.

<sup>8</sup> Lacking a well-defined measure of *expected* investment banking activities, we use merger and equity issuance activity in year  $t$  to proxy for a firm's attractiveness as a potential investment banking client (see Appendix A). However, we note that the autocorrelation for  $\text{MERGE}$  and  $\text{EQUITY}$ , at 0.27 and 0.07 respectively, are both statistically significant at better than 0.01 levels for our sample, suggesting that current deal activity has significant predictive ability for future deal activity. In addition, we also include

Analysts could also have incentives to move towards growth firms as these firms are more likely to be a source of investment banking business in the future. Jegadeesh, Kim, Krische and Lee [2006] show that analysts tend to tilt their portfolios towards “glamour” firms and firms that are expected to grow their earnings faster in the future. We capture changes in growth expectations using the change in the book-to-market ratio ( $\Delta\text{BTM}$ ). We also proxy for growth expectations using capital expenditures (CAPEX), as firms making investments in property, plant and equipment are likely to be gearing up for growth.

Barth, Kasznik and McNichols [2001] argue that analysts have greater incentives to cover intangibles-intensive firms. They suggest that these firms are likely to have greater information asymmetry, as a large part of their value creation comes from intangible assets that are unrecognized and hard to value. This creates greater opportunities for analysts to uncover mispricing. They find that analyst coverage is higher for intangible-intensive industries and firms. Therefore, we hypothesize that changes in analyst coverage are positively related to intangibles-intensiveness, which we measure using research and development expenditures (RDX).

Finally, as O’Brien and Bhushan [1990] explain, institutional investors and security analysts share a close demand/supply relationship. On the one hand, analysts’ research is often used by brokerage firms as a “loss leader” to attract trading business from institutions. On the other hand, institutions’ demand for information about firms could provide analysts the incentive to start covering these firms. Therefore, we posit that changes in analyst following are positively associated with changes in firms’ institutional ownership ( $\Delta\text{IO}$ ).

#### *Forecasting difficulty*

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in our model variables such as capital expenditures and R&D expenditures, which potentially also capture the propensity of the firm to engage in M&As and external financing deals in the future.

We also incorporate proxies for difficulty in forecasting. Literature on the career concerns of analysts suggests that analysts care about their forecast accuracy, as analysts who forecast accurately over a period of time tend to have better reputations which affect not only their ability to generate trading volumes (Jackson [2005]), but also their career prospects. Mikhail, Walther and Willis [1999] and Hong and Kubik [2003] show that analysts are more likely to experience unfavourable career outcomes if their forecast accuracy declines relative to peers. Therefore, we expect that changes in analyst coverage are negatively correlated with two proxies for forecasting difficulty, forecast dispersion (DISP) and absolute consensus forecast error (AFE).

It is worth noting that the categories of proxies described above are not mutually exclusive. For example, Leone [2004] suggests that analysts have recently favoured large-cap stocks as these firms bring large fees from their heavily traded stocks and potential for profitable investment-banking business. Thus, firm size and changes thereof could plausibly capture not only firms' information environment but also analysts' incentives.

### 3.2 EMPIRICAL ANALYSIS

We examine the proposed determinants of changes in analyst coverage using the following model specification.

$$\begin{aligned} \text{LN\_}\Delta\text{COV}_{j,t} = & \beta_0 + \beta_1*\text{EGROW}_{j,t} + \beta_2*\text{SGROW}_{j,t} + \beta_3*\text{LOSS}_{j,t} + \beta_4*\text{MISS}_{j,t} + \beta_5*\text{GUIDE1}_{j,t} \\ & + \beta_6*\Delta\text{SIZE}_{j,t} + \beta_7*\text{MERGE}_{j,t} + \beta_8*\text{EQUITY}_{j,t} + \beta_9*\Delta\text{BTM}_{j,t} + \beta_{10}*\text{CAPEX}_{j,t} \\ & + \beta_{11}*\text{RDX}_{j,t} + \beta_{12}*\Delta\text{IO}_{j,t} + \beta_{13}*\text{AFE}_{j,t} + \beta_{14}*\text{DISP}_{j,t} + \beta_{15}*\text{COV1}_{j,t} + \varepsilon_{j,t} \quad (1) \end{aligned}$$

In addition to the proposed determinant variables, we also include COV1, the initial analyst coverage level three months after the end of year t-1, as a control variable because firms with higher initial coverage are less likely to have higher changes in analyst coverage. We estimate

the model using ordinary least squares procedure. In all regressions in this study, standard errors are adjusted using the Newey-West procedure to account for serial correlations.<sup>9</sup>

Table 2 displays descriptive statistics of the determinant variables. We briefly discuss the means of these variables. The sample firms show average earnings growth of 0.8% and sales growth of 19.6%. About 15% of the sample firms report a loss, whereas a quarter of the firms (25%) miss consensus analyst forecasts. The average guidance level in year  $t$  is about 5.2, and the average  $\Delta$ SIZE is 0.05. About 23% of our sample firms experience a merger/acquisition and the sample firms on average raise new equity to the tune of 3% their market value in year  $t$ . The mean  $\Delta$ BTM is about 0.10. On average, our sample firms spend 6.5% and 4.4% of lagged total assets on capital and R&D expenditures respectively. They experience about 3.7% increase in the percentage of institutional ownership. Finally, the average dispersion and absolute forecast errors are 0.2% and 0.4% of stock prices respectively.

Table 3 displays correlations among our coverage and guidance variables, and between these variables and the proposed determinant variables. Changes in analyst coverage (LN\_ΔCOV) are insignificantly correlated with both changes in guidance (LN\_ΔGUIDE) and the indicator variable for increases in guidance (D\_ΔGUIDE). Decreases in coverage (DECR\_COV) are insignificantly correlated with the indicator for guidance increases but are significantly correlated with changes in guidance. On the other hand, increases in coverage (INCR\_COV) are insignificantly correlated with both measures of changes in guidance.

All the proposed determinants of changes in analyst coverage are correlated with LN\_ΔCOV in the expected direction and the correlations are highly significant. Their correlations with DECR\_COV and INCR\_COV are also largely consistent. Many of these

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<sup>9</sup> In additional sensitivity tests, we cluster the standard errors by firms and re-estimate all our regressions. The results are robust to this estimation procedure and all inferences remain unchanged.

determinants are also significantly correlated with changes in guidance (LN\_ΔGUIDE or D\_ΔGUIDE). For example, firms with high earnings growth (EGROW), sales growth (SGROW), changes in size (ΔSIZE), changes in growth expectations (ΔBTM, CAPEX) and changes in institutional ownership (ΔIO) are also significantly likely to increase the volume of guidance. This suggests it is important to control for these determinants in the analysis of guidance response to changes in analyst coverage, which we do in Section 4.

Table 4 presents the estimation results for model (1). Most of the explanatory variables are significant in the predicted direction and the adjusted  $R^2$  of the model is about 13%. Specifically, consistent with predictions, changes in analyst coverage are positively associated with sales growth, volume of managerial guidance, changes in market value, incidences of mergers and acquisition, R&D and capital expenditure intensity, and changes in institutional ownership. They are negatively associated with the incidence of reporting losses or of missing analyst forecasts, dispersion in analyst forecasts and the initial level of coverage. The effects of sales growth, equity offering intensity, and absolute forecast errors are each insignificant. Inconsistent with prediction, changes in analyst coverage are positively associated with changes in book-to-market ratio.<sup>10</sup>

To summarize, we find that changes in analyst coverage are significantly associated with companies' operating performance and information environment. Analysts' incentives in generating trading or investment banking businesses and the level of disagreement among analysts also play an important role in their decisions to increase or decrease coverage.

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<sup>10</sup> If we replace ΔBTM with BTM, the effect of the book-to-market ratio is consistent with prediction and significantly negative. Alternatively, if we regress LN\_ΔCOV on ΔBTM alone, the coefficient is also significantly negative. It is likely that the positive coefficient on ΔBTM in Table 4 is driven by the presence of other determinant variables in the model.

## ***4. Managers' Guidance Response to Changes in Analyst Coverage***

### **4.1 EMPIRICAL PREDICTIONS**

We now turn to our main research question and analyze whether and how managers respond to changes in analyst coverage of their firms. Our analysis focuses on managerial guidance decisions, i.e. whether managers respond to changes in analyst following by providing more or less guidance of prospective key financial information. We analyze separately the implications of decreases and increases in analyst coverage.

#### *Decreases in analyst coverage*

A large literature argues that analysts play a valuable role in capital markets. First, analyst research has been shown to play an important role in making stock prices more informationally efficient, and greater informational efficiency leads to gains in liquidity, decreases in trading costs, and decreases in the cost of capital (e.g., Amihud and Mendelson [1986], Frankel and Li [2004]). Second, analysts play the important role of monitoring the activities of management. Analyst scrutiny of management actions could exert a disciplining influence on management and reduce the agency costs associated with the separation of ownership and control (Moyer, Chatfield and Sisneros [1989], Chung and Jo [1996], Yu [2008]).

Finally, analysts as information intermediaries help to increase the breadth of investor cognizance of firms, which has been shown by Merton [1987] to be positively associated with a firm's market value. Analyst coverage creates publicity for target firms, draws investor attention to these firms, and increases the fraction of investors in the market who know about the firm. For example, analyst coverage initiations, forecast revisions and recommendation changes are often followed by increased trading volumes, large stock price movements and increased media coverage (e.g., Stickel [1995], Womack [1996], Bonner, Hugon and Walther [2007]), all of

which are expected to be valued by top management. Leavy and Sloan [2008] document in addition that increased investor recognition has effects in stimulating corporate financing and investing activity. As Leone [2004] suggests, decreasing analyst coverage means dwindling exposure to investors, which can be costly to the firm in many respects.

The evidence on the roles played by analysts suggests that management may consider analyst coverage to be important. For example, Rana [2008] asserts that CFOs spend a significant part of their time knocking on the doors of potential analysts and in maintaining communications with existing analysts. This raises the question of whether, and how, managers respond to decreases of analyst coverage. The literature has shown that a key determinant of analyst following is the quality and quantity of voluntary disclosures, and in particular, of managerial guidance, provided by the firm (e.g., Lang and Lundholm [1996], Healy, Hutton and Palepu [1999]). A 2003 survey of corporate managers conducted by the National Investor Relations Institute indicates that 98% of respondents believed that analysts wanted guidance.<sup>11</sup> Therefore, we expect that managers will respond to decreases in analyst following by increasing the volume of guidance they provide. In other words, we expect a positive association between changes in managerial guidance and the absolute value of decreases in analyst coverage.

#### *Increases in analyst coverage*

The literature has suggested that analysts function as information intermediaries and/or information providers (e.g., Lang and Lundholm [1996]). Under the first view, analysts receive disclosures from company management which they then assimilate, filter, process, and transmit to investors in the form of earnings forecasts, stock recommendations and research reports. This view suggests that analyst following and company-provided disclosure are complements; that is,

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<sup>11</sup> See [http://www.niri.org/news\\_media\\_center/pressReleases/20031210SurveyEarningsGuideRev.pdf](http://www.niri.org/news_media_center/pressReleases/20031210SurveyEarningsGuideRev.pdf).

having greater analyst following potentially implies greater demand for disclosures from management. This implies that firms experiencing increases in analyst following will respond with greater disclosures. However, analysts could also function as information providers. This view suggests that analysts use their superior skill and experience to generate new insights over and above the information contained in company-provided disclosures. Under this view, analyst following and company-provided disclosures could be substitutes, implying that firms experiencing increases in analyst following need not necessarily respond with increases in disclosure. Asquith, Mikhail and Au [2005] perform a detailed content analysis of all the quantitative and qualitative details in analysts' reports, and conclude that analysts perform both roles – that they provide new information to the market, and also interpret existing news about the firm that has already been released to the market. This evidence is consistent with analyst following and managerial disclosures acting as both complements as well as substitutes; therefore, we are agnostic about the direction of managerial response to increases in analyst coverage.

## 4.2 EMPIRICAL ANALYSIS

We estimate the following model to assess the managerial response to changes in analyst coverage:

$$CHG\_GUIDE_{j,t+1} = \beta_0 + \beta_1 * DECR\_COV_{j,t} + \beta_2 * INCR\_COV_{j,t} + Controls_{j,t} + \varepsilon_{j,t} \quad (2)$$

We include the determinant variables from model (1) as controls to mitigate the correlated omitted variable problem. We estimate two versions of model (2). In the first version, our dependent variable is *D\_ΔGUIDE*, which is an indicator variable set to one if the firm increases guidance, and zero otherwise. In this version, we only model the direction of the firm's

response. In the second version, the dependent variable is LN\_ΔGUIDE, which is the change of natural logarithm of the volume of guidance. This captures both the direction as well as the magnitude of the firm's response. DECR\_COV and INCR\_COV are as defined in Section 2.1, and capture the magnitude of decreases and increases in analyst coverage respectively.

We estimate the first model using logistic regression, and the second model using OLS. The estimation results, presented in Table 5, are consistent across the two specifications. In both specifications, the coefficients on DECR\_COV (0.218 and 0.080 respectively) are significantly positive ( $p = 0.02$  in both cases), suggesting that decreases in analyst coverage are followed by a significant increase in the volume of managerial guidance. While the coefficients on INCR\_COV are also positive, they are insignificant in both specifications ( $p = 0.19$  and  $0.10$  respectively). In addition, the magnitudes of the coefficients (0.135 and 0.053 respectively) are also substantially smaller. These results suggest that managers only respond weakly to increases in analyst coverage. Since our main results are qualitatively similar across both specifications of model (2), we perform all of our remaining analyses using the OLS version of the model and use dependent variable of LN\_ΔGUIDE that captures both direction and magnitude of managerial guidance responses.

As for the control variables, changes in guidance are positively associated with changes in firm size, analyst coverage levels and changes in institutional ownership; negatively associated with the incidence of reporting losses or of missing analyst forecasts, the intensity of equity offerings or R&D expenditures and previous guidance levels. All other variables are insignificant.

Overall, consistent with expectations, we document significant managerial response to decreases in analyst coverage. On the other hand, we find a significantly weaker managerial

response to increases in analyst coverage. The evidence confirms that managers perceive analyst coverage to be valuable, and that in face of dwindling analyst coverage, managers are willing to expend resources to increase communications to attract more analysts to the firm.

#### 4.3 The ROLE OF REGULATION FAIR DISCLOSURE

Our sample period spans 1997-2006 and therefore encompasses periods both before and after Regulation Fair Disclosure, which became effective in October 2000. Reg FD, issued by the Securities and Exchange Commission, is intended to level the playing field amongst all investors in the capital markets by eliminating informational disparities between individual and institutional market participants. Under Reg FD, management is prohibited from disclosing any material information to a select group of individuals and is required to provide broad, non-exclusionary disclosure of any such information that is disclosed privately.

Prior to the issuance of Reg FD, the practice of “private guidance” to a select group of analysts and institutional investors, for example through closed conference calls, was quite common (Hutton [2005], Wang [2007]). Such practices have been prohibited by Reg FD. To the extent that managers used private communications with analysts prior to Reg FD to attract more analysts upon decreases of coverage, we expect Reg FD to affect managers’ response to changes in analyst coverage. Specifically, prior to Reg FD, managers may have preferred to respond to decreases in analyst coverage and deterioration in the firm’s information environment by increasing disclosures to select analysts and investors through private channels, as this mechanism of communication is likely to be less costly than public announcements. Thus, prior to Reg FD, the public guidance response to decreases in analyst coverage is expected to be weaker. In the post-FD period, however, managers no longer have the option to communicate

privately with analysts and have to resort to public guidance in an effort to increase communications with analysts and attract more analysts to the firm after loss of coverage. On the other hand, if managers provide increased guidance in order to directly target investors and substitute for the role played previously by analysts, we expect to observe an increase in guidance following decreases of analyst coverage in both the pre- and post-FD period.

In Table 6, we estimating model (2), with dependent variable being LN\_ΔGUIDE, separately for pre- (1997-2000) and post-FD (2001-2006) sub-samples. We find stronger managerial guidance reactions to decreases in analyst coverage (DECR\_COV) in the post-FD period than in the pre-FD period. Specifically, there is no significant increase in managerial guidance following decreases in analyst coverage for the pre-FD period, implying that managers may have resorted to other communication mechanisms, such as private guidance, to cope with the loss of coverage in the pre-FD period. However, managers' response to decreases in coverage is strongly positive in the post-FD period, with a coefficient of 0.127 and a p-value less than 0.01.

These results therefore suggest that the results on managers' responses to decreases in analyst coverage presented in Table 5 are mainly driven by the post-FD period. More importantly, this differential pattern of response pre- and post-FD suggests that in the event of loss of analyst coverage, managers are primarily concerned with regaining analysts to the firm and are expending resources, by stepping up communication through private or public channels, in order to attract analysts to the firm – as opposed to trying to substitute for analysts by relaying information directly to investors. This pattern suggests that managers view analysts as playing a crucial intermediary role – that of receiving, processing and interpreting company-provided disclosures – to investors.

Regarding managers' response to increases in analyst coverage (INCR\_COV), the sub-sample analyses show a significantly positive coefficient in the pre-FD period and an insignificantly positive coefficient in the post-FD period. This result seems to suggest that while managers respond to increases in analyst coverage by providing more guidance in the pre-FD period, they discontinue doing this after Reg FD became effective.

A possible explanation for the different impact of Reg FD on managerial responses to increases and decreases of analyst coverage is the potential chilling effects imposed by Reg FD related to managerial disclosures. Many practitioners have been concerned that Reg FD would decrease the amount of disclosures from managers because of potential litigation costs or proprietary costs associated with public disclosures. As summarized by Security Industry Association spokesman Stuart Kaswell, "the playing field will be more level, but it will be empty (Hassett [2000])."<sup>12</sup> Thus, post-FD, managers may only provide or increase voluntary disclosures when the expected benefits dominate the expected costs of public communications. It is likely that the benefits associated with providing more guidance when firms have increased analyst coverage are relatively small compared to the associated costs post FD, hence managers no longer respond with more guidance. On the other hand, in the post-FD regime, the costs of losing analyst coverage may be substantially higher than the costs associated with providing more guidance. Thus, managers choose to increase their guidance in response to decreases in analyst coverage.

#### 4.4 THE ROLE OF SALES GROWTH

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<sup>12</sup> See Heflin, Subramanyam and Zhang [2003] for more detailed discussions about the potential chilling effects of Reg FD.

The managerial response to losses of analyst coverage need not be the same across all firms. We conjecture that the response will be stronger for firms where analyst coverage is more valuable. In this and next sub-section, we examine the effects of two cross-sectional firm characteristics that are expected to affect the value of analyst coverage.

The first variable we examine is firm growth. Growing firms, which are more likely to raise capital in the future, tend to have greater inherent uncertainty, poorer information environment and less investor recognition. Analysts' roles in improving informational efficiency of stock prices and increasing investor awareness of the company are thus more crucial for these firms. Therefore, we expect that analyst coverage is more valuable to growing firms than to mature firms, and consequently that managers of growing firms are more likely to respond to decreases in analyst coverage to compete for their coverage and investors' attention.

We test this prediction by partitioning our sample into two equal-sized sub-samples based on sales growth (SGROW) and estimating model (2) separately for the low-growth and high-growth firms. We perform this analysis for the post-FD period only, as Table 6 demonstrates that our main findings are driven by this period. Untabulated statistics show that our low-growth firms have a mean (median) sales growth rate of -0.3% (2.9%) over the previous year while the high-growth firms have a mean (median) sales growth rate of 40% (25%).

The results of this analysis, based on the OLS version of model (2), are presented in Table 7. The results are consistent with our prediction. We find that the managerial guidance response to decreases in analyst coverage is insignificant for the low-growth sub-sample, whereas it is positively and highly significant ( $p < 0.01$ ) for the high-growth sub-sample. Interestingly, while the managerial response to increases in analyst coverage is insignificant for the low-growth sub-sample, it is positive and significant ( $p < 0.05$ ) for the high-growth sub-

sample. The magnitude of the coefficient on INCR\_COV, however, is substantially smaller than that on DECR\_COV (0.100 versus 0.213) for the high-growth sub-sample, and a Wald test for the difference is significant at the 0.03 level. The fact that the coefficients for both increases and decreases in analyst coverage are significantly positive for high-growth firms suggests that managers of these firms are more sensitive and responsive to analysts' information demands. Both results are consistent with the notion that analysts are more valuable for high-growth firms than for low-growth firms, as high growth firms are likely in greater needs for capital as well as investor awareness.

#### 4.5 THE ROLE OF THE RESULTING LEVEL OF COVERAGE

Finally, we examine how the managerial response to changes in analyst coverage varies with the resulting level of analyst coverage. For example, the impact of the same drop, in percentage terms, in analyst coverage, may be very different for a firm that still has 25 analysts covering the firm, compared to a firm that only has two or three analysts remaining. We expect that the value of analyst coverage to managers is greater for thinly-covered firms than for heavily-covered firms. This is consistent with Leone [2004] who provides anecdotal evidence that executives at thinly-covered companies are under increasing pressure to keep from losing their existing coverage or to replace lost analysts in some way. Further, prior research has provided evidence suggesting that the marginal value of additional analyst coverage declines as the firm becomes more heavily covered. For example, Branson, Guffey and Pagach [1998] find that heavily followed firms experience a smaller positive stock price reaction to the announcement of coverage initiation by a new analyst, as compared to thinly followed firms.

Therefore, we hypothesize that managers' response to decreases in analyst coverage is stronger for firms that become thinly-covered, than for firms that still remain heavily-covered. We investigate this issue by partitioning the sample into two equal-sized sub-samples based on the level of analyst coverage at the end of year  $t$  (i.e., COV2), and estimating the OLS version of model (2) separately for thinly-covered firms and heavily-covered firms. Similar to the previous sub-section, we perform this analysis only for the post-FD period. Untabulated statistics show that the low-coverage firms have a mean (median) analyst coverage of 4.7 (5) and the high-coverage firms have a mean (median) analyst coverage of 14.9 (13), showing sharp contrast in the level of analyst coverage for the two sub-samples.

The results are presented in Table 8. Consistent with our expectation, we find that the change in guidance in response to decreases in coverage is positive and significant ( $p=0.01$ ) only for the thinly-covered sub-sample of firms, while there is no discernable managerial guidance response to increases in coverage for both thinly- and heavily-covered firms. This result implies that managers are concerned with maintaining a certain targeted level of analyst coverage for their firms, and are willing to implement measures in order to keep coverage at least at this level. However, as long as the level of coverage is above this "threshold," managers may not respond even if some analysts drop coverage of the firm. Our results are consistent with managers perceiving the marginal value of analyst coverage to be lower when their firms are already followed by a large number of analysts.

To summarize, while our main analyses in Table 5 provide compelling evidence that managers respond to decreases in analyst coverage by increasing the volume of managerial guidance, further investigation shows that this response is not homogeneous across different disclosure regulation regimes or different firm characteristics. Specifically, we show that the

results are driven by the post-FD period when managers can only communicate with analysts via public channels such as managerial guidance. Further, our results on managerial response to decreases in analyst coverage are stronger for high growth firms and firms with low coverage, but relatively muted for low growth firms and firms with high coverage. These results suggest that managers' response to decreases in analyst coverage depends on the value of analyst coverage to their firms.

## ***5. Conclusion***

We examine whether managers respond to changes in analyst coverage by altering the amount of guidance they provide. We find that managers respond strongly to decreases in analyst coverage by increasing the volume of managerial guidance. We find a muted and largely insignificant response from managers to increases in analyst coverage. These findings are driven by the period after Regulation Fair Disclosure. In addition, managerial response to decreases in analyst coverage is stronger amongst relatively high-growth firms and thinly-covered firms.

Our findings have several important implications. Prior research has concluded that analysts play various useful roles in the capital markets. However, little research has directly demonstrated that corporate managers value analyst coverage. Our findings that managers are willing to expend resources in stepping up communications upon decreases in analyst coverage imply that managers perceive analysts to be important in the information environment of the firm. The differential responses to decreases in analyst coverage between the pre- and post-Regulation FD periods further suggest that managers increase disclosures in order to attract more analysts to the firm, as opposed to trying to substitute for the role played previously by analysts who dropped coverage. Moreover, our cross-sectional analyses suggest that the perceived value

of analyst coverage to managers is not the same across firms, and that the strength of the observed managerial response to decreases in analyst coverage varies predictably with the value of analyst coverage to individual firms.

In addition, prior work generally concludes that analyst following increases as a result of increases in managerial voluntary disclosure. We demonstrate that increases in managerial voluntary disclosures can also be a response to dwindling analyst coverage, and thus document a new perspective to the complex interaction between analysts and managers.

## Appendix A: Variable Definitions

Variable name	Definition
<i>Coverage variables (I/B/E/S Summary)</i>	
COV1	Number of analysts following three months after the end of year t-1
COV2	Number of analysts following three months after the end of year t
$\Delta$ COV	COV2-COV1
LN_ $\Delta$ COV	Log(COV2/COV1)
DECR_COV	-LN_ $\Delta$ COV if $\Delta$ COV < 0; 0 otherwise
INCR_COV	LN_ $\Delta$ COV if $\Delta$ COV > 0; 0 otherwise
<i>Guidance variables (FirstCall CIG)</i>	
GUIDE1	Number of managerial guidance in year t, measured over the 12-month period ending three months after the end of year t
GUIDE2	Number of managerial guidance in year t+1, measured over the 12-month period ending three months after the end of year t+1
$\Delta$ GUIDE	GUIDE2-GUIDE1
D_ $\Delta$ GUIDE	1 if $\Delta$ GUIDE > 0; 0 otherwise
LN_ $\Delta$ GUIDE	Log(GUIDE2/GUIDE1)
<i>Determinant Variables (Compustat annual, unless otherwise indicated; all variables for year t)</i>	
EGROW	(Net income-lagged net income)/lagged total assets, where net income is data18, and total assets is data6
SGROW	(Revenue – lagged revenue)/lagged revenue, where revenue is data12
LOSS	1 if net income < 0; 0 otherwise
MISS	1 if FE < 0; 0 otherwise. FE is analyst forecast error measured as (eps – latest analyst consensus)/price at the end of corresponding year, where price is obtained from CRSP
$\Delta$ SIZE	Log(market value/lagged market value), where market value is data25*data199

MERGE	1 if the firm had a merger/acquisition; 0 otherwise. Merger/acquisition is identified by AFTNT1 AA or AB
EQUITY	data108/lagged market value
$\Delta$ BTM	Log(BTM / lagged BTM), where BTM is data60/market value
CAPEX	data128/lagged total assets
RDX	data46/lagged total assets; data46 is set to zero if missing
$\Delta$ IO	IO% - lagged IO%, where IO% is percentage of institutional ownership obtained from Thomson Financial
AFE	Abs(FE)
DISP	Standard deviation of the latest analyst forecasts/price at the end of corresponding year

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## References

- Ajinkya, B., S. Bhojraj, and P. Sengupta. "The association between outside directors, institutional investors and the properties of management earnings forecasts." *Journal of Accounting Research* 43 (2005): 343-376.
- Amihud, Y., and H. Mendelson. "Asset pricing and the bid-ask spread." *Journal of Financial Economics* 17 (1986): 223-249.
- Anilowski, C., M. Feng, and D. J. Skinner. "Does earnings guidance affect market returns? The nature and information content of aggregate earnings guidance." *Journal of Accounting and Economics* 44 (2007): 36-63.
- Asquith, P., M. Mikhail, and A. Au. "Information content of equity analyst reports." *Journal of Financial Economics* 75 (2005): 245-282.
- Barth, M., R. Kazsnik, and M. McNichols. "Analyst coverage and intangible assets." *Journal of Accounting Research* 39 (2005): 1-34.
- Bhushan, R., and J. Cho. "Acquisitions and the information environment of firms." *The Financial Review* 31(1996): 105-125.
- Bonner, S., A. Hugon, and B. Walther. "Investor reaction to celebrity analysts: The case of earnings forecast revisions." *Journal of Accounting Research* 45 (2007): 481-513.
- Branson, B., D. Guffey, and D. Pagach. "Information conveyed in announcements of analyst coverage." *Contemporary Accounting Research* 15 (1998), 119-143.
- Chuk, E., D. Matsumoto, and G. Miller. "Assessing methods of identifying management forecasts: CIG versus hand-collection." Working paper, 2008.
- Chung, K., and H. Jo. "The impact of security analysts' monitoring and marketing functions on the market value of firms." *Journal of Financial and Quantitative Analysis* 31 (1996): 493-512.
- Clarke, J., A. Khorana, A. Patel, and P. Rau. "The impact of all-star analyst job changes on their coverage choices and investment banking deal flow." *Journal of Financial Economics* 84 (2007): 713-737.
- Cliff, M., and D. Denis. "Do initial public offering firms purchase analyst coverage with underpricing?" *Journal of Finance* 59 (2004): 2871-2901.
- Craig, S. "Left out of shrinking research pool, companies resort to buying analyst coverage." *The Wall Street Journal*, 26 March 2003.
- Das, H., R. Guo, and H. Zhang. "Analysts' selective coverage and subsequent performance of newly public firms." *Journal of Finance* 61 (2006): 1159-1185.

Frankel, R., and X. Li. "Characteristics of a firm's information environment and the information asymmetry between insiders and outsiders." *Journal of Accounting and Economics* 37 (2004): 229-259.

Hassett, K. "Outlaw selective disclosures? –No, the more information the better." *The Wall Street Journal*, August 10, 2000, A18.

Healy, P., A. Hutton, and K. Palepu. "Stock performance and intermediation changes following sustained increases in disclosure." *Contemporary Accounting Research* 16 (1999): 485-520.

Heflin, F., K. Subramanyam, and Y. Zhang. "Regulation FD and the financial information environment: Early evidence." *The Accounting Review* 78 (2003): 1-37.

Hong, H., and J. Kubik. "Analyzing the analysts: Career concerns and biased earnings forecasts." *Journal of Finance* 58 (2003): 313-351.

Hutton, A. "Determinants of managerial earnings guidance prior to Regulation Fair Disclosure and bias in analysts' earnings forecasts." *Contemporary Accounting Research* 22 (2005): 867-914.

Irvine, P. "The incremental impact of analyst initiation of coverage." *Journal of Corporate Finance* 9 (2003): 431-451.

Jackson, A. "Trade generation, reputation and sell-side analysts." *Journal of Finance* 60 (2005): 673-717.

Jegadeesh, N., J. Kim, S. Krische, and C. Lee. "Analyzing the analysts: when do recommendations add value?" *Journal of Finance* 54 (2004): 1083-1124.

Kelly, B., and A. Ljungqvist. "The value of research". Working paper, 2007.

Khorana, A., S. Mola, and R. Rau. "Is there life after loss of analyst coverage?" Working paper, 2008. Available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=972720](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=972720).

Krigman, L., W. Shaw, and K. Womack. "Why do firms switch underwriters?" *Journal of Financial Economics* 60 (2001): 245-284.

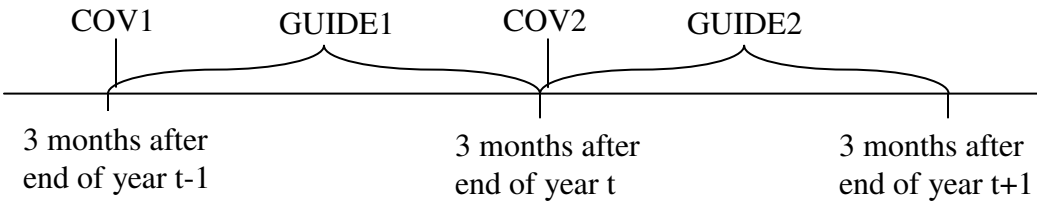
Lang, M. "Discussion of stock performance and intermediation changes surrounding sustained increases in disclosure." *Contemporary Accounting Research* 16 (1999): 521-524.

Lang, M., and R. Lundholm. "Cross-sectional determinants of analyst ratings of corporate disclosures." *Journal of Accounting Research* 31 (1993): 246-271.

Lang, M., and R. Lundholm. "Corporate disclosure policy and analyst behaviour." *The Accounting Review* 71 (1996): 467-492.

Lansford, B., B. Lev, and J. Tucker. "Why do firms issue disaggregated earnings guidance? The archival evidence." Working paper, 2007.

- Lehavy, R., and R. Sloan. "Investor recognition and stock returns." *Review of Accounting Studies* 13 (2008): 327-362.
- Leone, M. "The flight of the sell-side analysts." *CFO.com Magazine*, July 8, 2004.
- Lin, H., and M. McNichols. "Underwriting relationships, analysts earnings forecasts and investment recommendations." *Journal of Accounting and Economics* 25 (1998): 101-127.
- Ljungqvist, A., F. Marston, and W. Wilhelm. "Competing for securities underwriting mandates: banking relationships and analyst recommendations." *Journal of Finance* 61 (2006): 301-340.
- McNichols, M., and P. O'Brien. "Self-selection and analyst coverage." *Journal of Accounting Research* 35 (1997): 167-199.
- Mikhail, M., B. Walther, and R. Willis. "Does forecast accuracy matter to security analysts?" *The Accounting Review* 74 (1999): 185-200.
- Merton, R. "A simple model of capital market equilibrium with incomplete information." *Journal of Finance* 42 (1987): 483-510.
- Moyer, C., R. Chatfield, and P. Sisneros. "Security analyst monitoring activity: agency costs and information demands." *Journal of Financial and Quantitative Analysis* 24 (1989): 503-512.
- O'Brien, P., and R. Bhushan. "Analyst following and institutional ownership." *Journal of Accounting Research* 28 (1990): 55-76.
- Previts, G., R. Bricker, T. Robinson, and S. Young. "A content analysis of sell-side analyst company reports." *Accounting Horizons* 8 (1994): 55-70.
- Rana, E. "Cover me: How can CFOs keep their companies in analyst's spotlight?" *CFO.com Magazine*, April 7, 2008.
- Roulstone, D. "Analyst Following and market liquidity." *Contemporary Accounting Research* 20 (2003): 552 – 578.
- Shon, J., and S. Young. "Determinants of analysts' dropped coverage decision." Working paper, 2008.
- Stickel, S. "The anatomy of the performance of buy and sell recommendations." *Financial Analysts Journal* 51 (1995): 25-39.
- Wang, I. "Private earnings guidance and its implications for disclosure regulation." *The Accounting Review* 82 (2005): 1299-1332.
- Womack, K. "Do brokerage analysts' recommendations have investment value?" *Journal of Finance* 51 (1996): 137-167.
- Yu, F. "Analyst coverage and earnings management." *Journal of Financial Economics* 88 (2008): 245-271.



**Figure 1: *Timeline of Coverage and Guidance Measurement.*** COV1 and COV2 are numbers of analysts following at the respective point of time. GUIDE1 and GUIDE2 are numbers of units of managerial guidance over the respective period of time.

**Table 1**  
***Descriptive Statistics of Guidance and Coverage***

The sample is based on 9307 firm-years during 1997-2006. COV1 and COV2 are numbers of analysts following three months after the end of year t-1 and t respectively.  $\Delta\text{COV}$  equals  $\text{COV2}-\text{COV1}$ .  $\text{LN}_{\Delta\text{COV}}$  equals logarithm of  $\text{COV2}/\text{COV1}$ .  $\text{DECR}_{\text{COV}}$  equals  $-\text{LN}_{\Delta\text{COV}}$  if  $\Delta\text{COV}<0$ , and 0 otherwise.  $\text{INCR}_{\text{COV}}$  equals  $\text{LN}_{\Delta\text{COV}}$  if  $\Delta\text{COV}>0$ , and 0 otherwise. GUIDE1 and GUIDE2 are numbers of units of managerial guidance issued over the 12-month period ending three months after the end of year t and t+1 respectively.  $\Delta\text{GUIDE}$  equals  $\text{GUIDE2}-\text{GUIDE1}$ .  $\text{D}_{\Delta\text{GUIDE}}$  equals 1 if  $\Delta\text{GUIDE}>0$ , and 0 otherwise.  $\text{LN}_{\Delta\text{GUIDE}}$  equals logarithm of  $\text{GUIDE2}/\text{GUIDE1}$ .

**Panel A: Descriptive statistics of analyst coverage variables**

<i>Variable</i>	<i>#Obs</i>	<i>Mean</i>	<i>Median</i>	<i>25th Pctl</i>	<i>75th Pctl</i>	<i>Std Dev</i>
COV1	9307	9.529	7	4	13	6.874
COV2	9307	9.705	8	5	13	6.800
$\Delta\text{COV}$	9307	0.176	0	-1	2	2.951
$\text{LN}_{\Delta\text{COV}}$	9307	0.015	0	-0.182	0.223	0.391
$\text{DECR}_{\text{COV}}$	9307	0.130	0	0	0.182	0.246
$\text{INCR}_{\text{COV}}$	9307	0.144	0	0	0.223	0.235

**Panel B: Descriptive statistics of managerial guidance variables**

<i>Variable</i>	<i>#Obs</i>	<i>Mean</i>	<i>Median</i>	<i>25th Pctl</i>	<i>75th Pctl</i>	<i>Std Dev</i>
GUIDE1	9307	5.199	4	2	7	4.098
GUIDE2	9307	5.298	4	2	7	4.050
$\Delta\text{GUIDE}$	9307	0.099	0	-2	2	3.403
$\text{D}_{\Delta\text{GUIDE}}$	9307	0.417	0	0	1	0.493
$\text{LN}_{\Delta\text{GUIDE}}$	9307	0.038	0	-0.405	0.442	0.730

**Panel C: Contingency table**

		<i>Change in guidance</i>			Row totals	
		<i>Decrease</i>	<i>No change</i>	<i>Increase</i>		
#observations	<i>Change in coverage</i>	<i>Decrease</i>	1348	664	1491	3503
Row %			38.48	18.96	42.56	37.64 %
Column %			36.87	37.56	38.40	
#observations		<i>No change</i>	716	342	696	1754
Row %			40.82	19.50	39.68	18.85 %
Column %			19.58	19.34	17.92	
#observations		<i>Increase</i>	1592	762	1696	4050
Row %			39.31	18.81	41.88	43.52 %
Column %			43.54	43.10	43.68	
Column totals		3656	1768	3883	9307	
		39.28 %	19.00 %	41.72 %	100.00 %	

**Table 2**  
***Descriptive Statistics of the Determinants of Changes in Analyst Coverage***

The sample is based on 9307 firm-years during 1997-2006. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions.

<i>Variable</i>	<i>#Obs</i>	<i>Mean</i>	<i>Median</i>	<i>25th Pctl</i>	<i>75th Pctl</i>	<i>Std Dev</i>
EGROW	9307	0.008	0.010	-0.012	0.034	0.192
SGROW	9307	0.196	0.116	0.029	0.253	0.480
LOSS	9307	0.153	0	0	0	0.360
MISS	9307	0.250	0	0	0	0.433
GUIDE1	9307	5.199	4	2	7	4.098
ΔSIZE	9307	0.047	0.082	-0.197	0.331	0.541
MERGE	9307	0.233	0	0	0	0.423
EQUITY	9307	0.029	0.007	0.003	0.017	0.086
ΔBTM	9307	0.096	0.043	-0.181	0.325	0.549
CAPEX	9307	0.065	0.045	0.023	0.079	0.075
RDX	9307	0.044	0.000	0	0.062	0.082
ΔIO	9307	0.037	0.026	-0.017	0.081	0.129
DISP	9307	0.002	0.001	0.000	0.002	0.018
AFE	9307	0.004	0.001	0.000	0.003	0.023
COV1	9307	9.529	7	4	13	6.874

**Table 3**  
**Correlations Matrix**

This table presents Pearson correlation among coverage, guidance, and determinant variables. The sample is based on 9307 firm-years during 1997-2006. LN\_ΔCOV equals logarithm of COV2/COV1. DECR\_COV equals -LN\_ΔCOV if ΔCOV<0, and 0 otherwise. INCR\_COV equals LN\_ΔCOV if ΔCOV>0, and 0 otherwise. D\_ΔGUIDE equals 1 if ΔGUIDE>0, and 0 otherwise. LN\_ΔGUIDE equals logarithm of GUIDE2/GUIDE1. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions. \*, \*\*, \*\*\* indicate 2-sided statistical significance at the 10%, 5% and 1% level respectively.

	<i>LN_ΔCOV</i>	<i>DECR_COV</i>	<i>INCR_COV</i>	<i>D_ΔGUIDE</i>	<i>LN_ΔGUIDE</i>
DECR_COV	-0.823***				
INCR_COV	0.804***	-0.324***			
D_ΔGUIDE	-0.007	0.014	0.003		
LN_ΔGUIDE	-0.003	0.020*	0.016	0.760***	
EGROW	0.056***	-0.044***	0.048***	0.017*	0.020*
SGROW	0.169***	-0.080***	0.198***	0.011	0.027**
LOSS	-0.084***	0.131***	-0.003	-0.038***	-0.025**
MISS	-0.080***	0.088***	-0.042***	-0.022**	-0.011
GUIDE1	0.046***	-0.082***	-0.010	-0.252***	-0.373***
ΔSIZE	0.231***	-0.197***	0.178***	0.073***	0.099***
MERGE	0.057***	-0.034***	0.060***	0.001	0.006
EQUITY	0.145***	-0.060***	0.178***	0.003	0.014
ΔBTM	-0.083***	0.088***	-0.046***	-0.055***	-0.077***
CAPEX	0.054***	-0.032***	0.057***	0.007	0.023**
RDX	0.040***	0.019*	0.086***	-0.006	0.014
ΔIO	0.160***	-0.096***	0.166***	0.031***	0.037***
AFE	-0.093***	0.114***	-0.036***	-0.018*	-0.012
DISP	-0.106***	0.143***	-0.027***	-0.024**	-0.010
COV1	-0.158***	-0.027***	-0.292***	0.033***	0.007

**Table 4**  
***Determinants of Changes in Analyst Coverage***

The sample is based on 9307 firm-years during 1997-2006. The dependent variable is LN\_ΔCOV, which equals logarithm of COV2/COV1. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions. Standard errors are adjusted with Newey-West procedure. \*, \*\*, \*\*\* indicate 2-sided statistical significance at the 10%, 5% and 1% level respectively.

<i>Variables</i>	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>
Intercept		0.026	0.010***
<i>Fundamental performance:</i>			
EGROW	+	0.026	0.303
SGROW	+	0.089	0.000***
LOSS	-	-0.023	0.092*
MISS	-	-0.048	0.000***
<i>Information environment:</i>			
GUIDE1	+	0.005	0.000***
ΔSIZE	+	0.204	0.000***
<i>Analysts' incentives:</i>			
MERGE	+	0.019	0.032**
EQUITY	+	0.073	0.215
ΔBTM	-	0.109	0.000***
CAPEX	+	0.105	0.034**
RDX	+	0.145	0.006***
ΔIO	+	0.229	0.000***
<i>Forecasting difficulty:</i>			
AFE	-	-0.325	0.427
DISP	-	-1.333	0.016**
<i>Control variable:</i>			
COV1	-	-0.009	0.000***
Adjusted R <sup>2</sup>		12.85%	

**Table 5**  
**Managers' Response to Changes in Analyst Coverage**

The sample is based on 9307 firm-years during 1997-2006. The dependent variables are D\_ΔGUIDE and LN\_ΔGUIDE respectively. D\_ΔGUIDE equals 1 if ΔGUIDE>0, and 0 otherwise. LN\_ΔGUIDE equals logarithm of GUIDE2/GUIDE1. DECR\_COV equals -LN\_ΔCOV if ΔCOV<0, and 0 otherwise. INCR\_COV equals LN\_ΔCOV if ΔCOV>0, and 0 otherwise. LN\_ΔCOV equals logarithm of COV2/COV1. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions. Standard errors are adjusted with Newey-West procedure. \*, \*\*, \*\*\* indicate 2-sided statistical significance at the 10%, 5% and 1% level respectively.

Variables	Prediction	Dep. Var.: D_ΔGUIDE		Dep. Var.: LN_ΔGUIDE	
		Logit Estimates	p-value	OLS Estimates	p-value
Constant		0.379	0.000***	0.340	0.000***
DECR_COV	+	0.218	0.024**	0.080	0.016**
INCR_COV	?	0.135	0.190	0.053	0.104
EGROW		-0.078	0.383	-0.024	0.661
SGROW		-0.003	0.958	0.008	0.683
LOSS		-0.221	0.002***	-0.069	0.002***
MISS		-0.160	0.002***	-0.046	0.006***
GUIDE1		-0.180	0.000***	-0.071	0.000***
ΔSIZE		0.375	0.000***	0.174	0.000***
MERGE		-0.037	0.490	-0.013	0.438
EQUITY		-0.505	0.084*	-0.202	0.057*
ΔBTM		0.058	0.485	0.007	0.773
CAPEX		-0.165	0.599	0.123	0.229
RDX		-0.717	0.018**	-0.159	0.077*
ΔIO		0.376	0.049**	0.104	0.083*
AFE		0.521	0.626	0.057	0.887
DISP		-8.008	0.248	-0.078	0.833
COV1		0.024	0.000***	0.007	0.000***
Pseudo (Adjusted) R <sup>2</sup>		9.33%		16.23%	

**Table 6**  
***Managers' Response to Changes in Analyst Coverage: Role of Regulation FD***

Pre-FD sample is based on 2673 firm-years in 1997-2000 and post-FD sample is based on 6634 firm-years in 2001-2006. The dependent variable is LN\_ΔGUIDE, the logarithm of GUIDE2/GUIDE1. DECR\_COV equals -LN\_ΔCOV if ΔCOV<0, and 0 otherwise. INCR\_COV equals LN\_ΔCOV if ΔCOV>0, and 0 otherwise. LN\_ΔCOV is the logarithm of COV2/COV1. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions. Standard errors are adjusted with Newey-West procedure. \*, \*\*, \*\*\* indicate 2-sided statistical significance at the 10%, 5% and 1% level respectively.

<i>Variables</i>	<i>Pre-Reg FD</i>			<i>Post-Reg FD</i>		
	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>
Constant		0.604	0.000***		0.269	0.000***
DECR_COV	?	0.023	0.674	+	0.127	0.002***
INCR_COV	?	0.146	0.029**	?	0.030	0.425
EGROW		-0.024	0.668		0.007	0.905
SGROW		0.025	0.199		-0.041	0.087*
LOSS		-0.105	0.017**		-0.057	0.026**
MISS		-0.041	0.185		-0.049	0.010***
GUIDE1		-0.181	0.000***		-0.059	0.000***
ΔSIZE		0.178	0.000***		0.141	0.000***
MERGE		-0.033	0.315		0.004	0.836
EQUITY		-0.272	0.184		-0.109	0.283
ΔBTM		0.062	0.158		-0.024	0.431
CAPEX		-0.372	0.005***		0.393	0.003***
RDX		-0.214	0.143		-0.124	0.270
ΔIO		0.408	0.000***		-0.017	0.804
AFE		-0.194	0.765		0.266	0.414
DISP		0.109	0.924		-0.385	0.257
COV1		0.016	0.000***		0.005	0.000***
Adjusted R <sup>2</sup>		23.17%			14.09%	

**Table 7**  
***Managers' Response to Changes in Analyst Coverage: Role of Sales Growth***

Low sales growth sample is based on 3315 firm-years in 2001-2006 and high sales growth sample is based on 3318 firm-years in 2001-2006. The dependent variable is LN\_ΔGUIDE, the logarithm of GUIDE2/GUIDE1. DECR\_COV equals -LN\_ΔCOV if ΔCOV<0, and 0 otherwise. INCR\_COV equals LN\_ΔCOV if ΔCOV>0, and 0 otherwise. LN\_ΔCOV is the logarithm of COV2/COV1. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions. Standard errors are adjusted with Newey-West procedure. \*, \*\*, \*\*\* indicate 2-sided statistical significance at the 10%, 5% and 1% level respectively.

<i>Variables</i>	<i>Low Sales Growth (SGROW)</i>			<i>High Sales Growth (SGROW)</i>		
	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>
Constant		0.278	0.000***		0.284	0.000***
DECR_COV	?	0.076	0.126	+	0.213	0.001***
INCR_COV	?	-0.060	0.279	?	0.100	0.045**
EGROW		0.044	0.619		-0.043	0.597
SGROW		-0.132	0.182		-0.055	0.056*
LOSS		-0.038	0.298		-0.06	0.154
MISS		-0.007	0.802		0.093	0.001***
GUIDE1		-0.052	0.000***		-0.066	0.000***
ΔSIZE		0.178	0.000***		0.109	0.027**
MERGE		0.010	0.743		0.001	0.962
EQUITY		-0.079	0.664		-0.057	0.652
ΔBTM		0.015	0.733		-0.057	0.201
CAPEX		0.073	0.767		0.529	0.001***
RDX		-0.310	0.127		-0.068	0.642
ΔIO		-0.092	0.377		0.022	0.795
AFE		-2.299	0.070*		0.518	0.000***
DISP		1.161	0.129		-3.800	0.596
COV1		0.002	0.380		0.007	0.000***
Adjusted R <sup>2</sup>		12.17%			16.42%	

**Table 8**  
***Managers' Response to Changes in Analyst Coverage: Role of Resulting Coverage***

Low coverage sample is based on 3368 firm-years in 2001-2006 and high coverage sample is based on 3266 firm-years in 2001-2006. The dependent variable is LN\_ΔGUIDE, the logarithm of GUIDE2/GUIDE1. DECR\_COV equals -LN\_ΔCOV if ΔCOV<0, and 0 otherwise. INCR\_COV equals LN\_ΔCOV if ΔCOV>0, and 0 otherwise. LN\_ΔCOV is the logarithm of COV2/COV1. EGROW equals change in net income deflated by lagged total assets. SGROW equals change in revenue deflated by lagged revenue. LOSS equals 1 if net income < 0, and 0 otherwise. MISS equals 1 if FE < 0, and 0 otherwise, where FE is latest analyst forecast error deflated by price at the end of corresponding year. ΔSIZE equals logarithm of market value/lagged market value. MERGE equals 1 if the firm had a merger/acquisition, and 0 otherwise, where merger/acquisition is identified by AFTNT1 AA or AB. EQUITY is amount of equity issuance deflated by lagged market value. ΔBTM equals logarithm of book-to-market/lagged book-to-market. CAPEX is capital expenditure deflated by lagged total assets. RDX is R&D expenditure deflated by lagged total assets. ΔIO is IO% - lagged IO%, where IO% is the percentage of institutional ownership. AFE equals the absolute value of FE. DISP is the standard deviation of the latest analyst forecasts deflated by price at the end of corresponding year. See Appendix A for detailed variable definitions. Standard errors are adjusted with Newey-West procedure. \*, \*\*, \*\*\* indicate 2-sided statistical significance at the 10%, 5% and 1% level respectively.

<i>Variable</i>	<i>Low Coverage (COV2)</i>			<i>High Coverage (COV2)</i>		
	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>	<i>Prediction</i>	<i>OLS Estimates</i>	<i>p-value</i>
Constant		0.375	0.000***		0.252	0.000***
DECR_COV	+	0.115	0.014**	?	0.125	0.187
INCR_COV	?	0.010	0.851	?	0.019	0.748
EGROW		0.134	0.173		-0.088	0.207
SGROW		-0.029	0.450		-0.054	0.093*
LOSS		-0.066	0.067*		-0.013	0.754
MISS		-0.041	0.120		-0.051	0.066*
GUIDE1		-0.073	0.000***		-0.049	0.000***
ΔSIZE		0.070	0.176		0.179	0.000***
MERGE		0.034	0.201		-0.028	0.315
EQUITY		-0.022	0.875		-0.092	0.503
ΔBTM		-0.066	0.165		-0.005	0.908
CAPEX		0.061	0.770		0.689	0.000***
RDX		-0.377	0.029**		0.046	0.765
ΔIO		0.003	0.974		-0.036	0.715
AFE		0.331	0.144		-4.555	0.061*
DISP		-0.306	0.183		-19.023	0.000***
COV1		0.004	0.488		0.002	0.317
Adjusted R <sup>2</sup>		16.91%			12.79%	