Do managers use earnings guidance to influence street earnings exclusions?

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Abstract Despite the apparent importance of street earnings to investors, we know little about the composition of this earnings metric and the process through which it is determined. The limited evidence in the extant literature provides analyst-centric explanations, suggesting that analysts' abilities and incentives influence which line items forecast tracking services exclude from GAAP earnings to arrive at street earnings. We propose an alternative explanation: managers actively influence analysts' forecast exclusion decisions via earnings guidance. We test this explanation by examining how earnings guidance influences two aspects of analysts' exclusions: their exclusion of (1) special (i.e., non-recurring) items and (2) incremental (i.e., recurring) items. We find that for firms with no special items in the previous year, when managers guide, analysts exclude almost all current-year special items, whereas when managers do not guide, the proportion that analysts exclude is significantly lower. More importantly, we find that analysts' incremental exclusions are significantly higher when managers guide than when they do not guide. Overall, our evidence suggests that managers play an active role in influencing the composition of street earnings via earnings guidance.

1. Introduction

We investigate whether managers use earnings guidance as a tool to influence the composition of street earnings. Analyst forecast tracking services, such as I/B/E/S and First Call, exclude certain earnings components in calculating a firm's "core earnings" and this core earnings measure is often referred to as "street earnings."[1] Prior research suggests that (1) investors react more strongly to street earnings than to GAAP earnings and (2) investors extrapolate current performance into sustainable future earnings, making street earnings more relevant for equity valuation than other versions of core earnings (Bradshaw and Sloan 2002; Brown and Sivakumar 2003; Frankel and Roychowdhury 2005). Despite the apparent importance of street earnings to investors, the process by which the composition of street earnings is determined is poorly understood. Prior research provides analyst-centric explanations, such as analyst ability (Gu and Chen 2004) and analyst incentives (Baik, Farber, and Petroni 2009), for the exclusion of certain earnings components from street earnings. We explore an alternative (though not mutually exclusive) explanation: managers actively influence analysts' exclusion decisions via earnings guidance.[2]

The communication between managers and analysts is an important determinant of market expectations for future earnings. Prior research finds that managers are able to "walk down" analysts' earnings estimates through earnings guidance during the accounting period when managers consider analysts' forecasts to be overly optimistic (Matsumoto 2002; Cotter, Tuna, and Wysocki 2006; Richardson, Teoh, and Wysocki 2004). In addition to directly guiding the *level* of earnings expectations to influence the sign and level of earnings surprises, managers may also use earnings guidance to influence the *composition* of analyst earnings forecasts and therefore influence street earnings reported at the end of the period. This can be the case because forecast

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[1] Some studies have used the terms "pro forma earnings" and "street earnings" interchangeably (e.g., Bradshaw and Sloan 2002). We use the term "street earnings" to refer to the non-GAAP realized earnings numbers reported by analyst forecast tracking services and "pro forma earnings" to refer to the non-GAAP realized earnings disclosed by managers (e.g., Gu and Chen 2004; Bhattacharya, Black, Christensen, and Mergenthaler 2007).
[2] Although analysts occasionally include certain non-recurring income items, for brevity we use the term "exclusion" to refer to both expense (loss) exclusions and income (gain) inclusions.

tracking services rely on the earnings components forecasted by the majority of analysts *during* the

fiscal period to determine the exclusions from their street earnings number at the *end* of the period.[3]

To illustrate how managers can influence analysts' forecast exclusions, consider the

earnings guidance issued by Amazon and eBay in 2009.[4] Both firms are (1) hi-tech companies, (2)

members of the S&P 500, (3) classified in the same 2-digit SIC code, and (4) widely followed by

analysts. Both companies estimated two significant expense items—the amortization of intangibles

and stock-based compensation. Amazon provided a GAAP forecast that included both items in its'

earnings estimate. eBay, on the other hand, provided both GAAP guidance and pro forma

guidance—forecasts in which managers explicitly exclude certain earnings components from the

earnings estimate—and made the case in its pro forma guidance that amortization of intangibles

and stock compensation expense do not reflect results from ongoing operations and therefore

should be excluded in determining core earnings.[5] Strikingly, analysts' consensus earnings

estimates during the period and the *ex post* street earnings numbers included both items for

Amazon but excluded both items for eBay.[6] This evidence, albeit anecdotal, suggests that analysts'

street earnings exclusion decisions vary from firm to firm and that managers may be able to

influence these decisions.

Total exclusions from street earnings, that is, the difference between street earnings and

GAAP earnings, is composed of (1) special items exclusions (i.e., non-recurring items) and (2)

incremental exclusions (i.e, recurring items). Special items are defined as "one-time" items and

include asset write-downs and write-offs, gains or losses from asset sales and early retirement of

debts, legal settlements, restructuring charges, etc. In theory, since special items are by definition

transitory, their exclusion is justified because they are difficult to predict and are not useful in

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[3] First Call notes: "The estimates have been adjusted to exclude any unusual items that a majority of the contributing analysts deem non-operating and/or non-recurring" and "The values in the *Actuals* table have been adjusted to exclude any unusual items that a majority of the contributing analysts deem non-operating and/or non-recurring" (First Call Historical Database User Guide, pp.8-9).

[4] See Amazon's press release on 10/22/2009 and eBay's press release on 10/21/2009.

[5] Regulation G regulates the reporting of pro forma earnings, but is silent on pro forma guidance. Some firms provide both GAAP and pro forma guidance, perhaps to avoid public scrutiny. However, while they provide both types of guidance, they likely hope investors will pay more attention to the pro forma guidance.

[6] We infer this information from the actual analysts' consensus estimate available from a *Thomson Reuters* research report for each company. *MarketWatch* (October 21, 2009) provides additional confirmation.

predicting future earnings. In practice, however, special items frequently include items that are not necessarily "one-time" or purely transitory (McVay 2006). Moreover, the economic events that trigger the recognition of special items are often associated with firm-specific uncertainty such that analysts might be unsure about the duration and magnitude of the effects of such events (Elliott and Hanna 1996). Thus, analysts do not always exclude all special items from their forecasts (Bradshaw and Sloan 2002, p.60). Therefore, it is likely that analysts may find managers' earnings guidance helpful in assessing the persistence of specific line items included in special items. Accordingly, we predict that analysts are more likely to exclude the appropriate amount of special items when managers guide than when they do not guide.

"Incremental exclusions," on the other hand, are analysts' exclusions of line items beyond special items. Incremental exclusions represent the less-justifiable component of analysts' total exclusions because they are generally recurring items, such as research and development expense, depreciation and amortization, stock-based compensation, and interest- or tax-related items. For example, Doyle, Lundholm, and Soliman (2003) report that incremental exclusions are almost as predictive of future cash flows as the street earnings number itself, suggesting that incremental exclusions are essentially composed of recurring items. Because of the recurring nature of these items, analysts are unlikely to exclude them from their forecasts absent manager intervention. However, since managers presumably understand their business and the nature of their income statement line items better than outsiders, analysts are likely to seriously consider guidance from managers during the fiscal period about the exclusion of these items even though they are not traditionally defined as special items. Therefore, we predict that analysts are more likely to make incremental exclusions when managers guide than when they do not guide. Evidence consistent with this prediction is particularly important because it would provide more compelling evidence of managers' active influence in the composition of street earnings since special items are determined more objectively.

In our empirical tests, we assume that Compustat's "special items" variable represents an objective measure of transitory items because (1) Compustat has no known incentive to bias the

amount and (2) it actively searches both reported line-items on the income statement and disclosed information in the accompanying notes to classify these items (Frankel 2009; Burgstahler, Jiambalvo, and Shevlin 2002). We find evidence consistent with our predictions regarding the influence of management earnings guidance on analysts' special-item exclusions and incremental exclusions. In particular, we find that for firms with no special items in the previous year, when managers guide, analysts exclude almost all current-year special items, whereas when managers do not guide, the proportion that analysts exclude is significantly lower. More importantly, we find that analysts' incremental exclusions are significantly higher when managers guide than when they do not guide.

To further understand these results, we hand-collect a subsample of firms and code the type of earnings guidance and the frequency of various types of exclusions explicit in the guidance. We observe that pro forma guidance is prevalent and that many of the exclusions are recurring expenses. In addition, we analyze analysts' exclusion decisions of a *specific* recurring expense—stock-based compensation—and find that earnings guidance is positively associated with analysts' exclusions of this expense. Taken together, our evidence is consistent with the notion that managers influence analysts' street earnings exclusions through earnings guidance.

This study contributes to the street earnings literature by providing insights into the determination of street earnings. Gu and Chen (2004) find that the items analysts include are more persistent than those they exclude, consistent with analysts having expertise in distinguishing persistent from transitory items. Baik et al. (2009) conjecture that analysts have incentives to promote glamour stocks and find that analysts are more likely to exclude expenses for glamour stocks than for value stocks. Both studies focus on how analysts' ability and incentives influence the determination of street earnings. We extend this stream of research by providing preliminary evidence that managers also play an active role in determining the composition of street earnings.

The paper proceeds as follows. Section 2 reviews relevant research and develops the hypotheses. Section 3 outlines the research design. Section 4 describes the sample, Section 5

presents the main test results, and Section 6 discusses supplementary analyses. Robustness tests are discussed together with the respective tests. Section 7 concludes.

2. Background and hypothesis development

2.1 Background

Our research question is motivated by a broader interest in how managers communicate with analysts in setting market expectations. The interaction between managers and analysts, either in public or in private, has been well documented in prior research. Much of this research addresses the role of managers' guidance in setting the *level* of market earnings expectations to produce a desired sign or level of earnings surprises at the earnings announcement date (Ajinkya and Gift 1984; Matsumoto 2002; Hutton 2005; Cotter et al. 2006; Wang 2007). Our research differs from these studies in that our focus is on managers' efforts to manage the *components* of earnings that analysts include in their earnings estimates and subsequently in street earnings. This effort will not affect the sign (or level) of earnings surprises, as long as analyst forecast tracking services consistently exclude certain components in both the estimates and street earnings.

To illustrate the difference in focus, consider two scenarios. One scenario is that a firm manages analysts' earnings expectations by telling analysts that their estimates for depreciation and amortization expenses are too low. Such guidance would result in a downward adjustment in analyst expectations and a potentially positive earnings surprise at the earnings announcement date. In the other scenario, a manager attempts to manage the core earnings level as perceived by analysts (that is, "street earnings") by telling analysts that they should not include depreciation and amortization expenses in their earnings estimates because these measures are historical-cost-based estimates that do not meaningfully measure a company's current performance.[7] Guidance of this

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[7] For example, see Akamai's earnings guidance press release dated 2/4/2009 where they describe their rationale for excluding depreciation and amortization expense as follows: "Adjusted EBITDA also excludes depreciation and amortization expense, which is based on the company's estimate of the useful life of tangible and intangible assets. These estimates could vary from actual performance of the asset, are based on historic cost incurred to build out the company's deployed network, and may not be indicative of current or future capital expenditures." Similar justifications are routinely offered by companies seeking to exclude other recurring expenses.

nature will not affect the short-term earnings surprise, but will result in higher street earnings if analysts exclude these expenses. In addition, this guidance could boost the company's stock price if investors extrapolate these earnings into the future. While prior research has focused predominantly on the first scenario, our study focuses on the second.

Prior research acknowledges—but does not test—the question of whether managers influence the composition of street earnings. Bradshaw and Sloan (2002, p.47) state that "it is unclear whether an explicit focus on street definitions of earnings originates with managers or analysts." Gu and Chen (2004) conclude that analysts' expertise plays a key role in distinguishing persistent earnings components from transitory components. In their supplementary analysis they explore whether the emphasis on street earnings begins with managers or analysts. Their test, however, does not allow them to conclusively answer this question.[8] Observing that analysts' exclusions coincide with manager's pro forma earnings exclusions for 70% of their U.K. sample, Choi, Lin, Walker, and Young (2007, p.605) speculate that such a high level of agreement might have resulted from managers' guidance. While concluding that analysts are more likely to make income-increasing adjustments for glamour stocks than for value stocks, Baik et al. (2009) acknowledge that the adjustments could have been initiated by managers.

We specifically examine the role that managers play, *via* earnings guidance, in influencing the composition of street earnings. Figure 1 provides a conceptual timeline of the key events involved in determining a firm's street earnings. During the fiscal period, analysts make individual earnings forecasts and decide what earnings components are included in or excluded from their respective forecasts. A forecast tracking service then aggregates these individual forecasts according to the majority rule to form the consensus estimate. After the firm announces realized earnings, the forecast tracking service adjusts GAAP earnings based on the exclusion decisions made by the majority of analysts during the fiscal period to determine street earnings. We

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[8] They hand-collect a subsample of pro forma earnings at the earnings announcement to determine where street earnings come from. This timing, however, might be too late, because analyst tracking services use the majority rule and by the time of the earnings announcement all analysts have already made their forecasts. In other words, the components forecasted by the majority of analysts already standing, the announced pro forma earnings would be too late to influence what components should be included in the street earnings.

investigate whether managers influence this process by providing guidance to analysts about the earnings components that analysts should forecast.

2.2 Hypotheses development

Prior research finds that core earnings are more value-relevant to investors than GAAP earnings (Bradshaw and Sloan 2002). This result is intuitive because core earnings remove the transitory components of earnings (which are not very useful in predicting future earnings) and capture an earnings number that is predictive of future earnings (Francis, Hanna, and Vincent 1996; Ramakrishnan and Thomas 1998). Unlike GAAP earnings, there are no standard rules about what constitutes "core earnings." Two of the available measures are analysts' version of core earnings (i.e., street earnings) and Compustat's version of core earnings.[9] Brown and Sivakumar (2003) find that in equity valuation investors use street earnings to a larger extent than Compustat's version of core earnings, suggesting that street earnings should be the number on which managers focus if they are interested in favorable valuations of their stocks. Analysts appear to exercise substantial discretion in arriving at the street earnings number and their exclusion decisions are often firm-specific (Doyle et al. 2003; Barth et al. 2009). For example, Doyle et al. (p.148) states, "What gets excluded in a particular firm's definition of pro forma earnings varies greatly across companies, and the variation cuts across line items on the income statement and categories of accruals" (note that they use the term "pro forma earnings" to mean "street earnings.") Thus, managers may have a strong incentive to seek higher street earnings by guiding analysts on their exclusion decisions.

To influence investors' perceptions of a firm's future performance, managers may also (1) engage in classification shifting (McVay 2006) and (2) present their own pro forma realized earnings in the earnings announcements. If a firm acts strategically, the components in pro forma earnings (when the number is provided) are expected to be similar to those in the pro forma earnings guidance issued earlier in the fiscal period. Perhaps this is why Bhattacharya et al. (2003)

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[9] According to the definition in the Compustat manual, we treat Compustat's operating earnings as a sound "core earnings" measure and refer to it as "Compustat's version of core earnings" throughout the paper. Although we are aware of another variable specifically labeled as "core earnings" in Compustat after 2002, we do not use it because it does not exclude important non-recurring items such as restructuring charges.

report that for 65% of their sample the street earnings number equals the pro forma realized earnings. When the two numbers are different, Marques (2006) reports that investors react to the component adjustments made by analysts, but not to the additional adjustments made by managers. Her result suggests that managers might benefit more from indirectly influencing investors' expectations *ex ante* through street earning exclusions than from directly doing so *ex post* through pro forma earnings.

A major component of analysts' total exclusions from street earnings is special items. Special items are the primary reason for the growing difference between street and GAAP earnings (Abarbanell and Lehavy 2007; Bradshaw and Sloan 2002). Because of the uncertainty surrounding the economic events that lead to special items, analysts may be unsure about how transitory the effects are (e.g., do the events affect the firm for one year or three years?) and the magnitude of these effects. Prior research suggests that investors do not properly account for special items (Dechow and Ge 2006; Burgstahler, Jiambalvo, and Shevlin 2002). Given that special items are, at least partly, determined by managers' discretion, managers can anticipate these items and may guide analysts about the incidence and the magnitude of these items. As a result, we expect that analysts are more likely to identify and exclude special items when managers guide than when they do not guide.

> **H₁: Analysts are more likely to exclude the full amount of special items when managers guide than when they do not guide**.

Incremental exclusions are analysts' exclusions beyond special items. In theory, incremental exclusions should be comprised exclusively of recurring items. While it is understandable that managers seek to persuade analysts to exclude special items on the grounds that they are transitory, this rationale does not apply to recurring items. Yet, prior research finds that managers frequently exclude recurring items such as R&D expense, depreciation and amortization, stock-based compensation, interest expense, and tax-related costs (Black and Christensen 2009) from pro forma earnings. Doyle et al. (2003) and Gu and Chen (2004) imply that

analysts may inappropriately exclude some recurring expenses from street earnings.[10] Given managers' preference for higher street earnings, which can lead investors to value the firm more optimistically, managers may use earnings guidance to influence the exclusion of recurring expense/loss items from street earnings and the inclusion of non-recurring income items in street earnings. Alternatively, managers might influence analysts to exclude some recurring items because they do not believe these items would help investors evaluate the performance of the firm due to measurement issues of these items under the U.S. GAAP. Barth et al. (2009) find evidence consistent with this explanation regarding stock-based compensation expense exclusions. Doyle et al. (2003), however, find that incremental exclusions as a whole are almost as predictive of future cash flows as the realized street earnings number, suggesting it is inappropriate to exclude these incremental items.

When managers are aggressive in treating certain items as if they are transitory, when, in reality, they are recurring, and treating certain items as if they are value-irrelevant, when, in reality, they are value relevant, analysts may discern the motive behind earnings guidance as opportunistic and not respond to it. On the other hand, managers have superior information about the persistence and value-relevance of the firm's earnings components and it might be irrational for analysts to completely disregard managers' signals. Moreover, analysts might be under pressure to cooperate with managers for better access to the company's information (Lim 2001) and this incentive may remain even after Regulation Fair Disclosure (Mayew 2008). As a result, analysts may not be inclined to disagree with managers. Prior studies have found evidence suggesting that analysts respond to management earnings guidance even when the guidance is clearly intended to steer analysts in a particular direction (Cotter et al. 2006; Feng and McVay 2009). On balance, we believe that analysts are more likely to respond to earnings guidance than to ignore it. This discussion leads to our second hypothesis:

> **H$_2$: Incremental exclusions are higher for firms that issue earnings guidance than for those that do not.**

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[10] For example, Gu and Chen note that analysts' exclusions are persistent, suggesting that analysts have excluded items that should have be included (e.g., recurring expenses).

We view our hypotheses as examining two different aspects of managers' influence on street earnings. Evidence consistent with either H_1 or H_2 would suggest that managers use earnings guidance to influence street earnings exclusions, which is the primary question we examine in this paper. H_1 examines the exclusion of *non-recurring* items. The exclusions and the guidance relating to these exclusions are easier to justify. Analysts would exclude special items absent managers' influence as long as analysts realize that a certain item is transitory for the firm in that particular business environment. Earnings guidance can help analysts reach this conclusion and estimate the amount of special-item exclusions. On the other hand, H_2 examines the exclusion of *recurring* items. In this case, both the exclusions and the guidance relating to the exclusions are questionable and up to analysts' discretion. Therefore, if our tests indicate that analysts' *incremental exclusions* are higher for firms that provide earnings guidance, this evidence would be more compelling evidence of managers' influence in street earnings exclusion decisions than evidence regarding special-item exclusions.

3. Research design

3.1 Special-item exclusions

In general, researchers do not observe the amount of special items excluded by analysts, but observe only the amount of analysts' total exclusions. Given this data limitation, we test H_1 by examining the association of special items as identified by Compustat, which we use as an objective measure of special items, with analysts' total exclusions. Specially, we regress the amount of analysts' total exclusions on the amount of special items. If analysts are fully aware of the identity and amount of special items and exclude them accordingly, the coefficient on special items is expected to be 1 (i.e., total exclusions = special-item exclusions + other). If analysts experience difficulty in identifying and excluding special items, the association will be less than 1 (i.e., total exclusions = α*special-item exclusions + other, where $\alpha < 1$). Thus, the coefficient on special items represents the proportion of the "objective" amount of special items that are excluded

by analysts. H_1 predicts that given the objective amount of special items, analysts exclude a greater proportion of these items when managers guide than when they do not guide.

Our empirical model is adapted from Bradshaw and Sloan (2002, Table 4). Bradshaw and Sloan test the ability of special items to explain analysts' total exclusions over time (13 years) by regressing total exclusions on special items, a year trend variable, and the interaction between special items and trend. We drop the trend variable, because our sample period is short and analyzing the trend is not our primary interest, and augment the model by adding variables capturing the volatility of special items in the previous three years and glamour stock status.

The dependent variable for this test is analysts' total exclusions, *TOTAL*, measured as the difference between street earnings (*STREET*) and GAAP earnings (*GAA*P). *STREET* is the realized earnings per share (EPS), on a diluted basis, recorded by First Call after it excludes the earnings components that the majority of analysts did not forecast during the fiscal period. *GAAP* is the diluted EPS before extraordinary items and discontinued operations, obtained from Compustat. For cross-sectional comparisons, all EPS variables are scaled by the beginning-of-year stock price. *TOTAL* is positive for most observations because street earnings are typically higher than GAAP earnings. Figure 2 illustrates the calculation of these variables.

Our explanatory variable is the interaction between the amount of special items (*SPECIAL*) and the issuance of earnings guidance (*GUIDE*). For proper interpretation of this interaction term, we include the main effects of *SPECIAL* and *GUIDE*. Following prior literature, we measure *SPECIAL* as the difference between *GAAP* and Compustat's version of core earnings (*CORE*). *CORE* is referred to in Compustat as the "diluted EPS from operations," defined as GAAP earnings minus special items by Compustat. This number is after tax and has already been converted to a diluted EPS. It appears that Compustat exercise care in computing *CORE*. In addition to using both reported income statement line items and information in the notes, Frankel (2009) notes:

> Compustat is not ''mechanical'' in its reliance on categories. For example, if the company sets aside litigation reserves for three consecutive years, they will no longer be classified as nonrecurring. However, the guide notes that if the annual report uses words indicating an item is nonrecurring (for example,

''restructuring,'' ''nonrecurring,'' or ''special'') Compustat will take management at its word.

Because *CORE* is generally higher than *GAAP, SPECIAL* is mostly negative. A more negative value of *SPECIAL* indicates a larger amount of expenses or losses in the special items.[11] The main effect of *SPECIAL* captures the association between total exclusions and the "objective" amount of special items for firms that do not guide. We expect the coefficient on *SPECIAL* to be negative because we expect total exclusions (*TOTAL*) to be higher for firms with a larger amount of negative special items (i.e., a more negative value of *SPECIAL*).

GUIDE is coded as 1 if a firm issues at least one earnings forecast for the forthcoming year during the fiscal year and 0 otherwise, according to First Call's Company Issued Guidelines (CIG) database. We exclude forecasts issued after the fiscal year end because they are either preannouncements or warnings and are unlikely to influence the majority of analysts' exclusion decisions, which have already been made by that time. We do not include forecasts issued before the fiscal year begins because analysts' attention is arguably still on the previous year's earnings.[12] We expect *GUIDE* to have a positive coefficient because our H_1 and H_2 predict that *both* components of total exclusions (that is, special-item exclusions and incremental exclusions) are higher when firms guide than when they do not guide, all else being equal. Our H_1 predicts a negative coefficient for *SPECIAL*GUIDE* (again, please note that *SPECIAL* mostly takes negative values).

We control for special item volatility. The more volatile a firm's special items have been in the past, the more uncertain the environment in which it operates and therefore analysts are likely

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[11] Compustat also records a data variable for special items in aggregate dollar amount. Bradshaw and Sloan (2002) use this variable in their paper. We do not use this alternative measure because it is pre-tax and not reported on a diluted EPS basis. This measurement difference is relevant to comparisons of coefficients between the two studies.

[12] Chuk, Matsumoto, and Miller (2009) and Lansford, Lev, and Tucker (2010, Appendix C) have documented the incompleteness of CIG even in the sample years after Reg. FD. This problem is unlikely to have a material impact on our measurement of *GUIDE*, because firms provide an average (median) number of forecasts of 3.6 (4) during the fiscal year if they guide at all and it is unlikely for CIG to omit all these forecasts for a firm-year.

to make exclusions of greater magnitude. We measure this volatility as the average absolute change in special items in the previous three years, *VSPECIAL*, and expect a positive coefficient.

In light of Baik et al.'s (2009) evidence, we control for glamour stock status. Glamour stocks are expected to have high stock turnover, high P/E ratios, positive stock momentum, and high sales growth. *TURNOVER* is the average monthly trading volume in the previous year, scaled by the number of outstanding shares. To avoid a small scalar problem, we calculate E/P ratio rather than P/E ratio. *E/P* is the inverse of the trailing P/E ratio, where P is the price at the beginning of the fiscal year and E is the core EPS number from Compustat for the previous year.[13] We expect a negative coefficient on *E/P*. *MOMENTUM* is the buy-and-hold monthly return in the previous year minus the contemporaneous buy-and-hold monthly return of the value-weighted market index. *ΔSALE* is the percentage sales growth in the previous year. Equation (1) summarizes our model for testing H_1.

$$TOTAL = a_0 + a_1\,SPECIAL * GUIDE + a_2\,SPECIAL + a_3\,GUIDE + a_4\,VSPECIAL$$
$$+ a_5\,TURNOVER + a_6\,E/P + a_7\,MOMENTUM + a_8\,\Delta SALE + e \qquad (1)$$

3.2 Incremental exclusions

We test H_2 by modifying Equation (1) to use incremental exclusions (exclusions beyond special items), *INCREMENT*, as the dependent variable. *INCREMENT* is measured as *TOTAL* plus *SPECIAL* (it is a plus not a minus because we follow the tradition in the literature and measure *SPECIAL* as a variable that largely takes negative values), or equivalently as the difference between *STREET* and *CORE*. We drop *SPECIAL* and its interaction term with *GUIDE* from the model because *SPECIAL* is already removed from *TOTAL* in calculating the new dependent

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[13] Following Baik et al. (2009), our sample includes a small percentage of negative E/P ratio firms because a stock with a respectable stock price despite reporting losses indicates "glamour" and these stocks are more glamorous than those that have the same stock price but report accounting profits. However, two problems may arise from the inclusion of loss firms. First, some loss firms are depressed instead of being glamorous. Second, among loss firms, the more glamorous firms have less negative E/P ratios. We expect a positive coefficient if the sample includes only loss firms. In other words, although we expect a negative coefficient for *E/P* for the sample as a whole, we expect a positive coefficient locally for loss firms. In a robustness test, instead of employing *E/P*, we use a variable that takes the value of positive E/P ratios and is coded as 0 if the ratio is negative and a second variable that takes the value of negative E/P ratios and is coded as 0 if the ratio is positive. Our results remain unchanged when we use this alternative E/P specification. We thank an anonymous reviewer for this insight.

variable. Equation (2) summarizes the empirical model to test H_2. We expect the coefficient on

GUIDE to be positive.

$$INCREMENT = b_0 + b_1GUIDE + b_2VSPECIAL + b_3TURNOVER + b_4E/P$$
$$+ b_5MOMENTUM + b_6\Delta SALE + e \qquad (2)$$

4. Sample

Our sample period is 2003-2007 after Regulation Fair Disclosure (Reg. FD) took effect, allowing one year of time for us to collect earnings guidance for year t-1 since we later partition the sample by firms' previous year guidance practices.[14] Prior to Reg. FD, managers could have communicated privately with selected analysts (Ajinkya and Gift 1984; Wang 2007). The nature and extent of that communication is not public knowledge. Therefore, prior to the passage of Reg. FD, managers did not have to rely on public earnings guidance to influence analysts' earnings estimates. We expect public earnings guidance to be particularly relevant as a means of influencing analysts' earnings composition in their forecasts after the passage of Reg. FD.

We start with First Call's data file called "actuals" and require the sample firm-years to have fiscal-year-end date and the earnings announcement date for both the current year and the previous year. We collect the financial statement data from Compustat's Xpressfeed annual data file, the stock returns data from CRSP, the earnings guidance data from CIG, and the institutional ownership data from Thomson Financial. All earnings data are diluted EPS measures scaled by the stock price at the beginning of the fiscal year.[15] We adjust earnings and price for stock splits and

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[14] We avoid 2001 because there appears to be a chilling effect right after the implementation of Reg. FD. For example, Wang (2007) finds that half of the firms that previously provided guidance privately decided not to provide any disclosure after Reg. FD and that the information environment of these firms deteriorated subsequently.

[15] We elect to use annual data in our analyses because in recent years managers' decisions of providing quarterly earnings guidance have been greatly influenced by the quarterly earnings guidance detractors in a debate that heated up in 2006 (Houston et al. 2010). According to the National Investors Relations Institute annual surveys, the percentage of their member firms providing *quarterly* earnings guidance was 61% at the beginning of 2005, but dropped to 52% at about the same time in 2006, 14% in 2007, and 30% in 2008 (NIRI 2006, 2007, and 2008). Moreover, more accounting adjustments are made in the fourth fiscal quarter than in any other quarters, resulting in seasonality in the reporting of special items (Bradshaw and Sloan 2002). Preliminary results based on quarterly data, however, indicate that our inferences are similar to those based on annual data.

drop the observations with a scalar less than 1 to avoid outliers. After these requirements, our sample has 15,209 firm-year observations.

Panel A of Table 1 summarizes the observations by year in the sample period and provides the means of major variables. The frequency of earnings guidance is decreasing over time, consistent with the annual surveys of the National Investors Relations Institute (NIRI). The amount of negative special items is slightly decreasing over time, consistent with Heflin and Hsu (2008). Our main analyses are robust to controlling for the time trend.

Panel B presents the summary statistics for our test variables (except the indicator variable *GUIDE*) in the full sample after positively-signed variables are winsorized at 99% and others at 1% and 99%. As expected and consistent with prior research, street earnings are higher than Compustat's core earnings, and Compustat's core earnings are higher than GAAP earnings. In our sample, 35.6% of the firms provide annual earnings guidance and 61.3% of the sample have non-zero special items (untabulated).

Panel C provides Spearman correlations of the test variables. The amount of analysts' total exclusions is positively correlated with *GUIDE* and negatively correlated with *SPECIAL*, consistent with our expectations. The amount of analysts' incremental exclusions is not significantly correlated with *GUIDE* and is correlated with stock turnover, E/P, and sales growth in predicted directions. Both total exclusions and incremental exclusions are positively correlated with the volatility of special items, suggesting that analysts tend to make larger expense/loss exclusions for firms operating in increased uncertainty.[16]

5. Main test results

5.1 Evidence of special-item exclusions

Table 2 presents our multivariate analyses for the effect of management earnings guidance on analysts' special-item exclusions. Column 1 shows that in the full sample analysts' total

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[16] *GUIDE* is negatively correlated with *VSPECIAL*, consistent with Waymire (1985) that managers are less likely to issue guidance as the uncertainty of their operations increases.

exclusions are significantly higher for firms that guide than for those without guidance (coefficient = 0.003, t = 4.50), consistent with our expectation. *SPECIAL* is significantly negatively associated with *TOTAL* with a coefficient of -0.817, slightly lower than the theoretical coefficient of -1 when special items are fully excluded by analysts. Column 2 adds the interaction term, but its coefficient is not significantly different from 0, suggesting that the extent to which analysts exclude special items does not vary from guiding to non-guiding firms.

Prior research has noted that for some firms, special items are in fact not so "special": these firms are repeated chargers (Atiase, Platt, and Tse 2005; Fairfield, Kitching, and Tang 2009). For repeated chargers, analysts perhaps do not need management guidance to exclude special items from current years' earnings estimates because all they need to do is to look at the previous year's number. We indeed observe the stickiness of special items in our sample: the current year's amount of special items is positively correlated with the previous year's amount with a correlation of 0.251 (untabulated). Using special-item indicator variables, we observe that 74.9% of the firms with special items in year t-1 have special items again in year t (untabulated). Thus, it is important to separate firms with special items in the previous year from those without.

Columns 3 and 4 estimate Equation (1) separately for the two subsamples. Interestingly, as expected, earnings guidance does not affect the extent to which analysts exclude special items at all if firms have special items in the previous year (Column 4). The coefficient for *SPECIAL* is about -0.8 for both guiding and non-guiding firms, significantly lower than the theoretical coefficient of -1. Perhaps if a firm just reported special items in the previous year, analysts are somewhat skeptical and do not respond to managers' guidance. If a firm did <u>not</u> have special items in year t-1, however, the coefficient for *SPECIAL* is -0.667 for non-guiding firms but about -1.0 for guiding firms (Column 3). In fact, for the latter we fail to reject that the coefficient for guiding firms is different from -1. The coefficient difference between guiding and non-guiding firms is statistically significant with a t-statistic of -2.78. This result suggests that if the firm did <u>not</u> have special items in the previous year, management earnings guidance helps analysts fully exclude the amount of special items in the current year.

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Regarding the control variables, the coefficient on *VSPECIAL* is positive for the full sample and for the subsample of firms with special items in the previous year, suggesting that total exclusions are higher for firms with more volatile special items (thus more uncertainty). *TURNOVER* has a positive coefficient for the full sample and the prior-year special-item subsample. *E/P* has a negative coefficient for the full sample as well as for the subsamples. These results suggest that analysts make more income-increasing exclusions for glamour stocks, consistent with Baik et al. (2009).

5.2 Evidence of incremental exclusions

Table 3 presents the results about the effect of corporate guidance on analysts' incremental exclusions. For the full sample, the coefficient on *GUIDE* is 0.003, statistically significant at the 1% level. This result indicates that analysts exclude more recurring expense or include more non-recurring income items for firms that guide than for those that do not guide, consistent with H_2.[17] The evidence suggests that managers may influence analysts to exclude less-justifiable items, providing stronger evidence than Table 2 to support the notion that managers influence analysts' exclusion decisions through earnings guidance.

Prior research notices that earnings guidance practices are sticky: once a firm initiates guidance, it tends to continue the practice (Lang and Lundholm 1996; Anilowski, Feng, and Skinner 2007; Lansford, Lev, and Tucker 2010). In our sample, the current year's guidance decision is positively correlated with the previous year's decision to guide (correlation coefficient = 0.775, untabulated). To better understand the influence of management earnings guidance on analysts' exclusion decisions, we next partition the sample based on whether the firm issued earnings guidance in the previous year. On the one hand, managers who consistently guide may have developed a good reputation with analysts and thus will be able to influence analysts to a larger degree. On the other hand, managers who have provided guidance in the past might be

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[17] Some firms issue multiple forecasts for a fiscal year. In our primary test, *GUIDE* is 1 if a firm has issued at least one forecast. In a robustness test, we replace GUIDE with a guidance frequency count for the year. This new variable as well as its log transformation is positively associated with incremental exclusions.

issuing guidance to continue the existing practice rather than to influence analysts' exclusion decisions.

We estimate Equation (2) separately for both subsamples based on prior year earnings guidance. Columns 2 and 3 indicate that analysts' total exclusions are higher for guiding firms than for non-guiding firms in both subsamples. We also partition the sample by a firm's frequency of annual earnings guidance in the past three years. Firms that guided in at least two out of three previous years are referred to as "dedicated guiders," those that guided in one of the three years are called "occasional guiders," and those that did not guide in the past three years at all are "past non-guiders." In untabulated tests, we find that the coefficient on *GUIDE* is positive and statistically significant for all three groups. These results suggest that guidance history does not have a considerable influence on the relation between earnings guidance and analysts' incremental exclusions.

It is important to recognize that both analysts' incremental exclusion decisions and managers' decision to issue guidance might be driven by the same unobservable and thus omitted factors. If so, our previous test results would have been biased by this selection issue. In Appendix A we specifically model managers' guidance decision and calculate the Inverse Mills Ratio (IMR) separately for the guiding and non-guiding firms. Adding this variable to Equation (2) would control for a potential estimation bias from selection. We find that our previously reported results are robust: with this control, the coefficient on *GUIDE* is 0.015 with a t statistic of 8.68. The coefficient in fact increases because the selection effect would have biased against our finding the result. That is, IMR has a significantly negative coefficient, meaning that the omitted factors that encourage firms to guide in fact discourage analysts from making incremental exclusions.[18]

In sum, we document a strong association between earnings guidance issuance and the magnitude of analysts' incremental exclusions.

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[18] In an untabulated robustness test, we add firm fixed effects to control for time-invariant factors not included in Equation (2). The coefficient on *GUIDE* is still significantly positive.

6. Supplementary analyses

6.1 Evidence from hand-collected data

To further understand our results, we hand collect and code pro forma earnings guidance for a subsample of firms. Subject to the usual caveats of using a small sample, our objective is to get a preliminary understanding of (1) the prevalence of pro forma earnings guidance and (2) the types of exclusions proposed by firms in the earnings guidance. The answers to these questions might differ for firms that anticipate special items than for those that do not. Thus, half of our hand-collected subsample comprises 100 firms, randomly selected from firms that have provided annual earnings guidance according to CIG *and* have special items for the current year. The other half is a random sample of 100 firms that have provided annual earnings guidance but do not anticipate special items.

Panel A of Table 4 addresses the first question. In this hand-collected sample, 31% of the firms provide both GAAP and pro forma earnings guidance and 6% of the firms provide pro form guidance even in the absence of GAAP guidance. Thus, a total of 37% of the firms provide pro forma guidance. Pro forma guidance appears to be widespread and is not attributable solely to the presence of special items.

Panel B addresses the second question. Following Black and Christensen (2009), we classify the types of management exclusions from earnings guidance in four categories: (1) below-the-line items, (2) special items (3), recurring items, and (4) others (the notes of this Panel outlines the detailed constituents of each category). Of the four categories, we are particularly interested in the "recurring items" category.

We find a total of 101 occurrences of exclusions for special-item firms and 54 for non-special-item firms. In itself, the greater number of exclusions for special-items firms should not be surprising because they are more likely to face transitory items that managers might (justifiably) want to exclude from core earnings. Across the two groups, 48.4% of the exclusions come from

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recurring items, whereas the percentage for non-recurring items is 27.4%.[19] The data suggest that both special item and non-special-item firms seek to persuade analysts to exclude not only transitory items, such as merger-related costs and restructuring costs, but also recurring items. For example, companies routinely exclude amortization of intangible assets (e.g., Allergan and TNS Inc.) and stock-based compensation expense, (e.g., Cadence) and make revenue adjustments inconsistent with GAAP (e.g., i2 technologies). More importantly, for the five companies cited, we find that analysts' street earnings estimates exclude these expenses as well, lending credence to the argument that managers influence analysts in the composition of street earnings, especially relating to components that are not transitory.[20]

6.2 Stock compensation expense exclusions

Our test of H_1 examines the aggregate amount of non-recurring item exclusions and our test of H_2 examines the aggregate amount of recurring item exclusions. While *all* items in the respective categories are accounted for in each test, these items are heterogeneous. In this section, we narrow analysts' exclusion decisions to just one item—stock compensation expense, which is a recurring item. This focus will allow us to design a more direct test to ask a more specific research question, "Do managers use earnings guidance to influence analysts' decisions to exclude stock compensation expense from street earnings?" The caveat of this analysis is that the result may not generalize to other types of exclusions because of the unique measurement issues of stock compensation expense and its long history of controversy and omission.

We start with a subset of our sample firms that report positive stock compensation expense for fiscal years beginning after June 15, 2005 ("the post-SFAS 123R era"). We use the text of the footnote entries from the First Call Footnote data file to identify instances where analysts excluded

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[19] It might be surprising that in Panel B of Table 4 even for the firms coded as "Non-Special Item Firms", 16 exclusions are special items. This apparent discrepancy arises because our firm categorizations in the columns are based on special items classified by Compustat, whereas the coded special items in the rows are based on categories defined by Black and Christensen (2009). Even though managers may treat an item as a "special item," Compustat does not necessarily agree with managers' claims (Frankel 2009).

[20] The inferences are based on *AP Financial Wire* 10/25/2007 for Cadence, *Business Wire* 2/2/2006 for i2, *Business Wire* 1/31/2007 for Allergan, and *AP Financial Wire* 5/7/2007 for TNS. For example, i2, the press release states unambiguously "Analysts polled by Thomson Financial expected the company to earn, on average, 30 cents per share on $70.9 million in revenue. Analysts estimates were for operating revenue versus total revenue." (AP Financial Wire, "i2 shares surge on 4Q profit," February 2, 2006).

stock compensation expense from their forecasts. *EXCLUDE* is coded as 1 if a footnote identifies that the analyst consensus forecast excludes stock compensation for the fiscal year and is 0 otherwise. In this subsample, 9.5% of the observations take the value of 1 for *EXCLUDE*, suggesting that analysts include the expense for the vast majority of firms. Our variable of interest, *GUIDE*, is as previously defined. We control for glamour stocks because analysts' incentives to promote these stocks are expect to hold in the decision making of stock compensation expense exclusions. In light of Barth et al.'s (2009) evidence, we additionally control for the predictive ability and volatility of this expense.

Barth et al. (2009) find that analysts may have information-based reasons to exclude the stock compensation expense. In particular, analysts are more likely to exclude the expense for firms whose stock compensation expense has low ability to predict the future profitability of the firm. Following the procedures of Barth et al., we construct a measure of "predictive ability" and refer to it as "*RELEVANCE*." For each firm, we estimate Equation (3):

$$ROA_{t+1} = c_0 + c_1 ROA_t + c_2 COMPX_t + \varepsilon_t \qquad (3)$$

where *ROA* is the net income before extraordinary items and *COMPX* is the implied stock option expense, both scaled by beginning total assets. The model is estimated using annual data from 1996-2005 and we require at least five observations for each estimation. Note that pre-2005 *COMPX* is not a component of *ROA*. The magnitude of the estimated coefficient for *COMPX* measures the predictive ability of the firm's stock option expense and its in-sample fraction ranking is our variable *RELEVANCE* (the rankings are between 0 and 1 with 1 for the highest value).

In addition to *RELEVANCE*, we control for the variability of historical implied stock option expense, *VCOMPX*, because the more volatile the expense, the more difficult to predict and thus the more likely for analysts to exclude. *VCOMPX* is the standard deviation of *COMPX* during 1996-2005. Our test model is the logit model in Equation (4).

$$Prob(EXCLUDE) = F(d_0 + d_1 GUIDE + d_2 RELEVANCE + d_3 VCOMPX + d_4 TURNOVER +$$

$$d_5 E/P + d_6 MOMENTUM + d_7 \Delta SALE + e \qquad (4)$$

Table 5 presents the estimation results. We find that the likelihood of analysts' excluding stock compensation expense is significantly higher for firms that guide than for those that do not guide.[21] The coefficient on *RELEVANCE* is significantly negative and the coefficient on *VCOMPX* is significantly positive, both consistent with our expectations and with Barth et al.

To further understand this test, we hand-collect a random sample of 50 firms from this sample of firms that have provided annual earnings guidance. We observe that ten firms provided a pro forma earnings estimate with the stock compensation expense *explicitly excluded*; analysts also excluded the expense for six of these firms. Fourteen firms provided guidance in which the expense was mentioned and the firm did not explicitly exclude the expense; analysts included the expense for all of the firms. Twenty-Six firms did not mention the expense in their guidance; analysts again included the expense for all of the firms. We infer the following patterns. First, unless managers exclude the expense proactively, analysts include it in their earnings estimates. Second, when managers express a preference to exclude the expense, analysts follow most of the time (60%) but not all the time. Finally, 28% of the firms proactively include the expense in their earnings guidance. We note that both managers' and analysts' exclusion behavior with respect to stock option expense may not generalize to other exclusions, given the political history of accounting for stock-based compensation.[22]

Overall, our evidence in the stock compensation expense setting is consistent with our results in the general setting: managers appear to exercise influence on analysts' street earning exclusion decisions through earnings guidance.

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[21] Managers may argue that they encourage analysts to make exclusions when the recurring expenses are not predictive of future performance rather than for opportunistic reasons. Our test controls for this explanation and still finds a positive association between earnings guidance and recurring expense exclusion.

[22] According to "Wall street firms slowly changing option expense policies," by Stephen Taub, 9/13/2005, *Compliance Week*, online publication), brokerage firms are under pressure from institutional investors to include the stock compensation expense in analysts' earnings forecasts and some brokerages have succumbed to the pressure. Managers probably give in to the same pressure for an image of transparency.

7. Conclusion

Street earnings are a version of core earnings based on financial analysts' forecasts and reported by analyst forecast tracking services. The adjustments from GAAP earnings used to calculate street earnings ostensibly reflect analysts' collective views on the components of earnings that should be excluded from GAAP earnings. Both anecdotal evidence and prior research have documented the growing influence of street earnings in the capital markets. In fact, street earnings have supplanted GAAP earnings as the primary earnings number used by investors in valuing the firm (Bradshaw and Sloan 2002; Frankel and Roychowdhury 2005). Yet, we know relatively little about how street earnings are determined. The little that we do know about street earnings suggests that street earnings exclusions are a product of analysts' expertise (Gu and Chen 2004) or the result of analysts' incentives for promoting certain stocks (Baik et al. 2009). In other words, the focus of prior research explaining how the composition of street earnings is determined has been analyst-centric.

We believe that, given the importance of street earnings for valuation purposes, managers have an incentive to influence which earnings components are included in or excluded from street earnings. Managers can influence street earnings *during* the fiscal period by providing earnings guidance advising what components analysts should include or exclude from their forecasts. In other words, managers could influence analysts' exclusion decisions via earnings guidance. We find that among firms with no special items in the prior year, the extent to which analysts exclude the "objective" amount of special items in the current year is higher for firms that guide than for those that do not guide. More importantly, analysts' incremental exclusions beyond special items are much higher for firms that guide than for those that do not guide. In a hand-collected subsample, we observe that pro forma earnings guidance is very common and that a substantial percentage of exclusions advised by managers are recurring expense items, such R&D costs, depreciation and amortization, and stock-based compensation. Furthermore, we find consistent evidence in a specific setting regarding one particular recurring expense—stock compensation expense exclusion.

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Taken together, our results are consistent with the conjecture that managers use earnings guidance as a tool to influence analysts' street earnings exclusions. Our study extends the street earnings literature by examining managers' role in determining street earnings' composition and extends the expectations management literature by shedding light on managers' influence on the components of earnings expectations rather than the sign or level of earnings surprises.

Our study is subject to limitations. First, although we find that managers' guidance is associated with both components of analysts' exclusions, it is possible that managers are simply responding to analysts' demands. In other words, we cannot rule out the possibility that managers may be the followers and not the initiators of these exclusions. Within-industry variation in the treatment of the same recurring item by analysts (exclusion for one firm but inclusion for another), however, suggests a role for managerial guidance. Second, although results based on a large sample of firms indicate that analysts' exclusions are positively associated with the issuance of management earnings guidance, our evidence is largely indirect: we do not observe the real communication between the managers and analysts and we elect to use "earnings guidance" as a proxy for "pro forma guidance" owing to data constraints. Third, we document that managers appear to influence analysts' street earnings decisions, but are silent about whether such influence assists or biases analysts' estimates and investors' stock valuation. We believe that our analyses help us collectively to better understand the communication between managers and analysts regarding street earnings and that these limitations offer an opportunity for future research.

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Appendix A: Managers' decision to issue earnings guidance

      To control for a potential selection bias in our primary test, we model managers' earnings guidance decision following Ajinkya, Bhojraj, and Sengupta (2005). We drop the outside director variable because of data constraints and augment the model with an indicator variable for special items because as we argue for Hypothesis 1, managers are more likely to guide when they anticipate special items than when they do not. Our probit model is Equation (A1).

$$Prob\ (GUIDE) = c_0 + c_1 SPI + c_2 SIZE + c_3 ANALYST + c_4 IO + c_5 M/B + c_6 LOSS$$
$$+ c_7 DECLINE + c_8 VCORE + c_9 BETA + c_{10} LITIG + e \quad (A1)$$

      GUIDE is an indicator variable for earnings guidance issuance as defined in Section 3. *SPI* is 1 for firms that report non-zero special items for the current year and 0 otherwise. *SIZE* is the natural logarithm of total assets at the beginning of the year, proxying for the importance of transparency for large firms. *ANALYST* proxies for the demands of earnings guidance by analysts for valuation and is measured by the number of estimates in the last consensus for the prior-year earnings compiled by First Call before the prior-year earnings announcement. *IO* proxies for the demand of earnings guidance by institutional investors for monitoring and is measured as the percentage ownership by institutions according to the most recent 13F reports before the current fiscal year begins, obtained from Thomson Financial. We use the market-to-book ratio at the beginning of the fiscal year, *M/B*, to proxy for managers' incentive to avoid a torpedo effect at the earnings announcement from lack of early communication (Skinner and Sloan 2002). Prior studies have found that poorly performing firms are reluctant to provide earnings guidance (Miller 2002; Houston, Lev, and Tucker 2010). We use two indicator variables as proxies for poor performance: *LOSS* is coded 1 if the firm experiences losses in the previous year and 0 otherwise. *DECLINE* is coded 1 if the firm experiences an earnings decline in the previous year (i.e., the GAAP earnings number in the current year is lower than that in the previous year) and 0 otherwise. We model the uncertainty associated with a firm's operations, but do not offer directional predictions because reasonable arguments can be made for either direction. *VCORE* captures the uncertainty in core earnings that managers face and is measured as the average absolute change in core earnings in the previous three years, scaled by the stock price at the beginning of the current year (both earnings and price are adjusted for stock splits). *BETA* captures general business risk and is estimated in a market model using the daily returns in the previous fiscal year. Finally, we include litigation risk and expect firms with exposure to higher risk to be more likely to issue guidance. *LITIG* is 1 if the 4-digit SIC code is 2833-2836, 8731-8734, 3570-3577, 7370-7374, 3600-3674, or 5200-5961 and 0 otherwise (Philbrick, and Schipper 1994).

Table A1 presents the results and the tests of significance. We employ standard errors that are robust to heteroskedasticity and within-firm error correlations. As expected, *SPI* has a positive coefficient, indicating that firms with special items are more likely to guide than those without special items. The results for the other variables are all consistent with prior research. The model pseudo R_2 is reasonable at about 10%.

Table A1 Probit Estimation Results

	Coefficient	t-statistic
Intercept	-0.966***	(-9.68)
SPI	0.153***	(5.17)
SIZE	0.041***	(2.91)
ANALYST	0.012***	(2.96)
IO	0.807***	(11.98)
M/B	0.010**	(2.18)
LOSS	-0.643***	(-15.42)
DECLINE	-0.095***	(-3.82)
VCORE	-1.055***	(-4.31)
BETA	-0.187***	(-7.35)
LITIG	0.217***	(4.47)
Wald χ^2	764.33***	
Pseudo R^2	10.5%	
Obs.	14,137	

Note: "***," "**", and "*" denote statistical significance at 1%, 5%, and 10% in a two-tailed test, respectively.

Figure 1 Timeline

Total Exclusions
= Street Earnings – GAAP Earnings

Incremental Exclusions
= Street Earnings – Objective Core Earnings

GAAP

Analyst Exclusions
from Earnings Estimates

Beg.
FY

Analyst
Consensus
Forecast

End
FY
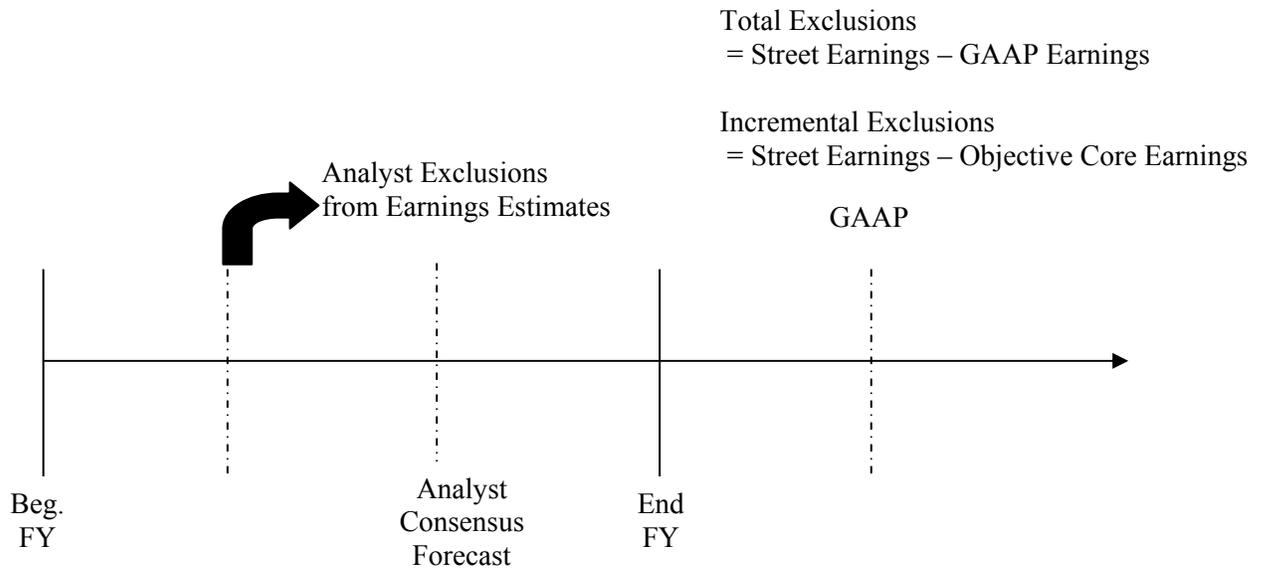
Figure 2 Earnings and earnings components

Sales
Cost of Goods Sold
Operating Expenses
Incremental Expenses Excluded or Income Included by Analysts
Special-item Exclusions (Most are expenses and losses)

Analysts' Total Exclusions

← **STREET: Street earnings (First Call-adjusted realized EPS)**

← **CORE: Objective core earnings (diluted EPS from operations: Data 323 or OPREPSX)**

← **GAAP: GAAP earnings (diluted EPS before extraordinary items: Data 57 or EPSFX)**

Table 1 Descriptive statistics

Panel A: Sample observations by year along with mean statistics

Year	Obs.	GUIDE	STREET	CORE	GAAP	TOTAL	INCREMENT	SPECIAL
2003	2,853	37.3%	0.022	0.016	0.000	0.021	0.006	-0.015
2004	2,937	38.1%	0.033	0.029	0.022	0.010	0.002	-0.008
2005	3,101	34.7%	0.028	0.027	0.019	0.008	0.002	-0.007
2006	3,142	35.1%	0.029	0.026	0.020	0.008	0.003	-0.006
2007	3,176	33.3%	0.017	0.013	0.005	0.010	0.003	-0.007

Panel B: Summary statistics

Variable	Obs.	Mean	P25	Median	P75
STREET	15,209	0.026	0.018	0.050	0.071
CORE	15,206	0.022	0.012	0.048	0.070
GAAP	15,206	0.013	0.005	0.045	0.069
TOTAL	15,206	0.011	0	0	0.006
INCREMENT	15,206	0.003	-0.001	0	0.003
SPECIAL	15,206	-0.009	-0.005	0	0
VSPECIAL	15,209	0.037	0.001	0.005	0.021
TURNOVER	14,950	0.158	0.064	0.114	0.200
E/P	15,206	0.022	0.012	0.048	0.070
MOMENTUM	14,861	0.144	-0.169	0.041	0.303
ΔSALE	14,987	0.196	0.011	0.110	0.258

Panel C: Spearman correlations

	TOTAL	INCREMENT	GUIDE	SPECIAL	VSPECIAL	TURNOVER	E/P	MOM.
INCREMENT	**0.560**							
GUIDE	**0.030**	0.013						
SPECIAL	**-0.517**	**0.216**	-0.002					
VSPECIAL	**0.189**	**0.032**	**-0.049**	**-0.278**				
TURNOVER	**0.113**	**0.080**	**0.113**	**-0.088**	**0.135**			
E/P	**-0.222**	-0.177	**0.194**	**0.155**	**-0.207**	**-0.163**		
MOMENTUM	**-0.085**	-0.010	**0.086**	**0.123**	**-0.161**	**-0.042**	**0.209**	
ΔSALE	**-0.044**	**0.017**	**0.045**	**0.084**	**-0.217**	**0.179**	0.014	**0.146**

Note: All correlations that are statistically significant at the 5% level are bolded. See Table 1 for variable definitions.

Variable Definitions:

GUIDE = 1 if the firm issues at least one earnings forecast for the fiscal year (t) during the fiscal year and 0 otherwise.

STREET = realized earnings per share (EPS) for the fiscal year as recorded by First Call after it adjusts earnings components to conform with what the majority of financial analysts forecast. It is scaled by the split-adjusted stock price at the beginning of the fiscal year.

CORE = diluted EPS from operations as recorded by Compustat. It does not include special items, extraordinary items, or items related to discontinued operations. It is scaled by the split-adjusted stock price at the beginning of the fiscal year.

GAAP = diluted EPS before extraordinary items and discontinued operations. It is scaled by the split-adjusted stock price at the beginning of the fiscal year.

TOTAL = STREET – GAAP. Total exclusions by analysts from street earnings.

INCREMENT = STREET – CORE. Incremental exclusions by analysts from street earnings.

SPECIAL = GAAP – CORE. Special items as identified by Compustat. The definition follows the tradition in the literature. When it is nonzero, *SPECIAL* is typically negative. "Special-item Exclusions" in Figure 1 is the negative of *SPECIAL*.

VSPECIAL = the average absolute change in *SPECIAL* in the previous three years. It measures the volatility of special items.

TURNOVER = the average monthly trading volume in the previous fiscal year scaled by the number of outstanding shares.

E/P = the inverse of the trailing P/E ratio, where P is the price at the beginning of the fiscal year and E is the core EPS for the previous year.

MOMENTUM = the buy-and-hold monthly returns in the previous fiscal year minus the contemporaneous buy-and-hold monthly returns of the value-weighted market index.

ΔSALE = the percentage sales growth in the previous fiscal year.

Note: *STREET, CORE, GAAP, TOTAL, INCREMENT, SPECIAL, E/P, MOMENTUM*, and *ΔSALE* are winsorized at 1% and 99% each year. *VSPECIAL*, and *TURNOVER* are winsorized at 99% each year.

Table 2 Earnings guidance and analysts' special-item exclusions

			Special items in prior year?	
	Dependent Variable = Total Exclusions (*TOTAL*)			
			No	Yes
Intercept	0.004***	0.005***	0.005***	0.004***
	(5.35)	(5.97)	(5.07)	(4.10)
GUIDE x SPECIAL		-0.110	-0.347***	-0.067
		(-1.62)	(-2.78)	(-0.87)
GUIDE	0.003***	0.002***	0.002**	0.002***
	(4.50)	(3.22)	(2.18)	(2.60)
SPECIAL	-0.817***	-0.787***	-0.667***	-0.807***
	(-26.92)	(-22.05)	(-7.99)	(-20.52)
VSPECIAL	0.020**	0.020**	-0.007	0.019**
	(2.18)	(2.16)	(-0.41)	(2.00)
TURNOVER	0.005**	0.005**	-0.000	0.008**
	(1.96)	(1.96)	(-0.11)	(2.02)
E/P	-0.084***	-0.086***	-0.079***	-0.091***
	(-7.61)	(-7.90)	(-5.01)	(-6.61)
MOMENTUM	-0.000	-0.000	0.000	-0.000
	(-0.41)	(-0.29)	(0.85)	(-0.60)
ΔSALE	-0.001	-0.001	-0.001	-0.001
	(-1.43)	(-1.53)	(-0.96)	(-0.77)
Model-fit F statistic	135.50***	118.97***	28.63***	99.38***
Adjusted R^2	50.9%	51.0%	37.2%	54.1%
Observations	14,674	14,674	5,938	8,736

Note: See Table 1 for variable definitions. The estimations are robust to heteroskedasticity and within-firm error correlations. "***," "**", and "*" denote statistical significance at 1%, 5%, and 10% in a two-tailed test, respectively.

Table 3 Earnings guidance and analysts' incremental exclusions

	Dependent Variable = Incremental Exclusions (*INCREMENTAL*)					
			Guided in Prior Year?			
			Yes		No	
Intercept	0.003	***	0.006	***	0.002	***
	(4.26)		(3.66)		(3.01)	
GUIDE	0.003	***	0.004	***	0.003	***
	(4.82)		(3.29)		(3.22)	
VSPECIAL	0.018	**	0.006		0.022	***
	(2.54)		(0.42)		(2.75)	
TURNOVER	0.005	*	-0.004		0.008	**
	(1.89)		(-1.05)		(2.45)	
E/P	-0.076	***	-0.140	***	-0.062	***
	(-8.37)		(-6.22)		(-6.60)	
MOMENTUM	0.000		0.001		0.000	
	(0.79)		(1.08)		(-0.02)	
ΔSALE	-0.001		0.004	**	-0.001	
	(-0.88)		(2.08)		(-1.62)	
Model-fit F statistic	17.26	***	8.16	***	13.95	***
Adjusted R^2	7.1%		13.8%		6.3%	
Observations	14,674		5,241		9,433	

Note: See Table 1 for variable definitions. The estimations are robust to heteroskedasticity and within-firm error correlations. "***," "**", and "*" denote statistical significance at 1%, 5%, and 10% in a two-tailed test, respectively.

Table 4 Supplementary analysis: prevalence of pro forma guidance and types of exclusions

Panel A: GAAP vs. pro forma earnings guidance

Guidance Type	Special-item Firms	Non-special-item Firms	**Total**
GAAP Guidance Only	52	75	**127 (63.5%)**
Both GAAP & Pro forma Guidance	37	25	**62 (31%)**
Pro forma Guidance Only	11	0	**11 (5.5%)**
Total	100	100	**200 (100%)**

Note: This table reports the type of earnings guidance provided by 200 firms. One hundred of these firms are a random sample of firms reporting non-zero special items according to Compustat and one hundred firms are a random sample of firms that reported zero special items.

GAAP Guidance means that the firm provided an earnings estimate without any indication of exclusions of certain earnings components other than extraordinary items and discontinued operations.

Pro Forma Guidance means that the firm indicates that certain items are excluded from the earnings estimate.

Table 4 (Continued)

Panel B: Number of exclusions in pro forma earnings guidance

Exclusion Type	Special-item Firms	Non-special-item Firms	Total
Below-the-line Items	10	4	**14**
			(8.9%)
Special Items	27	16	**43**
			(27.4%)
Recurring Items	44	32	**76**
			(48.4%)
Other Items	22	2	**24**
			(15.3%)
Total	103	54	**157**
			(100%)

This table reports the occurrences of exclusions from the earnings guidance provided by a sample of 200 firms (see Panel A for details). We code exclusions in four categories.

Below-the-line items include (a) extraordinary items, (b) discontinued operations, and (c) cumulative effect of change in accounting principles.

Special items include (a) restructuring charges, (b) gains and losses on sale of assets and other non-operating gains and losses, (c) merger and acquisition related costs, and (d) early debt retirement costs.

Recurring items include (a) research and development (R&D) costs and write-offs of purchased in-process R&D, (b) depreciation and amortization costs (excluding amortization of stock-based compensation), (c) stock-based compensation costs, (d) tax-related items, and (e) interest-related items.

Other items represent non-recurring items that are not in any of the three preceding categories.

Table 5 Supplementary analysis: stock compensation expense exclusion

	Logit Model Dependent Variable = Pr (EXCLUDE = 1)	
	Coefficient	T-Statistic
Intercept	-2.415***	(-15.41)
GUIDE	0.463***	(3.43)
RELEVANCE	-1.605***	(-5.96)
VCOMPX	6.878***	(6.69)
TURNOVER	2.615***	(7.77)
E/P	-0.685	(-0.97)
MOMENTUM	0.128	(1.14)
ΔSALE	-0.401***	(-2.69)
Wald χ^2	205.89***	
Pseudo R^2	10.8%	
Observations	4,758	

Note: The sample includes a subset of our original sample firms that report positive stock compensation expense for fiscal years beginning after June 15, 2005 (post-SFAS 123R). The dependent variable, *EXCLUDE*, is set to 1 if the First Call Footnote file indicates that the analyst consensus forecast exclude stock compensation and is 0 otherwise. *RELEVANCE* is the fractional rank (between 0 and 1 with 1 for the highest value) of the absolute value of c_2, computed following Barth et al. (2009) using a firm-specific estimation of $ROA_{t+1} = c_0 + c_1 ROA_t + c_2 COMPX_t + \varepsilon_t$ for firms with at least five observations during 1996-2005. *ROA* is net income before extraordinary items and *COMPX* is implied stock option expense, both scaled by beginning total assets. *VCOMPX* is the standard deviation of COMPX during 1996-2005 at the firm level. All other variables are defined in Table 1. Coefficients are estimated from a logistic regression. Standard errors are robust to heteroskedasticity and within-firm error correlations. "***," "**", and "*" denote statistical significance at 1%, 5%, and 10% in a two-tailed test, respectively.