

## The Demand for Corporate Financial Reporting: A Survey among Financial Analysts\*

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**Abstract**

We examine financial analysts' views on corporate financial reporting issues by means of a survey among 306 analysts and interviews among 21 analysts and compare their views with that of CFOs. Since CFOs believe that meeting or beating analysts' forecasts and managing earnings to achieve this benchmark can enhance firm value, examining analysts' perspectives on these actions improves our understanding on whether CFOs' beliefs are rational or heuristic. Our findings suggest that CFOs' beliefs tend to be rational regarding their focus on earnings and their views on earnings management and smoothing. The main reason is that analysts have difficulty in unraveling certain types of earnings management in a specific firm even though they anticipate earnings management in general. Yet, CFOs are heuristic in their optimism about the consequences of managing earnings, which potentially has negative implications for the value of their firm.

# 1. Introduction

In making decisions on corporate financial reporting issues, analysts – as consumers of financial information – play an important role in the eyes of the managers. Empirical evidence indicates that managers seek to meet or slightly beat analysts’ forecasts (e.g., Brown and Caylor (2005)) and, if necessary, tend to manage their earnings to reach this goal.<sup>1</sup> According to Graham, Harvey, and Rajgopal (2005), CFOs believe that those actions have real consequences for the value of their firm. However, if these managers think that they can steer analysts’ beliefs by managing reported earnings, the question that arises is how analysts perceive and respond to earnings management. On the one hand, analysts have incentives to go along with manipulated earnings, thereby maximizing forecast accuracy, either because of their inability to detect earnings management or because they behave strategically and collude with managers. On the other hand, their reputation concerns incentivize them to show their ability to detect earnings management and incorporate it in their reports.<sup>2</sup> These conflicting incentives have implications for their corporate financial reporting preferences.

In case analysts adjust their expectations based on managed earnings, it will be rational for managers to actually manage their reported earnings. If not, the question arises why managers would inflate their reported earnings. Managers can be “trapped” into managing earnings,

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<sup>1</sup> See, amongst others, Baber, Fairfield, and Haggard (1991), Dechow and Sloan (1991), Ayers, Jiang, and Yeung (2006), and Roychowdhury (2006).

<sup>2</sup> In a review on the corporate financial reporting environment, Beyer, Cohen, Lys, and Walther (2010) summarize analysts’ incentives in disclosing their expectations as follows: (1) to maximize their reputation, (2) to optimize the reaction of the receivers (incl. investors or the firm’s management) to their reports, and (3) to maximize the value of their forecast to investors.

because the market expects them to manage earnings (e.g., Stein, 1989). Alternatively, managers might be heuristic believing that they can alter analysts' expectations, while practice suggests otherwise. Verrecchia (2003, 2010) describes this type of heuristic as the behavior that results from the *belief* that individuals associate reported accounting measures of performance with real economic performance without being able to disentangle the two. Managers' corresponding behavior is to focus predominantly on earnings-based performance measures and to view transparent accounting disclosure improvements as wealth increasing.<sup>3</sup> Barth (2010) points out that the behavior of analysts might contribute to heuristic behavior by managers. In this paper, managers are heuristic when they manage earnings believing that they can influence analysts' valuations, despite the fact that in reality analysts see through the managed earnings.

We use large-scale survey and interview evidence to investigate analysts' views on corporate financial reporting policies, including earnings benchmarks, within GAAP earnings management, and earnings smoothing. The questions we ask analysts are similar to the questions Graham, Harvey, and Rajgopal (2005) asked to CFOs, enabling us to provide additional insights into managers' beliefs and the role of analysts. Because analysts are not likely to admit that they are unable or unmotivated to unravel earnings management, this design also allows us to draw inferences about their behavior and motivations. With a response rate of 48%, we examine the opinions of 306 analysts that work for 11 of the world's largest investment banks. We complement the survey responses with 21 interviews with analysts.

Because CFOs believe that earnings rather than cash flows is the most important performance metric for outsiders, we first ask analysts about the most important performance

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<sup>3</sup> See for instance Fischer and Verrecchia (2004), who model managers' heuristic behavior as an explanation for transparently biased disclosures in a Cournot product market setting.

metric. We find that, similar to CFOs, analysts also focus on earnings, and that they do so because of their client base. Independent of whether analysts or their client base are the driver behind this preference, we argue that CFOs are rational by focusing on earnings. Furthermore, we find that analysts view their own forecast as the most important performance benchmark, followed by the consensus analyst forecast.

Our results also suggest that analysts anticipate firms to manage earnings to the benchmark. In particular, analysts' answers indicate that they derive long-term consequences from meeting or missing short-term earnings benchmarks. Even though analysts tend to search for the underlying reasons behind missing a benchmark, they develop a negative view on firms that do so. The implications for managers are twofold. On the one hand, analysts' negative view creates incentives for managers to continue managing earnings to the benchmark. On the other hand, analysts' anticipation suggests that CFOs are heuristic in their earnings management efforts.

However, anticipation of earnings management to reach a benchmark does not automatically mean that analysts know how to unravel earnings management. If they do not, CFOs are rational rather than heuristic in their earnings management efforts. Analysts' answers to questions about the consequences of within GAAP earnings management and earnings smoothing in comparison with that of CFOs provide evidence in favor of CFOs being rational. Our findings suggest that analysts prefer earnings management actions that are easier to unravel, while CFOs are willing to take earnings management actions that are harder to unravel. We also show that, although analysts prefer to follow firms with a smooth earnings path, they dislike firms that intentionally smooth their earnings path, as these firms' performance is like a "black box". Thereby, analysts admit that they cannot always unravel earnings management practices.

This finding also provides a better understanding of analysts' incentives; analysts have to make a tradeoff between their reputation risk for overlooking earnings management by following firms that do not smooth their earnings path and their incentives to maximize forecast accuracy by following firms with a smooth earnings path.

Further evidence on earnings smoothing suggests that analysts recognize the positive consequences for firms to smooth their earnings path. The more optimistic they are about its consequences, the more value they recommend firms to sacrifice to avoid a bumpy earnings path. Nevertheless, analysts are less optimistic than CFOs resulting in a willingness of CFOs to give up much more value than analysts recommend. In other words, smoothing to a limited extent would be rational for managers, but they appear to be heuristic in their overly optimistic view on smoothing, which can be costly for its shareholders.

Overall, our evidence suggest that CFOs' behavior can be interpreted as rational and heuristic: heuristic in the sense that analysts anticipate earnings management to reach a benchmark and that CFOs are more optimistic about the consequences of earnings smoothing than analysts are. CFOs are rational because of their focus on earnings and their preferences for certain types of earnings management and smoothing. Note, however, that CFOs of technology firms form an exception. The earnings of technology firms are more uncertain and therefore more difficult to predict. Consistently, our results suggest that the signaling function of earnings management about the firm's performance might play a more important role than analysts' difficulty to unravel earnings management.

Our paper contributes to the existing literature on the endogenous interplay between analysts' forecasting behavior and managers' reporting behavior. According to the model of Beyer (2008), managers manipulate earnings as a response to meet analysts' forecasts, while

analysts account for earnings management in their forecasts. Other papers that model the interaction between analysts and managers are Dutta and Trueman (2002), Fischer and Stocken (2004), and Mittendorf and Zhang (2005). Our comparison between analysts' and CFOs' survey and interview evidence allows a deeper insight into this interplay. For example, analysts focus on earnings as a performance metric and anticipate earnings management to reach the benchmark, whereas managers believe they should manage earnings to the benchmark, because if they miss the benchmark analysts perceive this as a negative signal about the firm's future prospects.

Our paper also contributes to the literature on earnings management and whether analysts see through earnings management. Existing evidence on the topic is mixed. Some studies show that analysts do not anticipate earnings management to achieve a benchmark (e.g., Abarbanell and Lehavy, 2003; Burgstahler and Eames, 2003), while other studies suggest that analysts rationally anticipate earnings management (e.g., Kim and Schroeder, 1990; Coles, Hergzel, and Kalpathy, 2006). Market responses to announcements of firms that meet earnings benchmarks also differ according to the necessity of earnings management to reach the benchmark.<sup>4</sup> In their review, Dechow, Ge, and Schrand (2010) suggest that the difficulty to unravel earnings management to meet the benchmark potentially explains these differing market responses. We show that, although analysts anticipate earnings management, they are not always able to unravel earnings management, indicating a clear preference for the more detectable type of earnings management.

While our two main contributions are the enhanced understanding of the endogenous interplay between managers and analysts and of analysts' ability to detect earnings management,

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<sup>4</sup> See e.g., Bartov, Givoly, and Hayn (2002), Hribar, Jenkins, and Johnson (2006), Gleason and Mills (2008), Bhojraj, Hribar, Picconi, and McInnis (2009), and Chen, Rees, and Sivaramakrishnan (2010).

we would like to emphasize the broader consequences of our results. First, analysts typically are the most well-trained and sophisticated users of corporate financial reporting. This implies that retail and institutional investors might even have more difficulty in seeing through earnings management. Second, analysts play a crucial role in financial markets as representatives of retail and institutional investors. Since analysts do influence market beliefs, our findings may reflect the market as a whole, hence, explain the differing market responses to firms that meet their earnings benchmarks by means of different types of earnings management.<sup>5</sup>

This survey demonstrates that at least part of the explanation is analysts' inability to incorporate earnings management in their forecasts, creating preferences for the more detectable types of earnings management. With respect to analysts' motivation, we show a clear tradeoff between maximizing their forecast accuracy and minimizing their potential reputation damage for not detecting earnings management.

The paper is organized as follows. In Section 2 we describe our research design and present the summary statistics of our survey data. In Section 3 we describe analysts' view on earnings benchmarks and we discuss the value consequences of a firm's real and accounting actions to meet an earnings benchmark. In Section 4 we explore the perceived implications of a smooth earnings path and the recommended value sacrifice to avoid a bumpy earnings path. Section 5 concludes.

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<sup>5</sup> See e.g., Brown and Rozeff (1978), Givoly and Lakonishok (1979), and Khorana, Mola, and Rau (2010).



## 2. Research design, data description and summary statistics

We collect the opinions of financial analysts through a survey and additional interviews. To draw inferences on managers' beliefs, our survey design is strongly influenced by the Graham, Harvey, and Rajgopal (2005) questionnaire, who study the opinions of CFOs. This enables us to compare our results with theirs. We received 306 usable responses (response rate is 48 percent). We corroborate the survey results and allow for further clarifications using interviews with financial analysts. We interviewed 21 analysts in four different institutions, a subset of the investment banks in our survey. Our survey design and interview set-up is explained in detail in Appendix 1.

In Table 1, Panel A provides summary statistics of the analysts that filled out the survey. We find that 46.1 percent of the analysts have four to nine years of experience as financial analyst, and 34 percent have at least ten years of experience. The table also shows that 77.8 percent of the analysts follow at least ten firms.

– Please insert Table 1 here –

Panel B of Table 1 provides summary statistics for the firm that these analysts had in mind when they filled out the survey.<sup>6</sup> We ask analysts to provide information on size, industry and number of analyst following for one particular firm, for which they answer all questions (see Appendix 1). Almost 90 percent of the analysts focus on a firm larger than 1 billion USD, while 74.8 percent of the firms are followed by at least 10 analysts. The majority of our analysts indicate that their firm provides moderate or more than moderate guidance, which is in line with previous

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<sup>6</sup> In order to facilitate a comparison with the CFO sample in Graham, Harvey, and Rajgopal (2005) we also present the characteristics of their CFO sample.

studies that show a positive impact of guidance on analyst following (Lang and Lundholm, 1996) and analyst forecasting accuracy (Chen, Matsumoto, and Rajgopal, 2010).

In subsequent analyses, we document analysts' responses to questions related to earnings benchmarks and earnings management. Because the current and future earnings of technology firms tend to be more uncertain (e.g., Amir and Lev, 1996; Chen, DeFond, and Park, 2002), analysts' views on these issues might depend on whether they follow technology firms or firms operating in other industries. We perform conditional analyses that distinguish between answers of analysts following technology firms and answers of analysts following firms from other industries. We discuss the main results of these analyses throughout the paper, but for the sake of brevity, we do not report the results in the tables (the results are available upon request).

### **3. Earnings Benchmarks**

In this section we aim to get insight into analysts' preferences for earnings benchmarks as well as questions related to what they think would be the consequences of meeting or missing (short-term) earnings benchmarks. This section finally discusses the perceived value implications of a firm's actions to avoid missing earnings benchmarks.

#### *3.1. Performance measures and earnings benchmarks*

The survey results of Graham, Harvey, and Rajgopal (2005) indicate that CFOs believe that earnings rather than cash flows are the most important performance measure for outsiders. By asking a similar question to analysts, we can establish whether a group of "outsiders" actually views earnings as the most important performance metric. If so, managers act rationally by their focus on earnings. If not, they might be heuristic in their belief. Existing empirical evidence

suggests that managers are rational, as share prices behave as if the market is “fixated” on earnings rather than cash flows (Sloan, 1996). Block’s (1999) survey among several types of financial analysts provides preliminary evidence of a preference for earnings as well.

Table 2 shows the top three rankings of importance that analysts attach to different performance measures.

– Please insert Table 2 here –

The results indicate that analysts view a firm’s earnings as the most important performance measure and a firm’s revenues as the second most important performance measure. Free cash flows rank third on the list. Although these results weight in favor of the conjecture that managers are rational (rather than heuristic) when deciding on how to report their performance of operations, this does not necessarily mean that analysts are fooled. Our interviews further illuminate analysts’ preferences. The importance of earnings is particularly driven by investors’ interest in the EPS number, as an analyst puts it “..this is the metric the investment community has dictated..” and “..when I think of the Street, net income is most important.” So, analysts’ client base seems to be a driving factor behind their focus on earnings. Furthermore, the interviews indicate that analysts consider free cash flows as important, particularly in mature companies that operate in capital intensive industries. Analysts further indicate that over longer periods, earnings and cash flows provide similar valuations, but the firm characteristics may evoke differences in shorter-term windows.

We also asked analysts for their opinion about the importance of several earnings benchmarks. Even though CFOs posit that the EPS for the same quarter last year is the most important earnings benchmark for quarterly earnings announcements (Graham, Harvey, and Rajgopal, 2005), the results of Brown and Caylor (2005) indicate that CFOs act as if they try

harder to meet analyst consensus forecasts of EPS for the current quarter.<sup>7</sup> In addition, ample evidence indicates that to increase the probability to meet or beat these forecasts firms guide analysts in making their earnings forecasts.<sup>8</sup> CFOs have incentives to take these actions, as the negative market response to missing a threshold is higher for analyst consensus forecasts than for the same quarter last year EPS and avoiding a loss (Brown and Caylor, 2005).

Table 3 provides the analysts' responses in comparison with CFOs' answers.

– Please insert Table 3 here –

The results indicate that analysts attach the greatest importance to their own forecast (i.e., 91.7 percent agree or strongly agree). The second most important evaluation benchmark is the analyst consensus forecast, suggesting that CFOs' efforts to meet the consensus make sense. The third most important benchmark is the same quarter last year EPS. Analysts find that the previous quarter EPS and reporting a profit is significantly less important than CFOs do.

Additional conditional analyses indicate that analysts of technology firms tend to rely more heavily on other analysts' forecasts, while they attach less importance to same quarter last year EPS. In particular, of the analysts following a technology firm 92.0 percent rates the consensus forecasts of EPS as (very) important, while this percentage is 77.0 for analysts that follow firms in other industries. The difference is significant at the 5% level. For the same

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<sup>7</sup> Other papers that show that managers prioritize on earnings benchmarks are amongst others Burgstahler and Dichev (1997), Degeorge, Patel, and Zeckhauser (1999), and Dechow, Richardson, and Tuna (2003). And in their survey, Dechow, Ge, and Schrand (2010) summarize recent empirical evidence that consistently relates predicted determinants of earnings management to firms that just meet or beat analyst forecasts.

<sup>8</sup> E.g., Bartov, Givoly, and Hayn (2002), Matsumoto (2002), Richardson, Teoh, and Wysocki (2004), Cotter, Tuna, and Wysocki (2006), and Brown and Pinello (2007).

quarter last year EPS these numbers are 69.0 and 53.0 percent, respectively (the difference is significant at the 5% level). Since reported earnings of technology firms tend to be more uncertain (e.g., Amir and Lev (1996); Chen, DeFond, and Park (2002)), these results suggest that, when firms are more difficult to value, analysts depend more on the forecasts of other analysts and less on static earnings benchmarks. Ramnath, Rock, and Shane (2008) suggest that a reason for analysts' herding behavior may be uncertainty about a firm's future performance. The greater reliance on consensus forecasts in the technology sector provides evidence of this behavior.

### *3.2. Meeting or missing earnings benchmarks*

Several accounting studies show that managers have incentives to target earnings benchmarks, such as analyst forecasts (e.g., Healy and Wahlen, 1999; Dechow and Skinner, 2000; Fields, Lys, and Vincent, 2001; and Dechow, Ge, and Schrand, 2010 for surveys). The endogenous interplay between managers and analysts implies that not only managers have incentives to meet or beat analyst forecasts, analysts also have incentives to make accurate predictions of reported earnings (e.g., Beyer, 2008)). While managers account for analysts' incentives, analysts are likely to account for managers' discretion. The empirical evidence on whether analysts anticipate managers' discretion is mixed. Although some studies indicate that analysts do not incorporate earnings management in their forecasts (Bradshaw, Richardson, and Sloan, 2001) and do not identify firms that manage their earnings to target earnings benchmarks (Abarbanell and Lehavy, 2003; Burgstahler and Eames, 2003), other studies suggest that analysts rationally anticipate earnings management (e.g., Kim and Schroeder, 1990; Coles, Hertz, and Kalpahty, 2006). In this section, we aim to establish whether analysts anticipate managers' discretion in targeting

benchmarks and what are the consequences of this anticipation for managers or firms by asking analysts whether they agree with statements related to why firms should try to meet or avoid missing earnings benchmarks.

Tables 4 and 5 document analysts' answers to the questions why the firms that they follow should try to meet earnings benchmarks and why these firms should try to avoid missing earnings benchmarks, respectively.

– Please insert Tables 4 and 5 here –

We first describe analysts' answers split according to managers' incentives to target earnings benchmarks, which are related to stock prices, career concerns, stakeholders, employee bonuses, debt covenants, and potential lawsuits. We then draw inferences on analysts' anticipation of targeting benchmarks and its consequences and conclude with what these results suggest about managers' rational or heuristic behavior.

We start with the stock-price related motives. Several studies suggest that the market views meeting and beating earnings benchmarks as important. Investors reward firms that meet and beat earnings benchmarks, but punish firms that fall short of earnings benchmarks (e.g., Skinner and Sloan, 2002; Athanasakou, Strong, and Walker, 2011). In addition, firms that achieve earnings benchmarks consistently over time are priced at a premium (Barth, Elliott, and Finn, 1999; Kasznik and McNichols, 2002), especially when this premium is an indicator for future performance (Bartov, Givoly, and Hayn, 2002; Kasznik and McNichols, 2002). However, the market reward is lower or even absent for firms that meet or beat analyst forecasts as a result of earnings or expectations management (e.g., Bartov, Givoly, and Hayn, 2002; Gleason and Mills, 2008; Athanasakou, Strong, and Walker, 2011), suggesting that the market at least partially accounts for managers' discretion when targeting earnings benchmarks.

The analyst survey results in Table 4 support the importance of stock-price related motivations for meeting earnings benchmarks. The table shows that 88.2 percent of the analysts believe that meeting earnings benchmarks helps firms to build credibility with capital markets. Our interviews corroborate the relevance of this perspective. Almost all analysts explain to us that benchmarks are strongly based on previous expectations provided by management teams, so meeting benchmarks demonstrates the capabilities of the managers. In their own words, analysts say that meeting forecasts “..provides a signal about the management team. They should know what is going on in their own firm.” A large majority of the analysts (i.e., 87.5 percent) also believe that it helps to convey the firm’s future growth prospects to investors. Finally, analysts agree on the argument that it helps to maintain or increase the stock price (i.e., 77.1 percent) and reduce stock price volatility (57.8 percent). These results suggest that analysts believe that meeting short-term earnings benchmarks can have long-term consequences.

Analysts’ answers to questions why firms should try to avoid missing earnings benchmarks (as documented in Table 5) provides additional supportive evidence of this view. The table shows that 88.5 percent of the analysts agree with the statement that missing earnings benchmarks creates uncertainty about the firm’s future prospects. This percentage is even higher for analysts who follow firms in the technology sector, compared to analysts that follow firms in other industries (98.0 percent vs. 87.5 percent, respectively). The difference is significant at the 5% level. Almost 80 percent of the analysts believe that firms that fail to meet earnings benchmarks may have previously unknown problems.

Although these results suggest that analysts infer severe problems from firms that miss the benchmark, our interviews indicate that analysts deal with missed benchmarks in a more sophisticated way. Most analysts carefully examine the management’s explanations for missing

the benchmarks. In evaluating these explanations, the credibility of the motivation determines the magnitude of negative impacts. Analysts verify their assumptions for the key value drivers of their valuation models. Missed benchmarks are considered negative, particularly if the analyst's assessment of long-term cash flow changes. Although CFOs do not believe that missing a benchmark would lead to increased scrutiny of all aspects of the firm's earnings releases, the interview results are in line with analysts' survey responses that missing a benchmark leads to increased scrutiny (54.4 percent agrees). One analyst stated that "If a firm misses his number, it does not necessarily change the outlook for the business". However, in line with analysts' anticipation of managers' discretion in targeting earnings benchmarks, 42.0 percent of the analysts believe that the firm may lack the flexibility to meet the benchmark. We learn from the interviews that the lack of flexibility relates to earnings management. If firms' earnings are below the benchmark, they are expected to manage their earnings to be just above the benchmark. Hence, the missed benchmark indicates a lack of flexibility or that the gap between the earnings and the benchmark is too great to be bridged by earnings management.

Meeting benchmarks has consequences for the external reputation of the management team. Previous studies (e.g., Puffer and Weintrop, 1991; DeFond and Park, 1999; Farrell and Whidbee, 2003; Mergenthaler, Rajgopal, and Srinivasan, 2011) show that managers are more likely to be replaced when their firm does not achieve analyst forecasts. Our analyst results in Table 4 show that 82.2 percent of the analysts agree that firms should achieve earnings benchmarks for the external reputation of the firm's management team. Again, our interviews corroborate the importance for the plausibility of the management.

Bowen, DuCharme, and Shores (1995) and Burgstahler and Dichev (1997) argue that if firms show higher earnings, they can get better terms of trade with stakeholders, such as



customers, suppliers, and lenders, since higher earnings can enhance their reputation for fulfilling the claims with their stakeholders. Meeting earnings benchmarks can have the same implication. Our results show that 41.2 percent of the analysts view the assurance of a stable business to customers and suppliers as an important reason to meet earnings benchmarks. CFOs attach more importance to the stakeholder motivation to meet earnings benchmarks than analysts suggest CFOs should do. Analysts' client base, which mainly consists of one type of stakeholders – the investors – might explain their different view. An alternative view is that analysts do not fully account for managers' stakeholder-related incentives to meet earnings benchmarks.

Finally, and in line with CFOs' answers, analysts do not believe that earnings benchmarks are important for credit ratings, debt covenants, employee bonuses, and the possibility of lawsuits.

From analyzing the opinions of analysts and comparing them to the views of CFOs we derive the following insights. Analysts claim to search for reasons why firms missed their benchmark and that missing a benchmark for a temporary reason should not have severe consequences for the valuation of the firm. However analysts' answers on missing/meeting earnings benchmarks suggest that they develop a negative view on firms that miss short-term earnings targets. An explanation for this negative view is that analysts anticipate CFOs' discretion to manage earnings to a benchmark.

A potential problem that arises from the viewpoint of the analyst is that he/she might not be able to detect or unravel earnings management in a specific instance. That is why missing an earnings benchmark is perceived to be a negative signal about the firm's future prospects: it indicates potential problems not known before, as management lacks flexibility to manage

earnings towards the benchmark. Our conditional analyses support the view that analysts have difficulties to see through the earnings number, because missing an earnings benchmark is especially considered negative for firms that are more difficult to value, i.e., firms that operate in the technology industry. Since technology firms probably experience less costs to manipulate earnings towards a benchmark, our conjecture is in line with Beyer's (2008) prediction that market participants respond particularly negative to earnings surprises of such firms.

As to the behavior of CFOs, these results provide evidence in favor of both heuristic and rational behavior. On the one hand, we can argue that managers act heuristic in targeting earnings benchmarks, since we show that analysts anticipate managers' discretion. Moreover, CFOs seem to be ignorant of the possibility of increased scrutiny from analysts when missing an earnings benchmark. On the other hand, managers might act rational, because they can benefit from targeting benchmarks, while analysts' anticipation of managers' discretion does not necessarily mean that analysts have enough information to unravel this discretion and find out why firms meet or miss their benchmark.

### *3.3. Value implications of a firm's actions to avoid missing earnings benchmarks*

Given the importance of earnings benchmarks, firms can take accounting (i.e., accruals) or real actions to reduce the probability of missing earnings benchmarks. While both activities are costly, the two types of earnings management differ in timing and its effect on a firm's cash flows (e.g., Zang, *forthcoming*). Specifically, accounting actions do not affect the firm's cash flows, whereas real actions do. With respect to timing, if firms decide to take real earnings management actions to anticipate meeting earnings benchmarks, they should do it during the fiscal period. If necessary, they can adjust accruals towards the benchmark afterwards.

Empirical evidence shows that firms engage in accounting actions to meet earnings benchmarks by managing their accruals (e.g., Ayers, Jiang, and Yeung, 2006).<sup>9</sup> Other studies show that firms take real actions to meet benchmarks, for instance by means of a reduction in R&D expenditures (e.g., Baber, Fairfield, and Haggard, 1991; Dechow and Sloan, 1991; Bushee, 1998) timing asset sales (Bartov, 1993), a reduction in discretionary expenditures and manipulating sales (Roychowdhury, 2006), adjusting advertising spending (Cohen, Mashruwala, and Zach, 2010), and repurchasing shares (Hribar, Jenkins, and Johnson, 2006; Myers, Myers, and Skinner, 2007). Zang's (*forthcoming*) findings indicate that real earnings management and accruals-based earnings management act as substitutes.

The market rewards firms that meet earnings benchmarks.<sup>10</sup> However, the reward is higher for firms that meet the consensus analyst forecasts by means of real earnings management compared to those that use accruals management (Chen, Rees, and Sivaramakrishnan, 2010). Furthermore, firms experience a lower but positive premium when using accruals management (Bartov, Givoly, and Hayn, 2002) or classification shifting to meet the benchmark (Athanasakou, Strong, and Walker, 2011), while the positive market reaction is completely diminished, when firms decrease tax expenses (Gleason and Mills, 2008). Moreover, investors discount firms that meet analyst earnings forecasts due to share repurchases, although it helps firms to avoid an extreme share price decline (Hribar, Jenkins, and Johnson, 2006).

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<sup>9</sup> See Healy and Wahlen (1999), Dechow and Skinner (2000), Beneish (2001), and Fields, Lys, and Vincent (2001) for surveys on earnings management in general.

<sup>10</sup> Note, however, that the benefits are short-lived, as Bhojraj, Hribar, Picconi, and McInnis (2009) show that, on a three-year horizon, firms that miss the benchmark but do not manage their earnings (real, accruals or both) tend to outperform the firms that achieve their benchmark by means of earnings management.

In their review, Dechow, Ge, and Schrand (2010) suggest that a possible explanation for different responses to earnings management in relation to target beating is that some types of earnings management are more easily detectable than others. As a result, managers have incentives to prefer certain types of earnings management over other types. In the previous section, we argue that analysts tend to anticipate managers' discretion in targeting earnings benchmarks, but may not be able to identify how earnings are managed towards a benchmark. By asking analysts' opinions on the value implications of actions that firms can take to avoid missing earnings benchmarks, we draw inferences on analysts' preferences, which we relate to whether they are able to identify earnings management.

Table 6 displays the results.

– Please insert Table 6 here –

Our results indicate that analysts view real actions to meet the desired earnings target as either most value enhancing or least value destroying, relative to the accruals actions. The top four of most value-enhancing /least value-destroying choices are repurchasing common shares (rank 1), decreasing discretionary spending (rank 2), providing incentives for customers to buy more products this quarter (rank 3), and delaying the start of a new project, even if doing so entails a small sacrifice in value (rank 4), all of which are real actions. Except for the decision to sell investments or assets to recognize gains this quarter (rank 7), the bottom of the list contains accruals actions.

Comparing analysts' answers with that of CFOs shows a remarkable agreement. Although CFOs' preference for real earnings management is not so surprising,<sup>11</sup> from the

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<sup>11</sup> The Graham, Harvey, and Rajgopal (2005) interviews clarify CFOs' preference by their fear of legal actions when regulators suspect earnings management, which is more apparent to regulators with accruals actions than with real actions. Even when earnings choices are made within GAAP, regulators can consider these choices as

perspective of analysts it is, especially given the impact of real earnings management on the firm's actual cash flows. An explanation for analysts' preference is that they perceive achieving the earnings benchmark by means of real earnings management as a positive signal about the firm's future performance (e.g., Bartov, Givoly, and Hayn, 2002; Chen, Rees, and Sivaramakrishnan, 2010). However, an alternative explanation is that analysts may have more difficulty to unravel accruals management relative to real earnings management.

We find disagreement among analysts and CFOs on three options of real earnings management actions. First, they disagree on the share repurchase option. Our results indicate that analysts view a share repurchase as the most value-enhancing action that firms can take to meet their earnings target (the average rating equals 0.55), while CFOs posit that they are not willing to choose this option to reach an earnings target (average rating equals -1.02). In our interviews, analysts give two reasons for the value effect of repurchases, i.e., a signal of underpriced stock and the repayment of free cash flows. Yet, given that the repurchase transaction is designed merely to meet earnings expectations, it is not obvious why this transaction would enhance value. Perhaps analysts are positive about share repurchases, because it is easier to detect. This conjecture is consistent with the market discount of firms that meet earnings benchmarks by repurchasing shares (Hribar, Jenkins, and Johnson, 2006). The ease to unravel this type of earnings management might be the exact reason why managers disagree with the analysts.

The two other types of real earnings management about which analysts and managers have opposite opinions are the reduction in discretionary spending and the delay of starting a new project. On average, analysts find these two options value destroying (with average ratings

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earnings management with managerial intent to obscure true economic performance (Dechow and Skinner, 2000). And the consequences of being targeted for financial misrepresentation are severe for both the firm and its respective managers (Karpoff, Lee, and Martin, 2008a; 2008b).

of -0.28 and -0.56, respectively), while managers are willing to take those actions to meet the benchmark (with average ratings of 1.00 and 0.33, respectively). In contrast to the share repurchase option, managers might prefer these two actions, because they are less detectable by analysts and other market participants. At the same time, analysts might not be willing to admit that they have more difficulty to detect discretionary spending cuts or the delay of project initiations for the sake of achieving a benchmark.

Our conditional analysis shows that analysts who follow technology firms have a significantly less pessimistic view on certain actions that firms can take. For instance, of the analysts that follow tech firms, 56.9 percent believes that decreasing discretionary spending is value-enhancing, while only 23.7 percent of the analysts in the other industries agree. The difference is significant at the 1% level. Technology analysts are also less negative about the value consequences of providing more incentives for customers to buy more products this quarter, the delay of starting a new project, and booking revenues now rather than next quarter. Although the ease to unravel earnings management to reach a benchmark with these four actions is not likely to be greater for technology firms compared to firms operating in a different industry, analysts might perceive these actions as more beneficial for technology firms due to the more negative consequences when missing the benchmark (as discussed in the previous section).

#### **4. Smooth earnings paths**

This section discusses how analysts perceive the consequences of earnings smoothing and whether they recommend firms to sacrifice value to accomplish a smooth earnings path.

#### *4.1. The consequences for firms that smooth their earnings path*

There is considerable evidence that many firms smooth their earnings path.<sup>12</sup> In the interviews with Graham, Harvey, and Rajgopal (2005), managers point out that more volatile earnings are directly related to missing consensus analyst forecasts (as earnings benchmarks) and, hence, create more uncertainty among market participants about the value of the firm. Empirical evidence that relates earnings smoothing to firm value is mixed. Although some studies find earnings smoothing to be negatively associated with a firm's cost of equity (Francis, LaFond, Olsson, and Schipper, 2004) and positively with its share price (e.g., Ronen and Sadan, 1981; Myers, Myers, and Skinners, 2007), the positive effect on share price disappears after a string of earnings increases ends (Myers, Myers, and Skinners, 2007). Moreover, by applying asset pricing techniques, McInnis (2010) shows no relation between earnings smoothness and returns. The latter finding is in line with Verrecchia's (2010) view that managers' preference for smooth earnings paths is heuristic, in that their motivation to deliver a smooth earnings path is associated with *perceived* greater wealth.<sup>13</sup> Other reasons to smooth earnings are, amongst others, to reduce the cost of debt and get better trade terms with suppliers and customers (Trueman and Titman, 1988), to achieve bonus targets (Healy, 1985) and to protect managers' jobs (Fudenberg and Tirole, 1995).

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<sup>12</sup> E.g., Beidleman (1973), Ronen and Sadan (1981), Hand (1989), Barth, Elliot, and Finn (1999), and Myers, Myers, and Skinner (2007).

<sup>13</sup> Supporting evidence is the following text from Graham, Harvey, and Rajgopal (2005, p.47): "Without exception, every CFO we spoke with prefers a smoother earnings path to a bumpier one, even if the underlying cash flows are the same."

We examine the consequences of earnings smoothing as perceived by analysts for the firms they follow. Table 7 shows our results.

– Please insert Table 7 here –

The results indicate that 83 percent of the analysts view earnings as easier to predict for smoothing firms, a majority of 56.7 percent agree that firms that smooth earnings are less risky, and 42.2 percent agree that such firms have a lower required return. As one of our interviewees puts it, “Smoothing lifts the valuation, because it increases predictability, which reduces volatility (..) a little bit makes sense.” Analysts’ agreement with managers suggests that managers are rational in smoothing their earnings path, thereby being able to fool a proportion of analysts. Yet, the significantly higher average rating of CFOs for the perceived riskiness and required returns of firms with smooth earnings paths suggests some heuristic behavior in that they think that they fool more analysts than they do in reality.

Further evidence on CFOs’ heuristic behavior shows up in the disagreement between analysts and CFOs on two consequences of earnings smoothing. First, analysts do not perceive a smooth earnings path as being more informative about the firm’s growth prospects (average rating of -0.22), whereas CFOs do (average rating of 0.42). Second, while we see that the average rating of analysts regarding the statement that earnings smoothing promotes the firm’s reputation for transparent and accurate reporting, is -0.06, CFOs’ average rating is 0.32. Thus, even though analysts acknowledge that smoothing can make earnings more predictable, they do not expect broader reduction of information asymmetries. We argue that CFOs are heuristic in smoothing earnings, because analysts as information intermediaries do not pick up the signal.

In line with the theory of Trueman and Titman (1988), 43.8 percent of the analysts agree that a smooth earnings path can assure customers and suppliers that the business is stable. Again,



CFOs are more optimistic than analysts. Trueman and Titman (1988) also argue that smooth earnings could decrease the cost of debt. However, analysts vary in their opinion about the consequences of earnings smoothing for a firm's desired credit rating: 34.2 percent agree on a positive impact on a firm's desired credit rating, and 20.6 percent disagree.

The interviews also show another aspect of earnings smoothing. Interviewees' argument against earnings smoothing is that it creates a "black box" for what is really going on in the firm. Put differently, one analyst told us that "In the long run, it helps their stock price because of predictability, but it hurts our ability to see what the fair value is." This statement corresponds with analysts' disagreement with the survey statement that firms clarify true economic performance by smoothing earnings (average rating equals -0.32). Considering the pros and cons of smoothing, we can summarize the general view of analysts by the following interview response: "We do not want them to smooth, but we love smooth earnings paths." Thus, analysts like firms with smooth earnings paths in the belief that it leads to higher firm value. Yet, if firms with bumpy earnings paths start smoothing their earnings, then analysts dislike the fact that they cannot properly assess these firms' businesses and thus are less able to deliver reliable forecasts and reports. This paradoxical finding suggests (1) that analysts admit that they are not always able detect how managers smooth their earnings and (2) that analysts are therefore forced to tradeoff their incentives to maximize forecast accuracy with a possible reputation loss of overlooking earnings management.

Conditional analyses indicate that analysts for the technology industry are more positive about the consequences of a smooth earnings path. Relative to other industries, more analysts who follow high-tech firms believe that a smooth earnings path makes it easier to predict the firm's future earnings (96.0 percent agree or strongly agree compared to 80.9 percent of analysts

in other industries; the difference is significant at the 1% level), makes the firm less risky (74.0 percent agree or strongly agree vs. 53.3 percent; the difference is significant at the 1% level), assures that the firm's business is stable (58.0 percent agree or strongly agree vs. 40.6 percent; the difference is significant at the 5% level), promotes the firm's reputation for transparent and accurate reporting (48.0 percent agree or strongly agree vs. 32.4 percent; the difference is significant at the 5% level), and reveals more information about the firm's future growth prospects (40.0 percent agree or strongly agree vs. 18.9 percent; the difference is significant at the 1% level) and true economic performance (31.3 percent agree or strongly agree vs. 17.2 percent; the difference is significant at the 5% level). Overall, the difficulty of valuing technology firms and the uncertainty about these firms' future performance appears to make the role of a smooth earnings path more important for analysts. In fact, our findings suggest that when analysts are less able to identify how firms manage earnings and therefore assume more negative (long-term) implications from missing (short-term) earnings benchmarks, they are more likely to deduct positive long-term information from earnings smoothing.

#### *4.2. Value sacrifice to avoid bumpy earnings path*

Given the perception of both analysts and CFOs that a smooth earnings path may affect firm value positively, we ask analysts how much value managers should sacrifice to avoid a bumpy earnings path. Table 8 presents the results for the separate levels of value sacrifice.

– Please insert Table 8 here –

Of all analyst respondents, only one third of our analysts believe that firms should not sacrifice value to avoid a bumpy earnings path. About half of the analysts believe that firms should give up a small amount of money and 13.2 percent (i.e., 12.1 percent plus 1.1 percent) believe that

firms should make a moderate to large sacrifice to avoid a bumpy earnings path. These results suggest that, although analysts recognize that there are some advantages to a smooth earnings path, they seem to be more focused on the long-term value of the firm. In our interviews, one analyst posits: “I don’t think firms should be that short-sighted. (..) The firm may experience a short-term dislocation in the stock price, but over time they will get credit for having the credibility.”

We investigate the consistency of the analysts’ responses (in an unreported regression analyses). In this analysis we explain the value sacrifice by using the answers to the questions on the consequences of smoothing (as in Table 7).<sup>14</sup> The results indicate that analysts are more likely to recommend larger value sacrifices when the consequences of smoothing are more positive.<sup>15</sup>

When we compare our results with those of the CFOs regarding the question how much value managers should sacrifice to avoid bumpy earnings we see a distinct contrast. Of the CFOs, 60.9 percent (i.e., 46.9 percent plus 14 percent) are willing to make a moderate to large sacrifice compared to the 13.2 percent of the analysts that recommend firms to do so. CFOs claim that “the market hates uncertainty” and provide share-price related arguments for sacrificing value for a smooth earnings path (Graham, Harvey, and Rajgopal, 2005, p.49). The contrasting result on value sacrifice reinforces our argument that managers are heuristic in their belief that a smooth earnings path has more benefits than analysts believe. Hence, they are willing to sacrifice more value to achieve a smooth earnings pattern than recommended.

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<sup>14</sup> We estimate eight ordered logit regressions. In each regression we add one out of eight answers to the question on the consequences of smoothing, and we control for guidance, analyst tenure, portfolio size, firm size, and industry.

<sup>15</sup> The coefficients of the expected consequences are positive and significant at a one percent level.

Since our results suggest that analysts of technology firms are more positive about the consequences of a smooth earnings path, it is not surprising to find that these analysts agree most with firms to sacrifice at least some value to avoid a bumpy earnings path. Only 14.3 percent of those analysts do not recommend firms to sacrifice any value, compared to 36.9 percent of analysts following firms in other industries (the difference is significant at the 1% level). Also, 22.4 percent of analysts believe that technology firms should forfeit moderate value to avoid a bumpy earnings path, while only 9.7 percent of analysts following firms in other industries agree (the difference is significant at the 5% level).

## **5. Summary and conclusions**

In this paper, we examine analysts' views on corporate financial reporting concerning earnings benchmarks and earnings management. We conduct a survey among 306 analysts and interview another 21 analysts. We also compare analysts' preferences with the perceptions and actions of CFOs from public firms, derived from the survey data used by Graham, Harvey, and Rajgopal (2005). Since CFOs expect that they can enhance firm value by seeking to meet or beat analysts' forecasts and by managing earnings to achieve this goal (Graham, Harvey, and Rajgopal, 2005), investigating analysts' views on those actions can improve our understanding of whether managers' expectations are rational or heuristic. Managers' expectations are rational when analysts are not able or not motivated to see through earnings management. Akin to Verrecchia's (2010) definition, managers' expectations are heuristic when they *believe* that managing earnings affects analysts' valuations, while in reality it does not. Since analysts are not likely to admit whether or not they are able or motivated to see through earnings management, we structure our questions such that we can draw inferences about analysts' behavior and motivations and about

its consequences for managers' rationality with respect to benchmarks and earnings management.

Our survey and interviews provide the following insights. Analysts tend to focus on earnings, rather than on cash flows, which, according to our interviews with the analysts, is driven by the demands of "the street". Whether analysts or their clients are the drivers behind this focus, this result favors the hypothesis that managers are rational by focusing on the same performance metric. We also show that analysts find their own forecasts as well as the consensus forecasts the most important performance benchmarks, suggesting that managers' efforts to meet those benchmarks make sense.

Our questions related to reasons for firms to meet or avoid missing earnings benchmarks suggest that analysts anticipate firms to manage earnings to achieve those benchmarks. Though one can argue that analysts' anticipation makes managers heuristic in managing their earnings to achieve the benchmark, analysts' negative view on missing benchmarks also creates incentives for them to continue managing earnings.

However, managers' rationality not only depends on analysts' anticipation of earnings management, but also on whether analysts are able to unravel earnings management. Our questions with respect to within GAAP earnings management actions and smoothing earnings shed light on this issue. From analysts' answers about the value consequences of different types of within GAAP earnings management actions, we infer that they prefer firms to adopt the easiest detectable forms of earnings management actions, while managers are willing to take the less detectable actions. We also show that analysts prefer to follow firms with a smooth earnings path, because it makes the earnings of these firms more predictable and it could enhance firm value. Yet, they don't like firms to smooth their earnings, as it creates a "black box" for their

assessment of the firm's performance. From these findings we infer that analysts are not always able to identify how firms manage their earnings, making it rational for managers to engage in earnings management/smoothing to achieve benchmarks. We can also deduce from these answers that analysts have to tradeoff their incentives to minimize potential reputation damage for not detecting earnings management with their incentives to maximize forecast accuracy.

Although analysts posit that they dislike earnings smoothing, they are aware of its positive consequences. Accordingly, about two thirds of the analysts recommend firms to sacrifice at least some value to avoid a bumpy earnings path. Managers, however, tend to be much more optimistic about the consequences of smoothing earnings paths than analysts and are therefore willing to sacrifice a lot more value to avoid a bumpy earnings path than analysts would recommend. Thus, while a bit of earnings smoothing would be rational for managers, they tend to be heuristic in their too optimistic beliefs about its consequences and hence might be willing to give up too much value for this purpose.

We separately analyze whether analysts following technology firms have a different view on a firm's corporate financial reporting choices, because the future earnings of these firms tend to be more uncertain and therefore more difficult to predict. In line with greater uncertainty, technology analysts rely more on the consensus analyst forecasts. These analysts also have a stronger negative view about their firms' long-term prospects when missing an earnings benchmark, suggesting a more widespread anticipation of earnings management within technology firms. This more widespread anticipation suggests that managers are heuristic in managing earnings, but at the same time it enhances their incentives to do so. Moreover, the uncertain character of technology firms' future earnings and their greater flexibility to exercise discretion in reporting earnings makes it less costly to manage earnings and signal their

performance to the market through this channel. Accordingly, technology analysts are more positive about the value consequences of earnings management actions to achieve the benchmark and about the consequences of earnings smoothing. They even recommend firms to sacrifice more value to avoid a smooth earnings path than analysts of firms that operate in other industries. Thus, even though analysts anticipate earnings management to achieve benchmarks, the signaling function of earnings management might drive this anticipation, making managers of technology firms rational to engage in those practices. The difficulty to unravel earnings management seems to play a more inferior role.

Overall, we can conclude that managers are neither completely rational nor completely heuristic in their perspectives on (short-term) earnings benchmarks and earnings management. Our conclusion requires a more subtle view. Although managers tend to be rational in their focus on earnings and their perspectives on earnings management and smoothing due to the difficulty for analysts to unravel earnings management, their heuristic behavior can be derived from their too optimistic view on the consequences of managing earnings, which potentially has negative implications for the value of the firm.

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## **Appendix 1: Survey and interview design**

In this appendix we describe the set-up of our survey, the test for comparing our analyst results with the CFO data from Graham, Harvey, and Rajgopal (2005), and the set-up of the interviews.

### *Survey design*

In the period July – October 2007, we approached the heads of the equity research departments of 11 of the world’s largest investment banks. After we guaranteed anonymity for the participating banks and sell-side analysts to their compliance departments, all institutions were willing to participate. Heads of equity research departments encouraged their analysts to participate by sending them an e-mail with a request that they participate and the link to our survey's website. Each institution provided us with the number of sell-side analysts that were approached. The total number was 638, with a median of 68 per bank. We offered respondents a copy of our results and donated \$10 for each completed survey to a charity of the respondents’ choice. All responses with less than ten answers were automatically deleted. In the period July 18 – October 30, 2007 we received 306 usable responses. Our response rate is 48 percent.<sup>16</sup>

A requirement for analysts that we include in our study is that they follow at least one U.S. firm. Therefore, we start with three questions: (1) Does the analyst follow at least one firm with an official listing in the U.S.? (2) What is the number of firms that the analyst follows? and (3) How many years of experience does the financial analyst have? The survey ends if the respondent indicates that she does not follow a U.S. firm. If the analyst has at least one U.S. firm in her portfolio, then a screen appears that says, “The goal of this survey is to compare your

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<sup>16</sup> The response rate compares favorably with previous studies. For CFOs, Graham, Harvey, and Rajgopal (2005) and Gibbins, McCracken, and Salterio (2007) have response rates of respectively 10.4 percent and 15.1 percent. For analysts, Block (1999) reports a response rate of 33.7 percent.

responses to that of CFOs of U.S. companies. In order to allow such a comparison we like to ask you to answer all subsequent questions for a particular U.S. firm. Please think of a randomly chosen U.S. firm in your portfolio and answer the following questions for this specific firm. We will refer to this firm as *the firm you follow*.” This approach allows us to compare the analysts’ opinions with the responses of CFOs. After this screen, the analyst goes through seven more screens that pose questions about earnings measures, earnings benchmarks, and earnings smoothing. Because the compliance departments did not allow us to ask for the name of the firm the analyst had chosen, the final screen requests general information about this firm. We ask for revenues, industry, number of analysts following this firm, earnings guidance, credit rating, price-earnings ratio, and the number years the CEO has been in office. The questions in this final screen make it possible for us to analyze the data for subsamples and enable a comparison of our sample of firms with the sample in Graham, Harvey, and Rajgopal (2005). We incorporate all but three of the questions<sup>17</sup> in the Graham, Harvey, and Rajgopal (2005). Hence, the tables in this paper provide the results of our analyst survey, as well as a comparison with CFO’s opinions. Our survey is available on upon request from the corresponding author.

A common concern with surveys is that respondents provide answers that do not correspond with their actual opinions. In our view, the set-up of our survey minimizes this bias. Although other studies have demonstrated that analysts’ objectivity and judgment is limited by principal-agent problems between firms and analysts, analyst career concerns, and behavioral biases, these effects are particularly relevant in actual reports, recommendations, and estimations of analysts for specific firms. In our survey setting, we do not believe that these biases play a

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<sup>17</sup> The first omitted question is about motives to limit voluntary disclosure and is removed to shorten the survey. The second omitted question contains a hypothetical investment scenario, which cannot be answered by analysts. The third question is about the firm’s most important groups in setting the stock price, and included the analysts themselves.

significant role, because the answers do not affect client and management relations and do not require an analysis on a firm that will be published.

We test for non-response bias by comparing the responses of early and late respondents and we find no evidence of a bias. In addition we test for a representativeness bias, i.e. whether the firms chosen by the responding analysts are characteristic of the universe of U.S. listed firms. Because we need to control for differences in number of analysts following firms, we download the number of analyst following and sales for all firms with IBES and Compustat coverage as of September 2007. We weight each firm in the Compustat file with the number of analysts that follow the firm and compare the summary statistics of this sample with our survey data. We find that our survey has a slight overrepresentation of larger firms. The relatively larger firms indicate that our sample captures the bigger players that have the largest effect on the U.S. economy.<sup>18</sup>

#### *Comparison of CFO and analyst results*

In our results sections we compare the average answers of our analyst survey with the averages in the CFO survey in two ways. First, we do a standard difference-of-means *t*-test (we refer to this test in the tables as ‘ $H_0$ : Difference=0’).<sup>19</sup> However, as Table 1 indicates that the firm characteristics – in terms of size and industry – differ between the CFO and analyst samples, we also regress the answer scores of both samples on an analyst dummy that equals one for observations from our analyst sample and zero for CFOs and on dummy variables for the revenue (size) and industry classes. Because the answers are given in distinct categories, we use (ordered) logit regression models. The tables report the significance of the coefficient of the

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<sup>18</sup> A detailed description of the non-response and representativeness tests is available on request from the authors.

<sup>19</sup> This analysis requires all observations for public firms in the CFO survey sample. We are grateful to John Graham, Campbell Harvey and Shiva Rajgopal for providing their CFO data to us.

analyst dummy, which represents the size and industry corrected difference between the CFO and analyst answers (we refer to this test in the tables as ‘ $H_0$ : Corrected difference  $\beta=0$ ’).

### *Interview design*

We corroborate the survey results and allow for further clarifications using interviews with financial analysts. We interviewed 21 analysts in four different institutions, a subset of the investment banks in our survey. All analysts mainly follow U.S. firms. We conducted the semi-structured interviews in person in June 2008 over a period spanning almost seven hours. Our questions followed the sequence of the survey, but were asked in a general, open manner. We wished to have the analyst explain to us his or her preferences and practices. In addition, we asked several specific questions concerning results of the survey that we would like to have further clarified. In this paper we focus on the survey results and add insights from the interviews when an analyst's answer yielded additional insights.

**TABLE 1**  
**Characteristics of surveyed analysts and the firm that they follow**

In Table 1, Panel A shows the frequencies and the percentage of the total number of observations per group of analyst respondents. Panel B shows these characteristics for the firm that analysts had in mind when filling out the survey. We also provide the corresponding statistics for the firms in the survey of Graham, Harvey, and Rajgopal (2005). We consider only non-missing values in the calculations.

<i>Panel A: Characteristics of surveyed analysts</i>							
<i>Number of years active as financial analyst</i>				<i>Number of firms you follow</i>			
	<u>N</u>	<u>%</u>		<u>N</u>	<u>%</u>		
<4 years	61	19.9%		< 5 firms	20	6.5%	
4 - 9 years	141	46.1%		5 - 10 firms	48	15.7%	
10+ years	104	34.0%		10 - 15 firms	100	32.7%	
				> 15 firms	138	45.1%	
<i>Panel B: Characteristics of the firm that the analyst follows</i>							
	<u>Analysts</u>		<u>CFOs</u>		<u>Analysts</u>		<u>CFOs</u>
	<u>N</u>	<u>%</u>	<u>%</u>	<i>Number of analysts</i>	<u>N</u>	<u>%</u>	<u>%</u>
<i>Revenue</i>				None	0	0.0%	7.8%
<\$100 million	5	1.8%	15.1%	1 - 5	2	0.7%	39.9%
\$100 - 499 million	15	5.4%	22.0%	6 - 10	64	23.4%	21.6%
\$500 - 999 million	11	4.0%	12.8%	11 - 15	89	32.5%	14.1%
\$1 - 4.9 billion	83	30.1%	24.6%	16+	116	42.3%	16.7%
\$5 billion +	162	58.7%	25.6%	Don't know	3	1.1%	
<i>Industry</i>				<i>Guidance provided</i>			
Retail/Wholesale	30	10.8%	8.6%	0. None	21	7.6%	19.3%
Tech (Software/Biotech)	51	18.4%	13.9%	1. A little	28	10.2%	18.0%
Bank/Finance/insurance	38	13.7%	13.2%	2.	33	12.0%	8.5%
Manufacturing	27	9.7%	30.7%	3. Moderate	118	42.9%	32.0%
Public Utility	8	2.9%	3.3%	4.	63	22.9%	13.7%
Transportation/Energy	27	9.7%	5.3%	5. A lot	12	4.4%	8.5%
Other	36	13.0%	12.2%	<i>CEO tenure</i>			
				<4 years	109	39.4%	36.9%
				4 - 9 years	123	44.4%	33.0%
				10+ years	42	15.2%	30.1%
				Don't know	3	1.1%	



**TABLE 2****Survey response to the question:****Rank the three most important performance measures that the firm you follow reports to outsiders**

Table 2 shows the three most important performance measures for outsiders. Under ‘Avg. points’ we present the average score where rank #1 scores 3, #2 scores 2, #3 scores 1 and not ranked scores 0. We also provide the corresponding statistics for the firms in the survey of Graham, Harvey, and Rajgopal (2005). We consider only non-missing values in the calculations

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	Analysts			Avg. points	CFOs
	Ranking				Avg. points
	#1	#2	#3		
Earnings/EPS	118	40	41	1.55	2.10
Revenues	40	86	74	1.20	1.24
Free cash flows	48	69	64	1.13	0.70
Pro Forma earnings	50	36	32	0.83	0.52
CF from operations	21	42	38	0.60	1.13
Other measure	21	31	47	0.56	n.a.
EVA	9	2	11	0.14	0.06

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**TABLE 3****Survey response to the question:****How important are the following earnings benchmarks for your assessment of the reported quarterly earnings number of the firm you follow?**

The answer of the respondents could vary between -2 (i.e., not important) and +2 (i.e., very important). The table shows the percentage of respondents that answers not important (i.e., values -2 and -1), the percentage of respondents that answers important or very important (i.e., values +1 and +2), and the average rating. A higher average rating corresponds with more importance. The table further provides the average rating of the CFOs of public firms as derived from Graham, Harvey, and Rajgopal (2005). We calculate the difference as the analysts' average rating minus the CFOs' average rating. The first difference test provides the significance of the outcome of a difference-of-means *t*-test. The second test is the outcome of an ordered logit regression, where the dependent variable is the answered value and the independent variables are an analyst dummy that equals one for observations from our analyst sample, four revenues dummies, and nine industry dummies. The corrected difference  $\beta=0$  is the significance of the coefficient of the analyst dummy. \*\*\*, \*\*, and \* denote that the differences are significantly different at the 1 percent, 5 percent, and 10 percent level, respectively.

Question	Analyst sample				Analysts vs. CFOs			
	percent important or very important	percent not important	Average rating	H <sub>0</sub> : Average rating =0	Average rating CFOs	Difference	H <sub>0</sub> : Difference =0	H <sub>0</sub> : Corrected difference $\beta=0$
(1) My forecast of EPS for current quarter	91.7	2.6	1.50	***				
(2) Analyst consensus forecast of EPS for current quarter	79.3	9.5	1.05	***	0.96	0.09	***	
(3) Same quarter last year EPS	65.8	16.8	0.70	***	1.28	-0.58	***	***
(4) Previous quarter EPS	42.8	37.8	-0.02		0.49	-0.51	***	***
(5) Reporting a profit (i.e., EPS>0)	42.1	29.6	0.13		0.84	-0.71	***	***

**TABLE 4****Survey response to the question:****Do these statements describe why the firm you follow should try to meet earnings benchmarks?**

The answer of the respondents could vary between -2 (i.e., strongly disagree) and +2 (i.e., strongly agree). The table shows the percentage of respondents that answers agree or strongly agree, the percentage of respondents that answers disagree or strongly disagree, and the average rating. A higher average rating corresponds with more agreement. The table further provides the average rating of the CFOs of public firms as derived from Graham, Harvey, and Rajgopal (2005). We calculate the difference as the analysts' average rating minus the CFOs' average rating. The first difference test provides the significance of the outcome of a difference-of-means *t*-test. The second test is the outcome of an ordered logit regression, where the dependent variable is the answered value and the independent variables are an analyst dummy that equals one for observations from our analyst sample, four revenues dummies, and nine industry dummies. The corrected difference  $\beta=0$  is the significance of the coefficient of the analyst dummy. \*\*\*, \*\*, and \* denote that the differences are significantly different at the 1 percent, 5 percent, and 10 percent level, respectively.

Meeting earnings benchmarks helps...	Analyst sample				Analysts vs. CFOs			
	percent agree or strongly agree	percent disagree or strongly disagree	Average rating	H <sub>0</sub> : Average rating =0	Average rating CFOs	Difference	H <sub>0</sub> : Difference =0	H <sub>0</sub> : Corrected difference $\beta=0$
(1) this firm to build credibility with the capital market	88.2	3.4	1.26	***	1.17	0.09		
(2) this firm to convey its future growth prospects to investors	87.5	2.7	1.22	***	0.90	0.32	***	***
(3) the external reputation of the firm's management team	82.2	3.4	1.08	***	0.95	0.13	**	
(4) this firm to maintain or increase its stock price	77.1	7.4	1.07	***	1.06	0.01		
(5) this firm to maintain or reduce stock price volatility	57.8	15.3	0.53	***	0.74	-0.21	***	**
(6) this firm to assure customers and suppliers that its business is stable	41.2	24.3	0.20	***	0.50	-0.31	***	***
(7) this firm to achieve or preserve a desired credit rating	30.2	28.5	-0.04		0.07	-0.11		***
(8) this firm to avoid violating debt-covenants	29.9	31.3	-0.06		-0.28	0.22	**	**
(9) this firm's employees to achieve bonuses	27.8	34.2	-0.14	**	0.06	-0.20	**	***

**TABLE 5****Survey response to the question:****Do these statements describe why the firm you follow should try to avoid missing an earnings benchmark?**

The answer of the respondents could vary between -2 (i.e., strongly disagree) and +2 (i.e., strongly agree). The table shows the percentage of respondents that answers agree or strongly agree, the percentage of respondents that answers disagree or strongly disagree, and the average rating. A higher average rating corresponds with more agreement. The table further provides the average rating of the CFOs of public firms as derived from Graham, Harvey, and Rajgopal (2005). We calculate the difference as the analysts' average rating minus the CFOs' average rating. The first difference test provides the significance of the outcome of a difference-of-means *t*-test. The second test is the outcome of an ordered logit regression, where the dependent variable is the answered value and the independent variables are an analyst dummy that equals one for observations from our analyst sample, four revenues dummies, and nine industry dummies. The corrected difference  $\beta=0$  is the significance of the coefficient of the analyst dummy. \*\*\*, \*\*, and \* denote that the differences are significantly different at the 1 percent, 5 percent, and 10 percent level, respectively.

Missing an earnings benchmark hurts this firm because...	Analyst sample				Analysts vs. CFOs			
	percent agree or strongly agree	percent disagree or strongly disagree	Average rating	H <sub>0</sub> : Average rating =0	Average rating CFOs	Difference	H <sub>0</sub> : Difference =0	H <sub>0</sub> : Corrected difference $\beta=0$
(1) it creates uncertainty about the firm's future prospects	88.5	4.7	1.31	***	0.97	0.34	***	***
(2) there may be previously unknown problems at the firm	79.7	7.8	0.99	***	0.49	0.50	***	***
(3) it leads to increased scrutiny of all aspects of the firm's earnings releases	54.4	16.2	0.48	***	0.07	0.41	***	***
(4) the firm may lack the flexibility to meet the benchmark	42.0	23.7	0.19	***	-0.14	0.33	***	***
(5) it increases the possibility of lawsuits	8.5	58.3	-0.74	***	-0.20	-0.53	***	***

**TABLE 6****Survey response to the question:**

**Hypothetical scenario: Near the end of the quarter, it looks like the firm you follow might come in below the desired earnings target. Within what is permitted by GAAP, what are the value implications of the following choices for the firm you follow?**

The answer of the respondents could vary between -2 (i.e., value destroying) and +2 (i.e., value creating). The table shows the percentage of respondents that answers value creating (i.e., value +1 or +2), the percentage of respondents that answers value destroying (i.e., value -2 or -1), and the average rating. A higher average rating corresponds with more value creation. The table further provides the average rating of the CFOs of public firms as derived from Graham, Harvey, and Rajgopal (2005). We calculate the difference as the analysts' average rating minus the CFOs' average rating. The first difference test provides the significance of the outcome of a difference-of-means *t*-test. The second test is the outcome of an ordered logit regression, where the dependent variable is the answered value and the independent variables are an analyst dummy that equals one for observations from our analyst sample, four revenues dummies, and nine industry dummies. The corrected difference  $\beta=0$  is the significance of the coefficient of the analyst dummy. \*\*\*, \*\*, and \* denote that the differences are significantly different at the 1 percent, 5 percent, and 10 percent level, respectively.

Question	Analyst sample				Analysts vs. CFOs			
	percent value creating	percent value destroying	Average rating	H <sub>0</sub> : Average rating =0	Average rating CFOs	Difference	H <sub>0</sub> : Difference =0	H <sub>0</sub> : Corrected difference $\beta=0$
(1) Repurchase common shares	58.0	13.6	0.55	***	-1.02	1.57	***	***
(2) Decrease discretionary spending	30.0	45.9	-0.28	***	1.00	-1.28	***	***
(3) Provide incentives for customers to buy more products this quarter	17.8	56.8	-0.55	***	-0.11	-0.44	***	**
(4) Delay starting a new project, even if this entails a small sacrifice in value	17.4	58.5	-0.56	***	0.33	-0.89	***	***
(5) Book revenues now rather than next quarter	15.0	50.3	-0.53	***	-0.12	-0.41	***	***
(6) Draw down on reserves previously set aside	9.4	53.1	-0.63	***	-0.45	-0.18	*	*
(7) Sell investments or assets to recognize gains this quarter	8.3	59.4	-0.77	***	-0.77	0.00		
(8) Postpone taking an accounting charge	6.9	43.9	-0.55	***	-0.72	0.17	**	
(9) Alter accounting assumptions (e.g., allowances, pensions, etc.)	2.1	78.0	-1.26	***	-1.22	-0.04		

**TABLE 7****Survey response to the question:****If the firm you follow would smoothen its earnings path, what would be the consequences?**

The answer of the respondents could vary between -2 (i.e., strongly disagree) and +2 (i.e., strongly agree). The table shows the percentage of respondents that answers agree or strongly agree, the percentage of respondents that answers disagree or strongly disagree, and the average rating. A higher average rating corresponds with more agreement. The table further provides the average rating of the CFOs of public firms as derived from Graham, Harvey, and Rajgopal (2005). We calculate the difference as the analysts' average rating minus the CFOs' average rating. The first difference test provides the significance of the outcome of a difference-of-means *t*-test. The second test is the outcome of an ordered logit regression, where the dependent variable is the answered value and the independent variables are an analyst dummy that equals one for observations from our analyst sample, four revenues dummies, and nine industry dummies. The corrected difference  $\beta=0$  is the significance of the coefficient of the analyst dummy. \*\*\*, \*\*, and \* denote that the differences are significantly different at the 1 percent, 5 percent, and 10 percent level, respectively.

If the firm that I follow would smoothen its earnings path...	Analyst sample				Analysts vs. CFOs			
	percent agree or strongly agree	percent disagree or strongly disagree	Average rating	H <sub>0</sub> : Average rating =0	Average rating CFOs	Difference	H <sub>0</sub> : Difference =0	H <sub>0</sub> : Corrected difference $\beta=0$
(1) it would be easier to predict this firm's future earnings	83.0	8.5	1.01	***	0.99	0.02		
(2) this firm would be less risky	56.7	22.3	0.37	***	1.18	-0.81	***	***
(3) this firm would assure customers/suppliers that business is stable	43.8	24.9	0.17	***	0.61	-0.44	***	***
(4) this firm would reduce the return that investors demand	42.2	25.9	0.16	***	0.55	-0.39	***	***
(5) this firm would promote a reputation for transparent and accurate reporting	35.1	33.3	-0.06		0.32	-0.38	***	***
(6) this firm would achieve or preserve a desired credit rating	34.2	20.6	0.10	*	0.21	-0.11		***
(7) this firm would convey higher future growth prospects	22.6	38.4	-0.22	***	0.42	-0.64	***	***
(8) this firm would clarify true economic performance	19.9	42.4	-0.32	***	-0.05	-0.27	***	***

**TABLE 8****Survey response to the question:****How large a sacrifice in value should the firm you follow make to avoid a bumpy earnings path?**

The answer of the respondents could vary between 0 (i.e., none) and +3 (i.e., large sacrifice). The table shows the percentage of respondents per answer. The table further provides the percentage of respondents of the CFOs of public firms as derived from Graham, Harvey, and Rajgopal (2005). We calculate the difference as the analysts' average rating minus the CFOs' average rating. The first difference test provides the significance of the outcome of a difference-of-means *t*-test. The second test is the outcome of a binary logit regression, where the dependent variable is a dummy that equals one if the analyst provided that value as answer. E.g., for the answer no sacrifice in value, the dummy is one if the analyst checked "none" and zero otherwise. The independent variables are an analyst dummy that equals one for observations from our analyst sample, four revenues dummies, and nine industry dummies. The corrected difference  $\beta=0$  is the significance of the coefficient of the analyst dummy. The corrected difference of all groups is the analyst coefficient and its significance of an ordered logit regression with the same independent variables as the previous regression, but with the value of the answer that ranges from 0 to 3 as dependent variable. \*\*\*, \*\*, and \* denote that the differences are significantly different at the 1 percent, 5 percent, and 10 percent level, respectively.

	Analyst sample	Analysts vs. CFOs			
	percent of respondents	percent of respondents CFOs	Difference	H <sub>0</sub> : Difference =0	H <sub>0</sub> : Corrected difference $\beta =0$
None	33.5	5.5	27.9	***	***
Small sacrifice	53.3	33.6	19.8	***	***
Moderate sacrifice	12.1	46.9	-34.8	***	***
Large sacrifice	1.1	14.0	-12.9	***	***
H <sub>0</sub> : Corrected difference all groups ( $\beta$ ) =0		-2.318***			