

# Earnings Quality: Evidence from the Field

Ilia Dichev

Goizueta Business School, Emory University

John Graham

Campbell R. Harvey

Fuqua School of Business, Duke University

National Bureau of Economic Research

Shiva Rajgopal

Goizueta Business School, Emory University

**Comments welcome**

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## **Abstract:**

We provide new insights into earnings quality from a survey of 169 CFOs of public companies and in-depth interviews of 12 CFOs and two standard setters. Our key findings include (i) high-quality earnings are sustainable and are backed by actual cash flows; they also reflect consistent reporting choices over time and avoid long-term estimates; (ii) about 50% of earnings quality is driven by innate factors; (iii) about 20% of firms manage earnings to misrepresent economic performance, and for such firms 10% of EPS is typically managed; (iv) CFOs believe that earnings manipulation is hard to unravel from the outside but suggest a number of red flags to identify managed earnings; and (v) CFOs disagree with the direction the FASB is headed on a number of issues including the sheer number of promulgated rules, the top-down approach to rule making, the curtailed reporting discretion, the de-emphasis of the matching principle, and the over-emphasis on fair value accounting.

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# Earnings Quality: Evidence from the Field

## 1. Introduction

The concept of earnings quality is fundamental in accounting. Yet, there are deep disagreements about how to define earnings quality and how to measure it. The list of candidate measures is long: earnings persistence, predictability, asymmetric loss recognition, various forms of benchmark beating, smooth earnings, magnitude of accruals, income-increasing accruals, absolute value of discretionary or abnormal accruals, and the extent to which accruals map into cash flows. Complicating the measurement of earnings quality, archival research cannot satisfactorily parse out the portion of managed earnings from the one resulting from the fundamental earnings process (Dechow, Ge and Schrand 2010). Relatedly, there are a number of vexing questions that have been difficult to address with archival work because answers often rely on managerial intent, which is not observable and is thus difficult to infer. Examples of such questions include the following: What opportunities and constraints do managers trade off to choose one set of earnings attributes over the other? How prevalent is earnings management? What is the typical magnitude of earnings management? Would certain accounting policies promote higher quality earnings? How can an outside investigator tell whether ex-ante earnings quality is poor before observing ex-post outcomes such as restatements and SEC enforcement actions?

In this paper, we provide insights about earnings quality from a new data source: a large survey and a dozen interviews with top financial executives, primarily Chief Financial Officers (CFOs). Why CFOs? While it is clear that there are important consumers of earnings quality such as investment managers and analysts, we focus on the direct producers of earnings quality, who also intimately know and cater to such consumers. In addition, CFOs commonly have a formal background in accounting – about two-thirds of our survey respondents - which provides them with keen insight into the determinants of earnings quality, including the advantages and limitations of GAAP accounting. CFOs are also key decision-makers in company acquisitions (see Graham, Harvey and Puri 2010), which implies that they have working knowledge of how to evaluate earnings quality from an outside perspective.

Although field studies suffer from their own problems (potential response bias, limited number of observations, whether questions on a survey instrument are misinterpreted, do respondents do what they say, do they tell the truth, do they recall the most vivid or their most representative experience), surveys potentially offer a way to address often intractable issues related to omitted variables and the inability to draw causal links, that are endemic to large-sample archival work. Surveys and interviews allow researchers to (i) discover institutional constraints that impact practitioners' decisions in ways that academics may not fully appreciate; and (ii) ask key decision makers directed questions about their behavior as opposed to inferring intent from statistical associations between proxy variables surrogating for such intent. Critically, we also try to provide some idea about "how it all fits together," i.e., about the relative importance of individual factors and how they come together to shape reported earnings.

Our analysis offers the following insights: (i) earnings are generally considered high quality when they are sustainable and backed by actual cash flows; more specific characteristics include consistent reporting choices over time and avoidance of long-term estimates; (ii) the most important determinants of earnings quality are the firm's business model, the strength of its internal control system, its industry, accounting standards, and macro-economic conditions; (iii) innate factors (beyond managerial control) account for roughly 50% of earnings quality; (iv) CFOs feel that reporting discretion has declined over time and that GAAP standards are somewhat of a constraint in reporting high quality earnings; (v) a large majority of CFOs believe that FASB's de-recognition of matching and over-emphasis on fair value are misguided and adversely affect earnings quality; (vi) CFOs would like standard setters to issue fewer new rules, and to converge U.S. GAAP with IFRS to improve earnings quality. They state that earnings quality would improve if reporting choices at least partly evolve from practice rather than coming entirely from a top-down body such as FASB. They view financial reporting largely as a compliance activity rather than as a vibrant means to innovate and compete for access to capital; (vii) CFOs estimate that in any given period, roughly 20% of firms misrepresent their economic performance by managing earnings; for such firms, the typical misrepresentation is about 10% of reported EPS; (ix) they believe that 60% of

earnings management is income-increasing while 40% is income-decreasing; (x) a large majority of CFOs feel that earnings misrepresentation occurs most often in an attempt to influence stock price, because of outside and inside pressure to hit earnings benchmarks, and to avoid adverse compensation and career consequences for senior executives; and (xi) CFOs suggest a number of red flags that point to potential earnings management. The three most common flags are persistent deviations between earnings and the underlying cash flows, deviations from industry and other peer experience, and large and unexplained accruals and changes in accruals. There are also a number of red flags that relate to the role of the manager's character and the firm's culture, which allow and perhaps even encourage earnings management.

We believe our survey can impact future research in at least four ways. First, future work on earnings quality proxies might want to dig deeper on measures that capture sustainable future earnings, earnings backed by cash flows, consistent reporting choices over time and the predictability of future cash flows and earnings. In particular, parsing line items of the income statement by persistence is likely to be interest to several constituencies such as CFOs, analysts, investors and standard setters as such an exercise might help identify sustainable earnings. More work on the long-run persistence and prediction of earnings is also needed. Second, existing models typically under-estimate the importance of innate factors in explaining earnings quality, as evidenced by  $R^2$  in the region of 10%-30% for various versions of the Jones (1991) model or the Dechow and Dichev (2002) model. In particular, when modeling innate determinants of earnings quality, researchers might want to consider explicitly incorporating the influence of factors we uncover/highlight, such as the firm's business model, specific accounting standards affecting the firm, industry membership, macro-economic conditions and the quality of the firm's internal controls. Conversely, existing models typically over-estimate the extent of opportunistic earnings management given that we report that the CFOs' median estimate of the proportion of EPS managed is only about 10%, and that for only the 20% of firms in the economy that engage in such behavior. Such magnitudes of opportunistic earnings management suggest that current large-sample models have to

become statistically and economically more powerful than they are today. Alternatively, a deeper analysis of the firm's financial statements, for at least a random sub-sample of the firms, might be in order. Third, the findings above indicate that CFOs share much of the economic view of GAAP proposed by Kothari, Ramanna and Skinner (2010), and are often at odds with the current regulatory philosophy of FASB and IASB. Hence, future research might want to more closely investigate how FASB frames standards. Specific questions include (i) does FASB's rule making add economic value to firms? (ii) how does its rule-making agenda get set?; (iii) where did the push for fair value standards or excessively detailed standards come from? (iv) how important is the conceptual framework to FASB's rule making?; and (v) how responsive is FASB to constituents' feedback? Fourth, future work aiming to detect opportunistic earnings management might want to emphasize the "human element," such as a deeper analysis of the character of the managers running the firm and the firm's corporate culture, in addition to a fundamental analysis of the financial statements themselves. New data sources and techniques, including text-processing programs and data on the academic and professional background of managers, can help in this endeavor.

Figure 1 provides a road map to clarify the unifying structure of the paper, and to help the reader locate and navigate through its individual parts. Section 2 describes the process of designing and conducting the survey and the interviews. Section 3 presents results on how earnings are used and on CFOs' views related to defining and measuring earnings quality. Section 4 reports results on the determinants of earnings quality. Section 5 details CFOs views on the standard setting process and its impact on earnings quality. Section 6 presents CFOs' views on the prevalence and reasons for earnings management, and red flags to detect such management. Section 7 concludes.

## **2.0 Survey and interview logistics**

### *2.1 Survey design and delivery*

We developed the initial survey instrument based on our review of the literature on earnings quality, including recent published reviews in Dechow, Ge, and Schrand (2010), Melumad and Nissim

(2009), and Dechow and Schrand (2004). As discussed below, we supplement this review with interviews of CFOs and standard setters to identify issues that are potentially missed or underdeveloped in the academic literature. We also solicited and received feedback from 18 academic researchers, and one professional survey expert, on survey content and design. Our goal was to minimize biases induced by the questionnaire, strike a neutral tone, and to maximize response rate. We used the penultimate version of the survey to conduct beta tests to gather feedback and to make sure that the time required to complete the survey was reasonable. Our beta testers took 15-20 minutes to complete the survey. Based on such feedback, we made changes to the wording of several questions, deleted some questions and added four new (sub) questions. The final survey, available at <http://faculty.fuqua.duke.edu/~jgraham/EQ/EQ.htm> contains 10 main questions and was administered over the Internet. Note that the survey was anonymous and did not require subjects to disclose their names or affiliation.

One advantage of online administration is the ability to randomly scramble the order of choices within a question, so as to mitigate order-of-presentation effects. Specifically, the survey scrambles the order of answers in questions 1, 4, 5, and 9. For the remaining questions, order is either not an issue (demographic questions, qualitative questions) or there is a natural order of alternatives (e.g., 6, 8b). In two cases, we decided against scrambling because the listed alternatives are organized in meaningful clusters, which we felt is best not to break (3a, 7). Participants were allowed to skip questions so that we did not lose them if they were to encounter a question that they did not want to answer. Every multiple-choice question was followed by a free-text response option, so that survey takers could enter answers that were not explicitly specified in the question. We comment on these qualitative textual responses at appropriate places in the paper.

Invitations to take the survey were sent via email. We used two databases of email addresses of CFOs supplied by (i) *CFO* magazine; and (ii) a list of CFO email addresses maintained by the Fuqua School at Duke University. The majority of executives have the job title of CFO, though the database also includes the titles Chief Accounting Officer, Treasurer, Assistant Treasurer, Controller, Assistant

Controller, or Vice President (VP), Senior VP or Executive VP of Finance (collectively referred to as CFOs for simplicity).<sup>1</sup> In total, approximately 10,300 email addresses from these two sources were surveyed. We emailed an invitation to take the survey on October 25, 2011, a reminder was sent a week later, and finally the survey closed on December 9, 2011.

We received 558 responses, for a response rate of approximately 5.4%. This rate is lower than that from some past surveys of CFOs such as 9% in Graham and Harvey (2001), and 8.4 % in the most directly comparable Internet-delivered portion of Graham, Harvey and Rajgopal (2005) but higher than the approximately 4.5% rate in the quarterly CFO survey administered at Duke University.<sup>2</sup> In any case, the critical consideration here is not so much the size but the representativeness of the sample when compared to the environment (List 2007), and we present some positive evidence along these lines below in section 2.2, where we benchmark the respondents to the Compustat population. Of the 558 total responses, only 402 participants indicate whether they belong to a public company, a private firm or to the government and non-profit sector, leaving us with 169 responses from public firms and 206 from private firms. Since our primary interest is in the economically dominant publicly-traded companies, the analysis below is mostly based on the 169 responses that we can confidently identify as public firms.

## *2.2 Summary statistics and data issues*

While the survey is anonymous, we gather demographic information to allow us to explore conditional effects of earnings quality practices, e.g., whether CFOs of companies with high litigation risk rate conservative earnings as higher quality earnings. In particular, the survey instrument asks for firm characteristics often used to proxy for creditworthiness (credit rating, total debt to assets ratio), profitability (report a profit or a loss), growth opportunities (growth rate in sales, price-to-earnings ratio),

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<sup>1</sup> To guard against the possibility that someone other than the CFO (e.g., a secretary) filled out the survey, we ask for extensive information personal to the CFO (e.g., age, education, previous professional background, time on the job,). This is on top of nuanced data requests where we ask the respondent to benchmark the firm's earnings volatility and litigation exposure to the firm's competitors.

<sup>2</sup> There are two possible reasons for the lower response rates compared to, for example, Graham et al. (2005). One is that spam filters have become more stringent, and despite our best efforts to avoid them, they have taken a toll. "Survey fatigue" due to the increased frequency of CFO surveys in recent years may also be a contributing factor.

potential agency problems (did the firm pay a dividend, proportion of CEO and CFO pay that is incentive-based, managerial ownership, institutional ownership), the firm's operating environment (firm age, foreign sales, number of business segments, the physical location of company headquarters, earnings volatility and exposure to class action litigation), size effects (sales revenue, number of employees), informational effects (public versus private, which stock exchange for public firms), industry membership, and several variables specific to the CFO taking the survey (age, his/her risk aversion, job title, person he/she reports to, where is his/her job physically located, time on the job, and professional background such as public accounting, investment banking etc.). The question assessing risk aversion is inspired by Barsky et al. (1997).

To conserve space in the paper, we tabulate most of conditional analyses of the survey responses on the Internet at <http://faculty.fuqua.duke.edu/~jgraham/EQ/EQconditional.pdf>. We briefly report in the text only conditional results that are economically meaningful and on which prior literature might have a bearing. We do provide a more systematic comparison of public firms relative to private firms in the text for two reasons. First, because 206 of our 402 survey responses are from private firms, such a comparison is feasible and reliable. Second, emerging work has exploited the private/public divide to test hypotheses related to financial reporting (e.g., Ball and Shivakumar 2005, Burgstahler, Hail, and Leuz 2006), so we have more systematic theory and archival results against which to benchmark our findings. One caveat here is that we do not have data on whether our private firms plan to go public soon or whether they have public debt. If some firms intend to soon become public, the reported differences between public and private firms would be less stark than expected by theory. Note that all the other reported conditional analyses, except for comparisons with private firms, are based on responses from CFOs of public firms.

Table 1, panel A reports select descriptive data on the surveyed public firms compared to surveyed private firms, with non-profits excluded. The public executives are mostly between 50-59 years of age and are somewhat younger and higher-educated than their private counterparts. Roughly 46% of



the public executives have a public accounting background and another 21% have other accounting background, consistent with our priors that top finance executives are likely to have a sophisticated understanding of the accounting determination of earnings. The responding public firms are much larger than the private firms in that 1.21% (15.92%) of the public (private) sample have revenues of less than \$25 million, and 26.67% (1%) have revenues of more than \$10 billion. Most public firms are from the manufacturing sector (37.58%) followed by banking/finance and insurance (15.76%) and healthcare or pharmaceuticals (7.88%) sectors. Insider ownership is larger in private firms but institutional ownership is greater in public firms, as expected.

Table 1, panel B reports pairwise correlations of select variables reported in the survey but few of these correlations are noteworthy. Following the recommendation by List (2007) mentioned earlier, we benchmark our survey sample to the target population of Compustat (see Table 1, panel C). While the survey firms span most of the universe of Compustat firms on the indicated variables, they also visibly tilt away from the benchmark averages in some directions. Perhaps most importantly, our sample firms are considerably larger than the typical Compustat firm, as indicated by the mean and median statistics and the distribution across Sales categories.<sup>3</sup> Surveyed public firms are also growing faster, are more levered, and are higher rated than the average Compustat firm. Overall, the survey firms seem to be a reasonable snapshot of the experience of U.S. public firms. To the extent the survey firms tilt away from the benchmark population, the tilt is towards larger, leading firms in terms of economic importance (which seems desirable).

### *2.3 Conducting interviews*

We conduct 12 one-on-one interviews with CFOs and two with standard-setters, to complement the survey work in three ways.<sup>4</sup> First, we use initial interviews as a broad exploration of earnings quality

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<sup>3</sup> We ask CFOs to assign sales in their firm to one of seven categories in the survey (< \$25 million, \$22-99 million, \$100-999 million, \$500-999 million, \$1-4.9 billion, %5-5.9 billion, and > \$ 10 billion).

<sup>4</sup> Two CFOs and one standard-setter had recently retired from their respective positions. We view this as an advantage as they could be more detached and candid in their answers. For parsimony, we refer to them with their former titles throughout the paper.

and as input in developing survey questions. Second, the interviews provide context to improve our understanding of the survey answers, and provide specific and often vivid examples. Finally, several post-survey interviews further flesh out and aid interpretation of our main findings, including certain surprising survey results. To identify interview subjects, we chose firms in different industries and with different analyst coverage and market capitalization, purposefully seeking cross-sectional variation in financial reporting policies. Table 1, Panel D reports data on the representativeness of these interviewed firms relative to the Compustat population of U.S. public firms.<sup>5</sup> The interviewed firms are much larger than the typical Compustat firm with average (median) sales of \$24 billion (\$10.4 billion), and they are more levered, and have lower sales growth and higher credit ratings.

All interviews except one were conducted via telephone, with the understanding that firms and executives will remain anonymous. We conduct interviews according to the scientific practices described in Sudman and Bradburn (1983). At the beginning of the interviews, we ask the respondent an open-ended question allowing them to describe their understanding of “earnings quality” and the ways in which an outside investigator would discern from a firm’s financial statements whether earnings are of high quality. We next clarify that, consistent with Dechow and Skinner (2000), whenever we use the words “earnings management” we mean aggressive reporting choices within GAAP, i.e., we explicitly rule out fraudulent transactions in both our survey instrument and interviews. Also consistent with Sudman and Bradburn (1983), “riskier” questions are asked later in the interview. We attempt to conduct the interview so as not to ask leading questions, influence the answers or make the interviewee feel “cornered.” We also try to avoid affecting the initial direction of the interviews with a pre-set agenda. Rather, we let the executive tell us what is important at his or her firm about earnings quality and follow up with clarifying questions. Many of the clarifying questions are similar to those that appear on the survey instrument. The interviews varied in length, lasting from 40 to 90 minutes. The executives were remarkably forthcoming

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<sup>5</sup> Table 1 lists data for 11 publicly traded firms since one executive worked for a private firm.

in their responses, and most were enthusiastic about the topic. Each interview was recorded and transcribed, ensuring accuracy in the quotations later in the paper.

### **3.0 The concept and proxies of earnings quality**

#### *3.1 How are earnings used?*

To aid the interpretation of later survey questions about earnings quality, it is important that we first establish how earnings are used. In addition to clarifying the decision context, this analysis sheds light on long-standing theoretical arguments related to whether earnings information is more useful for valuation (e.g., Barth, Beaver, and Landsman 2001, Schipper 2005, Barth 2006, Francis, Olsson, and Schipper 2006, IASB/FASB project on the conceptual framework 2006) or for performance evaluation, contracting and stewardship purposes (e.g., Holthausen and Watts 2001). These differing perspectives are at the heart of several policy and practical debates in accounting research (see Kothari et al. 2010 for a summary), and while these two schools of thought often agree in their implications for what is meant by “high quality earnings,” they also contradict on some key issues. As Christensen, Feltham and Sabac (2005) point out “increasing the persistent components (of earnings) and reducing the reversible components are generally desirable for valuation, but not for contracting. Eliminating transitory components of earnings is generally desirable for valuation, but not necessarily for contracting.” Note that at the beginning and throughout the survey we emphasize that our notion of earnings is reported GAAP earnings.

Results reported in Table 2 reveal that the valuation role of earnings dominates: 94.7% of CFOs think that earnings are important to very important for investors in valuing the company (ranks 4 and 5 on a scale of 1 to 5). This emphasis on the valuation role is consistent with the impressions from surveys of investors, analysts, and financial executives, with a long stream of research in capital markets (Kothari 2001), and the professed goals of standard setters. Following closely behind, however, is a distinct cluster of four other uses, which can be broadly placed in the contracting/stewardship/control role of accounting; specifically we find much support for the importance of earnings (i) for use in debt contracts

(82.1%); (ii) for use by the firm's own managers (80.5%); (iii) for use in executive compensation contracts (78.7%); and (iv) for use by outsiders in evaluating the company's managers (62.7%). The results also indicate that earnings are much less important for other stakeholders such as customers, suppliers and employees.<sup>6</sup> Focusing on qualitative answers that appeared at least thrice in the data, CFOs identify the following additional uses of earnings: (i) by government/tax authorities/regulators; (ii) for identifying M&A opportunities; (iii) for incentive compensation; and (iv) for use by competitors.

In sum, while the valuation use of earnings dominates, there is also solid support for the importance of contracting and stewardship uses. Hence, accounting is useful for both valuation and stewardship, consistent with the position adopted by some researchers (e.g., Christensen and Demski 2003; Kothari, Ramanna and Skinner 2010, Lambert 2010) but somewhat at odds with FASB/IASB's (2006) professed focus on valuation.

One surprising finding is the high rank assigned to using published earnings by the firm's own management, given existing arguments that managers have access to more fine-grained internal information beyond earnings. Our interview evidence, however, confirms a tight link between internal and external reporting. Several CFOs emphasized the use of "one number" for both external and internal communications. In the words of one CFO: "We make sure that everything that we have underneath – in terms of the detailed reporting – also rolls up basically to the same story that we've told externally." Others suggest that performance inside the firm is tracked via reported earnings and compensation decisions also depend on reported earnings: "earnings is certainly the basis of our assessing our own performance, and our board; we had a little grid to determine what is our return on equity and that was driven by the earnings figure as per GAAP." The tight link between the internal and external uses of

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<sup>6</sup> An exploratory factor analysis of these responses (with varimax rotation) revealed three factors, with eigenvalues greater than one, cumulatively explain 59.5% of the variation in the data. In particular, these factors had the following loadings on individual responses: (i) a "valuation" factor with a loading of 0.80 on use in valuation and 0.77 on use by company's own managers; (ii) a "stewardship" factor with a loadings of 0.78 on use in debt contracts, 0.64 on use in executive compensation contracts, 0.51 for use for outside evaluation of managers and 0.49 for labor negotiations; and (iii) "other stakeholders" factor with loadings of 0.85 by customers, 0.83 for use by suppliers and 0.76 for use by employees.

GAAP is also consistent with research that investigates the investment-related consequences of earnings quality (e.g., Biddle and Hilary 2006, McNichols and Stubben 2008, Kedia and Phillipon 2009, and Shroff 2011).

Turning to conditional analysis, our main finding is that nearly all uses of earnings are rated as lower in importance by private firm executives, which perhaps simply reflects the fact that private firm earnings are either unavailable or less available to outsiders, and private and smaller firms have less formal means of communicating performance information.

### *3.2 Qualitative evidence on the concept of earnings quality*

Despite widespread use of the term “earnings quality” in both the academic and practitioner communities, there is no consensus on its definition and meaning.<sup>7</sup> High-quality earnings have been defined/measured in the literature as those that:<sup>8</sup>

- (i) are persistent and hence the best predictor of future long-run sustainable earnings, e.g., Penman and Zhang (2002), Dechow and Schrand (2004) and Melumad and Nissim (2009).
- (ii) are smooth, e.g., Francis et al. (2004) and Dechow and Schrand (2004);
- (iii) predict future earnings better, e.g., Schipper and Vincent (2003);
- (iv) do not have special or non-recurring items, e.g., Dechow and Schrand (2004), McVay (2006);
- (v) are derived under conservative accounting rules or the conservative application of relevant rules (Watts 2003a, 2003b);
- (vi) are backed by past, present, or future cash flows, e.g., Sloan (1996), Dechow and Dichev (2002);
- (vii) have smaller changes in total accruals that are not linked to fundamentals, e.g., DeAngelo (1986), Jones (1991), Dechow et al. (1995), Kothari et al. (2005).

Note that the above definitions overlap somewhat. For instance, because special items have lower persistence, absence of special items implies higher persistence. On the other hand, a common concern that often comes up in the literature is the low empirical correlations among these several

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<sup>7</sup> An old survey of analysts, accountants, managers and graduate students of the Harvard Business School on the concept of earnings quality also reflects this lack of consensus (Siegel 1982 and Bernstein and Siegel 1979).

<sup>8</sup> Dechow et al. (2010) define higher quality earnings as earnings that more faithfully represent the features of the firm’s fundamental earnings process that are relevant to a specific decision made by a specific decision maker. After some consideration, we do not include “representational faithfulness” as one of the alternatives in our survey because our emphasis is on specific and operational measures rather than general constructs.

measures of earnings quality (Bowen et al. 2008, Dechow et al. 2010). It is unclear whether such low correlations indicate noise in the measures of earnings quality or more fundamental differences in the underlying notions of earnings quality. In addition, there is little guidance in the literature on (1) the relative importance of earnings quality attributes; (2) whether there are specific contexts in which one attribute is more important than the other; and (3) what trade-offs CFOs weigh while deciding to choose one attribute over the other. We ask CFOs to provide insight on these issues, starting with an open-ended qualitative question inquiring what the term “high quality earnings” means to them. This question clarifies the meaning of the earnings quality concept itself and also helps in interpreting the results in the remainder of the paper.

We collect 320 responses to this qualitative question (from public and private firms), which are organized and ranked on their relative frequency in Panel A of Table 3; Panel B includes some direct quotes from participants which illustrate the findings. The most frequently narrated idea of earnings quality relates to earnings that are sustainable, repeatable, recurring, consistent, reflecting long-term trends, and/or have the highest chance of being repeated in future periods. The second most common theme relates to earnings that are free from special or one-time items, earnings that are not drawn from reserves, fair value adjustments, accounting gimmicks, market fluctuations, gains/losses, fluctuations in effective tax rates, and/or foreign-currency adjustments; thus, high quality earnings are essentially free of the items would make them unsustainable (i.e., the second theme is really the flip side of the first one). This dominance of the sustainability notion of earnings quality is understandable given the dominance of the valuation function of earnings registered in Table 2 since valuation approaches typically view the firm as a continual stream of earnings and cash flows. While the academic literature has certainly explored the sustainability aspect of earnings (e.g., Penman and Zhang 2002), this characteristic has not been a central, organizing theme in the quality of earnings literature.

The third most common theme relates to earnings that are backed by cash flows, consistent with efforts like Dechow and Dichev (2002). Two other ideas are moderately common, the first that earnings

quality results from consistent and accurate application of GAAP; the other is that quality earnings come from core operations or from normal margin on regular expenses and revenues (which is essentially a variation on the sustainable idea above). Summing up, the qualitative answers suggest that high quality earnings are sustainable and repeatable, free of one-time items, and backed by actual cash flows.

Interviews with standard setters reveal much agreement with CFO views but also provide a valuable counterpoint in places, including a key clarification of whether and how to treat one-time items. Here is one standard setter's extended take on earnings quality: "earnings quality is a difficult concept because investors ideally want to identify a firm with quality economics that are repeatable. Firms that have those characteristics are good investments. Hence, sustainable and persistent earnings are likely to be popular choices among CFOs for high quality earnings. However, earnings that are not persistent are not necessarily low quality because investors will want to know when the economics of the business dictate that earnings are not repeatable due to changes in the nature of the business. For earnings to be high quality, it must capture both (i) when earnings components reflect the outcome of business activities that will persist; and (ii) when those outcomes are associated with business activities that represent one time changes in wealth that will not persist." In other words, both persistent and non-persistent components of earnings can be viewed as good reflections of what is happening in the business, although they have different meanings, and perhaps the problem really lies in aggregating such distinctly different items into a single earnings number. In general, a recurrent theme in standard setters' comments is the need to distinguish between persistent and non-persistent components of income, which is related to the need to distinguish between normal and ongoing cash flows and accruals, and revision in stocks.<sup>9</sup> Based on our impressions from the literature and this study, we believe that parsing line items by persistence is likely to have considerable appeal to key constituencies like company executives, analysts, and investors.

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<sup>9</sup> A standard setter expressed this idea as: "another frustrating issue with earnings is the desire among constituents to condense the economics of the firm into one number. I think disaggregating activities into operating, investing and financing is important. The EPS number, by itself, cannot capture everything especially when change is constant and businesses are complex. One way to do this better is to separate one-time components from persistent earnings. These subtotals may also better measure the effects of persistent and one time outcomes if they are each separately measured using a single measurement attribute. Adding fair value and allocated historical cost measures and including them in one subtotal creates challenges for what the subtotal means."

So far, however, there is little evidence that classifying line items by persistence has become a major driving force in official standard setting theory or practice.

### *3.3 Rank ordering empirical proxies of earnings quality*

To get a sense for how preparers view academic operationalizations of earnings quality, we ask CFOs to rank the importance of commonly-used proxies. As reported in Table 4, the top choice is that high quality earnings reflect consistent reporting choices over time (94% agree) followed by avoiding long term estimates as much as possible (86.4%).<sup>10</sup> These items have intuitive appeal and are consistent with the preference for persistent and repeatable earnings registered above: changing accounting choices introduce irrelevant accounting noise and long-term estimates introduce substantial estimation errors in the stream of operating earnings. Given their overwhelming popularity with CFOs, there seem to be opportunities for future research to operationalize these measures. One caveat, however, is that there could be formidable obstacles in implementation. For example, an interviewed CFO suggests that consistency entails not so much obvious and visible accounting choices like FIFO vs. LIFO but more subtle ones such as deciding whether to designate earnings abroad as “permanently reinvested” (which affects tax expense, see Graham, Hanlon, and Shevlin 2011 for discussion of effects) or whether to classify an asset as “available-for-sale.” For long-term estimates, an oil-and-gas CFO cites the case of long-term energy contracts for which they are required to follow mark-to-market accounting but had to rely on forward curves 20-30 years out to value these contracts although the market for electricity is not very liquid and hence less reliable for such durations.

High quality earnings are also tied to (i) earnings that are sustainable (80.5%); (ii) earnings that predict future earnings (78.6%) or future cash flows (75.7%); (iii) accruals that are eventually realized as cash flows (75.7%); (iv) earnings that do not include one-time items (71.4%); and (v) earnings that require fewer explanations in company communications (69.2%). It is easy to see that these answers are

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<sup>10</sup> The interviewed CFOs also affirmed the importance of consistency: “Well, if the accounting policies and principles are not being consistently applied, that’s a huge red flag, and there better be a doggone good reason that something changed.”



largely consistent with the qualitative responses above, affirming the importance of sustainability and mapping into cash flows.<sup>11</sup> These themes are for the most part well-represented in the literature, including Penman and Zhang (2002), Schipper and Vincent (2003), and Melumad and Nissim (2009). The importance of these characteristics is also confirmed in the interviews. For example, in conveying the significance of accruals realized as cash flows, one CFO points out “unless the firm is in a huge growth phase, I expect a significant discount in the firm’s stock price if the gap between earnings and cash flows is persistently high, because ultimately if the cash is not being generated, then the earnings are artificial or are not a good indicator of value creation.” On one-time items, a CFO comments that as long as the item is truly only a one-time event, it may not catch up with the company. However, persistent abusers or cases where the truth is stretched too often get questioned and lose credibility.

Several CFOs underscore the importance of disclosure to clarify the nature of these one time or non-recurring items. One CFO cites the example of a FIN 48 reversal which he said he would disclose, talk about, and work through the item transparently so that the investor can then attempt to go back and determine a consistent earnings stream. On fewer explanations, a CFO opines that “high-quality earnings are earnings that you don’t have to go back in and do a lot of adjustments and clarify what those adjustments mean.” Several CFOs complain that over time GAAP has changed in so many ways that it creates earnings volatility that now requires them to spend a lot more time with investors trying to (i) explain what causes an infrequent gain or an infrequent loss; and (ii) undo FASB-imposed one-time items so that they can better appreciate the core earnings number for the firm; or alternatively, provide the investor with realistic earnings in terms of what they can expect on a normalized go-forward basis.

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<sup>11</sup> An exploratory factor analysis of these responses (with varimax rotation) is consistent with these statements. In particular, when the eigenvalue of the factors was restricted to one, we found four factors that explained 56.8% of the data. The “sustainability factor” had the following loadings: 0.76 and 0.71 on earnings that predict future cash flows and earnings respectively, 0.56 on sustainable earnings and 0.37 on avoiding long term estimates as much as possible. The “transitory earnings” factor reported the following loadings: 0.68 on avoid one-time items, 0.68 on fewer explanations and 0.64 on fewer accruals. The “conservative earnings” factor reported the following loadings: 0.77 on timelier loss recognition, 0.71 on conservative recognition of assets and liabilities and 0.61 on earnings less volatile than cash flows. The “consistency factor” reported loadings of 0.77 on consistent reporting choices and 0.78 on accruals realized as cash flows.

Additional characteristics that garner (near) majority support include unconditional conservatism and conditional conservatism (59.3% and 49.7% respectively), with interview answers adding interesting texture and some surprising twists. One CFO emphasizes the traditional understanding of conservatism as a shield against uncertainty “conservative accounting is the way to go because you have less of a worry when the market turns against you. You are better insulated against the unknown.” Another CFO points out that “conservative accounting” is a relative and contextual term, and can actually morph into aggressive accounting under certain circumstances, e.g., by setting up cookie jar reserves especially because auditors do not look as closely at under-statement of earnings and assets relative to over-statements.<sup>12</sup> While potential abuse of conservative accounting has been recognized in the literature (e.g., DeAngelo, DeAngelo and Skinner, 1994 and Francis, Hanna, and Vincent, 1996), a less appreciated point that came up in the interviews is CFO’s fear of under-valuation of the firm’s stock: “in the absence of enough disclosure about conservative accounting, investors will undervalue our company as they cannot distinguish poor earnings from conservative earnings.” Finally, one CFO challenges the traditional notion that the FASB’s accounting rules are nearly always conservative. He gives an example of FASB’s interpretation of FAS 5 as applied to the banking industry. “Up until 1996, banks as an industry would reserve for the inherent losses that were built into their loan portfolios. In 1996, FASB took a strong stand ruling that banks can only reserve when losses have actually occurred, not when they are embedded in the loan portfolio. A bank’s portfolio of assets and liabilities is essentially made up of financial instruments, and some of those financial instruments have inherent losses built into them. Hence, failing to recognize these losses in a timely manner was partly responsible for lax lending practices during the mortgage boom. If not for the FASB’s position, banks would have been forced to start reserving for bad loans once they started putting them on their books.”

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<sup>12</sup> He narrates an incident at a major money center bank, “which had taken down the loan loss expense 70% year-over-year in their second quarter of 2010, even though their loan loss experience had actually only improved marginally. During the downturn this bank had taken the opportunity to set up a substantial amount of reserves, and now that they feel the credit quality issue is behind them, they’re going to try to reap the benefits of it.”

Characteristics not viewed as particularly important by survey respondents include earnings that are smoother than cash flows (40.2%) and earnings with fewer accruals (20.8%).<sup>13</sup> The low ranking of earnings with fewer accruals is especially surprising given (i) the voluminous literature on “the accrual effect,” starting with Sloan (1996), where higher level of accruals is a strong signal of deteriorating future earnings and poor stock returns; and (ii) that fewer abnormal accruals is one of the standard measures in the literature to measure poor quality earnings (e.g., Jones 1991, Kothari, Leone and Wasley 2005). The low rating for “smooth earnings” reflects CFOs distrust of this measure, and seems to mirror the corresponding conflicting impressions from the research literature. Some academic sources point to smoothness (or absence of volatility) as a desirable quality of earnings because (i) it indicates the natural stability of operations; (ii) smooth earnings eliminate timing and mismatching problems in the underlying cash flows; and (iii) benevolent managers iron out transitory components of earnings (e.g., Dechow 1994, Subramanyam 1996, Tucker and Zarowin 2006, and Dichev and Tang 2008). Other studies, especially in the international context, impart the opposite interpretation, emphasizing the opportunistic and misleading “over-smoothing” of earnings with respect to the underlying cash flows or economic events (Leuz, Nanda and Wysocki 2003). We attempt to disentangle these effects by asking about the smoothness of earnings compared to cash flows. The resulting low rating for smoothness, however, does not provide a clear answer in one direction or the other, with respondents who agree (40.2%) only marginally higher than those who are neutral (31.4%) or disagree (28.4%).

Some interviews highlight the importance of balance sheet quality in affecting earnings quality – a point that has not been emphasized much in the academic literature (Barton and Simko 2002 is a prominent exception). One CFO of a financial institution, quoting Jamie Dimon of J.P. Morgan, looks for what he calls “a fortress balance sheet.” He goes on “to me, the quality of your earnings is directly

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<sup>13</sup> Dechow, Ge and Schrand (2010) suggest that there is no one uniformly accepted proxy for earnings quality for all decision contexts such as valuation and stewardship. To examine this issue, we considered the answers of 138 participants of public firms that ranked the use of earnings in debt contracts as a “4” or a “5” in the previous survey question and compared that to participants who ranked earnings use for valuation as a “4” or a “5.” We focus on debt contracting because it is among the more commonly discussed stewardship functions of earnings. We find that these participants rank the same three ideas (consistent reporting choices, long term estimates and sustainable earnings), regardless of whether they picked valuation or debt contracting as the dominant use of earnings.

related to the quality of assumptions underlying the estimates on the balance sheet. Even cash can be a problem if not properly audited, as found in the Italian company, Parmalat.”<sup>14</sup> Illustrating his point in the context of a financial institution, he points out “in securitization, we know that several of these claims are not traded and banks use their own models to value the residual interest retained by the bank. One can look at what percentage of the balance sheet is made up of high risk residuals. The FDIC thinks that if more than 25% of equity is composed of high risk residuals, then that bank is risky. That would reduce the quality of earnings down the line because they are taking too much risk and that will come back to haunt them later.”

Overall, the results in this section converge to a fairly clear and consistent concept of earnings quality. CFOs believe that, above all, quality earnings are sustainable and are backed by actual cash flows. While the academic literature has certainly explored these earnings quality characteristics, they have not had the effect of a dominant organizing force, concentrating research efforts in a well-defined direction. For example, we believe that the importance of earnings sustainability suggests research opportunities in identifying the factors that affect sustainability and the long-term prediction of earnings.

#### **4.0 Determinants of earnings quality**

##### *4.1 Innate and discretionary determinants of earnings quality*

Two types of factors are commonly linked to earnings quality in the literature. One is related to innate and exogenous factors like industry membership and economy-wide forces, and there is little that business and other stakeholders can do except understand and acknowledge them. For example, the rise in R&D-type activities suggests an increase in earnings volatility because R&D and related outcomes are inherently volatile and hard to predict (Kothari, Laguerre, and Leone 2002). In contrast, there are a whole host of controllable factors that can influence the quality of earnings, starting with the internal workings of the firm and extending to various voluntary and imposed mechanisms at the industry and societal level.

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<sup>14</sup> The Parmalat scandal, unearthed in 2004, refers to a fake letter purportedly from Bank of America, in which the bank confirmed that Bonlat, a Parmalat subsidiary based in the Cayman Islands, had deposits of close to €4 billion (\$5.5 billion) with the bank.

Dechow et al. (2010) review much archival research on the determinants of earnings quality but empirical work has been unable to rank the importance of these determinants.

The survey evidence in Table 5 indicates that by far the most important factor affecting earnings quality, in the eyes of CFOs, is the firm's business model (74% thought that its influence was high, a choice of 4 or 5 on a scale from 1 to 5) followed by accounting standards (60.4%). The other three determinants that pass the threshold of majority opinion are the company's industry (56.8%), macro-economic conditions (55%) and the firm's internal controls (50%). The board of directors (48%), reporting choices (43.2%) and the operating cycle (40.2%) are also thought to influence earnings quality, though to a lesser extent.

When compared to the extensive literature on the determinants of earning quality summarized by Dechow et al. (2010), the survey evidence has the following implications. First, although the literature has considered industry membership, size, risk, performance, growth, investment and leverage as determinants, we cannot find many instances where factors identified in our paper such as macro-economic conditions, variation in the firm's business model, and the specific accounting standards affecting the company are explicitly modeled as factors affecting earnings quality.<sup>15</sup> Furthermore, the role of corporate culture in affecting earnings quality seems important, but perhaps difficult to quantify for empirical study. One interviewed CFO thought that the key determinants of earnings quality are "good management culture, a well-staffed internal accounting function, and an audit group that knows what it is doing." Most interviewed CFOs thought that it was their job to produce high quality earnings. One CFO elaborated on the close interaction between the business model and earnings quality: "the majority of the responsibility, or at least the communication, the presentation of high quality earnings, is the CFO's. And then ultimately, behind that, is the operational generation of those earnings, which is the business model, which would be more the CEO and COO. It's hard to have one without the other, but I think they are two distinct issues. One: is the business inherently high quality, in the way the business

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<sup>15</sup> One CFO thought that the way the accounting standards are implemented, more than the standards themselves is important: "it's really what you make of those standards more than the standards themselves keeping you from having high quality earnings."

model converts revenue to cash and earnings? And the other: is the accounting doing the best job it can around clarity, communication, transparency, predictability and visibility?”

Second, although there is mixed evidence in the literature on the impact of board composition on earnings quality (Beasley 1996; Klein 2002, Vafeas 2005, Farber 2005 versus Larcker et al. 2007), CFOs believe that boards affect earnings quality (48% say high influence) but the role of the audit committee, in particular, is smaller than the one discussed in the literature (40.2% say high influence versus 33.1% say not influenced). When asked about the relatively lower rank that audit committees receive in our survey results, a CFO suggested that “the audit committee sets the general tone. I think you can fool them, but what the audit committee is essentially going to ask is whether the CEO and controller are basically honest people who are going to report faithfully. They can ask some intelligent questions and my guess is that a well-functioning audit committee is going to keep the big collapse from happening. But I don't think they can do much about small variations in earnings quality.”

Third, internal controls significantly affect earnings quality, consistent with the research on SOX 404 opinions (e.g., Doyle et al. 2007, Ashbaugh-Skaife et al. 2008). However, our evidence suggests that the strength of internal controls deserves to be included as a routine determinant of earnings quality, not just in the context of SOX 404. One CFO emphasized the importance of quality of the internal accounting group: “you need experienced people who have been through a few recessions so that they know that bad things do happen to good people. You want solid technicians so that you have control but then you also want people who have a good worldview on what can happen so that when they are asked a question about the accounting treatment, they take into account the fact that the future is uncertain. All these little individual decisions add up and go on to determine the quality of earnings and the balance sheet.”

Finally, although there is an extensive literature on the role of audit firms, their size, their audit and non-audit fees, and auditor effort on earnings quality (see Dechow et al. 2010 for a summary), CFOs believe that the impact of external auditors on earnings quality is somewhat limited (37.9% say high

influence versus 29.6% say not influenced). One explanation for this finding could be that the role of the external auditor is contextual. For instance, one CFO suggests that a well-functioning management team and a good external auditor are complements not substitutes: “if I’m Enron and my aim is to corrupt the whole process from the start, I could move Anderson around and make them do whatever I wanted. But in the context of a very well-run board and organization, Anderson to us was a pretty useful tool in explaining what our choices were and how much risk I was taking with the IRS and trial lawyers by adopting a new accounting treatment for a transaction.”

Turning to select conditional averages, as expected, private firms believe that external monitoring matters less to earnings quality as found in the lower ratings on the following factors: (i) accounting standards (60.4% for public versus 40% for private); and (ii) external auditor (37.9% for public v/s 28.8% for private). Consistent with the formal governance structure of private firms being worse than that of public firms, private CFOs rank the importance of the following determinants to be much smaller: (i) internal controls (50% for public v/s 37.7% for private); (ii) board of directors (47.9% for public v/s 38.7% for private); and (iii) audit committee (40.2% for public v/s 16.1% for private). These statistics are consistent with research that private firms potentially manage earnings more than public firms, as found in Burgstahler et al. (2006) and in Ball and Shivakumar (2005). Finally, CFOs with a public accounting background rank the contribution of the audit committee to earnings quality to be more important relative to other CFOs (untabulated).

#### *4.2 How much of earnings quality is innate?*

Dechow et al. (2010) repeatedly emphasize that a common yet unobservable driver of all earnings quality proxies is the firm’s fundamental earnings process. Thus a related question, that is perhaps unanswerable via archival research, is the extent to which earnings quality is innate versus the portion that is discretionary or controllable by the manager. To get a sense for this proportion, we ask CFOs on a scale of 0 (no influence of innate factors) to 100 (earnings completely determined by innate factors), “to what extent do innate factors influence earnings quality at your company? (where innate factors refer to

factors beyond managerial control such as your industry or macro-economic conditions).” The mean and median answer to this question is 50% in Table 6. Thus, it appears that about half of earnings quality is beyond the immediate control of the manager.

The finding that the median contribution of innate factors to earnings quality is 50% suggests that researchers omit potentially important variables from the standard models used to parse out earnings (especially accruals) into innate and discretionary components. In particular,  $R^2$  from one of the most expansive versions of the modified Jones model, proposed by Dechow, Richardson and Tuna (2003) only approaches 20% in a pooled cross-sectional setting. The Dechow and Dichev (2002) model is better at capturing innate factors as their  $R^2$ s reach 30% at the pooled level, after adjusting for change in sales and property plant and equipment (McNichols 2002).

## **5.0 The impact of standard setting on earnings quality**

As indicated in Table 5, accounting standards are the highest-rated of the discretionary factors that affect earnings quality, and so it is important to have a better understanding of their role. This section explores the role of standard setters in greater depth.

### *5.1 The extent of reporting discretion*

Understanding CFOs’ views on the extent of reporting discretion is timely and important because a main stated objective of the FASB’s work on principles-based standard setting is to reduce the diversity in accounting practice.<sup>16</sup> We begin with the following survey question: “How much discretion in financial reporting does the current accounting standard-setting regime in the United States allow?”, asking CFOs to pick a point along the continuum anchored by -10 for “too little discretion,” 0 for “about right” and 10 for “too much discretion.” The mean and median answers are close to -1 in Table 7a, and the standard deviation is large at 3.74. In terms of percentages, 50.3% of CFOs believe they have too little discretion while 29% report that they have too much discretion. Thus, the CFOs consensus is that the extent of reporting discretion is slightly less than the “right” level but there is a great dispersion in

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<sup>16</sup> [http://www.fasb.org/project/principles-based\\_approach.shtml](http://www.fasb.org/project/principles-based_approach.shtml)



opinions. As might be expected, public firms feel there is less discretion relative to private firms (-0.78 vs. 1.12). CFOs of firms with greater sales growth, executives with greater incentive-based pay and firms with low foreign sales (untabulated) feel they have less reporting discretion relative to their counterparts.

To understand trends in the extent of reporting discretion, we ask “relative to 20 years ago, indicate the extent to which you believe companies have more or less discretion in financial reporting” on a scale of -10 to 10, where -10 means severe reduction in discretion. Survey evidence likely has distinct advantages in addressing this issue because questions related to the curtailment of reporting discretion are hard to isolate with archival data because of the pervasive entanglement of economic and accounting changes through time (e.g., Donelson, Jennings, and McInnis 2011). In Table 7b, the mean (median) answer is -4.22 (-5), where 81% of CFOs believe that the level of discretion today is lower than it used to be, suggesting that reporting discretion has been substantially curtailed over time. The theme of reduced reporting discretion over time was strongly confirmed in our interviews, where virtually all CFOs agreed that they have far less discretion in financial reporting relative to when they started their careers. In addition, public firms were much more likely to report reduced discretion than private firms.

As a final question about discretion and the possible limitations of mandated standards, we ask “to what extent have you found that written accounting standards limit you in your ability to report high quality earnings?” Answers are recorded on a scale of 0 for “not at all limited” to 100 for “very limited,” where note that “0” means no constraints. The mean (median) answer to this question is 35.57 (31) in Table 7c, suggesting that most CFOs feel moderately constrained by codified GAAP in their ability to report better quality earnings. There is not much cross-sectional variation in this response. Summing up, CFOs feel that today they have considerably less reporting discretion as compared to a generation ago. There is more ambiguity about the level of discretion today but, on balance, executives feel that the present set of standards somewhat constrains their ability to report high quality earnings.

## *5.2 What kind of accounting produces quality earnings?*

A long-standing controversy is whether accounting should follow an income statement or a balance sheet orientation. The income statement orientation views the firm as an ongoing stream of operating bets designed to bring in revenues and earnings, and equity value is derived from this ongoing stream of earnings. This perspective views earnings as mostly the result of revenues minus properly matched expenses, and the quality of earnings critically depends on the quality of matching. The income statement perspective was historically prominent until the early 1980s (Paton and Littleton 1940), and still has strong support, especially in the investment community.

In contrast, the balance sheet orientation views the firm as a collection of assets and liabilities, and the operations of the company as a continuous and dynamic creation and destruction of these resources. Equity value is simply the difference between properly determined assets and liabilities and earnings for a given period represent the change in net assets. Thus, this perspective is primarily interested in the valuation of assets and liabilities, and quality earnings can be thought of as the result of the quality valuation of net assets. The logic of the balance sheet perspective is especially clear for financial assets, and since market-based prices often provide a clear value benchmark for such assets, there has been an increasing push for “fair value” accounting. Driven by conceptual considerations, accounting standard setters have been the biggest proponents of the balance sheet model and fair value accounting, and through their influence, these features dominate recent accounting rules (Storey and Storey 1998).

The history and substance of these two perspectives is, however, too long and arcane to address in survey questions to financial executives, so we take a two-pronged approach. First, we ask respondents about a list of features, attributes and comparisons that are valuable in their own right but can be also used to infer underlying opinions about the theoretical constructs discussed above. Second, we directly ask what can be done to improve accounting.

### *5.3 Specific policies that affect earnings quality*

We ask CFOs to rate the extent to which they agree with the statements listed in Table 8 about accounting policies that are likely to produce “high quality earnings.” The most popular answer by far endorses the matching of expenses with revenues (92.2% of respondents agree) followed by conservative accounting principles (75.4%).<sup>17</sup> In the words of one interviewed CFO “I’m a huge proponent of matching because I believe the highest quality of earnings occur when we match costs to generate that revenue.” Another CFO states “I think the matching of revenue and earnings streams is probably the most important thing on the income statement. If you have balance sheet adjustments that you need to make, they should be called out separately, below operating earnings.” A third CFO: “From my standpoint, the FASB has lost the concept of matching and driven a substantial amount of volatility within earnings, and in many cases unnecessarily so.” In contrast, standard setters believe that “the idea that matching is important is somewhat misleading. Historical cost accounting necessarily involves allocating costs or benefits over some accounting period. However, we never do matching right. Most firms use straight-line depreciation. How can that reflect good matching?”

Respondents also agree that reducing long term projections and revaluations (65.3%) would lead to accounting policies that produce high quality earnings, echoing the importance of this item registered earlier in Table 4. There was a statistical tie between those who agreed and disagreed that earnings quality results from policies that rely on fair value accounting as much as possible (38.1% v/s 39.9%) or for policies that reduce earnings volatility (41.3% v/s 35.3%). Support for pure historical cost-based policies is also limited (40.7%), perhaps pointing to preference for the currently used hybrid model of accounting. There is relatively more solid support for using fair value only for financial assets and liabilities, as opposed to operating assets and liabilities (53.6%).

Several interviewed CFOs felt that fair value accounting has its place but it should be used mostly for financial instruments, and mostly for disclosure rather than “running fair-value changes through

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<sup>17</sup> 82.03% of respondents who rated “conservative accounting” (both unconditional and conditional) highly in Table 4 as an attribute of high quality earnings also support the idea that the FASB should promulgate conservative accounting policies.

earnings.” The following CFO comment is typical: “the balance sheet has become the big obsession, and a lot of that is because of the financial industries. I think fair value accounting is a great snapshot if there are doubts about the going concern assumption of a business. But in a continuing, stable environment, traditional accounting based on historical cost accounting for the assets and balance sheet works pretty well. I do worry that we’re starting to create much more volatility on balance sheets, as various assets get fair valued, whether that’s pension liabilities or financial assets. My concern is that so much energy directed at the balance sheet is going to be hard for markets to digest. It may be that the FASB is overreaching a bit trying to solve problems in all industries with something that’s most important for financial companies.” Similar comments include: (i) “fair value accounting creates a level of volatility and change, even though nothing in the business seems to have changed. That is the new frontier of confusion;” (ii) “in my opinion fair value accounting should be limited to banks and companies that have a lot of financial assets.” Some CFOs were unhappy with hybrid accounting that combines historical costs and fair value, especially for banks: “What I think is not good is to do it piecemeal. Banks’ assets and liabilities are essentially all financial instruments of some sort. So I would have no problem in valuing the balance sheet in its entirety on some regular basis.” Several CFOs complained about the cottage industry of valuation experts involved in fair value calculations: “on our balance sheet, we’ve got an intangible asset for a non-compete covenant, customer lists, and trademarks. To value these assets, we end up using assumptions that are recycled from one valuation to another by valuation experts.”

The key message in this section is the overwhelming popularity of the matching principle and conservative accounting and the tepid support for fair value accounting.<sup>18</sup> These views run almost diametrically opposed to FASB’s official position against matching and conservative accounting, and in favor of fair value accounting (e.g., Johnson 2005 and Barth 2006). This is perhaps our clearest and strongest finding of sharp dissonance between the views of standard setters and the most important

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<sup>18</sup>To verify whether CFOs from financial industries prefer fair value accounting relative to those from other industries, we compared the percentage of CFOs from financial firms who ranked fair value accounting as a “4” or a “5” relative to those from other industries. We find no evidence that financial industry firms like fair value accounting any better than nonfinancial firms.

producers of financial reports. In the literature, there are a number of studies on conservatism and the problems of fair value accounting (Watts 2003a/b, Kothari et al. 2010 and Christensen and Nikolaev 2009) but the sparse research efforts on matching seem way short of CFOs' enthusiasm for this topic.<sup>19</sup>

#### *5.4 How can earnings quality be improved?*

Continuing with the theme of improving earnings quality, we ask CFOs: “would the following changes in standard-setting produce higher quality earnings?” The 12 alternatives listed in Table 9 are wide-ranging in scope including fewer rules, convergence between U.S. GAAP and IFRS, and more organic ground-up rule making. The most popular policy change that CFOs would like is for the standard setters to issue fewer new rules (65.7% agree). To make sure respondents are not influenced by the way the question is asked, we also have an explicit alternate choice “issue more rules,” and since it gathered only 7.2% support and finished last, the same basic message is confirmed. Several interviewed CFOs complained about (i) “new rules fatigue” or the difficulty they experience in keeping up with the standards; and (ii) explaining the changes in reported earnings created by these ever-changing standards to investors. In the words of one CFO: “there is an effort on the part of the FASB to try to figure out how to make the financial statements so absolutely economically precise, that (FASB has) lost sight of the real purpose. They worked fine previously, where is the need for this rule?” A CFO laments: “investors cannot understand the complexity of the new accounting rules, so in many cases they look for the companies to educate them so they can better understand it and better explain it. Routinely, we'll have one of our Wall Street analysts who cover us send me an email request from an investor who doesn't understand something from an accounting perspective.” Reacting to CFO comments about new rules fatigue, one standard setter counters “there are a lot of people that believe on the policy side that the pace of change in financial reporting has actually been glacial.” He agrees later about the costs: “change requires a lot of investment from the company – change systems, and training, and then explaining the

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<sup>19</sup> Exceptions that investigate the mechanism and effects of matching include Dechow (1994) and Dichev and Tang (2008).

effects of the change” but argues that these changes have been worth it if one considers the beneficial effects over long horizons.

In terms of other changes that could produce higher quality earnings, the second most popular desire among CFOs is to see convergence of U.S. GAAP and IFRS (59.9% agree). However, the literature contends that such convergence allows standard setters to pool the risk from producing poor quality standards and produces an inefficient institutional arrangement for standard setting (Kothari et al. 2010). Despite that concern, interviews confirm that convergence is a popular alternative among CFOs because it reduces the “regulatory overhang” or the uncertainty associated with which standard setting regime is likely to be eventually mandated. In contrast, there is little appetite for either an outright promulgation in favor of IFRS (25.4%) or for allowing a choice between IFRS and GAAP (29.8%), with much larger proportions of CFOs opposing these options. On the potential move to IFRS, some CFOs are wary because they view it as a costly process without much payoff: “Part of the problem is simply going through the amount of work that’s involved. So under IFRS, you can have one form of inventory valuation. We have multiple forms of inventory valuation in our company, we use the retail method and the cost method depending on where the inventory is located and the amount of work it would take to get it all onto one method is crazy and expensive and doesn’t provide any value to anybody. And it’ll be confusing to investors. So I see it just as another requirement that will perhaps drive up consulting fees. You know, every time there is a potential change, everyone’s knocking on the door, wanting to get hired to help us manage through it.” Thus, our evidence finds little practitioner support for academic calls for competition between GAAP and IFRS (e.g., Dye and Sunder 2001, Sunder 2002, Benston et al. 2006 and Kothari et al. 2010) due to implementation concerns and investor confusion.

The third most popular standard-setting change would be to allow reporting choices to evolve from practice (53.6% agree), as opposed to the FASB’s top-down approach to rule making. Almost every interviewed CFO regretted the decline of the earlier bottom-up system of developing GAAP in favor of the more prescriptive rules now: “The rules are so prescriptive that they override and supersede your

judgment, and you end up with things that don't really reflect the economic substance of the transaction, but you have to account for it in the way that's described by the rules." One CFO went so far as to say that he is asking his legal group to rewrite contracts with customers so that they better conform to revenue recognition criteria related to multiple deliverables – interesting because we usually think of GAAP reflecting actual business transactions instead of the other way around. Another CFO complained that the FASB had become too theory-driven to be effective: "They have attempted to be so definitive that by and large most investors cannot judge what is truly happening within a company. I think the FASB has lost their way, and have become much too theoretical in what they're trying to do. The best of all worlds would be the FASB would actually quit issuing opinions for a while and let everybody try to implement where we are and then get on with IFRS and then go ahead and converge it all. I think a lot of it should evolve from practice. Actually setting principles from the top and then evolving practices from the bottom would make a lot more sense." However, several CFOs agree that the litigious environment in the U.S. and regulatory fear of delegating too much discretion to business hamper any progress towards true principles-based system, e.g.: "We live in a litigious society so people would prefer to have prescriptive guidance, so they can say they followed the rules."

Standard setters largely agreed with such comments about constituents' ambivalence between rules and principles, and the role of the litigious environment: "I often hear: 'give me principles but tell me exactly what to do.' It is due to the fear of second guessing, whether it be the auditor or now the Public Company Accounting Oversight Board (PCAOB) judging the auditor, and the SEC judging the company and then there's a problem of the trial lawyers right behind them." One standard setter, however, objects to the criticism that the FASB is a top-down agency as "nonsense" because "the amount of outreach that the FASB does with all constituents and stakeholders is enormous, and that includes lots and lots of investors as well as the companies who are in the face of the FASB all day long, and the auditors and the SEC, and lots of academic research is looked at." When asked about what value the FASB adds given that we had financial reporting and accounting conventions before the advent of the

FASB, this same standard setter responded: “I think the big cost over time (of not having the FASB) would be the loss of confidence in financial reporting. For instance, the car and steel companies fought pension accounting because they said these weren’t real liabilities.” One CFO also praised the top-down system, echoing the confidence theme: “I think that it may make the investing world feel better, that it’s being governed and regulated.”

Interestingly, CFOs would like more detailed implemented guidance (47.9%) but would also like rule makers to allow more judgment in reporting (44.4%).<sup>20</sup> As explained in the interview evidence that follows, a resolution to this apparent inconsistency is that many CFOs view reporting as a compliance activity and they would rather get implementation guidance from the FASB than get into debates with their auditors. Another interpretation of this response pattern is that even principles-based systems need rules to function on a day to day basis and the choice between principles and rules based regimes boils down to who writes the rules -- standard setters or courts (Lambert 2010). Generally speaking, though, there is less agreement about the potential policy changes in Table 9 (i.e., even the top choices hit highs only in the 50% to 65% range in terms of agreement), as compared to earlier tables where the highs are often in the 80% and 90% range.

Summing up, both survey and interview evidence show strong signs of rules fatigue, where the introduction of new rules is mostly seen as costly and confusing. Note that this evidence dovetails with earlier results that CFOs view consistent reporting choices as the top characteristic of quality earnings. Thus, the need for consistency and continuity in financial reporting – both on the level of standards and in reporting choices - is one of the emphatic messages of our study.

## *5.5 Additional insights from interviews of CFOs and standard setters*

### *5.5.1 Audit firm behavior*

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<sup>20</sup> Qualitative responses to this question contain a couple of interesting recommendations. They suggest that the following standard-setting changes would increase earnings quality: (i) “policies that enable the ease of disclosure of cash and non-cash components of earnings, and disclosure of recurring and non-recurring components of earnings;” and (ii) disclosures related to the “velocity of cash moving through the cycle.”



Several CFOs mentioned that FASB's over-emphasis on rules has affected the quality of audits and auditors, in addition to its direct effect on earnings quality. In particular, "the big firms are not passing authority downstream to the regional headquarters or onto the actual auditors like they used to. And so what you lose is an aspect of training that's very significant in terms of bright new young accountants coming up through the accounting firms. Interpretation of these rules in the accounting firms comes from high above now rather than from the field." Another CFO lamented that "the junior audit staff, after a short period of time gets tired of traveling, because their discretion is being more and more limited, therefore there is a continuing outflow into the corporate world. And, they're not as well-trained as they used to be." One CFO observed that audit firms used to participate more in shaping standard setting by writing position papers but now all they do is lobby to advance their clients' positions.

An interviewed CFO complains about how the audit profession has changed due to the rules orientation of the FASB: "They now are much more into the exact wording of something and the interpretation of it versus what's logical. Earlier you could work with your local accounting firm, your local partner and accomplish things. Now, pretty much everything goes up to their think tank at national." One CFO observed that auditors have stopped exercising professional judgment relative to the earlier days and this attitude hurts reporting quality. He says "with the prescriptive accounting rules, the accounting firms feel that they're pretty much in a corner – they have to follow a strict interpretation of it, versus what is more relevant for the business at hand. I had a secondary offering I was doing in my last company. I could not get consent from the accounting firm until I resolved the one issue with the SEC. So it's a little bit of a Catch-22 where the accounting firm wants to see what the SEC's interpretation is before they'll opine on it." He goes on to explain that the motivation is litigation and fear: "major accounting firms take away their partner shares if their client has to restate their books and if the audit firm gets sued." These comments echo Sunder's (2010) position that uniform standards induce a follow-the-rule-book attitude among accountants at the expense of developing their professional judgment.

### *5.5.2 Ideal reporting model*

Beyer et al. (2010) emphasize the importance of understanding the regulator's objectives to better model the economics of capital market regulations. Hence, we asked one of the standard setters about the ideal set of accounting standards he/she would like to set without the usual political constraints to improve earnings quality. S/he responded: "I want a balance sheet perspective (referred to in section 5.2). To me the balance sheet should be something closer to a statement of financial condition. I don't think that having long outdated historical costs for things is particularly informative. ... The basic model is to try to get the balance sheet closer to current values not fair value. For operating items, let's say you have a business that combines fixed assets, intangibles, people, customers, and it generates cash flows. The value of that business is the future discounted cash flows. So, if you had my ideal model, I would try to get the balance sheet closer to something that captures expected future cash flows. But the cash flows for the current period run through the cash flow statement, and then they're adjusted by the accrual part of the adjustments. The difference we can kind of call "other comprehensive income," but, as an economist, if you start with wealth, you will have the change in wealth being income. An economist meticulously distinguishes between the two components of income, one being the flows of the period, and the other changes in stocks. And you don't mix the two because they have very different properties. The real debate to me would be how do we separate the flows from the change in stocks?"

The same standard-setter comments later on: "we know current cash flows and everybody would agree that adjusting cash by contractual accruals is probably a useful thing to do. What people don't agree about are things like depreciation of a building that's not actually depreciating. How do you want us to deal with inventory valuation? Those might be very useful discussions to have in order to really improve the overall model of reporting and the presentation. But unfortunately, most of the debate gets into, I want to just have matching – any dollar that I spend now I want to be able to capitalize it because there must be a future benefit or I wouldn't capitalize it. Then I want to amortize it. And then when the balance sheet doesn't change very much despite changing economics and technology, most people would

complain and say no, you have to start with the balance sheet, and the changes in the balance sheet ought to go through earnings.”

### *5.5.3 Reporting is a compliance activity with deadweight costs*

Several CFOs say that they are resigned to financial reporting as a compliance activity where they just do what the regulators tell them to do rather than compete and innovate via reporting practices for better access to capital. This feeling of resignation might explain the popularity of more detailed implementation guidance (47.9%) in Table 9. Typical of this perspective is the following CFO: “There are so many things that are ridiculous, but rather than saying oh this is ridiculous, we say OK. We just want to get it right.” Another CFO’s perspective: “Because at the end of the day, how should I spend my time? Do I want to spend my time working on this? Or do I want to spend my time working on strategy and driving the business? We’re not going to let the accounting wag the business here, so we’re just going to comply.” These interview comments provide some contrast with the literature on rents that firms can potentially earn by innovating in their reporting practices (e.g., Diamond and Verrecchia 1991, Botosan 1997, Healy and Palepu 2001, Beyer et al. 2010).

### *5.5.4 Potential future research*

The sharp differences between the perceptions of CFOs and standard setters about rule making raise several research questions worth pursuing. Examples include: (i) how does the FASB add economic value to its constituents, especially the corporate sector? (ii) how do topics for regulation get on FASB’s agenda?; (iii) how does the FASB assess the costs and benefits of new rules and standards before promulgating them; (iv) how does it test the ex-post success of an already established rule?; (v) does eliminating diversity of reporting choices improve the quality of financial reporting, as presumed by several actions of the FASB; (vi) can competition between standard setters add value?; (vii) does the FASB appease influential stakeholders such as Congress and the SEC to stay in business?; (viii) how responsive is the FASB to constituents’ feedback, including comment letters?; (ix) when and why did the

FASB tilt in favor of the balance sheet perspective and rules-based standards?; and (x) what would an alternative standard-setting regime, if any, look like?

## **6.0 Misrepresenting Earnings**

The extant literature provides mixed conclusions on the motivations and consequences of earnings management. For instance, Becker et al. (1998) argue that opportunism drives earnings management but Christie and Zimmerman (1994) and Bowen et al. (2008) suggest that accounting choice is primarily motivated by efficient contracting considerations. Bowen et al. (2008) highlight the difficulty of ascertaining whether accounting choices are motivated by opportunism or efficient contracting using archival data because what appears to be opportunistic, *prima facie*, may merely reflect the impact of omitted factors related to efficient contracting. To overcome these limitations of archival work, we ask questions along three dimensions: (i) how common is earnings management to misrepresent economic performance? (ii) why do CFOs manage earnings?; and (iii) how can academics and other outsiders detect earnings management from public data?

### *6.1 How common is earnings management?*

There is little specific evidence on the magnitude and frequency of earnings management, e.g., Healy and Wahlen (1999). We focus on three aspects of this issue: (i) the proportion of firms in the economy that manage earnings; (ii) the magnitude of the earnings management; and (iii) the extent to which earnings management increases income versus decreases income. Note that in phrasing these questions, we opt for a narrow but clear definition of earnings management. Specifically, we clarify that our notion of earnings management is strictly within the realm of GAAP and does not involve fraud. In addition, we focus on earnings management that misrepresents economic performance. As discussed in much of the extant literature, there are also broader notions of earnings management that include financial reporting discretion that communicates private information. Thus, the answers to our questions can be thought of as a lower bound on actual earnings management encountered in practice.

As a further precaution, we also avoid asking CFOs about earnings management at their own firm. Even though the survey is anonymous, there is an obvious risk that managers would be reluctant to tell us about their own earnings misrepresentations.<sup>21</sup> To avoid this danger, the precise wording of the first question is: “From your impressions of companies in general, in any given year, what percentage of companies use discretion within GAAP to report earnings which misrepresent the economic performance of the business?\_\_%.” As shown in Table 10, the mean answer to this question is 18.43% among public firms with a standard deviation of about 17%. Thus, it appears that roughly 20% of the firms in the economy manage earnings in any given period. Moreover, 99.4% of CFOs feel that at least some earnings management of the opportunistic kind happens. Hence, there is near-unanimity that at least some earnings management occurs but there is considerable dispersion in beliefs about the magnitude. Interestingly, CFOs of private firms seem to believe that the prevalence of opportunistic management is much higher relative to the estimates of their public counterparts (30.37% vs. 18.43%), consistent with findings that private firms manage earnings more (Burgstahler et al. 2006 and Ball and Shivakumar 2005). There is only modest cross-sectional variation in this response across other dimensions (un-tabulated).

To get a sense for the extent to which EPS is managed, we ask “For this question, consider only companies that use discretion within GAAP to misrepresent economic performance. Among these firms, assume that earnings per share is \$1 per share. Of this, how many cents per share is typically misrepresented?” The mean response is 9.85 cents (see Table 11), with a standard deviation of 8.81 cents. Thus, for firms that manage earnings, approximately 10% of the earnings number is managed. Note that this estimate is considerably lower than estimates from most existing earnings management models, e.g., the most widely used Jones model and its various modifications typically produce  $R^2$  of

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<sup>21</sup> Barton (1958, p. 67), cited in Sudman and Bradburn (1983, p. 55), characterizes this strategy of asking threatening questions about behavior as the “other people” approach. The other people approach of course relies on the CFO being familiar with other companies’ opportunistic earnings management practices. This seems reasonable since CFOs likely share the same formal and informal business networks including membership of industry associations, alumni clubs, CFO forums, etc.

around 10-20% which implies that fully 80-90% of the variation on total accruals is due to earnings management. Turning to the (un-tabulated) cross-sectional variation, the following categories of CFOs believe that the dollar magnitude of earnings management is higher than the mean response: (i) fast growing firms; (ii) firms whose earnings are more volatile than those of their peers; and (iii) firms with a higher exposure to lawsuits. Similar to the answer in the previous question, private CFOs believe that a greater magnitude of EPS is managed, relative to public CFOs (12.35 cents vs. 9.85 cents).<sup>22</sup>

Consistent with the survey evidence, one interviewed CFO opined “I would say on average 10-15% of earnings are managed through various accruals, reserves, fair value assumptions.” Another shares the following comment about the magnitude and process of earnings management: “we were going to get a \$1.50 EPS number and you could report anywhere from a \$1.45 to a \$1.55, and so you sit around and have the discussion saying well, where do we want the number to be within that range? We talk about estimates: do we recognize this in this quarter? Is there some liability that can be triggered that hasn't been triggered yet or has it really been triggered yet? Do we really have enough information to write this down? All of those kind of things but mainly involving some sort of estimate and also a question of something where we had discretion of the time period in which we recognized the gain or the loss.”

Finally, we investigate the extent to which such earnings management is income-increasing vs. income-decreasing. The extant literature tends to emphasize income-increasing earnings management (e.g., Sweeney 1994; auditors' emphasis on income-increasing accruals as seen in Elliott, Nelson and Tarpley 2002) but it is also clear that cookie-jar reserving for example involves both decreasing and increasing earnings, so it is useful to have some more systematic evidence about this issue. In particular, the survey question reads “within a given year and among the companies that misrepresent performance, indicate the percentage of firms that misrepresent by increasing earnings (vs. those that misrepresent by reducing earnings). The mean (median) answer to this question, as reported in Table 12, is 58.8% (67%). Thus, it appears that the majority of firms misrepresent by increasing income but a significant portion

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<sup>22</sup> This list has the most value if we (at least implicitly) assume that firms rate their peers. For example, fast growing CFOs say their peers manage earnings, so this means fast growing firms manage earnings.

manages earnings down. In interpreting this finding, however, one should keep in mind that at least to some extent it likely reflects the inter-temporal settling up of accruals implying that managing up and managing down are really two sides of the same coin (e.g., see Dechow et al. 2012 for a recent application of this idea).

## *6.2 Why manage earnings?*

Extant archival evidence is often conflicted on what motivates firms to manage earnings. For instance, Burns and Kedia (2006) and Efendi et al. (2007) conclude that incentive compensation drives earnings management but Armstrong et al. (2010) dispute this conclusion. Klein (2002) argues that better governance mitigates earnings management but Larcker et al. (2007) disagree. To get a better sense of why CFOs misuse their reporting discretion, we ask the following survey question: “From your observations of companies in general, please rate the extent to which companies use reporting discretion within GAAP to report earnings which misrepresent their economic performance to achieve the following goals.” The most popular answers in Table 13 are the desire to influence stock price (93.5% agree), outside pressure to hit earnings benchmarks (92.9%) and inside pressure to do the same (91%). In terms of “outside pressure,” most interviewed CFOs believe that there is unrelenting pressure from Wall Street to avoid surprises. As one CFO put it, “you will always be penalized if there is any kind of surprise.” As a result, “there is always a tradeoff. Even though accounting tries to be a science, there are a hundred small decisions that can have some minor impact at least on short-term results. So that is a natural tension, and one that, depending on the company, the culture, and the volatility of the company, can be either a source of extreme pressure or a minor issue.” The importance of stock price and outside pressure is consistent with a long stream of literature documenting earnings management around specific financing events such as IPOs, SEOs, stock buybacks, etc. (e.g., Teoh et al., 1998a and b, and Erickson and Wang 1999). The role of pressure from inside the firm is just beginning to be explored (e.g., Oberholzer-Gee and Wulf 2012).

The next most popular survey answers relate to executives' career concerns: 88.6% say that executive compensation leads to earnings management, and similarly 80.4% believe that senior managers fear adverse career consequences and hence misrepresent earnings. Thus, this evidence is consistent with the conclusions of Burns and Kedia (2006) and Efendi et al. (2007). In the interviews, we heard an interesting explanation for the continued importance of earnings for compensation "over the last five years, compensation consultants have shifted many companies toward using a GAAP-based earnings hurdle for their stock compensation. So there is usually some sort of earnings threshold to achieve either for their stock option vesting or for their restricted share vesting. Due to IRC Section 162(m) considerations, they tie such stock compensation to a performance metric. I think earnings management is still done, and in many cases it is for executive compensation." This comment is intriguing because the existing literature has mostly explored the link between bonuses and earnings targets (Healy 1985). To our knowledge there is little work that directly explores the potentially more important link between stock-based compensation and earnings targets.

Our analysis also indicates that pressure to report smooth earnings is an important (69.1%) driver of earnings management, consistent with the survey evidence reported in Graham et al. (2005), and the motivation to avoid debt covenant violations shows up as even more important (72.5%). It is also interesting to note that 60.1% of executives feel that managers manage earnings because they believe such misrepresentation will go undetected. This finding might solve one of the puzzles posed by Dechow et al. (2010) who wonder why managers do not appear to trade-off the short-term benefits of opportunistic accounting choices with the potential long-term reputation loss stemming from these earnings management decisions. Note also that the motivations to avoid violation of debt covenants and influence non-capital stakeholders show much stronger for private firms, consistent with lower dependence on capital markets and more emphasis on (explicit and implicit) contractual considerations.

Turning to further interview evidence, one CFO said that the chances that an analyst would spot an occasional instance of earnings management are low, and only persistent abusers have a high chance of



being detected. In his own words “we have some three-year compensation plans involving restricted stock, and they’re paid when managers achieve certain targets based on accounting numbers, and each quarter you have to make an estimate as to do you believe the company is going to actually hit these targets one, two, and three years out. And depending on a judgment call, you will start adjusting that accrual either up or down. Last year, we had some wild swings at our company, and in the third quarter of last year it looked like we were not going to make the targets, and we reversed the accrual. The reversal was a penny a share and increased income. Now let’s stop for a minute and say, I did that appropriately – but how would (an outsider) know (what we had done)? They probably wouldn’t because it’s buried in general and administrative expense but it’s not big enough on our income statement in one quarter to stick out. But it’s enough to change the EPS number that Wall Street analysts are looking at.”

Another CFO points out “I think when people are dishonest it is very hard for an analyst with just public information to tell, at least in the short-term. Eventually absence of cash flows always catches up with you. By doing comparisons and some detective work, an analyst can start to smell that something is not right, but unless it’s very egregious behavior, it usually takes a long time before they can have a conclusive argument that earnings are managed.” When pressed further to speculate how long such earnings management could carry on, he responded: “It would depend a lot on the industry. I think it would be very difficult for anyone to do this for any longer than five years, anywhere between two and three years should be possible, depending on the industry.” Several CFOs felt that sell-side analysts are not particularly good at detecting earnings management but the buy side, the bond market, and the shorts do a better job. This interview evidence speaks to questions raised by Dechow et al. (2010) on whether the equity market, in general, and analysts in particular can unravel earnings management in a timely and effective manner.

Summarizing, the evidence in this section indicates that earnings management is driven by a host of factors but capital market motivations and career and compensation concerns dominate. Earnings

management is often accomplished via invisible and subtle accounting choices, so outsiders have a hard time identifying it, at least over comparatively short horizons.<sup>23</sup>

### *6.3 Detecting earnings management*

There is considerable academic and practical interest in being able to identify managed earnings using publicly available data. There is also a related but challenging desire to split earnings (or earnings components) into an innate portion that is beyond the control of the management versus a discretionary portion that can be influenced by CFO decisions. The ability of even well-accepted models such as the modified Jones model to outperform even a random decomposition model is modest, however. Thirty years of research has left us with more questions than answers about how an external observer can detect the footprints of managed earnings. Virtually every proposed method of identifying managed earnings (e.g., discretionary accruals and benchmark beating) is disputed by papers that argue that such managed earnings represent (i) either an econometric or data artifact (Guay, Kothari and Watts 1996, Durtschi and Easton 2005); or (ii) some unobservable dimension of earnings quality related to the unobservable fundamental earnings process (Beaver, McNichols and Nelson 2007, Dechow et al. 2010).

To explore these issues, we ask CFOs the following question: “academic researchers have struggled for years trying to use publicly available data to identify companies that misrepresent reported performance. In your view, what are three “red flags” that would help academics detect such misrepresentation?” We expect the answers to serve three purposes. First, these answers can help validate some of the more popular approaches already used by academic researchers. Second, they can

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<sup>23</sup> When asked about the consequences of poor earnings quality, once discovered, interviewed CFOs mentioned: (i) “The company will not be fairly valued, because analysts will discount their earnings and cash flow so the company will trade at lower multiples than their peers” or (ii) “From management’s standpoint, much lower valuation. In the short term, there is an adjustment to your multiple. But this can take years.” Another CFO clarified that these consequences are due to investor confusion: “If it’s hard for investors to understand earnings going forward, that will result in lower stock price and higher cost of capital.” An interviewed CFO pointed out that bid-ask spreads and analysts coverage are less of a concern these days, especially for sizable companies. One CFO thought low earnings quality leads to high betas and short interest, and another one thought the market is more likely to ask questions about earnings quality when the firm is not doing well.

point to new areas of inquiry. Third, there is demand for the creation of “red flag” profiles to aid SEC investigations (Pincus, Holder and Mock 1998).

Table 14 organizes and summarizes CFO views on red flags, where individual responses are first organized into related categories, and only categories with more than 10 responses are included. The table is sorted in descending order of popularity, where for each category we include possible permutations of the main idea, and the frequency with which it is mentioned. We discuss in turn the most frequently offered red flags followed by a summary of the remaining ones.

(i) *Earnings inconsistent with cash flows*: The most popular red flag is observing trends in earnings that diverge from trends in operating cash flows (CFO), garnering 101 responses. Permutations on this idea include “weak cash flows,” earnings strength with deteriorating cash flows,” and “earnings and cash flows from operations (CFO) move in different directions for 6-8 quarters.” Note that the importance of the link between earnings and underlying cash flows is registered pretty much throughout the whole study, garnering high rankings in the open-ended responses to what is earnings quality in Table 3, in the survey question about characteristics of earnings quality in Table 4, and in the CFO interviews. This link between accrual and cash numbers has certainly been recognized in practitioner circles (e.g., O’Glove 1998) and on the academic side as well (e.g., Dechow and Dichev 2002). The magnitude of the response in Table 14, however, leads us to believe that there is still much work that can be done here, especially in the direction of explicitly modeling and exploring the effect of firm growth, as growth firms naturally tend to have high accruals and weak operating cash flows but not necessarily poor quality earnings.

(ii) *Deviation from norms*: The second most frequent earnings management red flag is deviations from industry norms or experience, registering 88 responses. Variations on this idea include deviations from the economy or peer experience, and include specific examples of such disparity in financial statement items such as cash cycle, average profitability, revenue and investment growth, and asset impairments. This idea is also recognized in the academic literature, where the typical treatment is to use industry and peer benchmarks as control variables. Given the high prominence of this signal in CFO responses,

though, and its presence in some of the most celebrated cases of earnings manipulation (Enron, WorldCom), one is inclined to think that perhaps a more direct and powerful investigation of this red flag is in order.

(iii) *Unusual accruals*: The third most prominent red flag, with 71 responses, is lots of accruals or unusual behavior in accruals, including large jumps in accruals. This signal has been well-researched in accounting, most prominently in the “accrual anomaly” literature starting with Sloan (1996). There are perhaps some research opportunities here given that CFO responses seem to emphasize *changes* in accruals as compared to the accrual anomaly literature that traditionally relies on level-of-accrual specifications. However, given that extreme levels of accruals are strongly associated with accrual reversals (Allen, Larson and Sloan 2010) it is an open question whether there is a reliable empirical distinction between these two specifications.

(iv) *Miscellaneous signals*: Next, there is a cluster of three signals (mentioned between 46 and 60 times). This cluster includes earnings and earnings growth that are too smooth for fundamentals, consistently meeting/beating benchmarks, and frequent one-time items. Overall, these three flags are familiar and have been explored in the existing literature, e.g., in Barth, Elliott, and Finn (1999), and Myers, Myers and Skinner (2007).

(v) *Unusual signals*: The remaining red flags are an eclectic collection, including familiar themes like build-ups in inventories and receivables (Thomas and Zhang 2002), large volatility in earnings (Dichev and Tang 2009), and lack of transparency in financial reporting (Li 2008). There are also some signals that sound intuitive but have received less attention in the literature, e.g., sudden or frequent changes in management and directors, changes in significant accounting estimates, and “tone at the top.”

#### *6.6 Additional insights from interview evidence on red flags*

The most prevalent and distinctive difference between the survey and interview evidence on red flags is the emphasis on the human factor. One CFO suggests that academics need to closely assess the credibility of management: “I would start with the top management or senior executives. That sets the

tone or culture which your internal accounting function will operate under.” When asked how to conduct such an assessment, this executive suggested that similar to a deep fundamental analysis of financial statements, we should conduct an “intensive fundamental analysis of the backgrounds of the top people running the company. I would like to look at the experience of the people behind a lot of the numbers.” Another suggested: “well there’s certainly industry gossip for sure and talking to the people in the company and in others to see how well-regarded they are.”<sup>24</sup> Some of the emerging work on the management styles of executives, their attitude, and CFO fixed effects on financial reporting can be thought of as implementing this advice (e.g., Bertrand and Schoar 2003, Hribar and Yang 2007, Francis et al. 2008, Bamber et al. 2010, and Dyreng et al. 2010, Schrand and Zechman, 2011, Davidson et al. 2012) but perhaps much more can be done here, especially as new text-processing techniques and data sources become available.

Other CFOs expand the circle of credibility beyond management “You need an independent internal auditor that reports up to the audit committee. The audit committee should be chaired by an experienced auditor that has a strong accounting and finance background, especially perspective on accounting policy treatment of transactions, as this kind of experience is more valuable than ever now. They should also use outsourced expertise in technical subjects such as valuing assets like mortgage-backed securities, residual assets or compliance with loan loss reserves. You need the kind of talent in the audit function that can go up against the department heads of divisions. The next group is the board. Note that I don’t put them up ahead because they are not close enough to the transactions.” Another CFO elaborates “You can get behind the proxy disclosures and take a hard look at who is on their audit committees or who is on the risk management committees. Do they have players in that specialty or industry such that they can give management honest advice? Again, it comes back to the category of ‘are

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<sup>24</sup> Cohen and Malloy (2011), Hobson, Mayew and Venkatachalam (2012), Larcker and Zakolyukina (2012) and Mayew and Venkatachalam (2012) discuss techniques to detect managers who convey under-confident, incomplete or unreliable information in their public statements.

their actions consistent with their stated strategy.’ Does management pay lip service or are they serious about corporate governance?”

Beyond these more general points, interviewed CFOs made some specific suggestions for red flags: *Acquisition accounting*: Several CFOs mentioned that accounting for acquisitions was a common setting for earnings management: “acquisition accounting would be the biggest area where I’ve seen some CFOs taking advantage. I have seen acquisitions used to establish numerous balance sheet items and those provide huge opportunities in the future to manage the P&L. They would set up provisions that are always worth more than they were set up for. I’ve watched numerous managements earn big incentives by being able to manage a balance sheet accrual. They are set up at the time of the acquisition, they include everything from integration to many different things that you assume, but they’re an estimate at that point in time. When the future happens then you take charges against that and in reality it was an estimate so it’s going to be (imprecise) but whenever I have seen this it was always less than what got set up, so it got released into favorable earnings. These accrual reversals did impact the earnings and sometimes for a period of time, two-three years because they were big acquisitions.”

*Use of subsidiaries and off-balance entities*: An interviewed CFO points out “when you see a company that has subsidiaries that ... are not reported as part of the entire company, that’s questionable and is a red flag.”

*Basis for recognition of income*: “Another has to do with the recognition of income, and on what basis is revenue being recognized, or expenses. For instance, if you have a contractor who is capitalizing interest on all developments, one might start asking some questions in that case.” Along similar lines, a CFO commented about due-diligence practices they follow about ensuring quality earnings at the company they are trying to acquire: “We look at revenue recognition first and foremost. Then, we look at reconciliations. Then, we look at reserving practices, and spend a ton of time on tax accounts.”

*Real earnings management is harder to detect but often more damaging*: Several CFOs thought that earnings are often managed using real actions such as cutting R&D, maintenance expenses and

marketing expenditures and these cuts are value-decreasing (Graham et al. 2005). However, empirically distinguishing between business-driven economic reasons to cut spending versus opportunistic cuts aimed at hitting earnings targets is difficult for an outside analyst. One CFO explains “cutting marketing may be the right decision if you’re let’s say in a country where your volumes are down, revenues are not increasing perhaps because of a recession. So that is an appropriate business decision (and does not imply that you are) cutting marketing because you just have to hit an earnings target for the quarter.”

## **7.0 Conclusions**

We provide new insights into the concept of earnings quality from field evidence which includes a large-scale survey of CFOs as well as in-depth interviews of CFOs and standard setters. Most respondents believe that high quality earnings are sustainable and are backed by actual cash flows. They add that high quality earnings result from consistent reporting choices over time, and avoiding unreliable long-term estimates. They believe that about half of earnings quality is determined by innate factors, i.e., by forces outside manager’s control. In terms of economic prevalence and importance, CFOs estimate that in any given period about 20% of firms manage earnings to misrepresent their economic performance, and for such firms 10% of the typical EPS number is managed. Their answers indicate that only about 60% of earnings management is income-increasing while 40% relates to income-decreasing activities, somewhat in contrast with the heavy emphasis on income-increasing motivations in the literature.

CFOs believe that it is difficult for outside observers to unravel earnings management, especially when such earnings are managed using subtle unobservable choices or real actions. However, they advocate paying close attention to the key managers running the firm, the lack of correlation between earnings and cash flows, significant deviations between firm and peer experience, and unusual behavior in accruals. Most believe strongly in the matching principle and in the primacy of the income statement over the balance sheet. Few CFOs are supporters of fair value accounting, although they think it does have a place in the reporting for financial firms, and for financial assets and liabilities of non-financial firms.

CFOs have a strong aversion to mandated accounting changes, citing high cost of adoption and compliance, and investor confusion and the corresponding continued need for guidance and explanation. They have a clear preference for converging U.S. GAAP and IFRS over the outright adoption of IFRS or having a choice between the two systems. CFOs believe that reporting discretion has substantially declined during the last 20 years, and today GAAP rules are somewhat of a constraint in producing quality earnings. Several observe that the absence of reporting discretion breeds unquestioning compliance with rules, which harms the training process of younger auditors and the quality of the profession. There is a strong feeling that financial reporting has hardened into a compliance exercise rather than acting as a vibrant means of innovating and competing for better access to capital.



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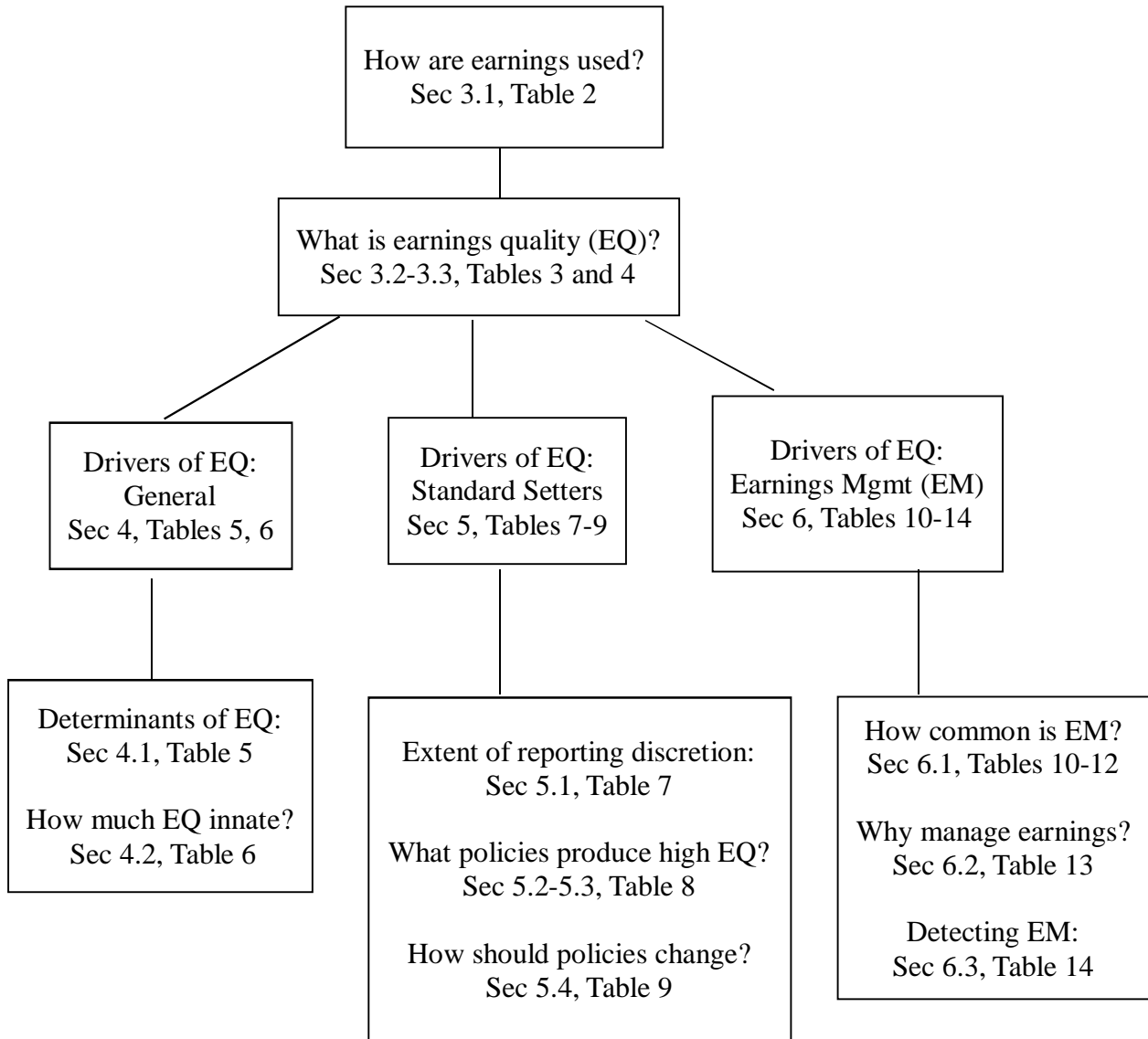
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**Figure 1: Roadmap of the paper**



**Table 1**  
**Panel A: Demographic characteristics of the survey participants (N = 375)**

<i>Ownership</i>	Percent		<i>Risk Averse</i>	Public (%)	Private (%)
Public	45.07		Yes	87.57	84.47
Private	54.93		No	12.43	15.53
			<i>Revenues</i>	Public (%)	Private (%)***
<i>Executive Age</i>	Public (%)	Private (%)**	< \$25 million	1.21	15.92
<40	4.82	4.93	\$25 - \$99 million	5.45	31.84
40-49	35.54	24.63	\$100 - \$499 million	13.33	32.34
50-59	46.39	46.31	\$500 - \$999 million	10.91	8.46
≥60	13.25	24.14	\$1 - \$4.9 billion	25.45	8.46
			\$5 - \$9.9 billion	16.97	1.99
<i>Executive Tenure</i>	Public (%)	Private (%)**	>\$10 billion	26.67	1.00%
<4 years	21.08	30.05	<i>Industry</i>	Public (%)	Private (%)***
4-9 years	37.35	27.59	Retail/Wholesale	6.06	19.90
10-19 years	27.11	21.18	Mining/Construction	3.64	6.12
≥20 years	14.46	21.18	Manufacturing	37.58	28.57
<i>Executive Education</i>	Public (%)	Private (%)	Transportation/Energy	6.67	5.61
Some College	0.00	0.99	Communications/Media	4.24	3.06
BA or BS	35.33	42.86	Tech [Software/Biotech]	5.45	5.61%
MBA	58.08	48.77	Banking/Finance/Insurance	15.76	8.16
Non-MBA Masters	6.59	7.39	Service/Consulting	3.64	8.16
			Healthcare/Pharmaceutical	7.88	6.12
<i>Executive Background<sup>f</sup></i>	Public (%)	Private (%)	Other	9.09	8.67
Corporate Finance	48.52	55.34	<i>Insider Ownership</i>	Public (%)	Private (%)***
Public Accounting	45.56	41.26	<5%	42.76	24.10
Other Accounting	21.30	27.18	5-10%	34.21	12.31
Investment Banking	4.73	1.94	11-20%	9.21	7.69
Credit Officer	2.96	2.43	>20%	13.82	55.90
Other	5.33	9.71	<i>Institutional Ownership</i>	Public (%)	Private (%)***
<i>Proportion of Foreign Sales</i>	Public (%)	Private (%)***	<5%	75.14	43.58
0%	14.63	41.71	5-10%	2.16	3.88
1-24%	34.76	42.21	11-20%	1.08	5.07
25-50%	29.27	12.56	>20%	21.62	47.46
>50%	21.34	3.52			

<sup>a</sup>Total percentages add up to more than 100% because respondents could choose more than one option., The frequencies of each option are compared across public and private firms using chi-square test. All responses, both from public and private firms, are included above. \*, \*\*, and \*\*\* indicate the significance of Pearson's Chi-squared test that compares the frequencies between public and private firms at 10%, 5%, and 1% levels, respectively. Frequencies are based on non-missing observations.



**Table 1**  
**Panel B: Pearson correlation coefficients of the demographic variables for surveyed public firms (N = 169)**

	Profitable	P/E Ratio	Sales Growth	Firm Age	Insider Ownership	Institutional Ownership	Executive Age	Executive Tenure	Executive Education	Risk Averse	Revenue
P/E Ratio	-0.205**										
Sales Growth	0.149*	-0.024									
Firm Age	-0.122	-0.018	-0.158**								
Insider Ownership	-0.035	0.020	0.037	-0.150*							
Institutional Ownership	-0.046	0.036	0.065	-0.083	-0.413***						
Executive Age	0.046	0.110	0.021	0.069	-0.045	-0.091					
Executive Tenure	-0.074	-0.030	-0.056	0.233***	0.126	-0.077	0.233***				
Executive Education	-0.077	-0.027	0.124	0.046	-0.011	-0.086	-0.037	-0.129*			
Risk Averse	0.117	-0.014	-0.061	0.022	0.038	-0.012	0.017	0.050	-0.030		
Revenue	-0.185**	-0.043	-0.134*	0.433***	-0.462***	0.194**	-0.094	0.083	-0.055	0.041	
Debt/Assets	0.088	-0.104	-0.100	0.041	0.069	-0.070	0.021	0.065	0.010	0.045	0.037

*Note:* Demographic correlations for executive age, executive tenure, executive education, risk aversion, revenues, insider ownership, and institutional ownership are based on the categories defined in Table 1, Panel A. Profitability, P/E ratio, sales growth, firm age, and debt/assets are directly drawn from the survey responses. \*, \*\*, \*\*\* correspond to p-values <0.1, 0.05, 0.01, respectively.

**Table 1**  
**Panel C: Representativeness of surveyed public firms (total possible N= 169)**

Variable		Sample average	Sample median	Compustat breakpoint categories/quintiles <sup>a</sup>						
				1	2	3	4	5	6	7
Sales	Universe avg.	2641.07	247.63	9.96	56.85	247.76	709.74	2284.96	6959.73	35144.19
	Universe %			13.56	21.28	26.68	11.06	18.38	3.96	5.09
	Sample avg. <sup>b</sup>	5473.72	2950.00	12.50	62.00	299.50	749.50	2950.00	7450.00	12500.00
	Sample size			2	9	22	18	42	28	44
	Sample %			1.21	5.45	13.33	10.91	25.45	16.97	26.67
Sales growth	Universe avg.	0.04	0.03	-0.47	-0.13	0.03	0.21	0.58		
	Sample avg.	0.09	0.05		-0.09	0.04	0.17	0.72		
	Sample size				18	102	33	8		
	Sample %				11.18	63.35	20.50	4.97		
Debt/Assets	Universe avg.	0.18	0.08	0.00	0.01	0.08	0.22	0.58		
	Sample avg.	0.28	0.25	0.00	0.01	0.08	0.23	0.49		
	Sample size			8	6	21	69	57		
	Sample %			4.97	3.73	13.04	42.86	35.40		
Credit rating	Universe avg.	BB+	BB+	B-	BB-	BB	BBB	A		
	Sample avg.	A	A-	B-	B+	BB+	BBB	AA-		
	Sample size			5	5	19	22	99		
	Sample %			3.33	3.33	12.67	14.67	66.00		
Price/Earnings ratio (for E>0)	Universe avg.	36.42	17.29	7.34	13.18	17.54	25.49	118.61		
	Sample avg.	13.93	13.80	8.14	13.48	17.10	24.63	36.67		
	Sample size			36	53	25	8	3		
	Sample %			28.80	42.40	20.00	6.40	2.40		

Panel C reports summary statistics on the representativeness of surveyed firms relative to the universe of firms listed on the NYSE, AMEX, and NASDAQ and with CRSP share codes of 10 or 11 as of December 2011. Comparison is based on the following variables: Sales, Sales growth, Debt-to-assets, Credit rating, and (positive) P/E ratio. <sup>a</sup>There are seven categories for sales (category 1:<\$25 million; category 2:\$22-\$99 million; category 3:\$100-\$499 million; category 4: \$500-\$999 million; category 5:\$1-\$4.9 billion; category 5:\$5-\$9.9 billion; category 7: >\$10 billion), and for all other variables listed in this table the numbers are reported to each quintile. <sup>b</sup>Average sales of survey firms in each of categories 2 to 6 are defined to be the average of the lower bound and upper bound of the category. Average sales of survey firms in category 1 are defined to be \$12.5 million, and average sales of survey firms in category 7 are defined to be \$12.5 billion. Since companies report their own sales,

debt-to-asset ratio, credit rating and price to earnings ratios on the survey, we employ these in the analysis below. The information for the universe of firms is obtained from Compustat: 1) Sales, is based on Data12-Sales(net); 2) Sales growth, is calculated as the percentage of sales over 3 years; 3) Debt-to-asset, is based on Data9-long term debt divided by Data6-total assets; 4) Credit rating, is Compustat variable SPDRC: S&P long term domestic issuer credit rating; 5) Price to earnings ratio, is calculated as Data 24- price divided by Data 58-EPS (basic) excluding extraordinary items. We then sort all firms with valid data into quintiles and record the corresponding breakpoints. For each quintile we report in panel C the percentage of the surveyed firms that are in these five sorts. The reported percentages can then be compared to the benchmark 20%. All firms contained in sample calculations are public. Sales is the exception that has 7 categories because survey respondents record their Sales on a menu of 7 bins; we adjust for this by converting all Compustat firms to the 7-bin ranking scheme, which allows comparability between Compustat and survey firms on sales. This peculiarity explains also why the Universe % variable is needed and added for the presentation of Sales (because otherwise the default Universe % is the 20% from quintile ranking).

**Table 1**  
**Panel D: Representativeness of interviewed firms**

Variable		Sample average	Sample median	Compustat breakpoint quintiles				
				1	2	3	4	5
Sales	Universe avg.	2641.07	247.63	17.28	79.94	264.13	917.76	11934.21
	Sample avg.	24076.81	10420.03			274.34		26457.06
	Sample size					1		10
	Sample %					9.09		90.91
Sales growth	Universe avg.	0.04	0.03	-0.47	-0.13	0.03	0.21	0.58
	Sample avg.	-0.01	-0.05	-0.26	-0.14	-0.02	0.29	
	Sample size			1	5	2	3	
	Sample %			9.09	45.45	18.18	27.27	
Debt/Assets	Universe avg.	0.18	0.08	0.00	0.01	0.08	0.22	0.58
	Sample avg.	0.23	0.25			0.09	0.26	0.38
	Sample size					4	4	3
	Sample %					36.36	36.36	27.27
Credit rating	Universe avg.	BB+	BB+	B-	BB-	BB	BBB	A
	Sample avg.	BBB+	BBB+		B+	BB		A+
	Sample size				2	1		6
	Sample %				22.22	11.11		66.67
Price/Earnings ratio (for E>0)	Universe avg.	36.42	17.29	7.34	13.18	17.54	25.49	118.61
	Sample avg.	20.14	19.32	4.48	14.72	18.80	25.00	36.90
	Sample size			1	1	4	2	1
	Sample %			11.11	11.11	44.44	22.22	11.11

Panel D reports summary statistics on the representativeness of the interviewed firms relative to the universe of firms listed on the NYSE, AMEX, and NASDAQ and with CRSP share codes of 10 or 11 as of December 2011. The information for the universe of firms is obtained from Compustat: 1) Sales, is based on Data12-Sales(net); 2) Sales growth, is calculated as the percentage of sales over 3 years; 3) Debt-to-asset, is based on Data9-long term debt divided by Data6-total assets; 4) Credit rating, is Compustat variable SPDRC: S&P long term domestic issuer credit rating; 5) Price to earnings ratio, is calculated as Data 24- price divided by Data 58-EPS (basic) excluding extraordinary items. We then sort all firms with valid data into quintiles and record the corresponding breakpoints. For each quintile we report in panel D the percentage of the surveyed firms that are in these five sorts. The reported percentages can then be compared to the benchmark 20%.

**Table 2**  
**Survey responses to the question: Rate the importance of earnings:**

Question	Rate the importance of earnings:	% of respondents who answered		Average Rating	H <sub>0</sub> : Average Rating =1	H <sub>0</sub> : Average Rating =3	% Very Important Private
		Very Important (5 or 4)	Not Important (2 or 1)				
(1)	For use by investors in valuing the company	94.67	2.37	4.72	***	***	75.00***
(2)	For use in debt contracts	82.15	6.55	4.14	***	***	78.92
(3)	For use by the company's own managers	80.48	7.10	4.15	***	***	85.44
(4)	For use in executive compensation contracts	78.70	7.70	4.11	***	***	62.22***
(5)	For use by outsiders in evaluating the company's managers	62.72	13.61	3.67	***	***	39.22***
(6)	For use by current and prospective employees	45.24	17.86	3.33	***	***	22.55***
(7)	For use by current and prospective suppliers	41.42	21.89	3.25	***	***	32.35**
(8)	For use by current and prospective customers	40.24	22.49	3.22	***	***	27.45***
(9)	For use in negotiations with labor	32.74	36.91	2.89	***		22.77***

Column 1 (2) presents the percent of respondents indicating importance levels of 5 or 4 (2 or 1). Column 3 reports the average rating, where higher values correspond to higher importance. Column 4 reports the results of a t-test of the null hypothesis that each average response is equal to 1 (not important), Column 5 reports the results of a t-test of the null hypothesis that each average response is equal to 3, with \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 6 presents the percentage of private firm respondents indicating importance levels of 5 or 4, with \*\*\*, \*\*, and \* representing statistically significant differences at the 1%, 5%, and 10% levels, respectively.

**Table 3**  
**Summary of the responses to the open-ended question “What does the concept of earnings quality mean?”**

**Panel A: Ranked summary of CFO responses**

<i>CFO's concept of earnings quality</i>	<i>Comment</i>
Sustainable, Repeatable, Recurring, Consistent, Reflects long-term trend, has the highest chance of being repeated in future periods	This is the dominant and most common idea of earnings quality
Free from special or one-time items, not from reserves, fair value adjustments, accounting gimmicks, market fluctuations, gains/losses, fluctuations in effective tax rates, F/X adjustments	Very common, essentially the converse of “sustainable,” typically the two are expressed together
Earnings that are backed by cash flows	Third most common, often combined with the first two
Accurately reflects economic reality, accurately reflects the results of operations	Common – but not helpful operationally
Consistently reported, consistently applied GAAP	Moderately common
Accurate application of GAAP rules	Moderately common
Quality earnings come from normal (core) operations	Moderately common, essentially a variation on “sustainable” above
Regular revenues minus regular expenses, normal margin on revenues	Moderately common, essentially a variation on “sustainable” above
Sustainable in the face of adversity (macro, operations)	Occasional, variation on “sustainable” above
Growing	Occasional
Conservative	Occasional
EBITDA	Rare

**Panel B: Selected direct quotes from CFOs illustrating the summary concepts in Panel A above**

“Repeatable earnings based on the core operations of the company”

“Earnings quality relates to sustainability and cash flow-driven earnings”

“Consistent, repeatable income”

“Consistent profitability from core business segments that tracks with sales growth”

“How closely the current reported earnings relates to the true long-term earnings of the company”

“Earnings generated by core business operations that are considered sustainable and exclude the impact of any material non-recurring items”

“Earnings based fundamentally on sales realized in cash from continuing customers that are likely to repeat”

**Table 4**

**Survey responses to the question: To what extent do you agree that this statement captures important features of "high quality earnings"**

Question	High quality earnings:	% Agree	% Disagree	Average Rating	H <sub>0</sub> : Average Rating =3 (Neutral)	% Agree Private Firms
(1)	Reflect consistent reporting choices over time	94.05	2.98	4.49	***	90.2
(2)	Avoid long term estimates as much as possible	86.39	3.55	4.28	***	83.4
(3)	Are sustainable	80.47	7.10	4.25	***	80.8
(4)	Are useful predictors of future earnings	78.57	8.33	4.07	***	75.1
(5)	Are useful predictors of future cash flows	75.74	7.10	4.07	***	75.7
(6)	Have accruals that are eventually realized as cash flows	75.74	9.46	4.04	***	71.2
(7)	Do not include one-time or special items	71.43	16.07	3.92	***	68.0
(8)	Require fewer explanations in company communications	69.23	14.80	3.80	***	62.0
(9)	Result from conservative recognition of assets and liabilities	59.28	13.77	3.64	***	66.8
(10)	Recognize losses in a more timely manner than gains	49.71	22.48	3.40	***	50.7
(11)	Are less volatile than cash flows	40.24	28.41	3.15	*	42.0
(12)	Have fewer accruals	20.84	49.40	2.60	***	26.6

Respondents were asked to indicate the level of agreement with statements on a scale of 1 (strongly disagree) to 5 (strongly agree). The table reports summary statistics for the responses from all public firms surveyed. Column 1 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree with or weakly agree with). Column 2 presents the percent of respondents indicating agreement levels of 2 or 1 (weakly disagree with or strongly disagree with). Column 3 reports the average rating, where higher values correspond to higher agreement. Column 4 reports the results of a t-test of the null hypothesis that each average response is equal to 3 (neutral). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 5 reports the percentage of respondents from private firms who strongly agreed or weakly agreed (4 or 5 on survey), with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 5**  
**Survey responses to the question: Rate the influence of the following factors on earnings quality at your company**

Question	% of respondents who answered			H <sub>0</sub> : Average Rating =1	H <sub>0</sub> : Average Rating =3	% Highly Influenced by (5 or 4) Private Firms
	Highly influenced by (5 or 4)	Not at all influenced by (2 or 1)	Average Rating			
(1) The business model of your company	73.96	9.47	3.91	***	***	75.7
(2) Accounting standards	60.36	15.38	3.72	***	***	40.0***
(3) Your company's industry	56.81	13.01	3.62	***	***	59.5
(4) Macro-economic conditions	55.03	18.34	3.57	***	***	57.8
(5) Your company's internal controls	50.00	23.21	3.39	***	***	37.7**
(6) Your company's board of directors	47.93	27.81	3.28	***	***	38.7*
(7) Your company's reporting choices	43.19	31.95	3.17	***	*	28.2***
(8) How fast the operating cycle converts accruals to cash flows at your company	40.24	25.44	3.24	***	**	42.2
(9) Your company's audit committee	40.23	33.13	3.07	***		16.1***
(10) Your company's disclosure policy	39.05	31.95	3.1	***		20.5***
(11) Analysts that follow your company	38.69	35.72	2.98	***		9.9***
(12) Your company's external auditor	37.87	29.58	3.08	***		28.8*
(13) The SEC's enforcement process	29.76	41.67	2.76	***	**	6.9***
(14) Prospect of litigation	22.62	48.21	2.63	***	***	16.3

Respondents were asked to indicate the level of influence of statements on a scale of 1 (not at all influenced by) to 5 (highly influenced by). The table reports summary statistics for the responses from all public firms surveyed. Columns 1-2 present the percent of respondents indicating influence levels of 5-4 (highly influenced by) and 1-2 (not at all influenced by) for each statement. Column 3 reports the average rating, where higher values correspond to higher influence. Column 4 reports the results of a t-test of the null hypothesis that each average response is equal to 1 (not at all influenced by), and column 5 reports the results of a t-test of the null hypothesis that each average response is equal to 3 (somewhat influenced by). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels,



respectively. Column 6 reports the percentage of respondents from private firms who denoted high influence (4 or 5 on survey), with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 6**

**Survey responses to the question: To what extent do innate factors influence earnings quality at your company (from 0-100) with 0 is no innate and 100 is all innate?**

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*Unconditional Averages*

Obs.	Mean	Median	Std. Dev.	Min	Max	% greater than 75	% greater than 50	% less than 50	% less than 25	% greater than 50 – private firms
160	49.98	50.00	22.19	5.00	100.00	15.04	46.36	20.00	17.50	46.3

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Respondents were asked to indicate the extent that innate factors influence earnings quality on a scale of 0 (not influential) to 100(very influential), (where innate factors refer to factors beyond managerial control such as industry or macro-economic conditions). The table reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 7-10 present the percent of respondents who answered greater than 75, greater than 50, less than 50, and less than 25, respectively. Column 11 reports the percentage of respondents from private firms who denoted greater than 50, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firm respondents at the 1%, 5%, and 10% levels, respectively.

Table 7

**Panel A: Survey responses to the question: How much discretion in financial reporting does the current accounting standard-setting regime in the United States allow (-10 - +10) with -10 being too little discretion and +10 being too much discretion.**

*Unconditional Averages*

Obs.	Mean	Median	Std. Dev.	Min	Max	% greater than 0	% less than 0	H <sub>0</sub> : Mean=0	Mean – Private Firms
147	-0.78	-1.00	3.74	-10	8	29.24	50.33	**	1.12***

Respondents were asked to indicate the level of discretion given by the current accounting standard-setting regime on a scale of -10 (too little discretion) to 10 (too much discretion). Panel B reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 7 and 8 present the percent of respondents who answered greater than 0 (neutral) and less than 0, respectively. Column 9 reports the results of a t-test of the null hypothesis that the mean response is equal to 0 (neutral). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 10 reports the mean of respondents from private firms, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Panel B: Survey responses to the question: Relative to 20 years ago, or to when you first became familiar with financial reporting practices, indicate the extent to which you believe companies today have more or less discretion in financial reporting (-10 - +10) with -10 being too little and +10 being too much discretion:**

*Unconditional Averages*

Obs.	Mean	Median	Std. Dev.	Min	Max	% greater than 0	% less than 0	H <sub>0</sub> : Mean=0	Mean – Private Firms
164	-4.22	-5.00	5.00	-10	10	17.08	81.11	***	-2.58***

Respondents were asked to indicate the current level of discretion compared to 20 years ago on a scale of -10 (less discretion today) to 10 (more discretion today). Panel C reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 7 and 8 present the percent of respondents who answered greater than 0 (neutral) and less than 0, respectively. Column 9 reports the results of a t-test of the null hypothesis that the mean response is equal to 0 (neutral). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 10 reports the mean of respondents from private firms, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 7 (continued)**

**Panel C: Survey responses to the question: To what extent have you found that written accounting standards limit your ability to report high quality earnings (from 0-100 where 0 stands for not all limiting and 100 for very limiting)?**

*Unconditional Averages*

Obs.	Mean	Median	Std. Dev.	Min	Max	% greater than 75	% greater than 50	% less than 50	% less than 25	Mean – Private Firms
152	35.57	31.00	22.13	0	90	5.26	22.39	71.76	36.21	33.55

Respondents were asked to indicate the extent that written accounting standards limit the ability to report high-quality earnings on a scale of 0 (not at all limiting) to 100(very limiting). The table reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 7-10 present the percent of respondents who answered greater than 75, greater than 50, less than 50, and less than 25, respectively. Column 11 reports the mean of respondents from private firms, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 8**

**Survey responses to the question: Rate the extent to which you agree with the following statements about GAAP policies that are likely to produce "high quality earnings"**

<i>Unconditional Averages</i>						
Question	The following GAAP policies are likely to produce high quality earnings:	% Agree	% Disagree	Average Rating	H <sub>0</sub> : Average Rating =3	% Agree – private firms
(1)	Policies that match expenses with revenues	92.22	2.40	4.59	***	91.7
(2)	Policies that use conservative accounting principles	75.44	7.79	4.04	***	79.0
(3)	Policies that minimize long-term projections and revaluations as much as possible	65.27	19.76	3.68	***	64.9
(4)	Policies that use fair value accounting only for financial assets/liabilities but not for operating assets/liabilities	53.57	25.00	3.37	***	42.0**
(5)	Policies that minimize the volatility of reported earnings	41.32	35.33	3.07		53.7**
(6)	Policies that rely on historical costs as much as possible	40.72	25.15	3.21	**	40.5
(7)	Policies that rely on fair value accounting as much as possible	38.09	39.88	2.91		43.6

Respondents were asked to indicate the level of agreement with statements on a scale of 1(strongly disagree) to 5(strongly agree). The table reports summary statistics for the responses from all public firms surveyed. Column 1 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree with or weakly agree with). Column 2 presents the percent of respondents indicating agreement levels of 2 or 1 (weakly disagree with or strongly disagree with). Column 3 reports the average rating, where higher values correspond to higher agreement. Column 4 reports the results of a t-test of the null hypothesis that each average response is equal to 3 (neutral). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 5 reports the percentage of respondents from private firms who strongly agreed or weakly agreed (4 or 5 on survey), with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 9**  
**Survey responses to the question: Would the following changes in standard-setting produce higher quality earnings**

Question	% Agree	% Disagree	Average Rating	H <sub>0</sub> : Average Rating =3	% Agree – private firms
(1) Issue fewer new rules	65.68	12.43	3.78	***	55.1*
(2) Converge U.S. GAAP and IFRS	59.88	17.37	3.57	***	54.2
(3) Allow reporting choices to evolve from practice	53.57	22.62	3.35	***	46.8
(4) Issue more detailed implementation guidance	47.91	25.15	3.27	***	55.4
(5) Allow managers greater professional judgment in preparing financial statements	44.38	31.95	3.15	*	47.5
(6) Reduce the use of “fair value” reporting	39.64	26.03	3.21	***	36.0
(7) Emphasize detailed rules more than concepts and principles	30.73	52.41	2.67	***	29.9
(8) Allow firms to choose either U.S. GAAP or IFRS	29.76	42.85	2.73	***	28.7
(9) Require more conservative rules	28.74	27.55	2.99		45.5***
(10) Require IFRS	25.44	41.42	2.69	***	25.6
(11) Expand the use of “fair value” reporting	23.67	49.11	2.57	***	30.7
(12) Issue more new rules	7.15	70.84	2.11	***	9.8

Respondents were asked to indicate the level of agreement with statements on a scale of 1 (strongly disagree) to 5 (strongly agree). The table reports summary statistics for the responses from all public firms surveyed. Column 1 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree with or weakly agree with). Column 2 presents the percent of respondents indicating agreement levels of 2 or 1 (weakly disagree with or strongly disagree with). Column 3 reports the average rating, where higher values correspond to higher agreement. Column 4 reports the results of a t-test of the null hypothesis that each average response is equal to 3 (neutral). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 5 reports the percentage of respondents from private firms who strongly agreed or weakly agreed (4 or 5 on survey), with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 10**

**Survey responses to the question: From your impressions of companies in general, in any given year, what percentage of companies use discretion within GAAP to report earnings which misrepresent the economic performance of the business?**

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*Unconditional Averages*

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Obs.	Mean	Median	Std. Dev.	Min	Max	% greater than 0	% greater than 15	H <sub>0</sub> : Mean=0	Mean – Private Firms
163	18.43	15.00	17.24	0	100	99.37	40.47	***	30.37***

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Respondents were asked to indicate the percentage of companies that use discretion within GAAP to report earnings which misrepresent the economic performance of the business on a scale of 0 to 100. The table reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 7 and 8 present the percent of respondents who answered greater than 0 and greater than 15 (the median), respectively. Column 9 reports the results of a t-test of the null hypothesis that the mean response is equal to 0. \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 10 reports the mean of respondents from private firms, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 11**

**Survey responses to the question: For this question, consider only companies that use discretion within GAAP to misrepresent economic performance. Among these firms, assume that earnings per share is \$1 per share. Of this, how many cents per share is typically misrepresented?**

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*Unconditional Averages*

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Obs.	Mean	Median	Std. Dev.	Min	Max	% less than 10	% greater than 10	Mean – Private Firms
163	9.85	10.00	8.81	1	65.50	45.39	22.70	12.35**

---

Respondents were asked to indicate the number of cents per share (out of \$1) that is typically misrepresented on a scale from 1 to 95.5. The table reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 7 and 8 present the percent of respondents who answered less than 10 (the median) and greater than 10, respectively. Column 9 reports the mean of respondents from private firms, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 12**

**Survey responses to the question: Within a given year and among the companies that misrepresent performance, indicate the percentage of firms that misrepresent by increasing earnings (vs. those that misrepresent by reducing earnings)**

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*Unconditional Averages*

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Obs.	Mean	Median	Std. Dev.	Min	Max	% greater than 50	H <sub>0</sub> : Mean=50	Mean – Private Firms
163	58.78	67.00	27.18	2	100	66.19	***	56.25

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Respondents were asked to indicate the percentage of firms that misrepresent performance by increasing earnings on a scale of 0 to 100. The table reports summary statistics for the responses from all public firms surveyed. Columns 1-6 present the number of respondents, mean, median, standard deviation, minimum, and maximum of the answers, respectively. Column 7 presents the percent of respondents who answered greater than 50. Column 8 reports the results of a t-test of the null hypothesis that the mean response is equal to 50. \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 9 reports the mean of respondents from private firms, with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.



**Table 13**

**Survey responses to the question: Please rate the importance of the following motivation for companies that use earnings to misrepresent economic performance**

Question	Companies report earnings to misrepresent economic performance:	% Agree	% Disagree	Average Rating	H <sub>0</sub> : Average Rating =3	% consider very important or important (5 or 4)- private firms
(1)	To influence stock price	93.45	6.55	4.55	***	94.1
(2)	Because there is outside pressure to hit earnings benchmarks	92.86	2.38	4.41	***	90.6
(3)	Because there is inside pressure to hit earnings benchmarks	91.02	4.19	4.28	***	86.7
(4)	To influence executive compensation	88.62	11.38	4.46	***	93.0
(5)	Because senior managers fear adverse career consequences if they report poor performance	80.36	8.33	4.02	***	83.7
(6)	To avoid violation of debt covenants	72.46	27.54	3.88	***	89.2***
(7)	Because there is pressure to smooth earnings	69.05	11.90	3.74	***	76.8*
(8)	Because they believe such misrepresentation will likely go undetected	60.12	17.27	3.55	***	64.9
(9)	Because senior managers are overconfident or overoptimistic	49.41	23.81	3.40	***	51.7
(10)	To reduce expectations of future earnings	41.67	32.15	3.13		39.9
(11)	To influence other stakeholders such as customers, suppliers and employees	37.73	25.15	3.16	**	53.7***
(12)	Because they feel other companies misrepresent performance	26.19	42.86	2.73	***	34.5*

Respondents were asked to indicate the level of agreement with statements on a scale of 1(strongly disagree) to 5(strongly agree). The table reports summary statistics for the responses from all public firms surveyed. Column 1 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree with or weakly agree with). Column 2 presents the percent of respondents indicating agreement levels of 2 or 1 (weakly disagree with or strongly disagree with). Column 3 reports the average rating, where higher values correspond to higher agreement. Column 4 reports the results of a t-test of the null hypothesis that each average response is equal to 3 (neutral). \*\*\*, \*\*, and \* denote rejection at the 1%, 5%, and 10% levels, respectively. Column 5 reports the percentage of respondents from private firms who strongly agreed or weakly agreed (4 or 5 on survey), with \*\*\*, \*\*, and \* denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

**Table 14:**  
**Red Flags: CFOs responses for signals that can be used to detect earnings that misrepresent economic performance:**

<b>Rank</b>	<b>Red Flag</b>	<b>Count</b>
1	GAAP earnings do not correlate with CFO; Weak cash flows; Earnings and CFO move in different direction for 6-8 quarters; Earnings strength with deteriorating cash flow.	101
2	Deviations from industry (or economy, peers') norms/experience (cash cycle, volatility, average profitability, revenue growth, audit fees, growth of investments, asset impairment, A/P, level of disclosure)	88
3	Lots of accruals; Large changes in accruals; Jump in accruals/Sudden changes in reserves; Insufficient explanation of such changes ; Significant increase in capitalized expenditures; Changes in asset accruals, High accrued liabilities	71
4	Too smooth/too consistent of an earnings progression (relative to economy, market); Earnings and earnings growth are too consistent (irrespective of economic cycle and industry experience); Smooth earnings in a volatile industry	60
5	Large/frequent one-time or special items (restructuring charges, write-downs, unusual or complex transactions, Gains/Losses on asset sales)	57
6	Consistently meet or beat earnings targets (guidance, analyst forecasts)	46
7	(Frequent) Changes in (significant) accounting policies	28
8	Inventory build-up / age of raw materials; Build-up in work-in-progress; Mismatch between inventory/COGS/reserves	26
9	High executive turnover; Sudden change in top management; Change in financial management; Sudden director turnover; Employee (non-management) turnover	26
10	Using non-GAAP (and/or changing) metrics	25
11	Build-ups of receivables; Deterioration of receivables days outstanding; A/R balance inconsistent with cash cycle projections/Allowance for doubtful accounts	25
12	Large volatility (Wide swings) in earnings, especially without real change in business	25
13	SEC filings becoming less transparent; Uninformative MD&A; Complex footnotes; Complexity of financials; Lack of understanding how cash is generated; Poor communication to outsiders	20
14	Major jumps or turnarounds; Break with historical performance; Unexplained volatility in margins	17
15	(Repeated) Restatement of earnings/prior period adjustments	16
16	Large incentive compensation payment; Misalignment of management compensation incentives; Management turnover after bonus payments	16
17	Sudden change in auditors; Auditors' report; Exceptions in audit report	12
18	"Tone from the top"; Internal controls; Reporting of internal control weakness	11
19	Significant use of (aggressive) long-term estimates (including resulting volatility in balances); Unusual reliance on accounts requiring management judgment/estimates; Changes in estimates, Lack of explanatory detail on estimates	11