Journal of Accounting and Economics 56 (2013) 1–33

Contents lists available at ScienceDirect

Journal of Accounting and Economics

journal homepage: www.elsevier.com/locate/jae

Earnings quality: Evidence from the field ☆

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ARTICLE INFO

Available online 20 June 2013

JEL classification:
G30
M14
M41

Keywords:
Earnings quality
FASB
Earnings management

ABSTRACT

We provide insights into earnings quality from a survey of 169 CFOs of public companies and in-depth interviews of 12 CFOs and two standard setters. CFOs believe that (i) above all, high-quality earnings are sustainable and repeatable; specific characteristics include consistent reporting choices, backing by actual cash flows, and absence of one-time items and long-term estimates; (ii) about 50% of earnings quality is driven by non-discretionary factors such as industry and macro-economic conditions; (iii) in any given period, about 20% of firms manage earnings to misrepresent economic performance, and for such firms 10% of EPS is typically managed; (iv) earnings manipulation is hard to unravel from the outside but peer comparisons and lack of correspondence between earnings and cash flows provide helpful red flags. In addition, CFOs disagree with current standard setting on a number of issues including the sheer number of promulgated rules, the top-down approach to rule-making, the neglect of the matching principle, and the emphasis on fair value accounting. They indicate that a rules-based culture makes the audit function centralized and mechanical, and hinders the development of audit professionals. A summary impression from our work is that CFOs view earnings quality as more of a single and unconditional characteristic, in contrast to current research where measures of earnings quality are strongly conditional on the decision setting. This CFO view is related to their idea of "one number" – a single earnings metric that shapes both their interactions with external stakeholders and internal decision-making.

☆ We acknowledge excellent research assistance by Mengyao Cheng, Jivas Chakravarthy and Stephen Deason. We appreciate written comments on an earlier version of the paper from Mark Nelson and Doug Skinner (discussants), Vic Anand, Sudipta Basu, Paul Healy, Urton Anderson and especially Pat O'Brien, Terry Shevlin, Michelle Hanlon (editor), and Jerry Zimmerman. We thank workshop participants at Texas A&M University, Cornell University, Harvard Business School, Wharton, University of Technology – Sydney, University of Melbourne, Cass Business School, London School of Economics, Virginia Commonwealth University, Stanford Summer Camp, Temple University, Ohio State University, Rotman School of Business, Tuck School at Dartmouth, Indian School of Business, Minnesota Financial Accounting Conference and the 2012 AAA Doctoral Consortium. We acknowledge helpful comments on a preliminary version of the survey instrument from workshop participants at Emory University and from Bob Bowen, Dave Burgstahler, Brian Bushee, Dan Collins, John Core, Patty Dechow, Mark DeFond, Jennifer Francis, Weili Ge, Jeff Hales, Michelle Hanlon, Gary Hecht, Kathryn Kadous, Mark Lang, Russ Lundholm, Mark Nelson, Stephen Penman, Kathy Petroni, Grace Pownall, Cathy Schrand, Terry Shevlin, Shyam Sunder, Terry Warfield, Ross Watts, Greg Waymire, Joe Weber and Jerry Zimmerman, and two anonymous standard-setters. We thank Larry Benveniste and Trevor Harris for arranging interviews. We are grateful for *CFO* magazine's help in this project, though the views expressed here do not necessarily reflect those of *CFO*. Finally, we thank David Walonick and Statpac, Inc. for dedicated work in coding and delivering the survey.

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http://dx.doi.org/10.1016/j.jacceco.2013.05.004

1. Introduction

The concept of earnings quality is fundamental in accounting and financial economics. Yet, there are broad disagreements about how to define and 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 portion resulting from the fundamental earnings process (Dechow et al., 2010). Thus, a number of vexing questions have been difficult to address with archival work because answers often rely on unobservable managerial intent. 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? What accounting policies promote higher quality earnings? How prevalent is earnings management? What is the typical magnitude of earnings management? 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? These are the types of questions we endeavor to answer.

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? First, CFOs are the direct producers of earnings quality, who also intimately know and potentially cater to consumers of earnings information such as investment managers and analysts. CFOs make the key decisions on how to apply accounting standards in their company, and whether to use or abuse discretion in financial reporting. Second, CFOs commonly have a formal background in accounting, which provides them with keen insight into the determinants of earnings quality, including the advantages and limitations of GAAP accounting. Third, CFOs are key decision-makers in company acquisitions (see Graham et al., 2012), which implies that they have a working knowledge of how to evaluate earnings quality from an outsider's perspective. Finally, CFOs have access to much tacit knowledge about earnings quality through their networks of financial executives in their industry and geographical neighborhood, e.g., from informal conversations about earnings management in peer companies.

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 offer a potential 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 also allow researchers to (i) discover institutional factors that impact practitioners' decisions in unexpected ways 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 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 intent is to provide evidence on earnings quality, complement existing research, and provide directions for future work.

Our key findings fall in three broad categories. The first includes results related to the definition, characteristics, and determinants of earnings quality. On definition, CFOs believe that, above all, quality earnings are sustainable and repeatable. More specific quality characteristics include consistent reporting choices over time, backing by actual cash flows, and absence of one-time items and long-term estimates – all factors that affect earnings sustainability. This view of earnings quality is consistent with a valuation perspective, where investors view the firm as a long-life profit-generating entity, and value is based on estimating and discounting the stream of future profits. Consistent with this view, current earnings are considered to be high quality if they serve as a good guide to the long-run profits of the firm. The dominance of the valuation perspective is confirmed in the responses to our survey question about how interested parties use earnings. However, we also find that the stewardship uses of earnings (debt contracts, managerial compensation) and internal uses (in managing own company) rank closely behind the valuation use. In addition, executives often refer to their reliance on "one number" for both external and internal reporting. The resulting impression is that the reported earnings metric serves consistent and integrated purposes across these different uses, and thus earnings quality is shaped by and in turn influences all of these uses. This "one number" view of reported earnings, and the single overarching concept of earnings quality mentioned above, stand in contrast to the current research consensus that emphasizes the conditional nature of earnings quality (i.e., earnings quality as a patchwork of earnings characteristics which gain or fade in importance depending on the decision setting). In terms of determinants, CFOs estimate that innate factors (beyond managerial control) account for roughly 50% of earnings quality, where business model, industry, and macro-economic conditions play a prominent role.

The second set of results relates to how standard setting affects earnings quality. CFOs feel that reporting discretion has declined over time, and that current GAAP standards are somewhat of a constraint in reporting high quality earnings. A large majority of CFOs believe that FASB's neglect of matching and emphasis on fair value adversely affect earnings quality. CFOs would like standard setters to issue fewer rules, and to converge U.S. GAAP with IFRS to improve earnings quality. Further, they believe that earnings quality would improve if reporting choices were to at least partly evolve from practice rather than being mandated from standards. CFOs also feel that the rules-orientation of the FASB has centralized and ossified the audit function, depriving local offices of discretion in dealing with clients, and hindering the development of young auditing professionals. Overall, CFOs have come to view financial reporting largely as a compliance activity rather than as a means to innovate to deliver the best possible information to stakeholders.

Our third set of results relates to the prevalence, magnitude, and detection of earnings management. Our emphasis is on observable GAAP earnings and on a clear definition of earnings management, asking for within-GAAP manipulation that

misrepresents performance (i.e., we rule out outright fraud and performance-signaling motivations). The CFOs in our sample estimate that, in any given period, roughly 20% of firms manage earnings and the typical misrepresentation for such firms is about 10% of reported EPS; thus, perhaps for the first time in the literature, we provide point estimates of the economic magnitude of opportunistic earnings management. CFOs believe that 60% of earnings management is income-increasing, and 40% is income-decreasing, somewhat in contrast to the heavy emphasis on income-increasing results in the existing literature but consistent with the inter-temporal settling up of accruals in settings like cookie jar reserving and big baths (e.g., Elliott and Hanna, 1996; Dechow et al., 2012). CFOs feel that most earnings misrepresentation occurs 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. Finally, while CFOs caution that earnings management is difficult to unravel from the outside, they suggest a number of red flags that point to potential misrepresentation. The two most common flags are persistent deviations between earnings and the underlying cash flows, and deviations from industry and other peer experience. There are also a number of red flags that relate to manager character and the firm's culture.

Our findings raise a host of possible directions for future research. Here we only discuss a few broad themes, with more specific suggestions given at appropriate places later in the paper. One broad direction is increased attention to the sustainability of earnings, and the intertemporal relation between earnings and cash flows. Another broad direction is closer attention to the role of standard setting in the determination and quality of earnings. Our survey suggests that standard setting has a first-order effect on the utility of earnings but there is a relative paucity of research that examines this connection. In addition, the evidence leaves little doubt that there is a dissonance between standard setters' and CFOs' views on the proper determination of earnings, e.g., on the roles of matching and fair value accounting. Research can help to bridge these views, and more generally these are issues that go to the heart of accounting and affect wide constituencies, so this is an area with much potential for significant work. Finally, there is considerable potential for further research into the detection of opportunistic earnings management, a topic of much interest to investors, auditors and regulators. Here, our point estimates of earnings management can be used for the calibration of existing and future models. A promising direction is 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.

The remainder of the paper is organized as follows. Section 2 describes the design and conduct of the survey and 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 offers some conclusions.

2. Survey and interview logistics

2.1. Survey design and delivery

We develop the broad hypotheses and the specific questions of the initial survey instrument based on our review of the literature on earnings quality, including recent reviews in Dechow et al. (2010), Melumad and Nissim (2009), and Dechow and Schrand (2004). As discussed below, we supplement this review with interviews of CFOs to identify issues that are potentially missed or underdeveloped in the academic literature. We also obtain feedback from 18 academic researchers and one professional survey expert on survey content, wording, and scientific design. Our goal is to minimize biases induced by the questionnaire, strike a neutral tone, and maximize the response rate. We use 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 is reasonable. 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 is anonymous and does not require subjects to disclose their names or their corporate affiliation.

One advantage of online administration is the ability to randomly scramble the order of choices within a question, so as to mitigate potential 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 to the presented alternatives (e.g., 6, 8b). In two cases, we decided against scrambling because the listed alternatives are organized in meaningful clusters, which we felt it best not to break (3a, 7).[1] Participants were allowed to skip questions if they did not want to answer them. Every multiple-choice question was followed by a free-text response

[1] While order-of-presentation effects cannot be ruled out for questions 3a and 7 (presented in Tables 5 and 9), we believe that they are unlikely to unduly influence the results. One reason is that the pattern of answers is sometimes visibly at odds with order-of-presentation effects. For example, question 7 in the survey lists “issue fewer rules” and “issue more new rules” as the number one and two alternatives – but they end up as the most and the least popular answers. Second, our answers are largely consistent with benchmarks for reasonable behavior. For example, in Table 5, private company CFOs were subject to the same order effects as public company CFOs but they indicate that the SEC's enforcement process and equity analysts are less important in driving earnings quality. Finally, the conclusions for these two questions are largely buttressed by the answers to questions where order was scrambled. For example, a key takeaway in Table 9 is CFOs' dislike for fair value accounting, similar to Table 8 where the order is scrambled.

option, so that survey takers could provide 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 of Business at Duke University for their quarterly survey. 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).[2] 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.[3]

We received 558 responses, for a response rate of approximately 5.4%.[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 et al. (2005) but higher than the approximately 4.5% rate in the quarterly CFO survey administered at Duke University. One possible reason for the lower response rates is that spam filters have become more stringent in recent years, and despite our best efforts to avoid them, they have taken a toll. To shed further light on the response rate, we probed the Duke email list (CFO magazine's email list is not accessible to us). The main finding is that about 10% of emails did not reach the intended recipient, and two-thirds of the names on that list had not opened an emailed survey invitation in the previous three years of surveys conducted by Duke. Had we deleted the previously non-responding emails from the Duke list, and assumed a similar rate of exclusion from the CFO magazine's list, our response rate would have been approximately 15% instead of the reported 5.4%.[5] Of the 558 total responses we received, 402 responses indicate whether they belong to a public company ($N=169$), a private firm ($N=206$) or to the non-profit sector. 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 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 in earnings quality practices. In particular, the survey instrument asks for firm measures of profitability (report a profit or a loss), growth opportunities (growth rate in sales, price-to-earnings ratio), agency problems (proportion of CEO and CFO pay that is incentive-based, managerial ownership, institutional ownership), credit risk (credit rating, total debt-to-assets ratio), 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 (sales revenue, number of employees), information environment (public vs. private, which stock exchange for public firms), industry membership, and several variables specific to the CFO (age, risk aversion, job title, person he/she reports to, location, time on the job, and professional background such as public accounting, investment banking etc.). The risk aversion question is based on 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 conditional results that are economically meaningful and on which prior literature might have a bearing. In addition, we provide a systematic comparison of public firms relative to private firms in the text for two reasons. First, because 206 responses are from private firms, such a comparison is feasible. Second, emerging work has explored the private/public divide to test hypotheses related to financial reporting (e.g., Ball and Shivakumar, 2005; Burgstahler et al., 2006; Beatty and Harris, 1999; Beatty et al., 2002), so we have 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.

Table 1, panel A reports descriptive data on the surveyed public firms compared to surveyed private firms (with non-profits excluded). The responding public firms are much larger than the private firms in that 1.2% (15.9%) of the public (private) sample has revenues of less than $25 million, and 26.7% (1%) have revenues of more than $10 billion. Most public firms are from the manufacturing sector (37.6%) followed by banking/finance/insurance (15.8%) and healthcare or pharmaceuticals (7.9%) sectors. Insider ownership is lower in public firms, and institutional ownership is higher, as expected. Public executives are mostly between 50 and 59 years old and are somewhat younger than their private counterparts.

[2] 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), in addition to specific data about the firm.

[3] We did not find meaningful differences in the answers of early vs. late respondents. We define early respondents as those who responded on or before the median response date for the period of time the survey was open.

[4] We believe that we have only one response per company. The reason is that none of our observations coincide on all of the following five identifying firm variables: (i) debt/assets, (ii) growth rate, (iii) company age, (iv) did you report a profit, and (v) stock price.

[5] While the survey is anonymous, a subset of CFOs who participate in the quarterly Duke survey voluntarily identify themselves and provide contact information. Based on our experiences over the 17 years of the quarterly survey, including interacting with many respondent CFOs, three patterns emerge: (1) If the CFO does not want to participate, he will delete the survey invitation, rather than forward it to another employee or fill it out with gibberish; (2) if the CFO participates, she will provide truthful and accurate information to the best of her ability; and (3) the intent of the questions on the survey is generally understood by the participants. Of those CFOs that do identify their firms in their correspondence with us, we have found that the information they report about their demographics (capital structure, payout policy, etc.) closely mirrors this same information in public sources like Compustat. In summary, our belief is that the survey responses provided by CFOs are reasonably accurate.

Table 1.
Descriptive statistics for sample CFOs and firms.

Panel A: Demographic characteristics of the survey participants ($N=375$)[a]

Ownership	Public (%)	Private (%)	*Insider ownership*	Public (%)	Private (%)***
	45.07	54.93	< 5%	42.76	24.10
			5–10%	34.21	12.31
			11–20%	9.21	7.69
Revenues	Public (%)	Private (%)***	> 20%	13.82	55.90
< $25 Million	1.21	15.92			
$25–$99 Million	5.45	31.84	*Risk averse*	Public (%)	Private (%)
$100–$499 Million	13.33	32.34	Yes	87.57	84.47
$500–$999 Million	10.91	8.46	No	12.43	15.53
$1–$4.9 Billion	25.45	8.46			
$5–$9.9 Billion	16.97	1.99			
> $10 Billion	26.67	1.00	*Executive age*	Public (%)	Private (%)**
			< 40	4.82	4.93
Industry	Public (%)	Private (%)***	40–49	35.54	24.63
Retail/wholesale	6.06	19.90	50–59	46.39	46.31
Mining/construction	3.64	6.12	≥60	13.25	24.14
Manufacturing	37.58	28.57			
Transportation/energy	6.67	5.61			
Communications/media	4.24	3.06	*Executive tenure*	Public (%)	Private (%)**
Tech [software/biotech]	5.45	5.61	< 4 Years	21.08	30.05
Banking/fin/insurance	15.76	8.16	4–9 Years	37.35	27.59
Service/consulting	3.64	8.16	10–19 Years	27.11	21.18
Healthcare/pharma	7.88	6.12	≥20 Years	14.46	21.18
Other	9.09	8.67			
Proportion of foreign sales	Public (%)	Private (%)***	*Executive education*	Public (%)	Private (%)
0%	14.63	41.71	Some college	0.00	0.99
1–24%	34.76	42.21	BA or BS	35.33	42.86
25–50%	29.27	12.56	MBA	58.08	48.77
> 50%	21.34	3.52	Non-MBA masters	6.59	7.39
Institutional ownership	Public (%)	Private (%)***	*Executive background*	Public (%)	Private (%)
< 5%	4.67	75.14	Corporate finance	48.52	55.34
5–10%	6.00	2.16	Public accounting	45.56	41.26
11–20%	10.00	1.08	Other accounting	21.30	27.18
> 20%	79.33	21.62	Investment banking	4.73	1.94
			Credit officer	2.96	2.43
			Other	5.33	9.71

[a]Variables tabulated here are directly drawn from the survey responses. The survey instrument is located at http://faculty.fuqua.duke.edu/~jgraham/EQ/EQ.htm. The risk aversion question is based on Barsky et al. (1997). Some 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 a chi-squared test. *,**, 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.

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	Exec 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 this table, Panel A. All variables are directly drawn from the survey responses. *, **, *** correspond to *p*-values <0.10, 0.05, 0.01, respectively.

Panel C: Representativeness of surveyed public firms (total possible $N=169$)

Variable		Mean	Median	Compustat breakpoint categories/quintiles[a]						
				1	2	3	4	5	6	7
	Universe avg.	2,641.07	247.63	9.96	56.85	247.76	709.74	2,284.96	6,959.73	35,144.19
	Universe %			13.56	21.28	26.68	11.06	18.38	3.96	5.09
Sales[a]	Sample avg.[b]	5,473.72	2,950.00	12.50	62.00	299.50	749.50	2,950.00	7,450.00	12,500.00
	Sample size			2	9	22	18	42	28	44
	Sample %			1.21	5.45	13.33	10.91	25.45	16.97	26.67
	Universe avg.	0.04	0.03	−0.47	−0.13	0.03	0.21	0.58		
Sales growth	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		
	Universe avg.	0.18	0.08	0.00	0.01	0.08	0.22	0.58		
Debt/assets	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		
	Universe avg.	BB+	BB+	B−	BB−	BB	BBB	A		
Credit rating	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		
	Universe avg.	36.42	17.29	7.34	13.18	17.54	25.49	118.61		
Price/earnings ratio (for $E>0$)	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: Representativeness of surveyed public firms (total possible $N=169$)

Variable		Mean	Median	Compustat breakpoint categories/quintiles[a]						
				1	2	3	4	5	6	7
CEO incentive pay	Universe avg.	49.80	53.74	3.84	37.62	63.56	87.10			
	Sample avg.[d]	55.99	66.00	10	36	66	90			
As % in CEO total pay[c]	Sample size			14	50	69	28			
	Sample %			8.70	31.06	42.86	17.39			
	Universe avg.	44.88	46.21	6.14	37.06	62.42	86.00			
CFO incentive pay	Sample avg.[d]	38.17	36.00	10.00	36.00	66.00	90.00			
As % in CFO total pay[c]	Sample size			43	74	40	5			
	Sample %			26.54	45.68	24.69	3.09			
	Universe avg.	2.88	0.78	0.11	0.37	0.80	1.83	11.32		
Executive ownership	Sample avg.	10.81	5.00	0.00	0.35	1.00	2.38	17.34		
	Sample size			5	1	26	31	89		
	Sample %			3.29	0.66	17.11	20.39	58.55		
	Universe avg.	53.49	59.39	7.26	32.80	59.23	77.46	90.77		
Institutional ownership	Sample avg.	53.96	60.00	8.57	29.78	56.34	75.53	92.17		
	Sample size			23	32	32	40	23		
	Sample %			15.33	21.33	21.33	26.67	15.33		

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, (positive) *P*/*E* ratio, CEO and CFO incentive pay, executive ownership, and institutional ownership. 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. The following 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 growth 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. The following information for the universe of firms is obtained from Execucomp: (1) CEO incentive pay and CFO incentive pay, are calculated as [100 × (stock_awards_fv+option_awards_fv+bonus)/tdc1]. (2) Executive Ownership, is based on shrown_exclu_opts_pct, and contains all covered executives for each firm in the Execucomp database. Institutional ownership is based on the variable "shares" from Thomson Reuters Institutional (13f) Holdings – s34 Master File for Dec. 2011. 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%. [a]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. 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). [b]Average sales of survey firms in each of categories 2 to 6 are defined to be the midpoint 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. [c]There are four categories of CEO (CFO) incentive pay as % in CEO (CFO) total pay (category 1: between 0 and 20; category 2: between 21 and 50; category 3: between 51 and 79.9; category 4: between 80 and 100). [d]Average CEO (CFO) incentive pay as % of CEO (CFO) total pay of survey firms are defined to be the average of the lower bound and upper bound of the category. All firms contained in sample calculations are public.

Table 1. (*continued*)

Panel D: Representativeness of interviewed firms

Variable		Mean	Median	Compustat breakpoint quintiles				
				1	2	3	4	5

Panel D: Representativeness of interviewed firms

Variable		Mean	Median	Compustat breakpoint quintiles				
				1	2	3	4	5
Sales	Universe avg.	2,641.07	247.63	17.28	79.94	264.13	917.76	11,934.21
	Sample avg.	24,076.81	1,0420.03			274.34		26,457.06
	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%.

Roughly 46% of the public executives have a public accounting background and another 21% have another accounting background, consistent with our priors that top finance executives are likely to have a sophisticated understanding of the accounting determination of earnings.

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), we benchmark our survey sample to Compustat in Table 1, panel C.[6] While the survey firms span most of the universe of Compustat firms on the indicated variables, they 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. Public firms in the survey are also growing faster, are more levered, and have higher credit ratings than the average Compustat firm. Probing this issue further, we find that the distribution of the sales variable for our sample firms matches well the corresponding distribution for Execucomp, another of the most widely used populations for archival research. The match with Execucomp is also better than the match with Compustat for the other variables in Table 1, Panel C. In untabulated analyses, we also find that our sample is fairly representative in terms of agency variables like executive compensation and managerial and institutional ownership. Overall, our public firms sample seems to be a reasonable snapshot of U.S. public firms.

2.3. Conducting interviews

We conduct one-on-one interviews with 12 CFOs and two with standard-setters (outside of our universities), to complement the survey work in two ways.[7] First, we use pre-survey interviews for a broad exploration of earnings quality, to identify under-researched topics, and as input in developing survey questions. Second, post-survey interviews clarify the main findings, including some surprising results. To identify interview subjects, we choose firms in different industries and with different analyst coverage and market capitalization. All the contacted executives and standard setters agreed to be interviewed, and most of the interviews were done before the survey was administered. Table 1, Panel D reports that 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 but higher credit ratings.[8]

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 respondents 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 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. Also consistent with Sudman and Bradburn (1983), "riskier" questions are asked later in the interview. 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 forthcoming in their responses, and most were enthusiastic about the topic. With the interviewee's permission, each interview was recorded and transcribed, ensuring accuracy in the presented quotations later in the paper.

3. The concept and characteristics 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 (i) valuation (e.g., Barth et al., 2001; Schipper, 2005; Barth, 2006; Francis et al., 2006, IASB/FASB project on the conceptual framework 2006); or (ii) 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 on their implications for what is meant by "high quality earnings", they also contradict on some key issues. As Christensen et al. (2005) point out "increasing the persistent components (of earnings) and reducing the reversible components are generally desirable for valuation, but not for contracting". Note that at the beginning and throughout the survey we emphasize that our notion of earnings is reported GAAP earnings.

Table 2 contains the results, rank ordered by stated importance with the respondents (recall that because of the random scrambling, different respondents saw a different ordering of alternatives in taking the actual Internet survey). Table 2

[6] The idea is to provide a context for interpreting our results. We benchmark to Compustat due to data availability and because it is the sample with which researchers are most familiar.

[7] Some interviewees had recently retired from their 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.

[8] Table 1, panel D lists data for 11 publicly traded firms since one executive worked for a private firm.

Table 2
Survey responses to the question: rate the importance of earnings.

Question	Rate the importance of earnings	Public (total possible $N=169$)			Tests		Private (total possible $N=206$)
		% Very important (5 or 4)	% Not important (2 or 1)	Average rating	Significant differences in average rating vs. rows	H_0: average rating=3	Very important (5 or 4)
1	For use by investors in valuing the company	94.67	2.37	4.72	2–9	***	75.00***
2	For use in company's debt contracts	82.15	6.55	4.14	1, 5–9	***	78.92
3	For use by the company's own managers	80.48	7.10	4.15	1, 5–9	***	85.44
4	For use in executive compensation contracts	78.70	7.70	4.11	1, 5–9	***	62.22***
5	For use by outsiders in evaluating the company's managers	62.72	13.61	3.67	1–4, 6–9	***	39.22***
6	For use by current and prospective employees	45.24	17.86	3.33	1–5, 9	***	22.55***
7	For use by current and prospective suppliers	41.42	21.89	3.25	1–5, 9	***	32.35**
8	For use by current and prospective customers	40.24	22.49	3.22	1–5, 9	***	27.45***
9	For use in negotiations with labor	32.74	36.91	2.89	1–8		22.77***

Columns 3 (4) present the percent of respondents indicating importance levels of 5 or 4 (2 or 1) on a scale of 1 to 5. Column 5 reports the average rating, where higher values correspond to higher importance. Column 6 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5 percent level are reported in the table. For example, for row 3 the recorded "1, 5–9" signifies that the average rating for the question in row 3 is significantly different from the average rating for the question in row 1 and all questions in rows 5 to 9. Column 7 reports the results of a *t*-test of the null hypothesis that each average response is equal to 3, with ***, **, and * denoting rejection at the 1%, 5%, and 10% levels, respectively. Column 8 presents the percentage of private firm respondents indicating importance levels of 5 or 4, as well as significance levels for differences from the equivalent question for public firms.

reveals that the valuation role of reported earnings dominates: nearly 95% of public company CFOs think that earnings are important to very important for investors in valuing the company (ranks of 4 or 5 on a scale of 1 to 5); in addition, the average rating for this role is statistically greater than the average rating for every other use of earnings in the table. This emphasis on the valuation role is consistent with 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 employees, suppliers and customers (45.2%, 41.4% and 40.2% respectively).[9] 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; and (iii) for use by competitors.

Perhaps the main surprise here is the high score assigned to the firm's own management using reported earnings (80.5%), given existing arguments that managers have access to more fine-grained internal information beyond earnings.[10] Our interview evidence, however, confirms a tight link between internal and external reporting. Several CFOs emphasize 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

[9] Factor analysis of these responses (with varimax rotation) is consistent with our interpretation of the data. In particular, we obtain three factors with eigenvalues greater than one and these three factors 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.

[10] In untabulated analyses, we find little reliable evidence that managerial views on earnings quality differ depending on how strongly they favor internal uses of earnings.

GAAP". The tight link between the internal and external uses of GAAP earnings 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 Philippon, 2009; Shroff, 2011).

Turning to conditional analyses, 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 less available to outsiders, and private and smaller firms have fewer formal means of communicating earnings-related information. Not surprisingly, the valuation role of earnings attracts a much lower rating for private firms. Otherwise, the views of public and private firm CFOs are remarkably similar, with a 0.93 correlation across earnings uses.

In sum, the valuation use of GAAP earnings dominates. There is also solid support, however, for the stewardship and contracting uses, and even for the internal use of GAAP earnings by managers. Hence, earnings is a key metric for a broad spectrum of interested parties, consistent with the position adopted by some researchers (e.g., Christensen and Demski, 2003; Hemmer and Labro, 2008; Kothari et al., 2010, Lambert, 2010) but less so with FASB/IASB's (2006) focus on valuation.

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.[11] High-quality earnings have been defined/measured in the literature as those that:[12]

(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) and 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) and Dechow and Dichev (2002);
(vii) have small changes in total accruals that are not linked to fundamentals, e.g., DeAngelo (1986), Jones (1991), Dechow et al. (1995), and 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 correlation among these various measures of earnings quality (Bowen et al., 2008; Dechow et al., 2010). It is unclear whether such low correlations indicate noise in the measures 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 question "What does the concept of earnings quality mean?"

The collected responses are categorized and ranked on their relative frequency in Panel A of Table 3, while Panel B includes some direct quotes from participants which illustrate the findings. Our discussion emphasizes public firms but the results for private firms are nearly the same (the correlation between the two in Panel A is 0.95). The most frequently narrated idea of earnings quality relates to reported 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 that make them unsustainable (i.e., the second theme is really the flip side of the first one). In addition, the fourth category "Quality earnings come from normal (core) operations" can be construed as just a variation on the same broad sustainability theme. This dominance of the sustainability notion of earnings quality is understandable given the importance of the valuation function of earnings registered in Table 2, as valuation approaches typically view the firm as a long-term stream of earnings and cash flows. But it is easy to see that sustainability in earnings is also a desirable trait in credit decisions and managerial evaluation, especially in the interpretation of earnings as a guide to long-term solvency and firm performance. Note also that the sustainability notion of earnings is closely related to the more frequently encountered notion of earnings persistence. We favor the sustainability label here because it more directly corresponds to the actual survey answers; also, sustainability captures more of a forward-looking meaning, while persistence seems to be more of a statistical construct based on past observ-

[11] 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 (Bernstein and Siegel, 1979; Siegel, 1982).

[12] 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. While "representational faithfulness" is implicit in our earnings quality constructs, we do not include it as an explicit survey choice because our emphasis is on specific and operational measures.

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

Rank	*CFO's concept of earnings quality*	*Count-Public*	*Count-Private*
1	Sustainable, Repeatable, Recurring, Consistent, Reflects long-term trend, Reliable, has the highest chance of being repeated in future periods	48	60
2	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	39	39
3	Accurately reflects economic reality, accurately reflects the results of operations	29	24
4	Quality earnings come from normal (core) operations	15	23
5	Earnings that are backed by cash flows	14	24
6	Accurate application of GAAP rules	13	11
7	Transparency/clarity	11	8
8	Consistently reported, consistently applied GAAP	10	4
9	Conservative	6	4
10	Regular revenues minus regular expenses, normal margin on revenues	5	5
11	Growing	2	2
12	EBITDA	1	3
13	Sustainable in the face of adversity (macro, operations)	0	4

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"
"Having transparency of what is driving the earnings is critical to understanding the level of quality in the reported number".

This table summarizes the responses from the open-ended question "What does the concept of earnings quality means?", splitting them into responses from private and public firms. The free-form responses are first categorized into tentative categories, and then the categories are checked for duplicates and overlaps, and merged or re-arranged, as appropriate. Most responses are fitted within one category, although sometimes responses are split and counted in two separate categories. Panel B contains selected quotes, illustrating the concepts in Panel A. Responses are from 169 public and 206 private firms.

ations. While the academic literature has certainly explored the sustainability and persistence aspect of earnings (Penman and Zhang, 2002; Sivakumar and Waymire, 1993; Skinner and Soltes, 2011), the research effort on this characteristic is not commensurate with the overwhelming popularity of this idea among CFOs.

Several other notions of earnings quality figure prominently in CFO responses. One is that quality earnings accurately reflect economic reality or the results of operations, consistent with the notions of "representational faithfulness" in U.S. GAAP and "true and fair view" in U.K. accounting (Livne and McNichols, 2009) – but this notion is less helpful operationally. Another common theme in Table 3 relates to earnings that are backed by cash flows, consistent with efforts like Dechow and Dichev (2002). "Accurate" and "consistent" application of GAAP rules also score highly, suggesting that standards and their application have much influence on the quality of reported results. Summing up, the qualitative answers suggest that, above all, high quality earnings are sustainable and repeatable, and free from one-time items.

Interestingly, not a single response brings up ideas about the potentially conditional nature of earnings quality. As discussed above, recent research emphasizes that the notion of earnings quality critically depends on the task at hand, and different metrics of earnings quality are appropriate in different circumstances, e.g., persistence may be the most important quality characteristic for valuation but conservatism may be the key characteristic in debt contracting (Dechow et al., 2010). Of course, responses that impart conditional ideas take more effort to formulate and write, and thus may be less likely to be provided. Still, there are reasons to believe that effort-aversion is not the main explanation here. One reason is that the free-form question appears near the beginning of the survey, and is clearly important as the main topic of the survey. In addition, many answers are elaborate (mean number of words in the answers is 13, and the standard deviation is 12), often including explanations and more than one notion of earnings quality. Even when several ideas of quality are discussed, however, these responses are usually complementary, e.g., "repeatability of earnings and lack of one-time items", or reflect different aspects of what appears to be a single concept of earnings quality, e.g., "earnings that are reliable, sustainable, and have a cash-predictability aspect". Thus, CFOs responses do not lend support for the importance of the conditional nature of earnings quality.

Interviews with standard setters reveal much agreement with CFOs' 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 ongoing cash flows/accruals and revisions in asset stocks. So far, however, there is little evidence that classifying earnings components by persistence has become a major driving force in standard setting. Current standards help in assessing some transient items, e.g., extraordinary items, discontinued operations, and other comprehensive income items. The treatment for the majority of transient items, however, (e.g., write-offs, impairments, and gains and losses on operating assets and liabilities) is inconsistent, with some firms separating and highlighting them as line items and others relegating them to aggregate categories like cost of goods sold and selling and administrative expenses. Based on our impressions from the literature and this study, we believe that parsing earnings components by persistence is likely to have considerable appeal to key constituencies like company executives, analysts, and investors. To summarize, identifying and highlighting one-time items is the single most important issue where we find close alignment between standard setters and key constituencies, which suggests a possible direction for improving accounting standards.

3.3. *Rank ordering the empirical characteristics of earnings quality*

Following the preceding conceptual exploration, we ask CFOs to rate the importance of commonly-used specific characteristics of earnings quality. As reported in Table 4, the top choice is that high quality earnings reflect consistent reporting choices over time (94.0% agree) followed by avoiding long-term estimates as much as possible (86.4%).[13] These items have intuitive appeal and are consistent with the preference for persistent and repeatable earnings registered above, where changing accounting choices introduce irrelevant accounting noise and long-term estimates introduce substantial estimation errors in the stream of operating earnings. Given their popularity with CFOs, there seems to be opportunities for future research that operationalizes these measures. One caveat, however, is that there could be 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 et al. (2011) for a discussion of these 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, even though the market for electricity is not very liquid and hence less reliable for such durations.

Table 4 also shows that high quality earnings are (i) 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%). Thus, these answers are largely consistent with the qualitative responses above, affirming the importance of sustainability and predictability of earnings.[14] The importance of these characteristics is also confirmed in the interviews. 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.[15] However, persistent abusers or cases where the truth is stretched too often get questioned and lose credibility; Elliott and Hanna (1996) report evidence consistent with this comment.

To check consistency, and to further explore the earlier theme of "one earnings" and "one dominant trait of earnings quality", we analyze whether the results vary much depending on decision contexts such as valuation and stewardship. Specifically, we consider the public firms' responses that rank the use of earnings in debt contracts as a "4" or a "5" in Table 2, and compare that to participants who rank 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 at the top (consistent reporting choices, long term estimates, and sustainable earnings), regardless of

[13] The interviewed CFOs confirmed the importance of consistency; for example, one CFO remarked: "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".

[14] A factor analysis of these responses (with varimax rotation) is consistent with these statements. In particular, when the eigenvalue of the factors was restricted to at least 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.

[15] Several CFOs underscore the importance of disclosure to clarify the nature of these non-recurring items. One CFO cites the example of a FIN 48 reversal that he said he would disclose, talk about, and work through the item transparently so that investors can then attempt to go back and determine a consistent earnings stream. 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 investors can better appreciate the core earnings number for the firm.

Table 4
Survey responses to the question: to what extent do you agree that this statement captures important features of "high quality earnings"?

		Public (total possible $N=169$)			Tests		Private (total possible $N=206$)
Statement	High quality earnings:	% Agree	% Disagree	Average rating	Significant differences in average rating vs. rows	H_0: average rating=3 (neutral)	% Agree
(1)	Reflect consistent reporting choices over time	94.05	2.98	4.49	2–12	***	90.2
(2)	Avoid long term estimates as much as possible	86.39	3.55	4.28	1, 4–12	***	83.4
(3)	Are sustainable	80.47	7.10	4.25	1, 4–12	***	80.8
(4)	Are useful predictors of future earnings	78.57	8.33	4.07	1–3, 8–12	***	75.1
(5)	Are useful predictors of future cash flows	75.74	7.10	4.07	1–3, 8–12	***	75.7
(6)	Have accruals that are eventually realized as cash flows	75.74	9.46	4.04	1–3, 8–12	***	71.2
(7)	Do not include one-time or special items	71.43	16.07	3.92	1–3, 9–12	***	68.0
(8)	Require fewer explanations in company communications	69.23	14.80	3.80	1–6, 10–12	***	62.0
(9)	Result from conservative recognition of assets and liabilities	59.28	13.77	3.64	1–7, 10–12	***	66.8
(10)	Recognize losses in a more timely manner than gains	49.71	22.48	3.40	1–9, 11–12	***	50.7
(11)	Are less volatile than cash flows	40.24	28.41	3.15	1–7, 9–10,12	*	42.0
(12)	Have fewer accruals	20.84	49.40	2.60	1–11	***	26.6

Respondents were asked to indicate the level of agreement with statements on a scale of 1 (strongly disagree) to 5 (strongly agree). Column 3 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree with or agree with). Column 4 presents the percent of respondents indicating agreement levels of 2 or 1 (disagree with or strongly disagree). Column 5 reports the average rating, where higher values correspond to higher agreement. Column 6 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5 percent level are reported in the table. For example, for row 3 the recorded "1, 4–12" signifies that the average rating for the question in row 3 is significantly different from the average rating for the question in row 1 and all questions in rows 4 to 12. Column 7 reports the results of a *t*-test of the null hypothesis that each average response is equal to 3 (neutral). Column 8 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.

whether they picked valuation or debt contracting as the dominant use of earnings. Private firm CFOs also rank the same top three characteristics in the same order in Table 4, and other conditional analyses in the Internet appendix of the paper reveal largely the same picture. Thus, CFOs have rather consistent views of earnings quality characteristics, with little difference conditional on earnings use and firm and manager characteristics.

Additional earnings quality characteristics that garner (near) majority support in Table 4 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 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. While potential abuse of conservative accounting has been recognized in the literature (e.g., DeAngelo et al., 1994; Francis et al., 1996), a less appreciated point that came up in the interviews is the 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. 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".

Characteristics not viewed as particularly important for earnings quality include earnings that are smoother than cash flows (40.2%) and earnings with fewer accruals (20.8%). The low ranking of earnings with fewer accruals is somewhat surprising given the voluminous literature on "the accrual effect" starting with Sloan (1996) but consistent with the positive role of most accruals in resolving timing and mismatching problems in Dechow (1994), and the high rating for accruals that are realized into cash flows mentioned above. The low rating for "smooth earnings" mirrors the corresponding conflicting impressions in the research literature. Some academic sources point to smoothness (or absence of volatility) as a desirable quality of earnings because it indicates the natural stability of operations or the elimination of transitory noise by the accrual process or benevolent managers (e.g., Dechow, 1994; Subramanyam, 1996; Tucker and Zarowin, 2006; Dichev and Tang, 2008).[16] Other studies point to the opposite interpretation, emphasizing the opportunistic and misleading "over-smoothing" of earnings with respect to the underlying cash flows or economic events (Leuz et al., 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%). Interviews reflect the same ambivalence about smoothness, with executives praising smooth earnings as consistent and reliable but decrying earnings that are "too smooth to reflect what is really going on".

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 related to the quality of assumptions underlying the estimates on the balance sheet". 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 coherent concept of earnings quality. CFOs believe that, above all, quality earnings are sustainable and predictive of future cash flows and earnings. More specific characteristics include consistent application of accounting rules, backing by cash flows, and absence of distortions like one-time items and long-term estimates. In addition, we find no support for the conditional view of earnings quality that dominates in recent research: this idea is absent in the qualitative responses, and favored quality characteristics vary little conditional on earnings uses and firm/management characteristics. While the academic literature has engaged some of these points, we believe that there is much room for interesting future research here. For example, we believe that the importance of earnings sustainability suggests research opportunities in identifying the accounting factors that affect sustainability and the long-term prediction of earnings. The idea that earnings quality is a single trait rather than a patchwork of context-specific characteristics is also worth further investigation.

[16] In the Internet appendix tabulating the cross-sectional differences in responses, we find that CFOs rate smooth earnings as a desirable attribute of earnings quality when (i) their CEO's pay is less incentive-based and (ii) their firms have more segments. By and large, we do not find many significant cross-sectional differences in the answers to this question.

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

		Public (total possible $N=169$)			Tests		Private (total possible $N=206$)
		% respondents					
Factor		Highly influenced by (5 or 4)	Not at all influenced by (2 or 1)	Average rating	Significant differences in average rating vs. rows	H_0: average rating=3	% Highly influenced by (5 or 4)
(1)	The business model of your company	73.96	9.47	3.91	3–14	***	75.7
(2)	Accounting standards	60.36	15.38	3.72	5–14	***	40.0***
(3)	Your company's industry	56.81	13.01	3.62	1, 6–14	***	59.5
(4)	Macro-economic conditions	55.03	18.34	3.57	1, 6–14	***	57.8
(5)	Your company's internal controls	50.00	23.21	3.39	1–2, 7, 9–14	***	37.7**
(6)	Your company's board of directors	47.93	27.81	3.28	1–4, 9, 11–14	***	38.7*
(7)	Your company's reporting choices	43.19	31.95	3.17	1–5, 13–14	*	28.2***
(8)	How fast the operating cycle converts accruals to cash flows at your company	40.24	25.44	3.24	1–4, 11, 13–14	**	42.2
(9)	Your company's audit committee	40.23	33.13	3.07	1–6, 13–14		16.1***
(10)	Your company's disclosure policy	39.05	31.95	3.10	1–5, 13–14		20.5***
(11)	Analysts that follow your company	38.69	35.72	2.98	1–6, 8, 13–14		9.9***
(12)	Your company's external auditor	37.87	29.58	3.08	1–5, 13–14		28.8*
(13)	The SEC's enforcement process	29.76	41.67	2.76	1–12, 14	**	6.9***
(14)	Prospect of litigation	22.62	48.21	2.63	1–13	***	16.3

Respondents were asked to rate the influence of factors 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 3–4 present the percent of respondents indicating influence levels of 5-4 (highly influenced by and 1–2 (not influenced by) for each statement. Column 5 reports the average rating, where higher values correspond to higher influence. Column 6 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5 percent level are reported. Column 7 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 8 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.

4. The determinants of earnings quality

4.1. What drives earnings quality?

After exploring the concept and observable characteristics of earnings quality, we next turn to the investigation of its underlying determinants. We are especially interested in the comparative role of innate vs. discretionary determinants, e.g., the role of industry and business model vs. the role of corporate governance and managerial discretion. We start with asking the CFOs to rank the importance of a number of earnings quality determinants that have been identified in the literature. The results in Table 5 indicate that the most important factor affecting earnings quality is the firm's business model (74% think that its influence is 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 garner 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 earnings quality summarized by Dechow et al. (2010), the survey evidence has the following implications. First, the factors that dominate Table 5 are mostly external to the firm or at least to its accounting function. Recent research has started to incorporate such factors as determinants of earnings quality (e.g., Francis et al., 2005) but there seems to be much opportunity for further development here, especially the role of business model and accounting standards. Second, we find solid support for the importance of internal controls, consistent with Doyle et al. (2007) and Ashbaugh-Skaife et al. (2008). There is also support for the role of the board of directors, although the evidence in the literature on this topic is more mixed (Beasley, 1996; Klein, 2002; Vafeas, 2005; Farber, 2005 vs. Larcker et al., 2007).

There is only modest support, however, for some of the factors that have received much attention in other research, specifically the role of the auditors, the SEC enforcement process, and the prospect of litigation (see Dechow et al. (2010) for a review). Our interviews with CFOs suggest that the explanation for this modest support lies in the contextual role of such factors, which become important only in fairly extreme situation but do not affect much the earnings quality of most firms. To illustrate this point, when asked about the relatively low rank that audit committees receive in our survey results, a CFO explains 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”.

Turning to private firm results in Table 5, as can be expected, their executives believe that external monitoring matters less to earnings quality, as captured by lower ratings on accounting standards (60.4% for public vs. 40% for private) and external auditor (37.9% vs. 28.8%). Consistent with the formal governance of private firms being less structured than that of public firms, private CFOs rank the importance of the following determinants to be lower: (i) internal controls (50% vs. 37.7%); (ii) board of directors (47.9% vs. 38.7%); and (iii) audit committee (40.2% vs. 16.1%). These statistics are consistent with research that private firms manage earnings more than public firms, as found in Burgstahler et al. (2006) and in Ball and Shivakumar (2005), but contrary to Beatty and Harris (1999) and Beatty et al. (2002). Overall, though, there is considerable agreement between the views of public and private executives, with correlation across categories of 0.87.

We also investigate whether the perceived importance of the drivers of earnings quality is a function of CFOs' views on the characteristics of earnings quality, detailed in Table 4. We rely on the factor analysis of the earnings quality proxies discussed in footnote 14. In particular, we identified four factors: “sustainability”, “transitory earnings”, “conservative earnings”, and “consistency”. For each factor, we designate a “high” and “low” level based on whether the average rating of the questions assigned to the factor is equal to or greater than (lower than) sample median. Finally, we check whether the average rating for each of the 12 drivers of earnings quality in Table 5 for the high level of a factor is statistically different from the low level for that factor. Of the 48 possible pair-wise comparisons (12 drivers and high/low splits for four earnings quality factors), only 5 pairs turn out to be statistically significant at the 10% level, which is the same that one would expect by chance. Hence, there is not much evidence to suggest that CFOs' ratings of the drivers of earnings quality in Table 5 are influenced by their ratings of earnings quality characteristics in Table 4. This finding suggests that CFOs' views of earnings quality are not particularly context-dependent.

4.2. How much of earnings quality is innate?

As mentioned above, 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 businesses and stakeholders can do except understand and acknowledge them. For example, the secular increase 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 et al., 2002). In contrast, there are a host of controllable factors that can influence the quality of earnings, starting with the internal workings of the firm (e.g., internal controls) and extending to various voluntary and imposed mechanisms at the industry and societal level. The distinction and importance of innate vs. discretionary factors are confirmed in the

Table 6
Survey responses to the question: to what extent do innate factors influence earnings quality at your company (from 0–100), with 0 as no innate and 100 as all innate?

Public ($N=160$)									Private ($N=192$)
Mean	Median	Std. dev.	Min	Max	% Greater than 75	% Greater than 50	% Less than 50	% Less than 25	Mean
49.98	50.00	22.19	5.00	100.00	15.04	46.36	20.00	17.50	52.10

Respondents were asked to indicate the extent to which 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 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 6–9 present the percent of respondents who answered greater than 75, greater than 50, less than 50, and less than 25, respectively. Column 10 reports the mean response of respondents from private firms, with ***, **, and * denoting statistically significant differences with public firm respondents at the 1%, 5%, and 10% levels, respectively.

interviews. Here is how one CFO expresses it: "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 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?"

Thus, an important question – that is perhaps unanswerable via archival research – is the extent to which earnings quality is innate vs. discretionary. Note that the preceding evidence already provides pointers about this issue; specifically, Table 5 indicates that innate factors are at least as important as discretionary factors because they comprise three of the five factors that exceed the 50% majority opinion threshold (business model, industry, and macro-economic conditions). To more specifically address this question, we ask CFOs "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)" on a scale of 0 (no influence of innate factors) to 100 (earnings completely determined by innate factors). The mean and median answer to this question is 50% in Table 6 with a standard deviation of 22.2 for public firms.[17] Similar answers obtain for private firms. Thus, it appears that half of earnings quality is innate, and half is discretionary.[18]

5. The impact of standard setting on earnings quality

As indicated in Table 5, accounting standards are among the most important factors affecting earnings quality. In fact, they are arguably the highest-rated discretionary factor that falls in the proper domain of accounting, and so it is important to have a better understanding of their role.

5.1. *The extent of reporting discretion*

We start with three questions that broadly assess the level and trend in reporting discretion used in GAAP accounting. We begin with "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 their opinions. As might be expected, public firms feel there is less discretion than do 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 feel they have less reporting discretion than do their counterparts (untabulated).

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 the pervasive entanglement of economic and accounting changes through time makes it hard to address with archival data (e.g., Donelson

[17] One discussant suggested that this estimate is questionable because respondents may tend to pick the midpoint when confronted with a difficult question. While we cannot explicitly reject this possibility, there are some reasons to believe that such effects are unlikely to be influential in our setting. One reason is that the answers to this question are not overly centered on the midpoint, with about a third of the observations lying outside the interquartile range. Another reason is that our survey has a number of difficult questions, especially later questions related to the incidence and magnitude of earnings management. However, we do not observe any gravitation to the midpoint in the answers to those difficult questions.

[18] In untabulated analyses, we find little evidence that survey responses vary systematically depending on whether managers are above or below the median in their consideration of innate factors as drivers of earnings quality. The exception is predictable patterns in the results in Table 5 (e.g., managers who believe that innate factors dominate also think that industry membership is of high importance for earnings quality) but these are more along the lines of validity checks.

Table 7
Evidence on financial reporting discretion.

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?

		Public ($N=147$)						Private ($N=178$)
Mean	Median	Std. dev.	Min	Max	% Greater than 0	% Less than 0	H_0: Mean=0	Mean
−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). Columns 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 6 and 7 present the percent of respondents who answered greater than 0 (neutral) and less than 0, respectively. Column 8 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 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.

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.

		Public ($N=164$)						Private ($N=196$)
Mean	Median	Std. dev.	Min	Max	% Greater than 0	% Less than 0	H_0: Mean=0	Mean
−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). 59.62% (70.98%) of respondents from public (private) firms who answered this question are over the age of 50, while 95.02% (94.81%) of respondents from public (private) firms are over the age of 40. Further, 14.91% (21.24%) of respondents from public (private) firms who answered this question have been in their current job for at least 20 years. Columns 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 6 and 7 present the percent of respondents who answered greater than 0 (neutral) and less than 0, respectively. Column 8 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 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.

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 at all limiting and 100 for very limiting)?

		Public ($N=152$)							Private ($N=176$)
Mean	Median	Std. dev.	Min	Max	% Greater than 75	% Greater than 50	% Less than 50	% Less than 25	Mean
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). Columns 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 6–9 present the percent of respondents who answered greater than 75, greater than 50, less than 50, and less than 25, 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 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".

		Public (total possible $N=169$)			Tests		Private (total possible $N=206$)
Statement	The following GAAP policies are likely to produce high quality earnings	% Agree	% Disagree	Average rating	Significant differences in average rating vs. rows	H_0: average rating=3	% Agree
(1)	Policies that match expenses with revenues	92.22	2.40	4.59	2–7	***	91.7
(2)	Policies that use conservative accounting principles	75.44	7.79	4.04	1, 3–7	***	79.0
(3)	Policies that minimize long-term projections and revaluations as much as possible	65.27	19.76	3.68	1–2, 4–7	***	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	1–3, 5, 7	***	42.0**
(5)	Policies that minimize the volatility of reported earnings	41.32	35.33	3.07	1–4		53.7**
(6)	Policies that rely on historical costs as much as possible	40.72	25.15	3.21	1–3, 7	**	40.5
(7)	Policies that rely on fair value accounting as much as possible	38.09	39.88	2.91	1–4, 6		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 3 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree with or agree). Column 4 presents the percent of respondents indicating agreement levels of 2 or 1 (disagree with or strongly disagree). Column 5 reports the average rating, where higher values correspond to higher agreement. Column 6 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5 percent level are reported in the table. Column 7 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 8 reports the percentage of respondents from private firms who strongly agreed or agreed (4 or 5 on survey), with ***, **, and * denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

et al., 2011). In Table 7b, the mean (median) answer is −4.2 (−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 reduced over time.[19] In addition, public firms are much more likely to report reduced discretion than are private firms. The theme of reduced reporting discretion was supported by our interviews, where CFOs agree that they have less discretion in financial reporting relative to when they started their careers.

As a final question about reporting 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?" This question is essentially a variation and reinforcement of the first question above, about the level of discretion today. Answers are recorded on a scale of 0 for "not at all limited" to 100 for "very limited", where "0" means no constraints. The mean (median) answer to this question is 35.6 (31) in Table 7c, suggesting that most CFOs feel that GAAP moderately constrains their ability to report high quality earnings. Overall, we find significant evidence that reporting discretion has been reduced over time, and some evidence that discretion today is somewhat less than desirable.

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 approach 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 prominent until the early 1980s, and still has strong support, especially in the investment community. In contrast, the balance sheet perspective is primarily interested in the valuation of assets and liabilities, and quality earnings result from quality valuation. 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 major 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 the conceptual underpinnings of these two perspectives, however, are too long and arcane to directly ask in a survey of financial executives. To shed some light on these issues then, we take a two-pronged approach. First, we ask respondents to rate a list of accounting policies that affect earnings quality, which 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.

[19] A potential concern is whether the CFOs have the requisite experience to answer this question. To address this concern, we investigate the 24 CFOs in the sample who have been on the same job for at least 20 years, and find that their answers are not statistically different from the answers of the other CFOs. In addition, the conditional analysis related to CEO age, in the Internet appendix, also reveals no differences in the answer to this question.

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 accounting policies that match expenses with revenues (92.2% of respondents agree) followed by conservative accounting principles (75.4%). The enthusiasm for matching is also evident in the interviews. 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 accounting policies that reduce long-term projections and revaluations (65.3%) would be conducive to producing high-quality earnings, echoing the importance of this item registered earlier in Table 4. There is a statistical tie between those who agree and disagree that earnings quality results from policies that rely on fair value accounting as much as possible (38.1% vs. 39.9%) or for policies that reduce earnings volatility (41.3% vs. 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 visibly more support for using fair value only for financial assets and liabilities, as opposed to operating assets and liabilities (53.6%).[20] The tenor of the results for private firms is nearly the same, correlating at 0.94 with public firm responses.

Consistent with survey responses, 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 earnings". The following manufacturing CFO's 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". 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". 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".

Summarizing, the key message in this section is the popularity of the matching principle and conservative accounting and the limited support for fair value accounting. These views contrast with FASB's official position against matching and conservative accounting, and in favor of fair value accounting (e.g., Johnson, 2005; Barth, 2006). This is perhaps our clearest finding of dissonance between the views of standard setters and the most important 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; Christensen and Nikolaev, 2009) but the sparse research efforts on matching seem short of CFOs' enthusiasm for this topic.[21]

5.4. How can standard setting improve?

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 or by the order in which questions appear in the survey instrument, we also have an explicit alternate choice "issue more rules", and since it gathered only 7.2% support and was the least popular response in the table, the message is confirmed.

The same point was strongly voiced in the interviews. Several 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: "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

[20] When we split the sample by CFOs belonging to the financial industry vs. others, the only question with a statistically significant difference is "do not include one-time or special items." For this particular question, 66.9% of non-financial companies strongly agreed as compared to 96.2% of financial firms.

[21] Exceptions that investigate the mechanism and effects of matching include Dechow (1994) and Dichev and Tang (2008).

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

		Public (total possible $N=169$)			Tests		Private (total possible $N=206$)
Question		% Agree	% Disagree	Average rating	Significant differences in average rating vs. rows:	H_0: average rating=3	% Agree
(1)	Issue fewer new rules	65.68	12.43	3.78	3–12	***	55.1*
(2)	Converge U.S. GAAP and IFRS	59.88	17.37	3.57	4–12	***	54.2
(3)	Allow reporting choices to evolve from practice	53.57	22.62	3.35	1, 5, 7–12	***	46.8
(4)	Issue more detailed implementation guidance	47.91	25.15	3.27	1–2, 7–12	***	55.4
(5)	Allow managers greater professional judgment in preparing financial statements	44.38	31.95	3.15	1–3, 7–8, 10–12	*	47.5
(6)	Reduce the use of "fair value" reporting	39.64	26.03	3.21	1–2, 7–8, 10–12	***	36.0
(7)	Emphasize detailed rules more than concepts and principles	30.73	52.41	2.67	1–6, 9, 12	***	29.9
(8)	Allow firms to choose either U.S. GAAP or IFRS	29.76	42.85	2.73	1–6, 9, 12	***	28.7
(9)	Require more conservative rules	28.74	27.55	2.99	1–4, 7–8, 10–12		45.5***
(10)	Require IFRS	25.44	41.42	2.69	1–6, 9, 12	***	25.6
(11)	Expand the use of "fair value" reporting	23.67	49.11	2.57	1–6, 9, 12	***	30.7
(12)	Issue more new rules	7.15	70.84	2.11	1–11	***	9.8

Respondents were asked to indicate the level of agreement with statements on a scale of 1 (strongly disagree) to 5 (strongly agree). Column 3 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree or agree). Column 4 presents the percent of respondents indicating agreement levels of 2 or 1 (disagree with or strongly disagree). Column 5 reports the average rating, where higher values correspond to higher agreement. Column 6 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5 percent level are reported in the table. Column 7 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 8 reports the percentage of respondents from private firms who strongly agreed or agreed (4 or 5 on survey), with ***, **, and * denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

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 effects of the change" but argues that these changes have been worth it if one considers the beneficial effects over long horizons, especially related to the reporting requirements for segment operations, pensions and health care benefits.

In terms of other changes that could produce higher quality earnings, many CFOs would like to see convergence of U.S. GAAP and IFRS (59.9% agree). 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". 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; Kothari et al., 2010) due to implementation concerns and investor confusion.

CFOs would also like 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: "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" and "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".[22] Several CFOs agree, however, that the litigious environment in the U.S. and regulatory fear of delegating too much discretion to business hamper progress towards a 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".

[22] One CFO went so far as to say that he is asking his legal group to rewrite contracts with customers so that such contracts can better conform to the revenue recognition standard related to multiple deliverables. This is interesting because we usually think of GAAP reflecting business transactions, rather than the other way around.

Standard setters are not surprised by 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 PCAOB [Public Company Accounting Oversight Board] 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". 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 implementation guidance (47.9%) but would also like rule makers to allow more judgment in reporting (44.4%).[23] As suggested in the interview evidence above, 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 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. Private firm responses are closely related to their public counterparts, correlating at 0.90 across policy choices.

Summing up, both survey and interview evidence suggest 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 a key 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

Several interviewed CFOs mention 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 audit 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 laments 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 observes 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 vs. 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 observes that auditors have reduced 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 vs. 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. 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 innovate via reporting practices for better access to capital.[24] 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

[23] 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".

[24] Zimmerman (2012) reflects this sentiment as well.

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).

6. Misrepresenting earnings

The evidence in Tables 5 and 6 suggests that discretionary factors are an important determinant of earnings quality. We next turn to earnings management, which is a clear discretionary choice, and has been a prominent theme in existing research. 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) discuss 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 use public data to detect earnings management?

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 typical earnings management; and (iii) the extent to which earnings management increases income vs. decreases income. Note that in phrasing these questions, we opt for a narrow but clear definition of earnings management. Specifically, we emphasize to respondents 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 avoid asking CFOs about earnings management at their own firms. Even though the survey is anonymous, managers might be reluctant to tell us about their own earnings misrepresentations.[25] To avoid this possibility, 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, for public firms the mean answer to this question is 18.4% (with a standard deviation of 17%). Thus, surveyed CFOs believe that roughly 20% of the firms in the economy misrepresent earnings in any given period.[26] Moreover, 99.4% of CFOs feel that at least some firms manage earnings. Interestingly, CFOs of private firms believe that the proportion of firms managing earnings is much higher relative to the estimates of their public counterparts (30.4% vs. 18.4%), consistent with findings that private firms manage earnings more (Burgstahler et al., 2006; Ball and Shivakumar, 2005). There is only modest cross-sectional variation in this response, conditional on other characteristics (untabulated).

To get a sense for the magnitude of earnings management, 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). Thus, for firms that manage earnings in a given period, approximately 10% of the earnings number is managed.

One implication of these results is that economy-wide the magnitude of opportunistic earnings management is relatively modest, especially as compared to some impressions from existing research, e.g., using our estimate of 20% of firms managing at 10% of earnings implies an economy-wide rate of 2%. Of course, comparisons with existing models of earnings management have to be made with caution because there are many different models, and there are differing constructs of interest. Still, it is probably fair to say that existing models greatly overstate the magnitude of likely earnings malfeasance. For example, using the most popular Jones model in a broad sample spanning 1970–2007, Wu et al. (2010) report average

[25] 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. It also seems plausible that although asked about "others," CFOs may answer based on their own experiences; we view this possibility as an added advantage.

[26] Although our survey question is restricted to within-GAAP misrepresentation of earnings, it may be informative to benchmark these frequencies against other data sources of earnings management and fraud. Karpoff et al. (2012) report 3,116 unique class action lawsuits (not necessarily related to GAAP violations) over the period 1996–2010 and 1,356 unique SEC AAERs over the period 1975–2011. The averages work out to 207 class action lawsuits per year and 37 AAERs per year. Dyck et al. (2011) estimate that fraud is taking place at any time in 11% to 13% of publicly traded firms.

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?

Public ($N=163$)								Private ($N=194$)
Mean	Median	Std. dev.	Min	Max	% Greater than 0	% Greater than 15	H_0: Mean=0	Mean
18.43	15.00	17.24	0	100	99.37	40.47	***	30.37***

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. Columns 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 6 and 7 present the percent of respondents who answered greater than 0 and greater than 15 (the median), respectively. Column 8 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 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 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?

Public ($N=163$)							Private ($N=189$)
Mean	Median	Std. dev.	Min	Max	% Less than 10	% Greater than 10	Mean
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. Columns 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Columns 6 and 7 present the percent of respondents who answered less than 10 (the median) and greater than 10, respectively. Column 8 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.

standard deviations of earnings and discretionary accruals (scaled by assets) of 0.20 and 0.10, respectively.[27] The corresponding numbers in a smaller focused sample in Klein (2002) are 0.08 and 0.19. These numbers imply discretionary accruals on the magnitude of 50% to 200% of earnings. If such discretionary accruals estimates are used as a proxy for the managed component of earnings, they appear an order of magnitude or more too high.

Turning to the (untabulated) conditional analysis, 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).[28]

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 them 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 earnings management increases or decreases income. While the extant literature tends to emphasize income-increasing earnings management (e.g., Sweeney, 1994; auditors' emphasis on income-increasing accruals as seen in Elliott et al., 2002), it is useful to gather 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 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 Elliott and Hanna (1996) for this point in the big-bath setting, and Dechow et al. (2012) for a recent application using accrual reversals to identify managed earnings.

[27] We use standard deviations of these variables to compare "average magnitudes" because Jones-type discretionary accruals are residuals from OLS regressions, with zero means by construction.

[28] Note that the conditional analyses are difficult to interpret unless we assume that CFOs are most likely to use their peers as a reference group.

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).

Public ($N=163$)							Private ($N=197$)
Mean	Median	Std. dev.	Min	Max	% Greater than 50	H_0: mean=50	Mean
58.78	67.00	27.18	2	100	66.19	***	56.25

Respondents were asked to indicate the percentage of firms that misrepresent performance by *increasing* earnings on a scale of 0 to 100. Columns 1–5 present the mean, median, standard deviation, minimum, and maximum of the answers, respectively. Column 6 presents the percent of respondents who answered greater than 50. Column 7 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 8 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 motivations for companies that use earnings to misrepresent economic performance.

		Public (total possible $N=169$)			Tests		Private (total possible $N=206$)
Motivations	Companies report earnings to misrepresent economic performance:	% Agree	% Disagree	Average rating	Significant differences in average rating vs. rows	H_0: average rating=3	% Agree
(1)	To influence stock price	93.45	6.55	4.55	2–3, 5–12	***	94.1
(2)	Because there is outside pressure to hit earnings benchmarks	92.86	2.38	4.41	1, 3, 5–12	***	90.6
(3)	Because there is inside pressure to hit earnings benchmarks	91.02	4.19	4.28	1–2, 4–12	***	86.7
(4)	To influence executive compensation	88.62	11.38	4.46	3, 5–12	***	93.0
(5)	Because senior managers fear adverse career consequences if they report poor performance	80.36	8.33	4.02	1–4, 7–12	***	83.7
(6)	To avoid violation of debt covenants	72.46	27.54	3.88	1–4, 8–12	***	89.2***
(7)	Because there is pressure to smooth earnings	69.05	11.90	3.74	1–5, 8–12	***	76.8*
(8)	Because they believe such misrepresentation will likely go undetected	60.12	17.27	3.55	1–7, 10–12	***	64.9
(9)	Because senior managers are overconfident or overoptimistic	49.41	23.81	3.40	1–7, 10–12	***	51.7
(10)	To reduce expectations of future earnings	41.67	32.15	3.13	1–9, 12		39.9
(11)	To influence other stakeholders such as customers, suppliers and employees	37.73	25.15	3.16	1–9, 12	**	53.7***
(12)	Because they feel other companies misrepresent performance	26.19	42.86	2.73	1–11	***	34.5*

Respondents were asked to indicate the level of agreement with statements on a scale of 1 (strongly disagree) to 5 (strongly agree). Column 3 presents the percent of respondents indicating agreement levels of 5 or 4 (strongly agree or agree). Column 4 presents the percent of respondents indicating agreement levels of 2 or 1 (disagree or strongly disagree). Column 5 reports the average rating, where higher values correspond to higher agreement. Column 6 reports the results of a *t*-test of the null hypothesis that the average rating for a given question is equal to the average rating for each of the other questions, where only significant differences at the 5 percent level are reported in the table. Column 7 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 8 reports the percentage of respondents from private firms who strongly agreed or agreed (4 or 5 on survey), with ***, **, and * denoting statistically significant differences with public firms respondents at the 1%, 5%, and 10% levels, respectively.

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 reporting discretion, we ask: "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". 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,b; Erickson and Wang, 1999). Benchmark-beating is another well-researched strand in the literature (Burgstahler and Dichev, 1997; Degeorge et al., 1999; Graham et al., 2005), while the role of pressure from inside the firm is just beginning to be explored (e.g., Oberholzer-Gee and Wulf, 2012) but is consistent with earlier evidence of widespread use of earnings for internal decision-making.

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 misrepresent earnings to avoid adverse career consequences. Thus, this evidence is broadly consistent with the conclusions of Burns and Kedia (2006) and Efendi et al. (2007), with the caveat that these studies deal with restatements, while our question explores within-GAAP misrepresentation. 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 earnings targets and bonuses (Healy, 1985). To our knowledge there is little work that directly explores the potentially more important current link between earnings targets and stock-based compensation.

Our analysis also indicates that the motivation to avoid debt covenant violations is important (72.5%), as well as the pressure to report smooth earnings (69.1%). 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 resolve 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 are much stronger for private firms, consistent with lower dependence on capital markets and more emphasis on (explicit and implicit) contractual considerations. But otherwise, the ordering of answers for private firms is nearly identical, correlating at 0.96 with public firm responses.

Turning to the interview evidence on these topics, one CFO said that the chances that an analyst would spot an occasional instance of earnings management are low, and only persistent abusers are likely to be 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? They probably wouldn't because it's buried in general and administrative expense and 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 short sellers 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 intertwined factors but capital market motivations dominate, followed by debt contracting, and career and compensation issues. 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.[29]

[29] When asked about the consequences of poor earnings quality, 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.

Table 14
Red flags: CFO signals that can be used to detect earnings that misrepresent economic performance.

Rank	Red flag	Count-Public	Count-Private
1	GAAP earnings do not correlate with cash flow from operations; Weak cash flows; Earnings and cash flow from operations move in different direction for 6–8 quarters; Earnings strength with deteriorating cash flow	58	38
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)	40	46
3	Consistently meet or beat earnings targets (guidance, analyst forecasts)	29	18
4	Large/frequent one-time or special items (restructuring charges, write-downs, unusual or complex transactions, Gains/Losses on asset sales)	28	25
5	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	25	45
6	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	24	25
7	(Frequent) Changes in (significant) accounting policies	17	9
8	Using non-GAAP (and/or changing) metrics	14	9
9	High executive turnover; Sudden change in top management; Change in financial management; Sudden director turnover; Employee (non-management) turnover	14	12
10	Inventory build-up/age of raw materials; Build-up in work-in-progress; Mismatch between inventory/COGS/reserves	12	13
11	Large volatility (Wide swings) in earnings, especially without real change in business	12	14
12	Build-ups of receivables; Deterioration of receivables days outstanding; A/R balance inconsistent with cash cycle projections/ Allowance for doubtful accounts	9	14
13	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	8	6
14	SEC filings becoming less transparent; Uninformative MD&A; Complex footnotes; Complexity of financials; Lack of understanding how cash is generated; Poor communication to outsiders	7	10
15	Major jumps or turnarounds; Break with historical performance; Unexplained volatility in margins	7	8
16	Large incentive compensation payment; Misalignment of management compensation incentives; Management turnover after bonus payments	7	8
17	(Repeated) Restatement of earnings/prior period adjustments	5	10
18	Accruals/Assets/Working capital growing faster or slower than revenue	5	4
19	Increased debt/high liabilities	5	2
20	Weak sales growth vs. industry/Declining performance (e.g. ROA or weakened cash flows, current ratio, working capital)	5	3

This table summarizes the responses from an open-ended question about red flags. Specifically, CFOs are asked to provide three red flags, which would alert an outside user to earnings misrepresentation. The responses are first split into public and private, and are organized into tentative categories. Then, the categories are checked for duplicates and overlaps, and merged or re-arranged, as appropriate. Most responses are fitted within one category, although sometimes responses are split and counted in two separate categories.

6.3. *Detecting earnings management*

There is considerable academic and practical interest in using publicly available data to identify managed earnings. 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 vs. 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 a random decomposition model is modest, however. Virtually every proposed method of identifying managed earnings (e.g., discretionary accruals and benchmark beating) is disputed by papers that argue that such representation of managed earnings represents (i) either an econometric or data artifact (Guay et al., 1996; Durtschi and Easton, 2005); or (ii) some unobservable dimension of earnings quality related to the unobservable fundamental earnings process (Beaver et al., 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?"

Table 14 summarizes CFO views on red flags, where individual responses are first organized into categories, and only categories with more than 5 responses are presented. The table is ranked 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 focus our discussion on public firms; in any case, it is clear from the table that the answers for private firms are similar, specifically, the correlation between public and private firm answers is 0.84. We discuss the most frequently offered red flags, followed by a summary of additional flags.

(i) *Earnings inconsistent with cash flows*: the most popular red flag is observing trends in earnings that diverge from trends in operating cash flows, garnering 58 responses. Permutations on this idea include "weak cash flows", "earnings strength with deteriorating cash flows", and "earnings and cash flows from operations move in different directions for 6–8 quarters". Note that the importance of the link between earnings and underlying cash flows is prominent throughout our entire study, garnering high rankings in the open-ended responses that describe 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, given that 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 red flag is deviations from industry norms or peer experience, registering 40 responses. Specific examples include deviations in 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 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) *Miscellaneous signals*: next, there is a cluster of four signals (mentioned between 24 and 29 times). This cluster includes consistently meeting/beating benchmarks earnings, frequent one-time items, lots of accruals and changes in accruals, and earnings patterns that are too smooth for fundamentals. Overall, these four flags are familiar and have been explored in the existing literature, e.g., in Barth et al. (1999) and Myers et al. (2007). The richness of the responses within categories, however, suggests that there is possibly more territory to be explored. For example, CFO responses emphasize *changes* in accruals as compared to the accrual anomaly literature that traditionally relies on level-of-accrual specifications.

(iv) *Other 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, frequent changes in significant accounting estimates, and "tone at the top".

6.4. Interview evidence on red flags

The main 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".[30] Some of the emerging work on the management styles of executives, 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; Dyreng et al., 2010; Schrand and Zechman, 2012; Davidson et al., 2012) but perhaps 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 their actions consistent with their stated strategy?' Does management pay lip service or are they serious about corporate governance?"

Beyond these general points, interviewed CFOs make some specific suggestions for red flags:

6.4.1. Acquisition accounting

Several CFOs mention that accounting for acquisitions is 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

[30] Cohen and Malloy (2011), Hobson et al. (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.

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".

6.4.2. 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".

6.4.3. Basis for recognition of income, especially revenue

"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 stated that they focus most on revenue when they conduct a due diligence review of the accounting policies of a target firm 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".

6.4.4. Real earnings management is harder to detect but often more damaging

CFOs think 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 vs. opportunistic cuts aimed at hitting earnings targets is difficult for an outside analyst.

7. Conclusions

We provide new insights into the concept of earnings quality using 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 free from one-time items. They add that high quality earnings reflect consistent reporting choices, are backed by actual cash flows, and avoid unreliable long-term estimates. They believe that about half of earnings quality is determined by innate factors, e.g., business model, industry, and macroeconomic conditions. There is near-unanimity that at least some firms manage earnings to misrepresent performance. In terms of point estimates, CFOs believe that in any given period about 20% of firms manage earnings, and for such firms 10% of the typical EPS number is misrepresented. Their answers also 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 existing 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, and significant deviations between firm and peer experience.

Most CFOs believe strongly in the matching principle, with conservative accounting close behind. Few of them are proponents of fair value accounting, although they think it does have a place in the reporting for financial assets and liabilities. CFOs have an aversion to mandated accounting changes, citing high cost of adoption and compliance, and also investor confusion and the corresponding continued need for guidance and explanation. They have a preference for converging U.S. GAAP and IFRS over the outright adoption of IFRS or allowing a choice between the two systems. CFOs believe that reporting discretion has 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 of young auditors. There is a strong feeling that financial reporting has hardened into a compliance exercise instead of evolving as a means to innovate and experiment to provide the best information to constituents.

CFO views on earnings quality remain largely the same across public and private firms, for different uses of earnings, and over various manager and firm characteristics. The dominance of the sustainability notion of earnings quality, combined with CFO preference for "one number" earnings for external and internal uses, suggests that earnings quality is a more homogenous and stable concept than previously thought. Existing research emphasizes that the notion of earnings quality is strongly conditional on decision context, and views earnings quality as a patchwork of characteristics which gain or recede in importance depending on the task at hand. Our impressions from this survey are that the same core concept of earnings quality has substantial utility over a wide range of settings, and the influence of decision context is limited. Future research can help in more carefully deciding the case between these two differing perspectives on earnings quality.

Appendix A. Supplementary material

Supplementary data associated with this article can be found in the online version at http://dx.doi.org/10.1016/j.jacceco.2013.05.004.

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