The Misrepresentation of Earnings*

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We ask nearly 400 CFOs about the definition and drivers of earnings quality, with a special emphasis on the prevalence and detection of earnings misrepresentation. CFOs believe that the hallmarks of earnings quality are sustainability, absence of one-time items, and backing by actual cash flows. Earnings quality is determined in about equal measure by controllable factors like internal controls and corporate governance, and non-controllable factors like industry membership and macroeconomic conditions. On earnings misrepresentation, CFOs believe that in any given period a remarkable 20% of firms intentionally distort earnings, even though they are adhering to generally accepted accounting principles (GAAP). The economic magnitude of the misrepresentation is large, averaging about 10% of reported earnings. The main consequences from poor earnings quality are investor confusion and lack of trust, leading to stock prices decreases and higher cost of capital. Finally, CFOs provide a list of red flags that can be used to detect earnings misrepresentation.

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Introduction

It is widely known that earnings is the single most important output of financial reporting. Intuitively, the notion of earning quality captures the extent to which the earnings number captures firm performance. In practice, however, there is considerable disagreement about what earnings quality actually means, and how to measure it. We take a new perspective on this topic by focusing our efforts on the producers of earnings quality: Chief Financial Officers. In a large-scale survey of 375 CFOs, we explore the definition, characteristics, and consequences of earnings quality, including the prevalence and identification of earnings misrepresentation. We supplement the survey with 12 in-depth interviews with CFOs from prominent firms.

Why ask CFOs? We argue that CFOs can provide unique insights on earnings quality. The reason is simple: CFOs know best the intersection of business operations and accounting rules which determines earnings, and their choices largely determine the quality of earnings. Almost all other research on earnings quality is based on published financial information, which has unavoidable limitations, especially with respect to unobservable managerial intent that drives decisions about earnings and earnings quality. In contrast, our approach focuses on the person that makes the key decisions with respect to accruals and real actions. Thus, our approach can yield insights that are otherwise unavailable, and are especially valuable to outside observers like financial analysts and investment managers.

Our four main results follow:

First, CFOs tell us that the key characteristics of high quality earnings are sustainability, the ability to predict future earnings, and backing by actual cash flows. More specific features include consistent reporting choices through time, and minimal use of long-term estimates. The factors that determine earnings quality are about half controllable (corporate governance, internal controls, proper accounting and audit function), and half non-controllable or innate (nature of the business, industry membership, macroeconomic conditions).

Second, CFOs believe that in any given year a remarkable one in five firms intentionally misrepresent their earnings using discretion within generally accepted accounting principles (GAAP). The magnitude of the typical misrepresentation is quite material: about 10 cents on every dollar. While most misrepresentation results in the overstatement of earnings, a full one-third of firms that are misrepresenting are intentionally lowballing their earnings.

Third, the main consequences from poor earnings quality are investor confusion and lack of trust in management, leading to stock price declines and higher cost of capital. CFOs acknowledge that investor confusion could also result in higher bid-ask spreads and lower analyst following but think that such effects are minimal for most sizable firms. In addition, firms with poor earnings quality frequently attract considerable short interest.

Finally, CFOs provide a list of red flags that outside observers like analysts and investors can use to identify poor earnings quality. Lack of correlation between earnings and cash flows is the top choice, followed by unwarranted deviations from industry or other peer norms. Presence of lots of accruals and one-time charges, and consistently beating analyst forecasts also score highly.

The CFOs

Our survey sample consists of anonymous responses from 169 CFOs of public companies and 206 CFOs of private companies. The public firm sample is roughly comparable to the Compustat population of U.S. public firms on most benchmark variables including sales growth, leverage, and PE ratios; the exception is size, where our surveyed companies tend to be larger. For simplicity, we refer to our respondents as CFOs. While indeed the majority of our respondents are CFOs, job titles also include Treasurer, Controller, Chief Accounting Officer, or Executive VP of Finance.

Survey design and delivery

Our draft survey instrument was sent to 19 academic researchers who have written prominent articles about earnings quality. We received feedback from each one and tried to incorporate their suggestions into the final survey instrument. The survey instrument was also checked by a company that specializes in survey design. This allowed us to avoid leading wording and ambiguities.

The survey was administered on the Internet with a combined sample of CFOs provided by Duke University and CFO Magazine who together conduct the quarterly Global Business Outlook CFO survey. Some of the survey questions involve fairly long lists of choices. One advantage of Internet delivery is the ability to randomize the order of these choices.

Our research also involved 12 in-depth interviews of CFOs. For these interviews, we follow best practices in interview techniques. Such practices include starting with open-ended questions, following a plan that connects to key questions in the survey, and saving controversial questions for the end of the interview.

Who Uses Earnings and How?

In gauging responses on earnings quality, it helps first to establish who uses earnings and how. Figure 1 shows the leading responses on this issue. The most important consumer is the investor who is valuing a particular company. Other important uses can be classified under the stewardship function, including use in debt contract, compensation contracts, and evaluation of management. Reported earnings also rank high as evaluation and compensation tools for the company’s own management; this is interesting because many other sources emphasize that internally, management is more likely to rely on finer-grained internal information (e.g., detailed cost data by product).

Figure 1. Importance of Earnings for Specific Uses

The survey evidence is complemented by our interviews. One CFO mentions: "most people who are looking at our public reports or listening to our calls have a model that they're trying to update, or they have a model about how they want to value the company. So from that perspective, most of our energy related to earnings reports is targeted at investors." Another CFO suggests that "both the valuation and stewardship motives are important. People are very aware of our financials and how they affect share price and stockholders. So we're very aware of the fact that how and what we communicate has to be absolutely clear and a fair view of our business so that stakeholders interpret it the right way. And then secondarily, and equally important, is accountability. The divisions are broken up based off of the presidents who are then held accountable for their revenue numbers as well, so that financial reporting is absolutely key in order to make sure that compensation is aligned with those numbers. And there is a lot that goes in to making sure that the numbers that we report are aligned with how we compensate."

We ask CFOs to comment on how they used earnings numbers inside the firm, given that they can access internal information beyond earnings. One reason that CFOs track earnings numbers is because they use the same number internally that they report every quarter to the Street. One CFO suggests a tight link between internal and external reporting "because we're always very cognizant of what was told to the Street, and we know that the Street is constantly watching our earnings, so the best thing to do is to have the exact same numbers that were received in the Street as we have internally, at least the top line numbers – the top and bottom line numbers. We make sure that everything that we have underneath – underneath in terms of the detailed reporting – also rolls up basically to the same story that we've told externally." Another CFO explains that performance inside the firm is tracked via reported earnings, and compensation decisions also depend on earnings: "earnings is certainly the basis of our assessing our own performance, and our board had a little grid to determine what is our return on equity and that was driven by the earnings figure as per GAAP".

The takeaway for financial analysts and investment managers is that their focus on reported earnings is warranted. First, CFOs emphatically confirm the importance of earnings for valuation. Second, they suggest an alignment of valuation, contractual, and internal uses behind "one number," externally reported earnings.

The Characteristics of High Quality Earnings

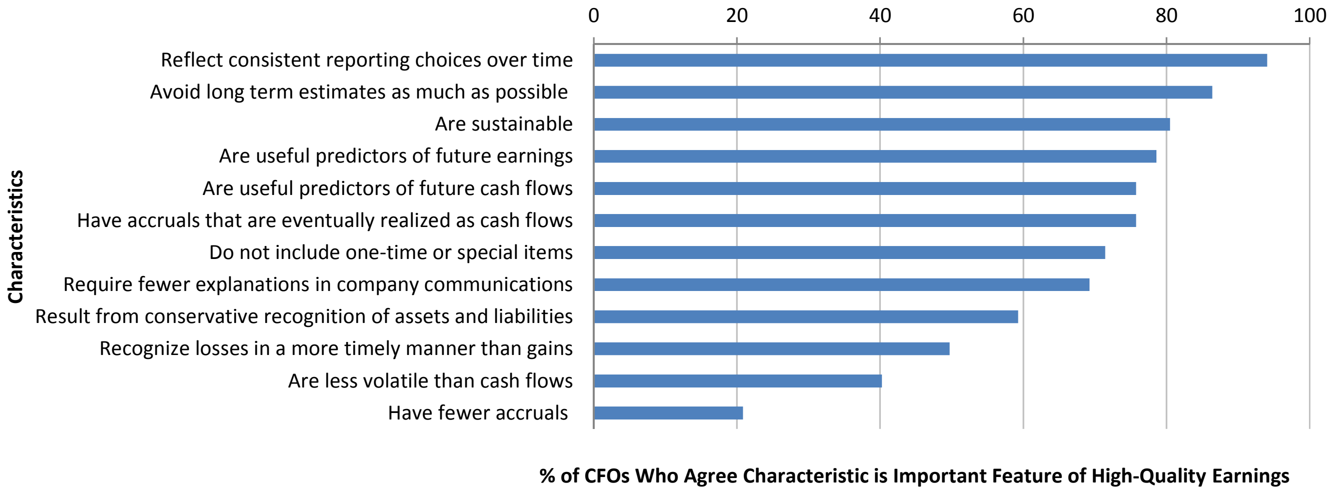
Next we explore the characteristics of high quality earnings. We begin with an open-ended question that allows CFOs to explain what the concept of high quality earnings means to them. The results are summarized in Table 1.

Table 1. Open-ended Responses to "What Does the Concept of Earnings Quality Mean?"

CFO's concept of earnings quality	*% of responses (public firms)*
Sustainable, Repeatable, Recurring, Consistent, Reflects long-term trend, Reliable, has the highest chance of being repeated in future periods	28%
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	23%
Accurately reflects economic reality, accurately reflects the results of operations	17%
Quality earnings come from normal (core) operations	9%
Earnings that are backed by cash flows	8%
Accurate application of GAAP rules	8%
Transparency/clarity	7%
Consistently reported, consistently applied GAAP	6%
Conservative	4%
Regular revenues minus regular expenses, normal margin on revenues	3%
Growing	1%
EBITDA	1%

The essence of earnings quality relates to earnings that are sustainable and repeatable, scoring the two top slots in Table 1 (since presence of one-time items is the converse of sustainable). A third common theme relates to earnings that are supported by cash flows. To verify and extend the open-ended responses, next we ask the CFOs to rank order specific characteristics of earnings quality in Figure 2. The leading answers are consistent reporting choices through time, and absence of long-term estimates. Since both of these characteristics improve sustainability, and the next few answers in Figure 2 directly endorse predictability and sustainability, we conclude that the same notion of earnings quality is reflected in both open-ended and structured questions. This dominance of the sustainability notion of earnings quality dovetails nicely with the importance of earnings for valuation registered in Figure 1 since most valuation models view the firm as a projected stream of earnings and cash flows, and sustainability in profits is the key to projecting such variables.

Figure 2. Characteristics of High-Quality Earnings



To obtain a deeper understanding of these choices, we excerpt from our interviews of CFOs.

Sustainable and predictable earnings. Several interviewed CFOs stress the importance of sustainable earnings. To quote one example: "You are reporting earnings in a way that is consistent with the long-run view of the profitability of the company. That you're not trying to essentially grab earnings from the future and drag them in to make it look better, nor are you trying to push earnings out into the future but you somehow reflect the underlying economics of the long-run value of this bundle of net assets that is the firm." To CFOs, the notions of transparency and predictability seem intertwined. One CFO opines: "one of the real big elements in this is transparency and predictability. Can investors anticipate what's going to happen? And not that they have to have a perfect forecast because there are the moving parts of the business but are the value drivers of the business understandable? "

One-time items. One CFO comments that as long as the item is only a one-time event, it may not catch up with the company. "Now when you do one-time items, I will admit that at least in the short-term, the analysts look past them. But it is sometimes almost too easy to do one-time write-downs. It can become a habit and that's when they impact the company's reputation for quality of earnings. If for every acquisition you do, you're going to come back two years later with a write-down of 10% then I'm going to start factoring that in when I hear you do another acquisition. It is the persistent abusers, where things that are stretched too often that get questioned and lose credibility…we once had an area in the company where we had three or four one-time events over the span of six quarters and one of the investors I admired the most said 'you guys are starting to get to be a serial adjustor, do I have to start wondering about your earnings going forward?' So you're spending your bank account of credibility when you do one-time items. You've got to make sure that those truly are one time and that they're material enough that it makes sense to try to exclude them, but I look at it as a loss of credibility every time we have to do one."

Accruals reflected as cash flows. One CFO points out that that over the long term, if earnings and cash flows are not highly linked and if he were to consistently report a big gap between these two measures, then the market would start to wonder what is going on, unless the firm is in a huge growth phase. If the gap between earnings and cash flows is persistently high, then this CFO expects a significant discount in the firm's stock price because ultimately if the cash is not being generated, then the earnings are artificial or are not a good indicator of value creation. Another CEO echoed the same sentiment saying "I think if earnings are not backed by actual cash flows, except for the very short term, then they are not good earnings."

Consistent reporting choices. A CFO suggests that high quality earnings involve consistency in many of the detailed reporting choices that firms make on a regular basis but are perhaps unobservable to outsiders because these decisions rely on managerial intent: "every quarter you're making many of these choices but they were not observable ones like a switch from LIFO to FIFO. For instance, in deciding whether to designate earnings abroad as "re-investable" or not, I could assume that my Philippines earnings are invested one way in one quarter and they're not the next quarter because it suits my purposes. And another one is whether an asset is available for sale. It could be something that's pretty subtle. If a guy walked in and offered me the right price, of course, I would sell it. Am I marketing it? No. Do I hope that somebody offers me a good price for it? Yes." The CFO emphasized that while these choices may not be explicitly observed by the public, earnings will be perceived as much higher quality if the firm makes choices that are consistent through time.

Long-term estimates. We asked a CFO to comment on the problem of using estimates in the determination of earnings, and especially long-term estimates, which are unavoidably unreliable. Using the example of pension projections, the CFO explained: "coming up with your pension estimates you're sort of trying to calculate your anticipated earnings, what your payouts are, etc., to come up with that number, and all of a sudden you realize that volatility in the market can totally change sort of what that number is on a go-forward basis. We really try to provide people with the basis on which you made our assumptions underlying pension calculations. So when I spend time with investors in regards to long-term items, it's really trying to get them to understand the assumptions that went into it because if they want to disagree, if they don't think it's an 8% growth rate, if they think it's a 5%, then they can recalculate it themselves and adjust their model accordingly. In dealing with long-term estimates it's making sure people have clarity on the underlying assumptions of how the estimate was derived."

Conservatism. A CFO, who was an ex-credit officer explains the appeal of conservative accounting: "you can do the analysis of historical cash flows you want but you get paid on tomorrow's cash flow. At the end of the day, it is a leap of faith. 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 pointed out that conservative accounting can be abused by setting up cookie jar reserves. He stated that a major money center bank, " had taken down their loan loss expense 70% year over year in their second quarter of 2010, even though their loan loss experience had actually only improved marginally. During the downturn this bank had taken the opportunity to set up a substantial amount of reserves, and now that they feel the credit quality issue is behind them, they're going to try to reap the benefits of it." Another points out the "the difficulty lies in credibly communicating the exact extent to which the firm is conservative in its accounting." The fear is that if most other firms are not being conservative, then following a conservative accounting policy would result in a discount on their stock price, leading to undervaluation of the firm.

Summing up, while the responses on what constitutes quality earnings span a number of themes, answers which emphasize the sustainability of earnings dominate. Variations include having fewer one-time items, using consistent reporting choices, and avoiding unreliable long-term estimates in the determination of earnings. Viewing sustainability as the hallmark of earnings quality is also in line with the dominance of earnings for valuation noticed earlier in the study.

Determinants of Earnings Quality

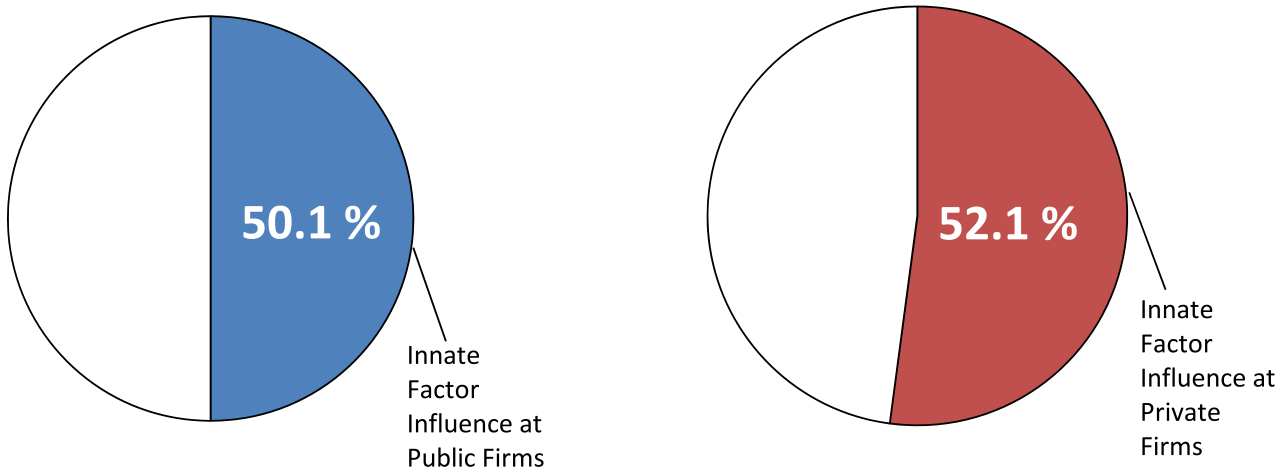
We next explore the factors that determine earnings quality. Potential determinants range from internal and controllable factors like corporate governance to unavoidable fundamentals like industry membership. Figure 3 indicates that the most frequently mentioned factor is the firm's business model followed closely by accounting standards. The other three determinants that pass the threshold of majority opinion were the company's industry, macro-economic conditions and the firm's internal controls. The least popular choices were the SEC's enforcement process and the prospect of litigation.

Figure 3. Factors that Influence Earnings Quality

The key implications are as follows. A substantial portion of earnings equality is beyond the immediate control of the CFO in that it is driven by the industry in which the firm operates, accounting standards set by the FASB, the firm's business model and the operating cycle. Controllable factors are also important, with internal controls garnering the most support.

To get a sense for the relative importance of controllable vs. non-controllable determinants of earnings quality, we asked CFOs, on a scale of 0 ("no influence of innate factors") to 100 ("earnings completely determined by innate factors"), "to what extent do innate factors influence earnings quality at your company? (where innate factors refer to factors beyond managerial control such as your industry or macro-economic conditions)." Figure 4 shows that about half the earnings quality of the average firm is beyond the immediate control of the manager.

Figure 4. Extent of Innate Factors' Influence on Earnings Quality



The distinction between controllable and non-controllable determinants of earnings quality was also emphasized in the interviews. One CFO elaborated "the majority of the responsibility, or at least the communication and 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, and predictability and visibility?"

One CFO indicated that the key determinants of earnings quality are "good management culture, well-staffed internal accounting function, an audit group that knows what it is doing." Referring to auditors and audit committees, one CFO remarked "there are some differences across audit firms, and certainly partners assigned to accounts, so that relationship of a company to its audit firm is an important one, and the audit firm has to strike the right balance between trying to be 100% strict versus making sure it is not in-bed with management. So that's an important balance. I think, in general, the balance is struck pretty well. I mean, when audit firms had some near-death experiences that kind of woke them up to that balancing act. Audit committees clearly feel that responsibility, but they're kind of the major line of defense, or should be anyway."

When asked about the relatively lower rank that audit committees receive in our survey results, a CFO suggested that "What they're going to do is basically set the general tone. I think you can fool them, but what the audit committee is essentially going to ask whether the CEO and controller are basically honest people who are going to report faithfully. That's about all they can do at the end of the day. They can ask some intelligent questions and make sure there's always a meeting with the internal auditor when nobody else is present and a meeting with the external auditor when nobody else is present and setup that routine. And my guess is a well-functioning audit committee is going to keep the big collapse from happening. But I don't think they can do much about the small variations in earnings quality."

Turning to the role of the external auditor, a CFO suggested that a good external auditor and a well-functioning audit committee were complements not substitutes: "let's suppose I'm Enron and my aim is to basically to corrupt the whole process from the start. Well, I guess it's evident that they could move Andersen around and sort of make them do whatever they wanted them to do. But I guess for us in the context of a very well-run board and organization, Andersen was a pretty useful tool in explaining what our choices were. For instance we did some leasing transactions and I would routinely ask the question, you know this is both an IRS and GAAP issue, and I'm willing to take on some risk, but I'm not willing to be near the edge of the envelope. So when you look at this, can you tell me how near the edge of the envelope I am? And then I can have an intelligent conversation with them and they would say well, I have seven clients who are also doing this same thing, and I think you're fine, or they could say no, nobody's doing this and I think you'd be the only one." This passage also suggests that reporting practices, both desirable and otherwise, are transmitted across many firms via external auditors.

When asked about the relatively high importance of boards in affecting earnings quality, one CFO says: "Boards are becoming very influential in the last five years, and they are constantly scrutinizing the earnings on a regular basis, and they truly do try to measure how our management team is doing. They have taken action in several other areas such as firing CEOs at HP, Yahoo and other companies."

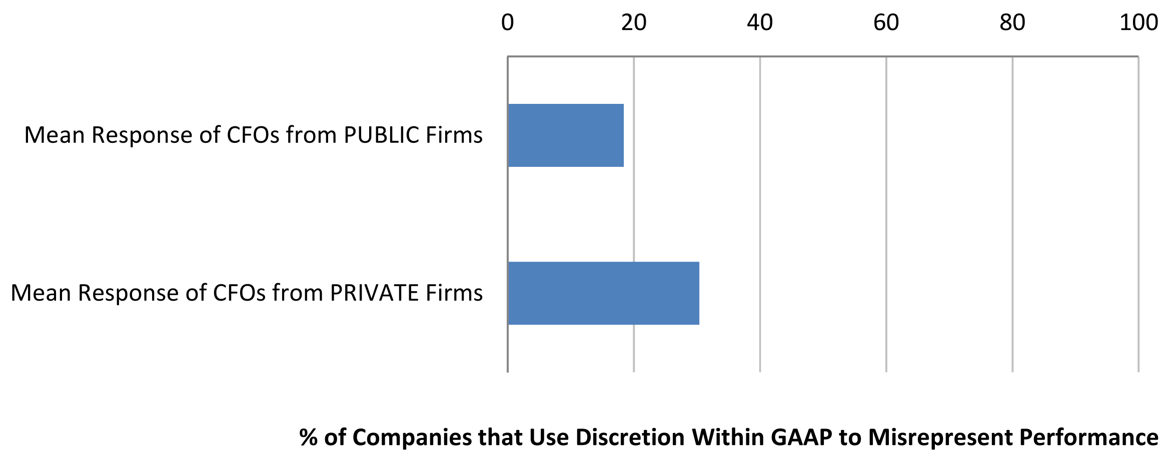
The bottom line here is that earnings quality is shaped by a number of controllable and non-controllable factors. Generally speaking, outside observers like financial analysts and investors would have a hard time evaluating unobservable factors like staffing and the quality of internal controls. But the evidence in encouraging in the sense that outsiders have more insight into observable and persistent fundamentals determinants like economy conditions and industry membership. To our knowledge, this link between fundamentals and earnings quality is not appreciated enough, and further work is needed to map out its mechanism and implications.

Misrepresentation of Earnings

The misrepresentation of earnings is a common flashpoint in discussions of earnings and earnings quality. Such misrepresentations is notoriously hard to identify, though, because of the need to discern unobservable managerial actions. This is one area, where the survey and interview methods, appropriately used, have a clear advantage over methods that rely on publicly available financial data.

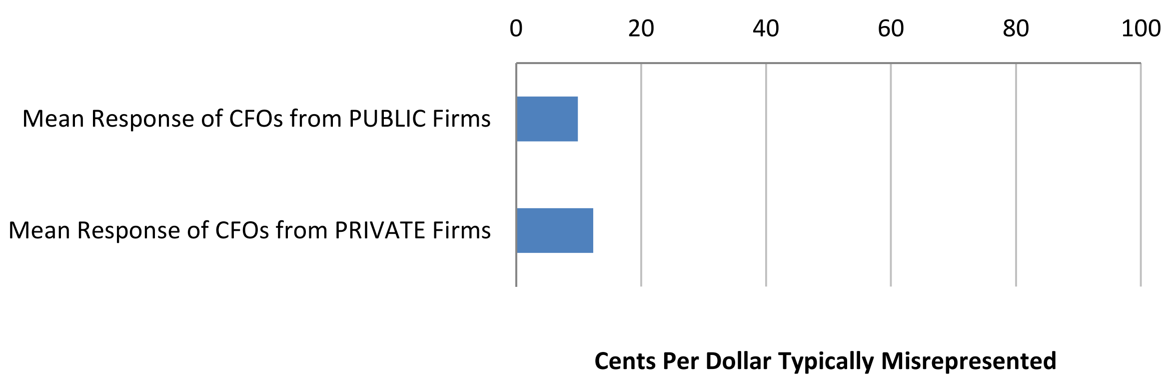
To gauge the prevalence of earnings misrepresentation, we asked the CFOs "From your impressions of companies in general, in any given year, what percentage of companies use discretion within GAAP to report earnings which misrepresent the economic performance of the business?__%." Note that our question asks CFOs about their views of industry practices rather than about their own company, and about misrepresentation using within-GAAP discretion, i.e., we rule out accounting fraud in order to capture the more prevalent but still problematic earnings management. Figure 5 shows that at any point in time about 20% of public firms misrepresent performance. Private firms' CFOs believe that the extent of earnings distortion is closer to 30%.

Figure 5. Prevalence of Within-GAAP Earnings Misrepresentation



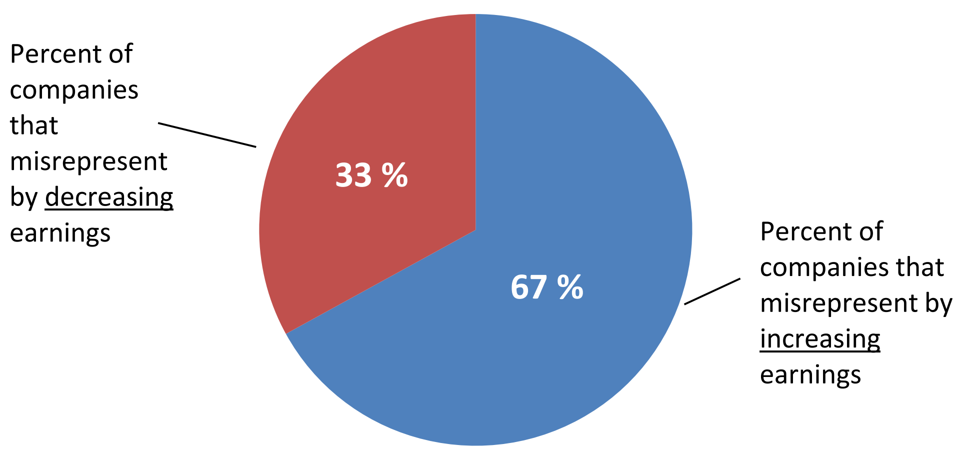
To get a sense for the magnitude of earnings management, we ask "For this question, consider only companies that use discretion within GAAP to misrepresent economic performance. Among these firms, assume that earnings per share is $1 per share. Of this, how many cents per share is typically misrepresented?" Figure 6 shows that about 10 cents on every dollar of earnings is typically misrepresented for those firms. The magnitude of the misrepresentation seems economically large given that missing earnings targets by just a penny or two can trigger a large drop in stock price. Private firms' CFOs believe that the extent of misrepresentation is even higher.

Figure 6. Extent of Within-GAAP Earnings Misrepresentation in Companies that Misrepresent Earnings



While the popular conception of earnings management is almost entirely about the overstatement of earnings, reducing earnings is often just the other side of the same phenomenon. Companies often establish so-called cookie-jar reserves (reducing current earnings) so that they can boost earnings later by releasing reserves. For example, a company can artificially boost bad debt expense for the current period, and later reverse this provision reducing expenses, and increasing earnings. Our evidence shows that downward misrepresentation is more common than popularly thought. While CFOs say that two-thirds of earnings misrepresentation involves overstatement, they also say that a third of misrepresenting companies are actually reducing their earnings.

Figure 7. Direction of Misrepresentation in Companies that Misrepresent Earnings



The interviews provide some interesting color. One CFO has the following comment about the 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, what do we want the number to be within that range? We talk about estimates: do we recognize this in this quarter? ... Is there some liability that can be triggered that hasn't been triggered yet, 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." Another CFO comments on the difficult nature of the term "misrepresent" in the context of earnings management because most earnings management schemes start fairly innocuously, and only later potentially cross into a grey area, and maybe even a fraud.

The interviews also provide insight into why such management is not discovered, and can persist for a while. One CFO thought that the chances that an analyst would spot an occasional instance of earnings management are low, where only persistent abusers have a high chance of being detected. He states: "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. That's kind of the first flag that something may not be right with the earnings, but you could be totally transparent, you could be totally conservative, and the accounting models, for a while, show earnings that are not supported by actual cash flows. So 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. One CFO goes so far as to say "analysts usually don't actively detect poor earnings quality. The good ones do but the sell side has no incentive to detect earnings quality." Another financial executive reported that buy side analysts are better because they "tend to go deeper into the nuts-and-bolts of the valuation and the value creation, cash flow, earnings quality" relative to the sell side analysts.

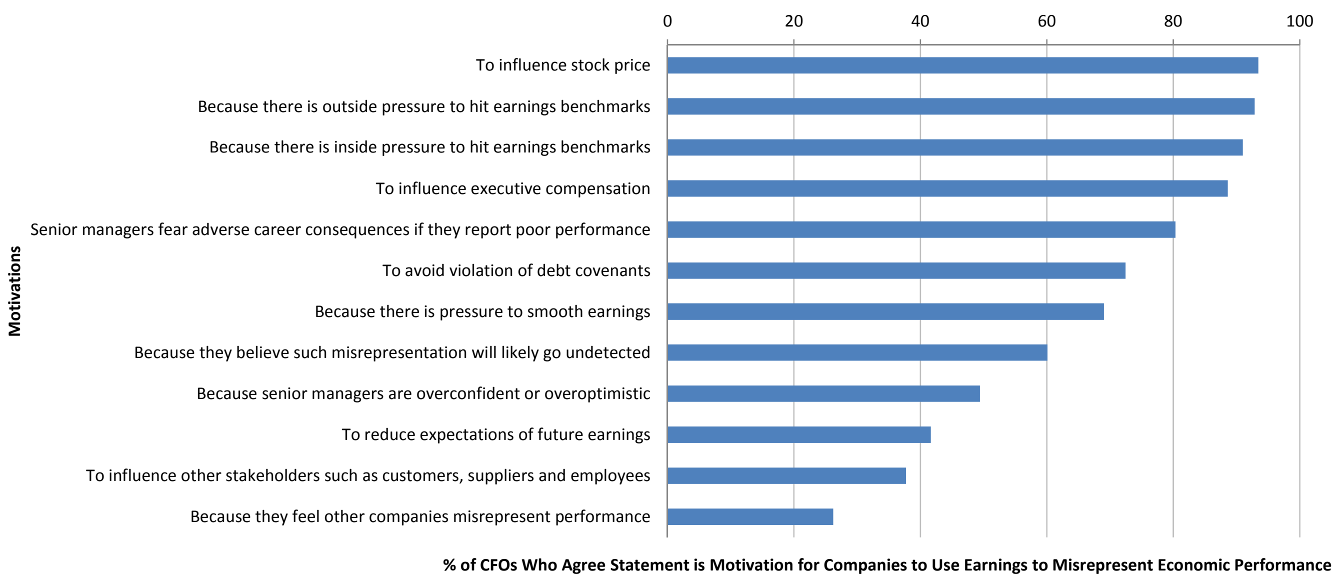
CFOs also contrasted the ability of equity and credit analysts in detecting earnings management and/or fraud. CFOs thought the "shorts and the bond and debt industry do a better job of it." Referring to the role of short interest in the recent credit crisis, one CFO mentioned "the whole idea that no one saw it coming is spurious because these shorts had seen the credit crisis coming. It was not anything magical. They did the hard work. They drove through empty neighborhoods, looked at houses and thought "Oh my god, they are trading these as AAA securities? Short this thing." People got away from the discipline of doing the hard work and doing the credit analysis. Anytime you slack off on issues like this, you end up with a quality of earnings issue down the line." He also thought that credit default swaps served as an early indicator: "we watch for daily trends in CDS prices. We look at the ratings that rating agencies give us but we also look at the trends in the CDS for companies whose securities we hold. These CDS data are telling you something before the rating agencies. Ratings tend to be sticky and late." Another CFO mentioned "analysts go out and listen to the b.s. from management and I say that affectionately. What I mean is that management tends to try and explain away a problem to the best of their ability. I don't mean they lie. Bond players and shorts look at these financial data in a more objective, unbiased and an unemotional way."

Summing up, the picture that emerges is that earnings misrepresentation is fairly common, and has material effect on earnings. Identifying it from the outside is difficult because GAAP provides considerable latitude with unobservable accounting choices, with the resulting effects buried in aggregated items on the financial statements. Earnings misrepresentation can be a one-off help to avoid earnings disappointments but can also persist for years. CFOs point out that some analysts are better than others at the detection of earnings misrepresentation, and suggest some ways to improve such detection (see also more systematic evidence on red flags later in the paper).

Why Misrepresent Earnings?

To get a better sense of why some CFOs might abuse their reporting discretion we asked the following question: “From your observations of companies in general, please rate the extent to which companies use reporting discretion within GAAP to report earnings which misrepresent their economic performance to achieve the following goals.” The results are presented in Figure 8.

Figure 8. Motivations to Use Earnings to Misrepresent Economic Performance



The most popular answers were the desire to influence stock price, outside pressure to hit earnings benchmarks and inside pressure to do the same (also see the evidence in Graham, Harvey and Rajgopal, 2005, 2006). These were followed by answers related to executives’ compensation career concerns. Interview answers corroborated these themes:

Stock price and pressure to meet benchmarks. Most CFOs think there is unrelenting pressure from Wall Street to avoid surprises. As one CFO put it, “you will always be penalized if there is any kind of surprise.” As a result “there is always a tradeoff. Even though accounting tries to be a science, there are a hundred small decisions that can have some minor impact at least on short-term results. So that is a natural tension, and one that, depending on the company, the culture, and the volatility of the company, can be a source of extreme pressure or it can be a minor issue.”

A CFO of a large company brings up the issue of materiality as it relates to Wall Street pressure to meet or beat earnings benchmarks. That is, a penny a share for his company can be a lot of money and can make the difference between meeting or missing the analyst consensus forecast but that amount would usually be buried in a generic line item on the income statement. One CFO likens the process of hitting the precise earnings benchmark to “trying to land an aircraft on a pin head.” In his own words “let me give you a couple of examples, and these are real-life examples from last year. 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, based on where you think you are, you will start adjusting that accrual either up or down. And so last year, we had some wild swings at our company, and in the 3rd 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 you know? You probably wouldn't because it's buried in general and administrative expense but it's not big enough on our income statement in one quarter to stick out. But it's enough to change the EPS number that Wall Street analysts are looking at."

Executives' compensation and career concerns. One CFO highlights the role of compensation consultants "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 section 162m considerations, they tie such stock compensation to a performance metric. I think earnings management is still done, in many cases it is for executive compensation. If you're going through a bad year, you're not going to achieve bonuses or vesting of your stock. There's still this inherent desire for management to set aside reserves so they can protect future years to make sure that from a compensation standpoint they're rewarded in the future." Note that this explanation is different from the dominant story in the academic literature, where it is assumed that bonus, not stock compensation, is directly tied to earnings and earnings targets.

The takeaways for analysts and investors are clear. The impression is that managers face a palpable pressure to do well, where their motivations to misrepresent earnings are especially dominated by capital market considerations, followed by compensation and career concerns.

Consequences of Poor Earnings Quality

Most of the interviewed CFOs believe that the consequences of poor quality, once discovered by the market place, is either an increase in the cost of capital and/or a decrease in stock price. The following comments were typical: (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."

One CFO linked the consequences 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." The issue of trust also came up: "Well, poor earnings quality certainly creates confusion, a lack of trust, to a large extent, companies, when you're out there meeting with buy-side especially, you're selling-the management is in effect the product that the company is buying. So if they don't trust you, then that ripples through the whole company results. So, if there is a lack of trust, then that makes decisions riskier, and therefore there's an implicit higher return that's required, which ripples into cost of capital."

Another CFO thought low earnings quality leads to high betas and short interest. He said "when I joined this company nine months ago, quite a few people were questioning the quality of the earnings. And it wasn't a case where the company was manipulating GAAP or doing anything unusual, but it was a case where things were coming through earnings that had not been discussed. There was no clarity and no transparency of disclosure that created that uncertainty and led to a very large short interest ratio and we had a very, very high beta. When I joined, the company used four non-GAAP measures as its primary earnings measures and that's all you'd see in the press releases, and of course our key investors didn't like that. They thought that approach was in many ways hiding the true performance of the company. The old CFO was not a CPA, was not overly versed in the GAAP and that type of SEC rules, and so he would avoid answering questions. He would do a black box. Hence, we were punished and we had over a 30% short interest ratio."

One CFO mentioned that the market is more likely to ask questions about earnings quality when the firm is not doing well: "whereas if you look at our company, what happened is we had the downturn in 2008, and at the same time people question the transparency and quality of the earnings, and that leads to a very bad situation. That's ultimately why the board forced the previous CFO to move and brought me in nine months ago."

On being asked about possible effects on bid-ask spreads, CFOs think they are likely to be small because of the great secular decrease in bid-ask spreads in recent years "High bid-ask spread seems like an arcane issue to me, I don't know how that manifests itself in the market these days, with such low increments of trading." Decreased analyst following is also not much of a concern, especially for large companies. "And then, depending on how big the company is, the number of analysts that follow you may or may not be an issue, but I suppose, I wouldn't rank less analyst following very high. I think you would have to get down into the smaller cap companies for that to be a big issue."

Echoing some of the themes earlier in the paper, CFOs also thought companies with good reputations will be more resistant, and will take longer to succumb to the consequences of poor earnings quality "Normally what will happen is investors … will develop expectations about the sustainability of the earnings of the company, they'll develop expectations about the credibility of management, and if you have poor earnings quality you can actually get away with it. Let's say you started from a really good place and then your quality of earnings goes down over some period of time. For some period of time you'll be able to get away with it, and you'll be fine, and you can talk about it and everyone may say well the quality is actually poor because they made it through non-operating things or one-time items or those kinds of things, but they'll actually disregard it for some period of time."

The takeaway for analysts is that the identification of poor earnings quality has potential for significant rewards. Companies with deteriorating earnings quality experience substantial price declines, lower price multiples, and higher cost of capital.

The Red Flags – How to Detect Earnings Management

The preceding sections reveal that earnings misrepresentation is fairly common, and it is difficult to unravel from the outside, while it has potentially severe capital market consequences. Thus, there is both room for improvement and rewards for identifying earnings misrepresentation. Correspondingly, we ask the CFOs what "red flags" they suggest investors, analysts, and researchers look for to detect earnings misrepresentation. Table 2 summarizes the results.

Table 2. Earnings Misrepresentation Red Flags

Rank	*Red Flag*	*% of responses (public firms)*
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.	34%
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)	24%
3	Consistently meet or beat earnings targets (guidance, analyst forecasts)	17%
4	Large/frequent one-time or special items (restructuring charges, write-downs, unusual or complex transactions, Gains/Losses on asset sales)	17%
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	15%
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	14%
7	(Frequent) Changes in (significant) accounting policies	10%
8	Using non-GAAP (and/or changing) metrics	8%
9	High executive turnover; Sudden change in top management; Change in financial management; Sudden director turnover; Employee (non-management) turnover	8%
10	Inventory build-up/age of raw materials; Build-up in work-in-progress; Mismatch between inventory/COGS/reserves	7%
11	Large volatility (Wide swings) in earnings, especially without real change in business	7%
12	Build-ups of receivables; Deterioration of receivables days outstanding; A/R balance inconsistent with cash cycle projections/Allowance for doubtful accounts	5%
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	5%
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	4%
15	Major jumps or turnarounds; Break with historical performance; Unexplained volatility in margins	4%
16	Large incentive compensation payment; Misalignment of management compensation incentives; Management turnover after bonus payments	4%
17	(Repeated) Restatement of earnings/prior period adjustments	3%
18	Accruals/Assets/Working capital growing faster or slower than revenue	3%
19	Increased debt/high liabilities	3%
20	Weak sales growth vs. industry / Declining performance (e.g. ROA or weakened cash flows, current ratio, working capital)	3%

The most popular responses are earnings inconsistent with cash flows, deviations from relevant industry and peer benchmarks, meeting and beating earnings too consistently, and too many one-time items. Thus, the evidence on red flags re-iterates many of the themes discussed earlier, like the role of one-time items and backing by cash flows in Table 1 and Figure 2, and hitting benchmarks in Figure 8. Such agreement and recurrence of these same themes provides reassurance about the main findings of our study.

In the interviews, the CFOs commented on a number of red flags included in Table 2 but also emphasized themes and variables related to corporate culture and manager characteristics:

Understand how accruals are put together and whether they tie back to cash. Many of the interviewed CFOs suggested that analysts should try to understand how accruals are put together and whether the analyst can tie the accruals back to cash over several years, although the CFOs readily acknowledge that growth "muddies the picture." In particular, when we asked CFOs how they would go about evaluating the quality of earnings of a target company they were considering acquiring using just public financial statements, one CFO advised, "We go through and prove out the revenue ties back to cash. You just go through all the accruals to make sure that they're right, or how are they done really." And "Where is the cash? I think one of the problems is that the statement of cash flows tends to get overlooked by the analysts. They tend to look at the income statement, the balance sheet and they do not tend to use the statement of cash flows as the roadmap of the business that it really is. Where is the cash going?

Consistency. One CFO stressed the importance of applying the policies and principles consistently over time: "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. If I started changing how we were reserving the board's compensation and general liability expense, you should ask why. Because that is not managing the business, that's making a change. You'd want to look at the discount rate being used for pension liabilities – is there a change? Why? You'd want to look at the discount rates in all the behind the scenes math that supports stock option expense and stock compensation expense and say why – why has it changed. If there's a good reason for it, great. But if there's not a very good reason, you have to say hmm, what's up with that?"

Corporate culture. The tone is set at the top. One CFO comments "I would start with say the top management or senior executives. That sets the tone or culture which your internal accounting function will operate under." When pressed further about how exactly to do it, this executive suggested that similar to a deep fundamental analysis of financial statements, researchers should conduct an "intensive fundamental analysis of the backgrounds of the top people running the company." 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. Look through the resumes of the individuals and check their background and whether they have a known history of success."

Governance structure. One CFO stated "you get what you inspect not what you expect." Hence, the quality of the audit team is important. He goes on "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 such as 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. Good management culture, well-staffed internal accounting function, an audit group that knows what it is doing is crucial. The next group is the board. Note that I don't put them up ahead because they are not close enough to the transactions. They have to assume that the management that they delegated to is performing and they are getting the proper reports coming up to the board. All the reports coming up to the board are only as good as the first three things I mentioned. Otherwise, it is the old garbage in, garbage out. The board would then be looking at fictitious reports which are useless."

Quality of the estimates in the financial statements. One interviewed CFO stated "another way to assess earnings quality is to look at the footnotes and assess the quality of the estimates and assumptions underlying the present value calculations of assets when these assets are being reported at the present value of future cash flows. We would look at several years of footnotes and see whether the target banks changed the assumptions underlying the valuations. It is easy to spot changes in the assumptions but the accounting profession does not ask firms to disclose what I call the "next sentence" stating that the effect of the change is to increase earnings in the current period and increase risk on the balance sheet. They are not required to say that. Whenever you see a change in the assumptions reported in the footnote, go back to the balance sheet and see what percentage of the total book is affected by the changed assumptions. That would tell you whether they have increased risk on their balance sheet and hence decreased the quality of their earnings. What you can assume is that the accounting firm that audited their books thought that the change was reasonable but it does not mean they have not added risk. Remember auditors look at GAAP compliance only. They are not going to invest their money in your stocks or bonds."

This CFO went on to give specific examples of the kind of estimates to consider in the context of a bank's financial statements: "Look at asset valuation models, residual valuations, what proportion of their book are these dodgy assets? Look at allowance for loan losses, allowances and estimates on the balance sheet and their methodology for valuing receivables. There is a lot of room in these estimates and the company can either be aggressive or less aggressive. Do the prepayment rates underlying the valuation of mortgage-backed securities or securitized assets make sense to me? Do the discount rates make sense? An analyst should be able to get that from industry standards. The next level is to check if these estimates change. You have to ask why? Their earnings must be under some stress."

Beware of black boxes. Several CFOs suggested that "if something is a black box or too good to be true, it probably is." He was referring to firms with opaque disclosure policies. One CFO commented that "I would look for an open discussion with management and I'm looking for clarity on the business model. I've found that if it's a black box generally they are usually hiding something."

Specific Red Flags

The comments above speak mostly to the general factors included in the survey. The interviews also provide some specific red flags.

Acquisition accounting. Several CFOs mentioned that accounting for acquisitions was a common setting for earnings management: "acquisition accounting would be the biggest area where I've seen some CFOs taking advantage… I have seen acquisitions used to establish numerous balance sheet items and those provide huge opportunities in the future to manage the P&L. They would set up provisions that are always worth more than they were set up for. I've watched numerous managements earn big incentives through being able to manage a balance sheet accrual. They set up big accruals and (then do) not meet them. 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."

***Pension accounting*.** One CFO warned that "the extent that management is changing assumptions in a way that could materially affect the reporting is an issue. Now, one is supposed to every year true the pension accounting up and use new long-term assumptions, and that's fine. But when they make changes that lead to them being different than everybody else, it's kind of a red flag."

***Use of subsidiaries and off-balance entities*.** An interviewed CFO points out "when you see a company that has subsidiaries that for whatever reason you learn about and are not reported as part of the entire company, that's questionable and is a red flag."

***Tax cushion*.** One CFO remarks: "The tax accounts are an area of real concern for many, many companies. The best example of a problem with the tax number would be, if a company's released earnings, and then before they file their statements with the SEC, they have to correct those earnings because the tax rate was wrong. And then you need to go behind the scenes and see what happened there, oftentimes, particularly with multinational companies, you learn that they don't have the right process to get good forecasts from an earnings perspective, and these earnings from multi-jurisdictions with different tax rates can really affect the overall effective tax rate."

Summing up, the dominant red flags are lack of correspondence between earnings and cash flows, and deviations from peer and industry norms. But there is much additional texture in the responses, with the interviews especially emphasizing the role of corporate governance and tone at the top. Specific red flags include the areas of acquisition accounting, provisions for taxes and pensions, and use of subsidiaries and off-balance sheet entities. These red flags can potentially counter the difficulty that analysts and investors experience in identifying earnings misrepresentation from the outside.

Real Earnings Management

Graham, Harvey and Rajgopal (2005, 2006) show that often the primary type of earnings management is the use of real actions such as delaying or cancelling valuable investment projects, cutting R&D, shirking on maintenance expenses and decreasing marketing expenditures. A strong majority of 78% of CFOs preferred to "destroy value" by partaking in real earnings management to smooth earnings rather than report bumpy results.[1]

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[1] Graham, Harvey and Rajgopal (2005, 2006) highlight the importance to CFOs of meeting and beating the analysts' consensus forecasts and smooth earnings and the levers companies are willing to pull to achieve that target, including the proclivity to pass up positive NPV projects that might depress reported earnings (e.g., R&D). For example, 78% of CFOs said they would "sacrifice" value to report smooth earnings. In addition, only 59% would accept a valuable investment project if it would cause them to miss target earnings.

Several CFOs reinforced the findings of Graham et al. (2006) noting that real earnings management is value decreasing. They emphasize that for an outsider it is hard to distinguish between business-driven economic reasons to cut spending versus opportunistic cuts aimed at hitting earnings targets.

One of the CFOs commented, “I think you can look at which is driving which. Is it the accounting trying to drive the business or the business driving the accounting? Yes, you can cut marketing, yes you can cut R&D, yes you can structure transactions; if you think about those though, you’re going to need to ask the questions, if it’s not disclosed: well, tell me about your marketing spends, tell me about your R&D spends, and because many times it may not be evident, because it’s going to be buried, and a company may or may not disclose it. So that’s one of those things I would say that should be asked when investors are talking with management and on public conference calls. How are you doing spending on your brands this quarter? How’s your R&D pipeline going, are you still investing? So I think there are some ways to determine real earnings management, but it’s going to require more rigorous analysis and questioning of management than is available in the financial statements.” He goes on to clarify, “and by the way, cutting marketing may be the right decision, if you’re let’s say in a country where your volumes are down, revenues are not increasing perhaps because of a recession. So that is an appropriate business decision (and does not imply that you are) cutting marketing because you just have to hit an earnings target for the quarter.”

One CFO offered an interesting perspective on the interaction between real activities and the accounting. Usually, accounting texts and practitioners advise tailoring the accounting treatment to match the substance of the business transactions, e.g., book revenue at the time of sale only if there are no remaining performance obligations, and defer revenue if there are remaining performance obligations. This CFO noted that they changed the real terms of certain transactions to make sure that there is no controversy in how the transactions fit the prescribed accounting treatment. Such comments are another evidence that how the accounting is done matters, and managers are willing to incur costs and change real actions to obtain the desired reporting results.

Conclusions

Using detailed interviews with 12 CFOs and a survey of almost 400 CFOs, we map out the characteristics and determinants of earnings quality, with special emphasis on the prevalence and detection of earnings misrepresentation. CFOs believe that quality earnings are sustainable and predictable, with few one-time items, and solid backing by cash flows. Earnings quality is determined in about equal measure by uncontrollable factors like industry and economic conditions, and controllable factors like internal controls and corporate governance.

We also find that in any given period a remarkable 20% of public firms use discretion within GAAP to intentionally misrepresent their earnings. The magnitude of such misrepresentation is large – of firms that do it, an average of 10% of the reported earnings is misrepresented. In addition, the misrepresentation goes both ways with a full one-third of perpetrators low-balling their reported earnings.

The most popular reasons for earnings misrepresentation are desire to influence stock price, related internal and external pressures to hit targets, and executive compensation and career concerns. The main consequences of poor earnings quality are stock price declines and increased cost of capital; effects on analyst following and bid-ask spreads are small, at least for large, established companies.

CFOs believe that misrepresentation is difficult to detect for an outsider. Accounting rules have become complicated, and the motivation for real actions like cutting valuable R&D initiatives often cannot be disentangled between business decisions and earnings management. Nevertheless, the CFOs provide an expansive list of "red flags" that they would look for if they were searching out misrepresentation. The leading red flags are lack of correspondence between earnings and cash flows, and unexplained deviations from peer and industry norms.

More than a decade after the Enron scandal, increased regulatory scrutiny following the Sarbanes Oxley Act and the demise of Arthur Andersen, the practice of earnings distortion continues. As long as incentives to manage earnings to influence stock prices remain, either via managerial equity ownership or via pressure from the managerial labor market or from stakeholders such as analysts to "hit the numbers," we believe that earnings misrepresentation will live on.

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