FAJ Financial Analysts Journal
Volume 72 • Number 1
©2016 CFA Institute

# The Misrepresentation of Earnings

Ilia Dichev, John Graham, Campbell R. Harvey, and Shiva Rajgopal

*The authors conducted a survey of nearly 400 chief financial officers on the definition and drivers of earnings quality, with an emphasis on the prevalence and detection of earnings misrepresentation. The respondents believe that the hallmarks of earnings quality are sustainability, absence of one-time items, and backing by actual cash flows. However, they also believe that in any given period, a remarkable 20% of companies intentionally distort earnings, even while adhering to GAAP. The magnitude of the misrepresentation is large: 10% of reported earnings.*

It is widely known that earnings are the single most important output of financial reporting. Intuitively, the notion of earnings quality captures the extent to which the earnings number reflects company 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 (CFOs). In a large-scale survey of 375 CFOs, we explored the definition, characteristics, and consequences of earnings quality, including the prevalence and identification of earnings misrepresentation. We supplemented the survey with 12 in-depth interviews with CFOs from prominent companies.

*Ilia Dichev is the Goizueta Chaired Professor of Accounting at Goizueta Business School, Emory University, Atlanta. John Graham is the D. Richard Mead Jr. Family Professor of Finance at Fuqua School of Business, Duke University, Durham, North Carolina, and research associate at the National Bureau of Economic Research. Campbell R. Harvey is the J. Paul Sticht Professor of International Business at Fuqua School of Business, Duke University, and research associate at the National Bureau of Economic Research. Shiva Rajgopal is the Roy Bernard Kester and T.W. Byrnes Professor of Accounting and Auditing at Columbia Business School, Columbia University, New York City.*

*Editor's note:* This article was reviewed and accepted by Executive Editor Robert Litterman.

*Authors' note:* This article is an augmented version of "Earnings Quality: Evidence from the Field," published in the *Journal of Accounting and Economics*, vol. 56, no. 2–3 (Supplement 1, 15 December 2013): 1–33. We have added additional interviews with chief financial officers and present results that are not contained in our earlier work.

Why ask CFOs? We believe 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 who 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, such as financial analysts and investment managers.

*Discussion of findings.* Our three main results follow:

1. CFOs told 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. Half of the factors that determine earnings quality are controllable (corporate governance, internal controls, proper accounting, and the audit function), and the other half are non-controllable or innate (nature of the business, industry membership, and macroeconomic conditions).
2. CFOs believe that in any given year, a remarkable one in five companies intentionally misrepresents its earnings using discretion within generally accepted accounting principles (GAAP). The magnitude of the typical misrepresentation is quite material—about 10 cents on every dollar. Although most misrepresentation results in the overstatement of earnings, one-third of companies intentionally lowball their earnings.

3. CFOs provided a list of red flags that outside observers, such as analysts and investors, can use to identify poor earnings quality. Lack of correlation between earnings and cash flows was the top choice, followed by unwarranted deviations from industry or other peer norms. The presence of lots of accruals and one-time charges and consistently beating analyst forecasts also scored highly.

## The CFOs

Our survey sample consists of anonymous responses from 169 CFOs of public companies and 206 CFOs of private companies. The public company sample is roughly comparable to the Compustat population of US public companies on most benchmark variables, including sales growth, leverage, and PE ratios; the exception is size, where our surveyed companies tend to be larger. We also included private companies for two reasons. First, there is relatively little research on private companies. Second, most of the companies in the United States are private, and as such, our sample is more representative of the economy in general. For simplicity, we refer to our respondents as CFOs. Although the majority of our respondents are CFOs, other job titles include treasurer, controller, chief accounting officer, and executive vice president 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, which allowed us to avoid leading words and ambiguity.

The survey was administered on the internet with a combined sample of CFOs provided by Duke University and *CFO Magazine*, which 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. More detail about the survey, its administration, and the results can be found in Dichev, Graham, Harvey, and Rajgopal (2013a).

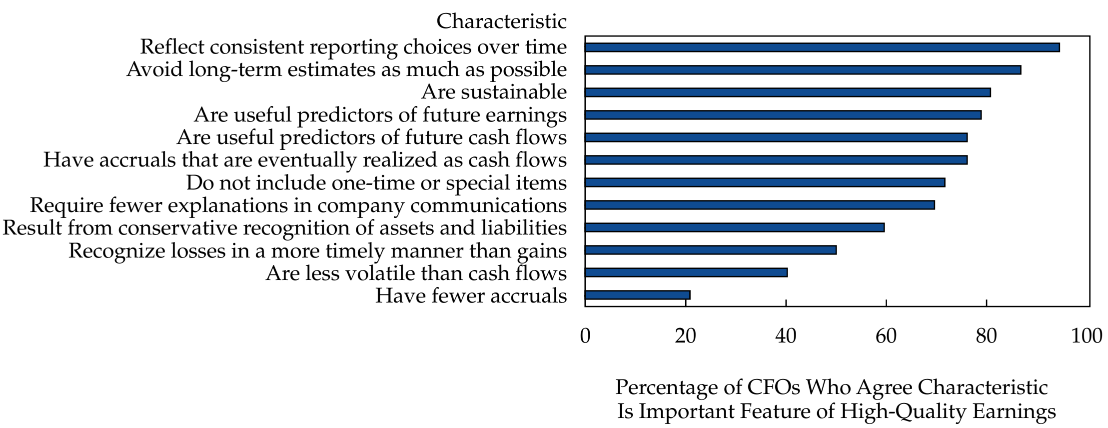
Our research also involved 12 in-depth interviews of CFOs. For these interviews, we followed best practices in interview techniques. Such practices include starting with open-ended questions, following a plan that connects to key questions in the survey, and saving controversial questions for the end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

## The Characteristics of High-Quality Earnings

In our survey, we collected information on the characteristics of high-quality earnings. We asked the CFOs to rank order specific characteristics of earnings quality; the results are shown in **Figure 1**. The leading answers are consistent reporting choices through time and absence of long-term estimates. Because both of these characteristics improve sustainability and the next few answers in Figure 1 directly endorse predictability and sustainability, we conclude that CFOs endorse the sustainability notion of earnings quality above all else. The dominance of the sustainability notion of earnings quality dovetails nicely with the well-documented importance of earnings for valuation because most valuation models view a company as a projected stream of earnings and cash flows, and sustainability in profits is the key to projecting such variables.

To obtain a deeper understanding of these answers, in this article, we include excerpts from our interviews of CFOs.

**Figure 1. Characteristics of High-Quality Earnings**



**Sustainable and Predictable Earnings.** Several CFOs stressed the importance of sustainable earnings. For example, one said, "You are reporting earnings in a way that is consistent with the long-run view of the profitability of the company. . . . You are 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 are intertwined. One CFO opined, "One of the real big elements in this is transparency and predictability. Can investors anticipate what is 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 explained that as long as an item is only a one-time event, it may not catch up with the company:

> 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 is when they impact the company's reputation for quality of earnings. If for every acquisition you do, you are going to come back two years later with a write-down of 10%, then I am 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 adjuster. Do I have to start wondering about your earnings going forward?" So, you are spending your bank account of credibility when you do one-time items. You have got to make sure that those truly are one-time and that they are 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 pointed out 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 company were 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 company's stock price because, ultimately, if the cash is not being generated, then the earnings are either artificial or not a good indicator of value creation. Another CFO 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 suggested that high-quality earnings involve consistency in many of the detailed reporting choices that companies make on a regular basis but that are perhaps unobservable to outsiders because these decisions rely on managerial intent:

> Every quarter, you are 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," I could assume that my Philippines earnings are invested one way in one quarter and they are 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 is 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 although these choices may not be explicitly observed by the public, earnings will be perceived as much higher quality if the company makes choices that are consistent over time.

**Long-Term Estimates.** We asked a CFO to comment on the problem of using estimates in the determination of earnings—especially long-term estimates, which are unavoidably unreliable. Using the example of pension projections, the CFO explained,

> [When] coming up with your pension estimates, you are 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 . . . 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 regard to long-term items, it is really [about] trying to get them to understand the assumptions that went into it, because if they want to disagree—if they do not think it is an 8% growth rate, if they think it is a 5%—then they can recalculate it themselves and adjust their model accordingly. In dealing with long-term estimates, it is making sure people have

clarity on the underlying assumptions of how the estimate was derived.

**Conservatism.** A CFO who is a former credit officer explained the appeal of conservative accounting: "You can do the analysis of historical cash flows all 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 noted that conservative accounting can be abused by setting up cookie jar reserves. He said that a major money center bank "had taken down its loan loss expense 70% year over year in its second quarter of 2010, even though its 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 it feels the credit quality issue is behind it, it is going to try to reap the benefits of it." Another pointed out that "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 companies are not being conservative, then following a conservative accounting policy would result in a discount on the stock price, leading to undervaluation of the company.

To sum up, although the responses on what constitutes quality earnings span a number of themes, answers that 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 noted earlier in the study.

## Determinants of Earnings Quality

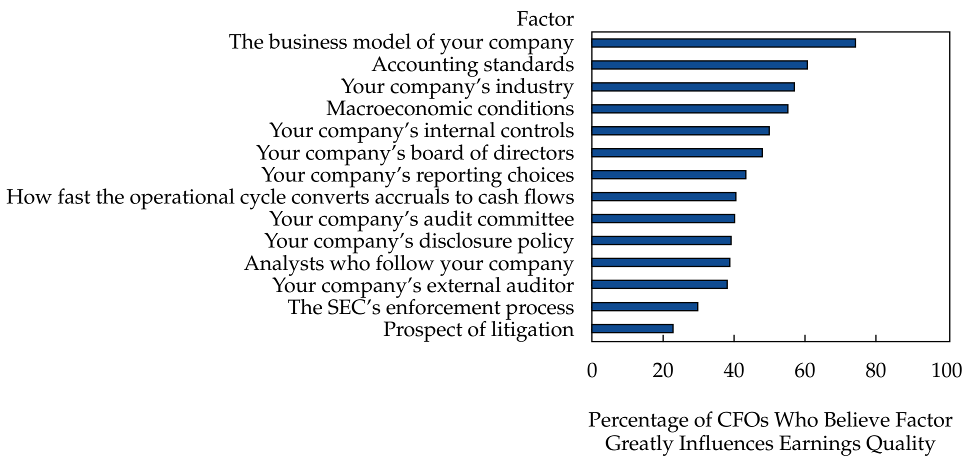
Next, we explore the factors that determine earnings quality. Potential determinants range from internal and controllable factors, such as corporate governance, to unavoidable fundamentals, such as industry membership. **Figure 2** indicates that the most frequently mentioned factor was the company's business model, followed closely by accounting standards. The other three determinants that passed the majority opinion threshold were the company's industry, macroeconomic conditions, and the company's internal controls. The two least popular choices were the enforcement process of the SEC and the prospect of litigation.

The key implications are as follows. A substantial portion of earnings quality is beyond the immediate control of the CFO in that it is driven by the industry in which the company operates, accounting standards set by the Financial Accounting Standards Board (FASB), the company'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 versus 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 macroeconomic conditions)?" Our results show that about half of the earnings quality of the average company is beyond the immediate control of the manager.

The distinction between controllable and non-controllable determinants of earnings quality was also emphasized in the interviews. One CFO elaborated,

**Figure 2. Factors That Influence Earnings Quality**



> 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 [chief operating officer]. It is hard to have one without the other, but I think they are two distinct issues. One is [whether] the business [is] inherently high quality, in the way the business model converts revenue to cash and earnings. And the other is [whether] the accounting [is] 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, [and] 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 is an important balance. I think, in general, the balance is struck pretty well. I mean, when audit firms had some near-death experiences, that . . . woke them up to that balancing act. Audit committees clearly feel that responsibility, but they are . . . the major line of defense, or should be anyway.

When asked about the relatively low rank that audit committees received in our survey, a CFO suggested the following:

> What they are 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 [is] whether the CEO and controller are basically honest people who are going to report faithfully. That is about all they can do at the end of the day. They can ask some intelligent questions and make sure there is always a meeting with the internal auditor when nobody else is present and set up that routine. And my guess is a well-functioning audit committee is going to keep the big collapse from happening. But I do not think they can do much about the small variations in earnings quality.

Regarding the role of the external auditor, one CFO suggested that a good external auditor and a well-functioning audit committee are complements, not substitutes:

> Let's suppose I am Enron and my aim is basically to corrupt the whole process from the start. . . . It is evident that it could move Andersen around and . . . make them do whatever it wanted them to do. But . . . 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 [a] GAAP issue, and I am willing to take on some risk, but I am 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 are fine." Or they could say, "No, nobody is doing this, and I think you would be the only one."

This statement also suggests that reporting practices—both desirable and otherwise—are transmitted across many companies through external auditors.

When asked about the relatively high importance of boards in influencing earnings quality, one CFO said, "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, such as financial analysts and investors, would have a hard time evaluating unobservable factors, such as staffing and the quality of internal controls. But the evidence is encouraging in the sense that outsiders have more insight into observable and persistent fundamentals determinants, such as economic 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 flash point in discussions of earnings and earnings quality. Such misrepresentation is notoriously hard to identify, however, because of the need to discern unobservable managerial actions. This area is one 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 that misrepresent the economic performance of the business?" Note that we asked CFOs about their views of industry practices, rather than about their own company, and about misrepresentation using within-GAAP discretion (i.e., we ruled out accounting fraud in order to capture the more prevalent but still problematic earnings management). **Figure 3** shows that public company CFOs believe about 20% of companies misrepresent performance. Private company CFOs believe that the extent of earnings distortion is closer to 30%.

To get a sense of the magnitude of earnings management, we asked, "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 4** shows that public company CFOs believe that about 10 cents on every dollar of earnings is typically misrepresented for those companies. 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 company CFOs believe that the extent of misrepresentation is even higher.

Although 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 (which reduce 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. Companies can also be motivated to reduce earnings if they are under intense government or public

**Figure 3. Prevalence of Within-GAAP Earnings Misrepresentation**

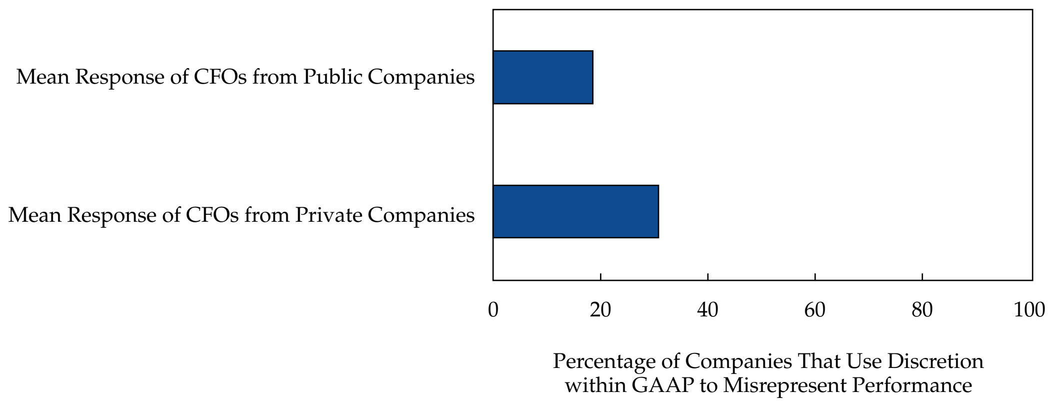
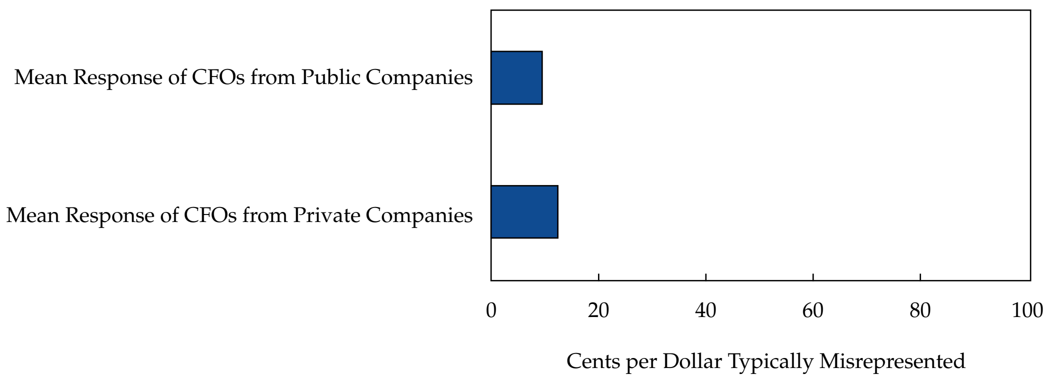



**Figure 4. Extent of Within-GAAP Earnings Misrepresentation in Companies That Misrepresent Earnings**



scrutiny (e.g., when oil companies earn windfall profits) or if they are in difficult labor or supplier negotiations. Our evidence shows that downward misrepresentation is more common than popularly thought. Although the CFOs said that two-thirds of earnings misrepresentation involves overstatement, they also said that one-third of misrepresenting companies are actually reducing their earnings.

The interviews provide some interesting color. Regarding the process of earnings management, one CFO made the following comment:

> 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 . . . 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 has not 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 commented 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 gray area and maybe even fraud.

The interviews also provide insight into why such management is not discovered and can persist for a while. One CFO believes that the chance that an analyst would spot an occasional instance of earnings management is low and that only persistent abusers have a high chance of being detected. He stated,

> 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 is . . . 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 is very egregious behavior, it usually takes a long time before they can have a conclusive argument that earnings are managed.

When pressed to speculate on how long such earnings management could go 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 that we interviewed believe that sell-side analysts are not particularly skilled at detecting earnings management. One CFO went so far as to say, "Analysts usually do not actively detect poor earnings quality. The good ones do, but the sell side has no incentive to detect earnings quality." Another CFO reported that buy-side analysts do a better job because they "tend to go deeper into the nuts and bolts of the valuation and the value creation, cash flow, [and] earnings quality" relative to sell-side analysts.

Some CFOs also contrasted the ability of equity and credit analysts in detecting earnings management and fraud. One said that 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 stated that "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, . . . '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 believes that credit default swaps (CDS) were 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 that "analysts go out and listen to the BS from management, and I say that affectionately. What I mean is that management tends to try to explain away a problem to the best of their ability. I do not mean they lie. Bond players and shorts look at these financial data in a more objective, unbiased, and unemotional way."

To summarize, the picture that emerges is that earnings misrepresentation is fairly common and has a material effect on earnings. Identifying it from the outside is difficult because GAAP provide 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. Some CFOs pointed out that some analysts are better than others at the detection of earnings misrepresentation and suggested some ways to improve such detection (we provide more systematic evidence on red flags later in this article).

## Why Misrepresent Earnings?

To better understand why some CFOs may abuse their reporting discretion, we asked the following: "From your observations of companies in general, please rate the extent to which companies use reporting discretion within GAAP to report earnings that misrepresent their economic performance to achieve the following goals." The results are presented in **Figure 5**.

The most popular answers were the desire to influence the 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 responses were followed by answers related to executives' compensation and career concerns. The interviews corroborated these themes.

**Stock Price and Pressure to Meet Benchmarks.** Most of the CFOs believe that there is unrelenting pressure from Wall Street to avoid surprises. As one CFO stated, "You will always be penalized if there is any kind of surprise." As a result, "there is always a trade-off. 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."

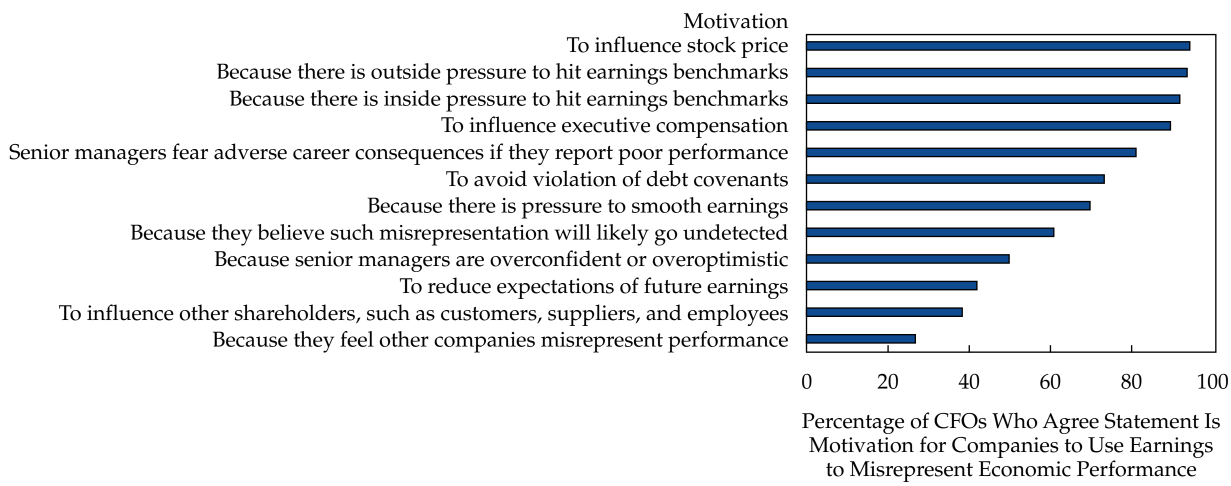
A CFO of a large company brought up the issue of materiality as it relates to Wall Street pressure to meet or beat earnings benchmarks. That is, a penny a share for his company can be a lot of money and can make the difference between meeting or missing the analyst consensus forecast, but that amount would usually be buried in a generic line item on the income statement. One CFO likened the process of hitting a precise earnings benchmark to "trying to land an aircraft on a pin head." He explained,

> 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 are paid when managers achieve certain targets based on accounting numbers. And each quarter, you have to make an estimate as to [whether] 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 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 you know? You probably would not because it is buried in general and administrative expense, but it is not big enough on our income statement in one quarter to stick out. But it is enough to change the EPS number that Wall Street analysts are looking at.

**Executives' Compensation and Career Concerns.** One CFO highlighted the role of compensation consultants:

> Over the last five years, compensation consultants have shifted many companies toward using a GAAP-based earnings

**Figure 5. Motivations to Use Earnings to Misrepresent Economic Performance**



> 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 [Internal Revenue Code] Section 162(m) 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 are going through a bad year, you are not going to achieve bonuses or vesting of your stock. There is 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 are rewarded in the future.

Note that this explanation is different from the dominant story in the academic literature, where the bonus, not stock compensation, is assumed to be directly tied to earnings and earnings targets.

The takeaways for analysts and investors are clear. The impression is that managers face 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 CFOs we interviewed believe that the consequence of poor quality, once discovered in the marketplace, is an increase in the cost of capital and/or a decrease in stock price. Following are two typical comments: "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," and "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 is 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: "Poor earnings quality certainly creates confusion, a lack of trust. To a large extent,…when you are out there meeting with the buy side especially, you are selling; the management is, in effect, the product that the company is buying. So if they do not 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 is an implicit higher return that is required, which ripples into cost of capital."

Another CFO believes low earnings quality leads to high betas and short interest:

> When I joined this company nine months ago, quite a few people were questioning the quality of the earnings. And it was not 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 is all you would see in the press releases. And of course, our key investors did not 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 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 an over 30% short interest ratio.

This CFO asserted that the market is more likely to ask questions about earnings quality when a company is not doing well: "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 is ultimately why the board forced the previous CFO to move and brought me in nine months ago."

When asked about possible effects on bid–ask spreads, the CFOs responded that they are likely to be small because of the great secular decrease in bid–ask spreads in recent years. One CFO explained, "High bid–ask spread seems like an arcane issue to me. I do not 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 would not 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 previous themes, the CFOs also believe companies with good reputations take longer to succumb to the consequences of poor earnings quality. As one CFO put it,

> Normally, what will happen is investors…will develop expectations about the sustainability of the earnings of the company, they will 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 will be able to get away with it, and you will be fine. And you can talk about it, and everyone may say, 'Well, the quality is actually poor because they made it through nonoperating things or one-time items or those kinds of things.' But they will 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 incur substantial price declines, lower price multiples, and higher costs of capital.

## The Red Flags: How to Detect Earnings Management

The preceding sections reveal that earnings misrepresentation is fairly common, it is difficult to unravel from the outside, and it has potentially severe capital market consequences. Thus, there is both room for improvement in and rewards for identifying earnings misrepresentation. Correspondingly, we asked the CFOs what "red flags" investors, analysts, and researchers should look for to detect earnings misrepresentation. **Table 1** summarizes the results.

**Table 1. Earnings Misrepresentation Red Flags**

| Rank | Red Flag | % of Responses (public companies) |
|---|---|---|
| 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 six to eight 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, accounts payable, 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 charges in accruals; jump in accruals/sudden changes in reserves; insufficient explanation of such changes; significant increase in capitalized expenditures; changes in asset accruals; high accruals 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 (nonmanagement) turnover. | 8 |
| 10 | Inventory buildup/age of raw materials; buildup in work in progress; mismatch between inventory/cost of goods sold/reserves. | 7 |
| 11 | Large volatility (wide swings) in earnings, especially without real change in business. | 7 |
| 12 | Buildups of receivables; deterioration of receivables days outstanding; accounts receivable 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 reiterates many of the themes discussed earlier, such as the role of one-time items and backing by cash flows (shown in Figure 1) and hitting benchmarks (shown in Figure 5). The recurrence of these themes provides reassurance about the main findings of our study.

In the interviews, the CFOs commented on a number of the red flags included in Table 1 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 they readily acknowledged that growth muddles the picture. In particular, when asked how he would go about evaluating the quality of earnings of a target company he was considering acquiring using only public financial statements, one CFO stated, "We go through and prove out the revenue ties back to cash. You just go through all the accruals to make sure that they are 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 [and] 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:

> If the accounting policies and principles are not being consistently applied, that is 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 is making a change. You would want to look at the discount rate being used for pension liabilities. Is there a change? Why? You would 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 is a good reason for it, great. But if there is not a very good reason, you have to say, "Hmm, what is up with that?"

**Corporate Culture.** The tone is set at the top. One CFO commented, "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 thorough fundamental analysis of financial statements, researchers should conduct an "intensive fundamental analysis of the backgrounds of the top people running the company." Another suggested the following: "There is certainly industry gossip . . . and talking to the people in the company and 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 said that "you get what you inspect, not what you expect." Hence, the quality of the audit team is important. He went 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 [and] 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 do not 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 CFO we interviewed 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 gave specific examples of the type 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 be either 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.** Echoing the sentiments of several other CFOs with regard to companies with opaque disclosure policies, one CFO suggested that "if something is a black box or too good to be true, it probably is." Another CFO stated, "I would look for an open discussion with management, and I am looking for clarity on the business model. I have found that if it is a black box, they are usually hiding something."

## Specific Red Flags

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

**Acquisition Accounting.** Several CFOs mentioned that accounting for acquisitions is a common setting for earnings management:

> Acquisition accounting would be the biggest area where I have 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 [profit and loss statement]. They would set up provisions that are always worth more than they were set up for. I have 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 are 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 is 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 to 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, every year, one is supposed to true the pension accounting up and use new long-term assumptions, and that is fine. But when they make changes that lead to them being different from everybody else, it is . . . a red flag."

**Use of Subsidiaries and Off-Balance-Sheet Entities.** We interviewed one CFO who noted that "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 is questionable and is a red flag."

**Tax Cushion.** One CFO remarked,

> 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 has released earnings and then before it files its statements with the

> SEC, it has 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 do not have the right process to get good forecasts from an earnings perspective, and these earnings from [multiple] jurisdictions with different tax rates can really affect the overall effective tax rate.

In summary, 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 information 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 et al. (2005, 2006) showed that the primary type of earnings management is often the use of real actions, such as delaying or canceling valuable investment projects, cutting R&D, shirking on maintenance expenses, and decreasing marketing expenditures. Graham et al. (2005) reported that a large majority—78%—of CFOs preferred to "destroy value" by partaking in real earnings management to smooth earnings rather than report bumpy results.[1]

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

> 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 are going to need to ask the questions, if it is not disclosed:…"Tell me about your marketing spends; tell me about your R&D spends."…Because many times it may not be evident because it is going to be buried, and a company may or may not disclose it. So that is 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 is your R&D pipeline going? Are you still investing? So I think there are some ways to determine real earnings management, but it is going to require more rigorous analysis and questioning of management than is available in the financial statements.…Cutting marketing may be the right decision, if you are, let's say, in a country where your volumes are down [and] 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.

Another 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 his company 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 provide further 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.

## Conclusion

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

We also found that in any given period, a remarkable 20% of public companies use discretion within GAAP to intentionally misrepresent their earnings. The magnitude of such misrepresentation is high: For companies that do it, an average of 10% of the reported earnings is misrepresented. While the typical misrepresentation overstates earnings, fully one-third of perpetrators lowball reported earnings.

The most common reasons for earnings misrepresentation are a desire to influence the stock price, related internal and external pressures to hit earnings 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 for outsiders to detect. Accounting rules are increasingly complicated, and it is often hard to discern whether the motivation for real actions, such as cutting valuable R&D initiatives, is a business decision or earnings management. Nevertheless, the CFOs we interviewed provided an expansive list of red flags that they would look for if they were monitoring for misrepresentation. The leading red flags were lack of correspondence between earnings and cash flows and unexplained deviations from peer and industry norms.[2]

*We are grateful for comments from Barbara Petitt, Luis Garcia-Feijóo, Robert Litterman, Ari Yezegel, and an anonymous reviewer.*

*Editor's note:* This article was reviewed via our double-blind peer review process. When the article was accepted for publication, the authors thanked the reviewers in their acknowledgments, and the reviewers were asked whether they agreed to be identified in the authors' acknowledgments. Ari Yezegel was one of the reviewers for this article.

CE Qualified Activity CFA Institute 1 CE credit

## Notes

1. Graham et al. (2005, 2006) highlighted the importance to CFOs of meeting and beating analysts' consensus forecasts and smooth earnings and examined the levers companies are willing to pull to achieve those targets, including the proclivity to pass up positive net present value projects that might depress reported earnings (e.g., R&D). In addition, Graham et al. (2005) found that only 59% would accept a valuable investment project if it would cause them to miss an earnings target.
2. Much of this article is based on in-depth interviews of CFOs that were not published in our paper in the *Journal of Accounting and Economics* (Dichev et al. 2013a). The last working paper version (Dichev et al. 2013a) is available at http://ssrn.com/abstract=2103384. This paper contains a detailed reference list, which we refer the reader to, along with a long list of acknowledgments. Also, we have a set of teaching slides (Dichev et al. 2013b) available at http://ssrn.com/abstract=2347428.

## References

Dichev, Ilia D., John R. Graham, Campbell R. Harvey, and Shiva Rajgopal. 2013a. "Earnings Quality: Evidence from the Field." *Journal of Accounting and Economics*, vol. 56, no. 2–3 (Supplement 1, 13 December): 1–33.

———. 2013b. "A Guide to Earnings Quality." Working paper (30 October).

Graham, John R., Campbell R. Harvey, and Shiva Rajgopal. 2005. "The Economic Implications of Corporate Financial Reporting." *Journal of Accounting and Economics*, vol. 40, no. 1–3 (December): 3–73.

———. 2006. "Value Destruction and Financial Reporting Decisions." *Financial Analysts Journal*, vol. 62, no. 6 (November/December): 27–39.