Accounting Horizons
Vol. 30, No. 3
September 2016
pp. 307-323

The Association between Executive Pay Structure and the Transparency of Restatement Disclosures

ACCOUNTING HORIZONS
Vol. 30, No. 3
September 2016
pp. 307–323

American Accounting Association
DOI: 10.2308/acch-51454

The Association between Executive Pay Structure and the Transparency of Restatement Disclosures

Brian Hogan
University of Pittsburgh

Gregory A. Jonas
Case Western Reserve University

SYNOPSIS: Restatement disclosures have evolved into two basic categories: reissuances (Big "R") and revisions (little "r"). A reissuance restatement requires an 8-K filing, whereas a revision restatement can be disclosed in less transparent ways. The high-transparency of a reissuance restatement disclosure (8-K) results in a greater likelihood of negative effects on companies, executives, and auditors (e.g., Plumlee and Yohn 2008; Burks 2010). Determining whether an 8-K filing is required involves judgment regarding materiality of the restatement, thus creating ambiguity as to the correct disclosure method. Such judgment also introduces the potential to opportunistically choose the method of disclosure. We study the restatement disclosure choices of companies to examine whether executive pay structure is associated with disclosure transparency. Using a sample of 1,178 restatements from the years 2004 through 2013, our results show that as the equity proportion of executive pay increases, the likelihood of a high-transparency disclosure decreases. However, as the difference in pay structure between the CEO and CFO increases, the likelihood of a high-transparency disclosure increases. Overall, our results suggest that executive pay structure influences disclosure choice and that pay structure differences between the CEO and CFO may mitigate such influence.

Keywords: restatement; executive pay; disclosure transparency.

Data Availability: All data are available from public sources identified in the paper.

INTRODUCTION

Companies disclose restatements to stakeholders in different ways. Although an 8-K filing is generally considered to be the most transparent disclosure method, less transparent ways of restatement disclosure (e.g., 10-K, 10-K/A, 10-Q, and 10-Q/As) are increasingly used (Audit Analytics [AA] 2013). Negative reactions to a restatement are greater when disclosed by an 8-K filing (Plumlee and Yohn 2008; Files, Thompson, and Tse 2009), thereby creating incentives to choose an alternate disclosure method. Since the requirement for an 8-K disclosure is based on judgment regarding materiality of the restatement, companies have the ability to manage the disclosure method choice. The primary purpose of this study is to investigate the potential influence of management pay structure on restatement disclosure choice.

The Securities and Exchange Commission (SEC 2004a) requires companies to disclose restatements in an 8-K (Section 4.02) filing within four business days of identifying errors that should cause investors to not rely on previously issued financial statements. Determining whether a restatement should cause non-reliance on the prior financial reports requires assessing whether the underlying error is material enough that it would likely affect a reasonable investor's view of the information (SEC 2006; PCAOB 2010). Ambiguity exists regarding the requirement for an 8-K disclosure (Turner and Weirich 2006; Reilly 2006; Huber and Bochner 2012) because materiality depends on the judgment of both quantitative and qualitative factors (FASB 1980; SEC 1999).

We are thankful for helpful comments and suggestions received from Susan Scholz (editor), two anonymous reviewers, Ronen Gal-Or, Leonardo Madureira, Colin Reid, participants at the 2012 American Accounting Association Annual and the 2012 Ohio Region Meetings, as well workshop participants at both Case Western Reserve University and The University of Toledo.

Editor's note: Accepted by Paul A. Griffin.

Submitted: September 2013
Accepted: March 2016
Published Online: March 2016

Materiality judgment can provide justification for using less transparent ways of disclosing restatements. Restatement disclosures using methods other than an 8-K filing are sometimes referred to as "stealth" restatements because they are considered less transparent (U.S. Government Accountability Office [U.S. GAO] 2006; Glass Lewis & Co., LLC [GLC] 2007). Anecdotal evidence of the role of materiality judgment in restatement disclosures can be seen in the proportion of stealth restatements. From 2008 to 2012, more than half of all restatements were not disclosed in an 8-K filing (AA 2013).

How restatements are disclosed matters. Lower-transparency restatement disclosures are associated with less unfavorable market reactions than 8-K disclosures (Myers, Scholz, and Sharp 2013; Plumlee and Yohn 2008). However, not using an 8-K disclosure increases the risk of regulatory and shareholder actions against the company (Files et al. 2009; Huber and Bochner 2012). Restatement disclosures often involve a company's board of directors and audit firm, as well as company management. However, the judgment involved in assessing materiality combined with the different consequences of alternative disclosure choices creates motive and opportunity for managing the transparency of the restatement disclosure.

The level and structure of executive compensation has been repeatedly linked to financial reporting issues, including restatements (see, e.g., Harris and Bromiley 2007). Managers have also been shown to manage disclosures based on whether the disclosure represented good news or bad news (Miller 2002). Growth in equity and other performance-based pay over time (Bebchuk and Grinstein 2005) increases the potential gains from opportunistic actions by managers to emphasize good performance and downplay bad performance (Efendi, Srivastava, and Swanson 2007). Identifying whether transparent disclosure of restatements is linked to executive pay structure could provide important insights as to whether materiality judgments are opportunistically managed to the benefit of executives.

This study examines the association between executive pay structure (equity pay/total pay) and the transparency of restatement disclosures. Within the population of companies that issue restatements, we seek to determine whether executive pay structure is associated with the transparency of the restatement disclosure. The CEO and CFO, who must certify financial statements under the Sarbanes-Oxley Act (SOX, U.S. House of Representatives 2002), are most likely to experience negative consequences from restatements. Thus, we examine the association between the compensation structure of these two executives and the transparency of the selected restatement disclosure method.

Our data consist of 1,178 restatements from Audit Analytics for the period August 2004 through December 2013. We use common control variables from the restatement literature in logistic regression models with pay structure as an independent variable. Regression results show a negative association between the proportion of executive equity pay and a high-transparency (8-K) restatement disclosure. Further, we find that differences in the pay structure between the CEO and CFO are positively associated with the likelihood of a high-transparency restatement disclosure. Overall, our findings suggest that greater proportions of equity pay may contribute to a less transparent disclosure of restatements. In addition, results suggest that greater differences in pay structure between the CEO and CFO result in a higher likelihood of a more transparent restatement disclosure.

We extend prior studies by providing evidence that even after managers determine a restatement is required, managers with pay structures favoring equity are more likely to judge a restatement as not material enough to trigger an 8-K filing. Our findings also point to possible benefits from not fully aligning the pay structures of the CEO and CFO, as greater differences in executive pay structure are associated with a greater likelihood of transparent restatement disclosures. This paper contributes to a growing body of research suggesting potential unintended and undesirable consequences of executive pay structures that favor more equity. These findings should be of interest to regulators, compensation committees, and investors in that current regulations and enforcement actions seem to be inadequate deterrents to less transparent financial reporting.

BACKGROUND

Restatement Disclosure Rules

The need to correct accounting errors in prior financial statements by restating results has long been addressed in accounting standards (see, for example, Accounting Principles Board [APB] 1971; FASB 1980). In an early study, DeFond and Jiambalvo (1991) note that earnings restatements are rare, but "consistent with management responding to economic incentives." Subsequently, restatements became more common with the number of restatements increasing rapidly through the 1990s (*The CPA Journal* [*CPAJ*] 2003) and peaking at 9.8 percent of all U.S. public companies in 2006 (GLC 2007). However, even after the peak in 2006, the number of restatements continued at levels of concern to stakeholders (AA 2013). Various organizations continue to study restatement trends and characteristics, including the General Accounting Office (U.S. GAO 2002), Government Accountability Office (U.S. GAO 2006), (GLC 2007), U.S. Department of Treasury (Scholz 2008), and the Center for Audit Quality (Scholz 2014).

One common concern identified in analyzing restatement trends is the large proportion of stealth restatements (U.S. GAO 2006; Turner and Weirich 2006; GLC 2007; AA 2010b). Section 4.02 of the SEC's 8-K Disclosure Requirements rule

specifically identifies restatements due to non-reliance as an 8-K reportable event regardless of whether the next regular filing occurs within four business days of identifying the error(s) (SEC 2004a, 2004b). Expectations from investor and governance groups were that stealth restatements would be greatly reduced, if not eliminated, by the 2004 SEC rule (Reilly 2006; Turner and Weirich 2006).

Although the total number of restatements declined substantially over the 2006 to 2012 timeframe, the percentage of restatements not disclosed in an 8-K filing increased from less than 40 percent in 2005 to over 60 percent of all restatements in 2012 (Scholz 2014; AA 2013). Part of the increase in non-8-K restatements may be attributed to increased emphasis on materiality and judgment in assessing the need to file an 8-K to disclose a restatement. Increased use of judgment in determining Section 4.02 restatement disclosures (SEC 2006) was supported by Staff Accounting Bulletin No. 108 of the Advisory Committee on Improvements to Financial Reporting (ACIFR 2008), and Auditing Standard No. 14 (PCAOB 2010).[1]

The net effect of post-2004 standards and guidance on restatements was to create a widely accepted, bifurcated restatement disclosure system. Restatements previously referred to as "stealth" were increasingly called "revision" or "little r," whereas restatements disclosed by an 8-K filing became known as "reissuance" or "Big R" (AA 2010a; Huber and Bochner 2012). Some stakeholders expressed concern that any restatement that merits correction should not be exempt from filing an 8-K disclosure (Turner and Weirich 2006; GLC 2007; Taub 2012).

Plumlee and Yohn (2010) find support for the view that less transparent restatement disclosures are related to low materiality, as opposed to companies trying to "hide" the restatement. However, Myers et al. (2013) find that firms with better governance, in the form of outside monitoring, tend to have higher-transparency restatement disclosures. They also observe that some firms with severe restatements continue to use low-transparency disclosures. Other studies find differential effects of less transparent disclosures after controlling for restatement magnitude. For example, Files et al. (2009) find that more transparent restatement disclosures result in lower SEC sanctions, whereas other studies provide evidence that negative market reactions to restatements are mitigated by low-transparency disclosure of the restatement (Plumlee and Yohn 2008; Myers et al. 2013). Thus, the restatement disclosure method matters, even after controlling for the materiality of the error correction.

Corporations, Audit Firms, and Executive Management

Restatements have consequences for companies, executive management, and audit firms. Restatements result mostly from income increasing errors (DeFond and Jiambalvo 1991), which can result in litigation, downward forecast revisions, negative market reactions, and delisting (Palmrose and Scholz 2004; Griffin 2003). During 1995–1999, restatement companies averaged a −9 percent abnormal return, with greater penalties for restatement disclosures that did not provide the financial magnitude of the change (Palmrose, Richardson, and Scholz 2004). More recent findings show that the average market reaction to restatements continues to be negative, although generally not as severe, with average returns of −1 to −3 percent (Burks 2010; Huang 2009).

Audit firms can be negatively affected by clients who have a restatement. Audits are based on financial statements being the responsibility of company management. However, when a client has a non-reliance restatement, the audit firm is at risk for being named in any related class action lawsuits, as well as losing the client. Client restatements have also become recognized as a measure of audit quality (POB 2000) such that academic research now uses restatements as a measure of low audit quality (see, e.g., Francis, Michas, and Yue 2013). In addition, restatements are often tracked and reported for each audit firm, providing negative visibility to audit firms with more client restatements (GLC 2007).

The consequences of restatements for executives are also unfavorable. Turnover for CEOs, CFOs, and directors is more likely for firms issuing restatements (Arthaud-Day, Certo, S. T. Dalton, and D. Dalton 2006; H. Wang, Davidson, and X. Wang 2010). Cheng and Farber (2008) suggest that the proportion of CEO option-based compensation decreases following a restatement as a result of companies recontracting to reduce CEO risk taking. Burks (2010) found that CEOs tend to have their bonus penalized following a restatement. However, CFOs are more likely to be terminated. In summary, the penalties associated with a restatement are different for CFOs than for CEOs; CFOs tend to receive more severe penalties. A low-transparency disclosure does not necessarily allow executives to avoid such penalties (Chan and Hee 2010), but a revision restatement is generally viewed as less egregious than a reissuance restatement (AA 2010a).

The SEC (2004a) identified two alternative disclosure criteria for restatements requiring an 8-K disclosure based on whether the company (board of directors, officers, or a subset of either group) or the independent accountant (audit firm) identified the error. Given the serious nature of a restatement, all of the above-named participants are likely to be informed of, if not involved in, the determination as to whether an 8-K disclosure is necessary. From the company perspective, the CEO and

[1] In 1999, Staff Accounting Bulletin (SAB) No. 99 (SEC 1999) provided guidance to update materiality considerations to be consistent with extant case law. In 2006, SAB No. 108 (SEC 2006) required both the rollover and iron curtain tests for materiality, while also emphasizing the role of judgement.

the CFO typically have the most knowledge and influence on company financial reporting. They are likely to provide strong guidance on the restatement disclosure method. Restatements of extreme magnitude are often clear as to the "right" disclosure method, but given materiality and judgment, many restatements can be argued to qualify as either "revisions" or "reissuances." Given that all participants in the disclosure-method decision benefit from avoiding a reissuance restatement, support for a revision restatement is likely unless compelling evidence that the error is material in nature exists.

Executive Compensation

The potential for corporate executives to use their power for self-enrichment at the expense of shareholders has long been a public and regulatory concern (see, e.g., Berle and Means 1932). Extant research suggests executive misuse of power can manifest in a variety of pay-performance behaviors that include managing earnings (Baker, Collins, and Reitenga 2003; Cheng and Warfield 2005; Ibrahim and Lloyd 2011), timing disclosures opportunistically (Aboody and Kasznik 2000), emphasizing good news over bad (Miller 2002), extracting rents when disclosure quality is low (Kayla and Magnan 2008), and backdating stock options (Yermack 1997). Such behavior can expose executives and their companies to increased litigation or regulatory enforcement actions. Such executive behavior could be explained by a perceived risk-reward opportunity set in which executives view the short-term gains as both large and highly probable, whereas they view the long-term penalties as both small and improbable.

Opportunistic executive behavior also appears in the context of restatements. Some research suggests a link between management compensation and an increased likelihood of a restatement (Burns and Kedia 2006; Efendi et al. 2007; Harris and Bromiley 2007). Other studies show that executives can benefit from opportunistic timing of exercising stock options or stock sales around the restatement announcement (Burns and Kedia 2008; Agrawal and Cooper 2008). However, the extant literature does not explore possible linkages between executive compensation and the transparency choice for a restatement disclosure.

Executive pay has increased substantially over time, with most of this increase coming in the form of equity-based pay, such as stock grants and stock options (Bebchuk and Grinstein 2005), causing a substantial change in the structure of executive pay. Public outcry over increasing executive pay, opportunistic management behavior, and high-profile business failures have contributed to regulations aimed at increasing the transparency of executive pay and reinforcing executive responsibility for financial statements (U.S. House of Representatives 2002).[2] Regulatory actions such as SOX also attempt to serve as deterrents to executive behavior that could place investors at greater risk. The absence of timely, transparent disclosure of a pending restatement of past financial results can be problematic for investors to assimilate the impact of the underlying errors into the value of securities (SEC 2004a).

HYPOTHESIS DEVELOPMENT

Agency theory (Jensen and Meckling 1976) predicts that in the absence of effective contracting, managers will act in their own self-interest. Although the trend of increasing equity pay to executives is often rationalized as better contracting of pay to performance, there may be unintended consequences. Evidence of these consequences includes actions that subsequently require a company to restate prior period results. However, at the time when executives take actions that ultimately contribute to a restatement, there may be little to no expectation by executives that the consequences of their actions will include restating financial results along with the related damages to them or their company.

Deterrence theory suggests that the severity and certainty of punishment influences whether people engage in certain behaviors (see Pratt, Cullen, Blevins, Dagle, and Madensen [2008] for an overview of deterrence theory). SOX added to both the severity and certainty of punishment for CEOs and CFOs who release erroneous financial statements by requiring personal certification and explicitly stating potential criminal penalties. Executives engaging in behavior that is not in direct violation of rules but that results in a future restatement (negligent errors, aggressive accounting, etc.) may not perceive their actions as putting them at risk for fines or other forms of punishment. Even fraudsters may believe that they can "fix" a situation before it can be discovered, causing them to view the risk of punishment as low. As such, it should not be surprising that executives sometimes enrich themselves through actions that subsequently result in a restatement (Burns and Kedia 2006; 2008; Efendi et al. 2007; Cheng and Farber 2008).

When executives are determining the disclosure method for a restatement, a financial reporting problem has already been discovered, thus increasing the "certainty of punishment." A reasonable course of action for executives faced with the necessity of a restatement is to be very transparent in the disclosure by "doing the right thing" in both fact and appearance. Files (2012)

[2] Examples of regulatory efforts to improve the transparency of executive pay include a 1992 SEC rule requiring disclosure of compensation amounts and components, and the SEC (2006) rule requiring a Compensation Discussion and Analysis (CD&A) section, which requires discussion of how executive pay is determined.

found evidence that the appearance of cooperation in the restatement disclosure process mitigates enforcement actions. Further, a non-reliance restatement disclosure (8-K) puts investors on notice, making it more difficult for class action lawsuits to seek damages for investment decisions made after the restatement disclosure (Files 2012).

Alternatively, an agency problem might persist beyond actions that increase the risk of a restatement into how executives choose to disclose a restatement. By avoiding the high-transparency disclosure (8-K filing) of restatements, executives can attempt to soften the effect of negative market reaction on company stock, provide more time to manage stock sales to their advantage, reduce the risk of being terminated, and minimize damage to their reputation. In particular, the CEO and CFO may consider the impact of the restatement disclosure on their equity compensation. Prior studies show that the market has a stronger negative reaction to 8-K restatement announcements than to other forms of restatement disclosure (Plumlee and Yohn 2008; Myers et al. 2013). Further, Irani and Xu (2011) find that the market does not significantly react to lower-transparency disclosures in both their short- and long-term time frames. This differential market reaction to how the restatement is disclosed creates opportunity for executives to benefit by choosing not to use a high-transparency disclosure.

Notwithstanding the tension between deterrence theory and agency theory predictions, we posit that the agency problem will outweigh existing deterrents and result in a low-transparency restatement disclosure. Although the CEO and CFO are both required to certify financial statements (U.S. House of Representatives 2002), restatement penalties for each executive could differ because of the different job responsibilities and stakeholder expectations of these two executives. These differences between the CEO and CFO suggest the need to examine each executive separately. The CEO is the titular head of most companies and viewed as responsible for overall company performance. Therefore, the first hypothesis stated in the alternative form (H1a) follows:

H1a: CEO equity pay proportion is negatively associated with the likelihood of a high-transparency disclosure (8-K).

Prior literature shows that CFOs face more severe penalties than CEOs in the form of job loss (Burks 2010) and labor market penalties (Collins, Masli, Reitenga, and Sanchez 2009) following a restatement. CFOs are responsible for overseeing the implementation of accounting principles as well as the preparation of financial reports (Aier, Comprix, Gunlock, and Lee 2005). CFOs supervise all of the firm's financial functions as the financial expert on the executive management team. CEOs, on the other hand, are responsible for the entire company of which financial reporting is but a part. CFOs are also more likely to hold professional accounting certification(s) that may be at risk in the event of not properly following accounting rules and regulations. Facing more severe deterrents, CFOs may not be willing to risk supporting a low-transparency restatement disclosure. However, we hypothesize that agency problems will also dominate the CFOs' disclosure choice. Thus, H1b stated in the alternative form follows:

H1b: CFO equity pay proportion is negatively associated with the likelihood of a high-transparency disclosure (8-K).

In the post-SOX era, both the CEO and the CFO have personal liability for the accuracy of the financial statements. Even though the CEO has authority over the company, prior literature suggests there is joint involvement between the CEO and CFO in important financial reporting decisions. For example, both CEO and CFO equity incentives have been associated with earnings management (Jiang, Petroni, and Wang 2010), financial policies related to debt and accruals (Chava and Purnanandam 2010), and accounting manipulations (Feng, Ge, Luo, and Shevlin 2011). In addition, using excerpts from Accounting and Auditing Enforcement Releases (AAERs), Feng et al. (2011) conclude that CFOs were pressured by CEOs to engage in accounting manipulations. Taken together, this evidence suggests that many financial disclosure decisions result from interaction between the CEO and CFO.

CEOs and CFOs have different risk-reward opportunity sets that create potential for tension in selecting disclosures that may affect compensation, employment, or litigation. With greater equity rewards at stake, CEOs may be more willing to take the risk of a low-transparency restatement disclosure. Conversely, CFOs, having relatively less equity-based pay and the risk of more severe penalties, may be less willing to take the risks associated with a low-transparency disclosure. Greater disparity in the CEO versus CFO pay structure could motivate CFOs to more aggressively resist a low-transparency disclosure, potentially reducing the likelihood of a low-transparency disclosure. Alternatively, if CEO and CFO pay structure is aligned (similar proportions of equity-based pay), then there may be less tension between these executives regarding the disclosure choice. Thus, for companies in which equity-based pay proportions are aligned between the CEO and CFO, we expect a greater incidence of low-transparency disclosures than for companies in which the equity pay proportions are not aligned.[3] H2 examines the association between transparency choice and pay structure differences between CEOs and CFOs.

[3] In an experiment using financial services professionals Danilov, Biemann, Kring, and Sliwka (2013) find that team (aligned) incentives resulted in more frequent recommendations of lower-quality investment products.

H2: As pay structure differences between the CEO and the CFO increase, the likelihood of transparent restatement disclosure increases.

RESEARCH DESIGN

H1a and H1b investigate the association between CEO and CFO equity executive pay and restatement disclosure choice. These hypotheses are examined by estimating logistic regression models in which disclosure choice is the dependent variable. Following Myers et al. (2013), we define high-transparency restatement disclosures as those filing an 8-K or a press release.[4] We use a categorical variable for the high-transparency disclosure year (*HIGH* = 1). Less transparent forms of restatements (low disclosure), such as amended filings (10-K/As) or regularly scheduled annual filings (10-Ks) are represented by *HIGH* = 0. For all hypotheses, we examine whether CEO (H1a) and CFO (H1b) equity compensation proportions are associated with the likelihood of these executives disclosing their restatement in the most transparent manner (*HIGH* = 1).

To measure executive pay proportion, the variable *PYLTPERCENT* (CEO and CFO) is created from the Execucomp database by dividing equity pay by total pay (*TDC1*) in the year prior to the restatement disclosure. For years prior to 2006, equity pay represents the sum of restricted stock grants (*RSTKGRNT*) and option award values (*OPTION_AWARDS_RPT_VALUE*). After 2006 stock (*STOCK AWARDS*) plus option values (*OPTION_AWARDS*) are used.[5] *PYLTPERCENT* captures the portion of compensation derived from equity during the restatement disclosure determination period (assumed to be the year prior to the restatement announcement). To avoid complications due to potential multicollinearity between CEO and CFO compensation, separate regressions are run with CEO (*PYCEOLTPERCENT*) and CFO (*PYCFOLTPERCENT*) proportion of equity pay to total pay as the primary independent variable of interest. Industry (based on two-digit SIC codes) and year fixed effects are also included in all models. Our empirical model for H1a and H1b, in which *PYLTPERCENT* represents CEO and CFO equity pay, respectively, follows:

$$HIGH_{i,t} = \beta_0 + \beta_1 PYLTPERCENT_{i,t} + \beta_{2\text{-}13}(Restatement\ Variables)_{i,t} + \beta_{14\text{-}22}(Firm\ Characteristics)_{i,t} + Industry\ Fixed\ Effects + Year\ Fixed\ Effects + \varepsilon_{i,t} \quad (1)$$

To control for characteristics that may also affect disclosure choice, all models include restatement-specific control variables. A restatement magnitude variable (*REPERCENT*) is included that represents the cumulative impact of the restatement on firm retained earnings (as measured in the year prior to the restatement announcement) (Hogan and Grant 2010).[6] Further, an indicator variable (*NEGATIVE_IMPACT*), equal to 1 if the restatement is an income-decreasing restatement, and 0 otherwise, is included as prior literature has shown that investors' reactions to income-increasing restatements are not significantly different from zero, while income-decreasing restatements produce negative market reactions (Callen, Livnat, and Segal 2006).

Other restatement control variables include *NUMRESTATE*, *NUMPERIODS*, *ICONTROLS*, and *INITMGER*. *NUMRESTATE* and *NUMPERIODS* are included as additional proxies for the severity of the firm restatement. *NUMPERIODS* is a continuous variable that equals the sum of the total number of periods restated (0.25 per quarter, 1 per year). Restatements affecting a greater number of firm years have been shown to increase the likelihood of an 8-K (*HIGH* disclosure) restatement filing (Myers et al. 2013; Plumlee and Yohn 2010). Similarly, *NUMRESTATE* is a continuous variable summing the number of financial statement accounts affected by the restatement, as the market has been shown to react more negatively as the number of financial statement categories increases (Palmrose et al. 2004).[7]

ICONTROLS is an indicator variable equal to 1 if the firm disclosed an internal control weakness issue within one year of the restatement filing, and 0 otherwise. Prior research has shown that internal control disclosures are informative to the market (Hammersley, Myers, and Shakespeare 2008) and may increase firm scrutiny by external parties. As external auditors are required to report on the adequacy of internal controls (U.S. House of Representatives 2002), managers may have less ability to manipulate disclosure choice when internal control weaknesses are found. Therefore, *ICONTROLS* is predicted to be positively associated with *HIGH* disclosure restatements as auditors may push for high disclosure when the firm has internal control concerns.

[4] More than 80 percent of our press release sample also filed a Form 8-K within a day or two of the filing of the press release. However, our disclosures are classified as *HIGH*, etc. based upon the initial disclosure. Even so, we classify both press releases and Form 8-K filings as the most prominent or *HIGH* disclosure level and do not specify differences between these two groups. In our discussion of H1a and H1b results, we report on supplemental tests that examine the possibility that all *HIGH* restatements are not similar by excluding press release disclosures.

[5] In 2006 the SEC changed compensation disclosure rules to require equity awards to be valued using Statement No. 123R (FASB 2004), grant date fair value. Prior to 2006, companies reported equity valued at one (or both) of two different methods. We use the amounts reported in Execucomp for all of our pay variables.

[6] Other papers in this literature stream have used different variables in scaling to measure the magnitude of the restatement on the firm. Prior literature has also used prior year total assets (Files et al. 2014; Plumlee and Yohn 2010) or prior year net income (Myers et al. 2013). Our results are qualitatively similar when using these different scaling variables to measure the magnitude of our sample of firm restatements.

[7] Account classification categories are provided, along with the sample, by Audit Analytics.

Indicator variables for *FRAUD,* stock option equity compensation (*SCOMP*), *REVENUE,* lease accounting (*LEASE*), and firm financing (*DEBT/EQUITY*) are also included to proxy for restatement severity based upon prior studies (Scholz 2008). These variables are all created based upon codes provided in Audit Analytics. Similar to Myers et al. (2013), an indicator variable (*QTR1*) equal to 1 if the restatement was released in the first firm fiscal quarter, and 0 otherwise, is also included and is predicted to be positively related to a more transparent disclosure. The authors posit that the first quarter represents a period of time when the external auditor is more engaged in audit procedures. This additional monitoring was found to increase the likelihood of a Form 8-K disclosure by the company.

Finally, *INITMGER* is an indicator variable equal to 1 if the company's management is responsible for initiating the restatement, and 0 otherwise. The need for a restatement, as disclosed in the restatement announcement, can also be brought about by external parties, such as an investigation by the SEC or the company's external auditor. Managers who are responsible for initiating the restatement filing, as opposed to a restatement brought about by an external source, should have greater influence over the eventual method of disclosure. Therefore, if managers are concerned about their compensation when determining a disclosure level, then *INITMGER* is predicted to be negatively related to high-disclosure restatements.[8]

Firm-specific control variables, consistent with prior literature, are also included in our models (for example Myers et al. 2013; Tan and Young 2015). We control for expected growth (*BM*), growth in assets (*ATGROWTH*), and leverage (*LEV*), as growth firms are less likely to disclose a restatement in a Form 8-K while highly leveraged firms are more likely to use this highest disclosure level (Myers et al. 2013). Book-to-market (*BM*) is computed as the ratio of firm book value to firm market value, while firm leverage (*LEV*) equals total long-term plus current liabilities scaled by total assets. Asset growth (*ATGROWTH*) equals the percent change in assets from the year prior to the year of the restatement announcements. To control for firm size, the log of total assets (*LOGTA*) is used. Total assets are used as a size control to avoid the volatility of other size measures such as market value. Variables accounting for past (*LOSS*) and current (*RET*) firm results are also included, as the stock markets have been shown to react differently to restatement announcements from weak stock performers (Palmrose et al. 2004). *LOSS* is an indicator variable equal to 1 if the firm reported a loss in the year prior to the restatement announcement, while current returns (*RET*) is computed as buy-and-hold returns over 120 days prior to the restatement announcement (day −120 to day −1). Managers may choose to disclose a restatement in a different manner based upon recent and current firm performance. As prior literature examining disclosure choice has been inconclusive regarding firm size and performance, no predictions are made for these variables (Myers et al. 2013).

Prior literature has also shown that firms are more likely to disclose restatements in a more transparent manner as external monitoring (institutional holding, analyst following, etc.) increases (Myers et al. 2013). To control for external monitoring, the percent of holdings by institutional investors (*PERCENTHELD*) is included. *PERCENTHELD* is computed as the sum of shares held by institutions in the quarter prior to the restatement announcement divided by total shares outstanding and is predicted to be positively related to high-disclosure restatements. Other external monitoring variables include whether the firm is audited by a Big 4 accounting firm (*BIGN*) and the proportion of restatements within the same industry that are disclosed in the same manner as our sample firm (*INDUSTRY_8K*). *BIGN* is an indicator variable equal to 1 if the firm is audited by a Big 4 accounting firm, and 0 otherwise. *INDUSTRY_8K* is created similar to Myers et al. (2013). The authors create industry classifications using the Fama and French (1988) 17-group classification system. We duplicate this step using our complete sample of disclosed restatements and determine the percent of 8-K filers within each industry group.

H2 examines whether differences in the proportion of total pay in equity also influences the disclosure choice. Executives potentially face dissimilar penalties when disclosing a restatement (Burks 2010). Further, CEOs and CFOs are generally compensated differently in regard to their equity and non-equity pay components. To examine whether differences in these compensation components between CEOs and CFOs are potentially causing tension in the disclosure selection decision, we examine differences in each executive's equity proportion of total compensation. CEOs and CFOs are matched within firms and a difference in equity percent compensation variable (*LTDIFF*) is included, which is defined as the CEO minus the CFO

[8] Prior literature often differentiates between management-initiated restatements and restatements forced or identified by others, such as the SEC's Accounting and Auditing Enforcement Releases (Agrawal and Cooper 2008) or the audit firm (Palmrose et al. 2004). Sometimes, the restatement announcement will include passages implying that the restatement was brought to the company's attention by an outside source (auditor, IRS, etc.). Market participants (and therefore the firm's stock price) may react to this additional information. Therefore, *INITMGER* is included to control for whether having an outside party initiate the restatement affects the disclosure decision. Data for this variable were initially obtained from Glass Lewis & Co., a company that tracks restatement disclosures. As the final restatement sample was obtained from Audit Analytics, the variable *res_sec_invest* from this dataset was used to supplement the Glass Lewis & Co. data for the *INITMGER* variable. However, the Audit Analytics data capture potential SEC identification/enforcement of the restatement, but not auditor-initiated restatements. Finally, all incomplete observations were hand collected directly from SEC filings. Overall, this variable is subject to some measurement error and noise regardless of the data source because the audit profession encourages management to take responsibility of financial reports and companies may want to credit management with initiating the restatement as a signal of better internal controls (see Palmrose et al. 2004). Notwithstanding the aforementioned limitations, *INITMGER* serves as a reasonable control variable for the purpose of this study.

TABLE 1

Sample Selection

Disclosures (10-K, 10-K/A, 8-K, Press Releases) from Audit Analytics (AA) from 8/2004 to 12/31/2013	5,804
Less: Restatements with market capitalization/revenues < $1 million	(2,686)
Less: Restatements missing Compustat/CRSP/Execucomp variable data	(927)
Less: Restatements missing cumulative restatement effect in AA	(445)
Less: Restatements missing Thomson Reuters institutional data	(409)
Less: Multiple restaters not greater than one year apart (77 firms, 91 obs.)	(91)
Less: Restatements in which CEO/CFO is deceased/other	(68)
Total restatement observations	1,178

percentage in equity compensation. This equity percentage difference variable serves as the main independent variable in the analysis for H2. Because the percentage of equity pay to total compensation is used, each compensation variable is scaled to reflect each component's impact on executive decision making, as well as to account for variations in total pay between companies and executives. In this regard, we examine whether the interaction between these two individuals, and the resulting disclosure choice, is different based upon compensation structures. However, as the disparity variable (*LTDIFF*) does represent a level of difference in pay percentage, but the magnitude of equity compensation may also influence disclosure choice, we also include our measure of prior year CEO long-term equity percent (*PYCEOLTPERCENT*) to control for the amount to which executive pay composition itself could influence disclosure choice.[9]

To test H2, a logit regression is used to examine whether high disclosure is positively associated with the CEO/CFO compensation difference. Our empirical model for H2 is summarized as follows:

$$HIGH_{i,t} = \beta_0 + \beta_1 LTDIFF_{i,t} + \beta_2 PYCEOLTPERCENT_{i,t} + \beta_{3\text{-}14}(Restatement\ Variables)_{i,t} + \beta_{15\text{-}23}(Firm\ Characteristics)_{i,t} + Industry\ Fixed\ Effects + Year\ Fixed\ Effects + \varepsilon_{i,t} \quad (2)$$

In the next section, we discuss our sample selection as well as provide descriptive statistics for our restatement and firm-specific control variables.

SAMPLE SELECTION AND DESCRIPTIVE STATISTICS

Table 1 provides detail regarding our sample selection. Restatement data are obtained for the period August 2004 through December 2013 from Audit Analytics. This time period is used because firms were not required to issue a restatement on a Form 8-K until August 2004.[10] In addition, the dataset only includes restatements due to accounting errors and does not include changes in accounting principles, estimates, the adoption of new standards, or typographical errors.

The initial sample contained 5,804 restatements, covering various firm disclosures (8-Ks, 10-Ks, 10-K/As, and press releases). The sample was reduced by 2,686 observations that had either market capitalization or revenue of less than $1 million to eliminate very small companies (Files, Sharp, and Thompson 2014). As the magnitude of the restatement is required to determine the severity, another 445 observations were eliminated for which Audit Analytics did not contain information about the financial impact of the restatement. Further, the sample was reduced by 927 (409) observations that did not have data on the control variables from Compustat/CRSP/Execucomp (Thomson Reuters). Since compensation data are collected for the year prior to the restatement disclosure, we eliminated an additional 77 firms (91 observations as a few firms had more than two restatements in consecutive years) in which restatements were reported in multiple subsequent years. These firms were excluded to ensure that there is no overlap between the compensation effects from one restatement and the disclosure of an additional restatement. However, firms that had multiple restatements with at least two years between disclosures were retained in our analysis.[11] Finally,

[9] As the difference variable (*LTDIFF*) is created from the CEO minus the CFO equity percentage variables, including both equity percentage variables in the model along with the difference variable would not be possible as the three variables form a linear combination.

[10] SEC (2004a) Release 33-8400, issued on August 23, 2004, introduced an 8-K filing requirement for a firm restatement under Section 4.02. However, discussion of this additional restatement 8-K filing requirement began at least as early as June 17, 2002 in SEC (2002) Release No. 33-8106. Therefore, while an 8-K was not formally required until the latter half of 2004, we believe that managers were aware of this new filing requirement before 2004.

[11] After removing firms with subsequent-year restatements but retaining those with at least two years between restatement observations, our sample still contains 39.3 percent of firms that had multiple restatements over our sample period. This number is slightly higher than the 38 percent of firms with multiple restatements found by Files et al. (2014).

we removed 68 restatement firms that reported an executive death or other (Execucomp variable *REASON*) in either the year prior to or in the restatement year, as these executives would have likely had less to do with the disclosure choice as new management transitioned. This resulted in a final sample of restatements consisting of 1,178 observations.[12,13]

Table 2 provides descriptive statistics and univariate analysis by executive level (CEO or CFO) for the sample. Examining executive equity compensation, the means (medians) of prior year equity pay percentage compensation for high-disclosure firms are 0.45 (0.47) for CEOs and 0.38 (0.36) for CFOs. For the low-disclosure restatement group, equity pay percentage compensation is 0.46 (0.49) for CEOs and 0.43 (0.42) for CFOs.[14] Univariate tests confirm that CEOs do not earn higher equity pay percentage based upon disclosure level. However, it is important to examine compensation and transparency while controlling for additional determinants of disclosure choice in a multivariate setting.

Restatement and control variables are also included in Table 2. Firm-specific control variables indicate that the high- and low-restatement transparency firms are of similar size, as the means (medians) of the size variable (*LOGTA*) are 7.58 (7.34) for the high-transparency restatement firms and 7.72 (7.67) for the low-restatement transparency sample. Further, sample firms are not significantly different in terms of growth, as proxied by book-to-market ratios (*BM*) and solvency risk as proxied by firm debt levels (*LEV*). However, significant differences are found for one of our measures of external monitoring. High disclosure restatement firms do not have significantly greater institutional ownership (*PERCENTHELD*) but high-disclosure firms are more likely to follow disclosure patterns within their respective industry (*INDUSTRY_8K*). Significantly different mean values of 0.68 (0.67) for our high- (low-) restatement transparency firms implies that a larger percentage of our high-disclosure restatement firms were located within industries whose members also filed a high-disclosure restatement.

Similar to prior literature (Files et al. 2009; Tan and Young 2015), we find significant differences between high- and low-restatement disclosure announcements with respect to the restatements themselves. High disclosure transparency restatements cover longer time periods (*NUMPERIODS*), have more restatement categories (*NUMRESTATE*), are more likely to involve a reduction in income (*NEGATIVE_IMPACT*), and are more likely to have been filed by firms announcing a disclosure of internal control deficiencies (*ICONTROLS*). Firms accused of fraud and restatements related to lease accounting and firm equity compensation are also significantly more likely to be disclosed in a high-transparency restatement. Similar to other studies that find no differences in magnitude between restatement categories (Myers et al. 2013), our proxy for the magnitude of the restatement (*REPERCENT*) does not differ significantly for high (mean equals −8 percent) and low (mean of −2 percent) disclosures. Further, these two groups do not differ significantly in terms of firm size (*LOGTA*). Finally, approximately 90 percent of high-transparency restatements versus 98 percent of low-transparency disclosure restatements are initiated by management (*INITMGER*).[15]

Table 3 provides cross-sectional correlations for our compensation, restatement, and firm-specific control variables. For CEO and CFO compensation, a significant positive correlation exists between the prior year equity (*PYLTPERCENT*) percentage compensation variables for each executive. Therefore, firms do appear to compensate both executives in a similar fashion, albeit the correlations are far from perfect and the levels of compensation are substantially different. Table 3 provides support for examining separate logistic regression models for our CEO and CFO compensation variables due to the potential for multicollinearity issues. Overall, correlation levels for our restatement and control variables suggest that multicollinearity is not a problem in our analyses.

RESULTS

H1a and H1b examine whether the equity proportion of CEO (H1a) and CFO (H1b) pay is associated with whether a firm releases a restatement in a high-transparency disclosure. Examining only the equity component of compensation, results found in Table 4 indicate that higher levels of CEO equity pay percentage ($p = NS$) do not—while increasing levels of CFO equity

[12] While studies have documented executive turnover following restatements (Arthaud-Day et al. 2006; Hennes, Leone, and Miller 2008), and potential job loss could be a concern when determining a restatement disclosure level, we focus solely on the annual compensation aspect of the disclosure decision. Further, as our compensation variable is measured in the year prior to the restatement as a determinant of disclosure choice, we are less concerned with executive firings *ex post*. However, the same executive is required for our complete sample period ($t-1$ to t) so that the compensation of the executive making the disclosure choice and their compensation are matched.

[13] Any missing and/or reported values of 0 in Execucomp on equity compensation components were hand collected and verified by the authors by reviewing the appropriate SEC Form DEF 14A. Hand-collected data, combined with initial elimination of small firms, mitigate the large sample melt often associated with using Execucomp.

[14] Approximately 200 executives in the sample have zero reported equity executive compensation. If these individuals are removed, then mean (median) values of equity pay percentage are 0.55 (0.55) for CEOs and 0.47 (0.45) for CFOs.

[15] Both the 90 and 98 percent of management-initiated restatements are likely overstated due to noise and measurement error in the reported attribution (see footnote 8 for more detail). However, any such noise or measurement issues are possible in all restatement attributions such that any impact on observed differences should be minimal.

TABLE 2

Descriptive Statistics

	High-Disclosure Restatements (n = 817 Firms)			Low-Disclosure Restatements (n = 361 Firms)			Mean Test	Median Test
	Mean	Median	Std. Dev.	Mean	Median	Std. Dev.		
CEOs								
PYCEOLTPERCENT	0.45	0.47	0.31	0.46	0.49	0.29	0.55	0.41
PYCEOLTCOMP	2636.28	1114.75	5454.28	2778.93	1389.54	5873.94	0.39	1.33
CFOs								
PYCFOLTPERCENT	0.38	0.36	0.29	0.43	0.42	0.26	2.57**	2.79***
PYCFOLTCOMP	783.20	351.45	1262.64	988.24	547.89	1813.18	2.08**	3.19***
NUMPERIODS	3.09	2.67	2.62	1.95	1.92	1.34	−7.78***	−7.74***
NUMRESTATE	2.75	2.00	1.93	1.99	2.00	1.33	−6.87***	−7.00***
REPERCENT	−0.08	−0.01	1.44	−0.02	0.00	0.28	0.46	7.75***
ICONTROLS	0.61	1.00	0.49	0.26	0.00	0.44	−11.99***	−10.95***
NEGATIVE_IMPACT	0.56	1.00	0.50	0.29	0.00	0.46	−9.01***	−8.45***
FRAUD	0.04	0.00	0.19	0.01	0.00	0.09	−2.88***	−2.87***
SCOMP	0.16	0.00	0.37	0.03	0.00	0.17	−6.46***	−6.35***
LEASE	0.14	0.00	0.35	0.01	0.00	0.12	−6.80***	−6.68***
DEBT/EQUITY	0.05	0.00	0.21	0.06	0.00	0.23	0.94	0.95
REVENUE	0.17	0.00	0.37	0.12	0.00	0.33	−1.91*	−1.91*
INITMGER	0.90	1.00	0.30	0.98	1.00	0.15	4.70***	4.66***
ATGROWTH	0.07	0.05	0.22	0.07	0.03	0.25	0.01	−2.09**
LEV	0.40	0.40	0.23	0.40	0.40	0.22	−0.01	−0.44
QTR1	0.38	0.00	0.48	0.61	1.00	0.49	7.49***	7.35***
BM	0.52	0.50	0.83	0.59	0.53	0.55	1.45	2.09**
RET	−0.06	−0.02	0.41	−0.09	−0.02	0.42	−1.11	−0.19
LOGTA	7.58	7.34	1.79	7.72	7.67	1.68	1.31	2.72***
PERCENTHELD	0.76	0.76	0.21	0.75	0.78	0.21	−0.84	1.58
INDUSTRY_8K	0.68	0.69	0.04	0.67	0.68	0.04	−3.33***	−1.34
BIGN	0.97	1.00	0.17	0.97	1.00	0.18	−0.35	−0.36
LOSS	0.25	0.00	0.43	0.23	0.00	0.42	−0.74	−0.73

***, **, * Indicate differences of means/medians between high- and low-disclosure restatement firms are statistically different from each other at significance levels of 1 percent, 5 percent, and 10 percent, respectively.

Variable Definitions:

PYCEOLTPERCENT = prior year long-term compensation (*PYCEOLTCOMP*) divided by prior year total compensation from Execucomp (TDC1);

PYCEOLTCOMP = prior year sum of stock and option awards from Execucomp. For years prior to 2006, stock awards represented restricted stock grants (variable RSTKGRNT) and options represented reported option award values (variable OPTION_AWARDS_RPT_VALUE). For years 2006 and after, stock awards (Execucomp variable STOCK_AWARDS) and option awards (Execucomp variable OPTION_AWARDS) were used. All CFO equivalent variables are computed in the same manner as the CEO variables;

NUMPERIODS = the sum of the restatement periods included in the restatement filing (0.25 per quarter, 1 per fiscal year);

NUMRESTATE = the sum of the restatement categories included in the restatement filing. These categories have been provided by Audit Analytics;

REPERCENT = the cumulative impact of the restatement as a proportion of firm-retained earnings (collected at the beginning of the restatement announcement year);

ICONTROLS = an indicator variable equal to 1 if the restatement was announced within ± 1 year of a firm disclosure of an internal control weakness, and 0 otherwise;

NEGATIVE_IMPACT = an indicator variable equal to 1 if the restatement reduced income, and 0 otherwise;

FRAUD, SCOMP (Stock Compensation), *LEASE, DEBT/EQUITY,* and *REVENUE* = indicator variables equal to 1 if the restatement included these issues, and 0 otherwise;

INITMGER = an indicator variable equal to 1 if initiation of the restatement was attributed to management, and 0 otherwise. This variable was initially populated by data from Glass Lewis & Co. Observations for which Glass Lewis & Co. data were not available were populated first from Audit Analytics, with the remaining observations hand collected from SEC filings. Please see footnote 8 for further discussion;

ATGROWTH = firm asset growth and is computed from Compustat variables (AT − prior year AT)/(prior year AT);

LEV (Leverage) = total long-term plus current liabilities scaled by total assets;

QTR1 = 1 if the restatement was in the firm's first fiscal quarter, and 0 otherwise;

BM (book-to-market ratio) = comparing size with market capitalization in the year preceding the announcement;

RET (Return) = buy-and-hold returns over 120 days prior to the restatement announcement (days −120 to −1);

LOGTA (Log Total Assets) = the natural log of total assets measured in the year preceding the restatement announcement;

PERCENTHELD = the sum of shares held by institutions divided by total shares outstanding in the quarter prior to the restatement announcement;

INDUSTRY_8K = the percentage of firms in each industry that reported using a *HIGH* restatement during our sample period;

BIGN = an indicator variable equal to 1 if the restatement firm had a Big N auditor on the restatement date, and 0 otherwise; and

LOSS = an indicator variable that equals 1 if the firm had a loss in the year prior to the restatement announcement, and 0 otherwise.

TABLE 3

Cross-Sectional Correlations between Restatement Variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
1. *HIGH*	—	−0.02	**−0.08**	0.04	**0.22**	**0.20**	−0.02	**0.25**	**−0.14**	**0.08**	**0.06**	**0.19**	**0.19**	−0.03	0.02	**0.10**	0.01	**−0.21**	**0.32**
2. *PYCEOLTPERCENT*	**−0.02**	—	**0.57**	**0.53**	0.03	0.02	−0.05	−0.02	0.02	0.01	0.02	−0.02	0.02	−0.03	**0.16**	**0.07**	**0.13**	−0.05	0.00
3. *PYCFOLTPERCENT*	**−0.09**	**0.57**	—	**−0.40**	0.03	−0.04	−0.05	−0.05	−0.01	0.03	0.01	0.02	−0.02	**−0.06**	**0.14**	0.05	**0.16**	0.02	−0.03
4. *LTDIFF*	0.00	**0.52**	**−0.24**	—	−0.01	**0.06**	0.00	0.03	**0.06**	−0.03	−0.03	−0.03	0.01	0.02	0.02	−0.01	0.00	**−0.06**	0.01
5. *NUMPERIODS*	**0.19**	0.02	0.00	−0.03	—	**0.13**	0.00	**0.16**	**−0.13**	**0.07**	−0.04	**0.09**	**0.43**	−0.04	**0.08**	0.05	**0.10**	**−0.07**	**0.08**
6. *NUMRESTATE*	**0.21**	0.04	−0.04	0.05	**0.20**	—	0.00	**0.13**	**−0.09**	**0.17**	**0.11**	**0.39**	**0.09**	**0.13**	0.05	0.05	**0.09**	−0.03	**0.16**
7. *REPERCENT*	**−0.10**	0.00	0.04	0.00	**−0.09**	**−0.09**	—	**−0.09**	−0.01	0.01	0.00	0.02	0.02	0.01	0.00	−0.01	−0.01	−0.02	−0.02
8. *NEGATIVE_IMPACT*	**0.25**	−0.01	−0.06	0.00	**0.15**	**0.15**	**−0.47**	—	0.03	**0.07**	**0.12**	**0.20**	**0.09**	**−0.08**	**0.08**	−0.02	−0.04	0.03	0.03
9. *INITMGER*	**−0.14**	0.02	−0.02	**0.07**	**−0.17**	**−0.06**	−0.04	0.03	—	**−0.19**	**−0.09**	0.00	**−0.09**	0.03	−0.05	−0.04	−0.01	**0.14**	**−0.08**
10. *FRAUD*	**0.08**	0.01	0.03	−0.04	**0.08**	**0.10**	−0.03	**0.07**	**−0.19**	—	**0.12**	**0.06**	−0.02	−0.02	0.01	−0.01	0.00	**−0.09**	**0.08**
11. *REVENUE*	**0.06**	0.02	0.01	−0.02	−0.03	**0.06**	**−0.07**	**0.12**	**−0.09**	**0.12**	—	**−0.06**	−0.06	−0.03	0.00	**0.07**	0.03	**−0.07**	**0.11**
12. *LEASE*	**0.19**	−0.02	0.02	−0.03	**0.16**	**0.40**	**−0.10**	**0.20**	0.00	0.06	**−0.06**	—	**−0.07**	**−0.06**	0.03	−0.05	**0.06**	**0.19**	0.02
13. *SCOMP*	**0.19**	0.03	−0.02	0.00	**0.29**	**0.09**	**−0.06**	**0.09**	**−0.09**	−0.02	−0.06	**−0.07**	—	0.02	**0.06**	**0.14**	0.02	**−0.18**	0.01
14. *DEBT/EQUITY*	−0.03	−0.04	**−0.06**	0.01	0.00	**0.10**	**0.07**	**−0.08**	0.04	−0.02	−0.03	**−0.06**	0.02	—	−0.05	0.00	**−0.09**	−0.05	0.04
15. *PERCENTHELD*	0.02	**0.17**	**0.14**	0.04	**0.06**	**0.06**	**−0.11**	**0.10**	−0.04	0.00	0.00	0.03	**0.06**	0.04	—	**0.09**	**0.17**	−0.02	0.00
16. *INDUSTRY_8K*	**0.07**	**0.09**	0.06	0.00	0.00	0.05	0.04	−0.02	−0.04	0.00	**0.08**	**−0.11**	**0.16**	−0.01	**0.12**	—	0.03	**−0.12**	**0.09**
17. *BIGN*	0.01	**0.13**	**0.17**	0.01	**0.11**	**0.10**	0.01	−0.04	−0.01	0.00	0.03	**0.06**	0.02	**−0.10**	**0.12**	**0.07**	—	−0.04	0.02
18. *QTR1*	**−0.21**	−0.05	0.02	−0.05	−0.02	−0.03	−0.03	0.03	**0.14**	**−0.09**	**−0.07**	**0.19**	**−0.18**	−0.05	0.00	**−0.15**	−0.04	—	**−0.12**
19. *ICONTROLS*	**0.32**	0.00	−0.03	0.00	**0.11**	**0.14**	0.05	0.03	**−0.08**	**0.08**	**0.11**	0.01	0.00	0.04	−0.03	**0.10**	0.01	**−0.12**	—

Pearson correlations above the diagonal, Spearman correlations below. Bold numbers indicate significant correlations at 5 percent or less.
See the "Research Design" section for all variable definitions.

TABLE 4

Results of Logit Regression Analysis of CEO/CFO Long-Term Executive Compensation

Panel A: CEOs

Independent Variables[a]	Prediction	Coefficient	Odds Ratio	p-value
PYCEOLTPERCENT	−	−0.2305	0.794	0.20
NUMPERIODS	+	0.1358	1.145	0.00***
NUMRESTATE	?	0.0899	1.094	0.10*
REPERCENT	−	−0.0327	0.968	0.76
NEGATIVE_IMPACT	+	0.9396	2.559	0.00***
INITMGER	−	−1.3045	0.271	0.00***
ICONTROLS	+	1.5250	4.595	0.00***
FRAUD	+	0.4727	1.604	0.48
REVENUE	+	0.1562	1.169	0.50
LEASE	?	2.4876	12.033	0.00***
SCOMP	?	1.3753	3.956	0.00***
DEBT/EQUITY	+	−0.2305	0.794	0.52
BM	−	−0.0894	0.914	0.42
LOGTA	?	0.0600	1.062	0.22
LEV	+	−0.3215	0.725	0.38
LOSS	?	0.0749	1.078	0.70
RET	?	0.1444	1.155	0.46
PERCENTHELD	+	−0.1129	0.893	0.76
ATGROWTH	−	−0.5216	0.594	0.06*
QTR1	+	−0.8668	0.420	0.00***
BIGN	+	−0.5778	0.561	0.20
INDUSTRY_8K	+	2.5625	12.968	0.19
n				1,178
LR Chi-square				409.3927
Prob. > Chi-square				< 0.0001

Panel B: CFOs

Independent Variables[a]	Prediction	Coefficient	Odds Ratio	p-value
PYCFOLTPERCENT	−	−0.9078	0.403	0.00***
NUMPERIODS	+	0.1059	1.112	0.04**
NUMRESTATE	?	0.0932	1.098	0.13
REPERCENT	−	−0.0591	0.943	0.68
NEGATIVE_IMPACT	+	0.9400	2.560	0.00***
INITMGER	−	−1.3436	0.261	0.00***
ICONTROLS	+	1.6135	5.021	0.00***
FRAUD	+	0.3869	1.472	0.57
REVENUE	+	0.1815	1.199	0.47
LEASE	?	4.0908	59.788	0.00***
SCOMP	?	2.0534	7.795	0.00***
DEBT/EQUITY	+	−0.2359	0.790	0.55
BM	−	−0.1131	0.893	0.34
LOGTA	?	0.0554	1.057	0.31
LEV	+	−0.3605	0.697	0.37
LOSS	?	0.0346	1.035	0.87
RET	?	0.2441	1.276	0.25
PERCENTHELD	+	−0.2632	0.769	0.52
ATGROWTH	−	−0.4574	0.633	0.24
QTR1	+	−1.0081	0.365	0.00***
BIGN	+	−0.3384	0.713	0.47
INDUSTRY_8K	+	3.2361	25.435	0.08*

(continued on next page)

TABLE 4 (continued)

Independent Variables[a]	Prediction	Coefficient	Odds Ratio	p-value
n				1,178
LR Chi-square				397.0147
Prob. > Chi-square				< 0.0001

***, **, * Represent coefficient significance levels of 1 percent, 5 percent, and 10 percent, respectively, based upon p-values.

[a] See the "Research Design" section for variable definitions. Results are for a logit model with *HIGH* as the dependent variable and long-term pay percentage (*PYCEOLTPERCENT*) as the primary independent variable for CEOs and CFOs. All results are presented at two-tailed significance levels. Year and industry fixed effects are excluded from regression results to conserve space.

pay percentage ($p < 0.01$) do—significantly decrease the likelihood of the firm disclosing its restatement in the most transparent manner (*HIGH* = 1). Therefore, support is not (is) found for H1a (H1b).[16,17]

Examining our firm and monitoring control variables, results for whether the manager initiates the restatement (*INITMGER*) as predicted provides support that executives are less likely to release the restatement in the most transparent manner (subject to the limitations identified in footnotes 8 and 15). However, restatements including disclosures of internal control problems (*ICONTROLS*), restatements with a negative impact on net income (*NEGATIVE_IMPACT*), and restatements with longer time periods restated (*NUMPERIODS*) are more likely to have a high disclosure. These finding are consistent with Myers et al. (2013) that restatements associated with internal control weaknesses, reduced net income, and that encompassed longer time periods are more likely to be disclosed in an 8-K filing. Indicator variables representing lease accounting (*LEASE*) and stock option equity compensation issues (*SCOMP*) are also significantly related to a high-disclosure restatement in both CEO and CFO models. These findings are not surprising as both of these restatement categories represent clarifications of accounting issues by the SEC in 2005 (leases) and 2006 (stock option reporting).

External monitoring, in terms of the propensity of firms in the same industry to make the same disclosure choice (*INDUSTRY_8K*) is positive and significant as expected (CFO model only), while the level of institutional ownership (*PERCENTHELD*) is not significantly related to disclosure choice. Finally, the indicator variable representing restatements in the first quarter (*QTR1*) is negative and significant for both CEO and CFO models. One potential explanation might be that firms filing low-restatement disclosures include the disclosure in SEC Form 10-Ks and 10-K/As. These restatements would therefore usually be filed within the first fiscal quarter with these regularly scheduled SEC filings. On the other hand, high-disclosure restatements are not typically attached to any particular SEC filing date or disclosure. Therefore, even though scrutiny may be higher due to external monitoring from the onsite auditor, *ex post* it may not be surprising that low disclosures are significantly more likely in the first fiscal quarter.

Supplemental analysis for the CEO and CFO samples excluding press releases from the most prominent (*HIGH* = 1) disclosure level was also performed. Press releases were initially included along with Form 8-Ks and, as previously discussed, are often released within a short time window around a Form 8-K. However, an argument could be made that these two disclosure types are not necessarily interchangeable. Results after removing 244 press releases from the high-disclosure category provide similar results and support for CFOs ($p < 0.01$, two-tailed) and marginal support is now found for CEOs ($p = 0.06$, two-tailed). Therefore, inclusion of press releases may be adding noise to our main model for H1a and H1b.

H2 examines differences between CEO and CFO pay structures and predicts that the proportion of equity to total compensation paid is different between these two employees based upon restatement disclosure choice (high versus low) in the year prior to the restatement disclosure (year $t-1$). Table 5 provides results of a logistic regression analysis with the primary independent variable, *LTDIFF*, representing the difference in pay percentage in equity compensation between CEOs and CFOs. Univariate statistics (untabulated) of mean (median) values of *LTDIFF* are 0.06 (0.03) for high-disclosure restatements and 0.04 (0.03) for low-disclosure restatements.

[16] In supplemental analysis, we also explored the possibility that executives would be less concerned about disclosure choice based upon whether they were an executive at the company during the original misstatement period. In this regard, executives who were not serving in their current position during the misstatement period, even though their equity compensation might still be affected by a restatement announcement, might be less concerned about a *HIGH* disclosure, as the blame for the restatement could be shifted to an ex-employee. Results incorporating an indicator variable from Execucomp data equal to 1 if the CEO was the CEO at the time of the misstatement period, or was even an employee at the company, produced similar results. However, Execucomp data for the CFO were not sufficiently populated with employment timeline information to accurately test this possibility.

[17] In supplemental analysis (untabulated), we also included as an additional control variable a proxy for executive wealth. We created this proxy based upon portfolio values of stocks and options following Core and Guay (2002). Results were qualitatively similar for CEOs, but the sample size reduction caused by wealth data not being well populated in Execucomp did not allow the model to detect significance for CFOs.

TABLE 5

Results of Logit Regression Analysis of CEO/CFO Long-Term Executive Compensation

Independent Variables[a]	Prediction	Coefficient	Ratio	p-value
PYLTPERCENT	−	−0.8176	0.442	0.02**
LTDIFF	+	1.0396	2.828	0.00***
NUMPERIODS	+	0.1060	1.112	0.04**
NUMRESTATE	?	0.0921	1.096	0.07*
REPERCENT	−	−0.0568	0.945	0.69
NEGATIVE_IMPACT	+	0.9341	2.545	0.00***
INITMGER	−	−1.3593	0.257	0.00***
ICONTROLS	+	1.6166	5.036	0.00***
FRAUD	+	0.3985	1.490	0.55
REVENUE	+	0.1903	1.210	0.45
LEASE	?	4.1082	60.837	0.00***
SCOMP	?	2.0702	7.927	0.00***
DEBT/EQUITY	+	−0.2284	0.796	0.56
BM	−	−0.1080	0.898	0.36
LOGTA	?	0.0522	1.054	0.34
LEV	+	−0.3511	0.704	0.38
LOSS	?	0.0260	1.026	0.90
RET	?	0.2386	1.270	0.26
PERCENTHELD	+	−0.2836	0.753	0.48
ATGROWTH	−	−0.4617	0.630	0.24
QTR1	+	−0.9995	0.368	0.00***
BIGN	+	−0.3401	0.712	0.47
INDUSTRY_8K	+	3.1876	24.231	0.08*
n				1,178
LR Chi-square				397.3803
Prob. > Chi-square				< 0.0001

***, **, * Represent coefficient significance levels of 1 percent, 5 percent, and 10 percent, respectively, based upon p-values.

[a] See the "Research Design" section for variable definitions. Results are for a logit model with *HIGH* as the dependent variable and the long-term percent pay differences (*PYCEOLTPERCENT* − *PYCFOLTPERCENT*) *LTDIFF* as the primary independent variable. All results are presented at two-tailed significance levels. Year and industry fixed effects are excluded from regression results to conserve space.

The results in Table 5 provide support for H2. As the difference between CEO and CFO equity compensation percentage increases, the likelihood of firms releasing high-disclosure restatements increases ($p < 0.01$, two-tailed).[18] Therefore, disclosure choice appears to be affected by pay structure differences between these two executives. Further, unlike our results found in Table 4, Panel A, after controlling for long-term pay differences (*LTDIFF*), results provide support ($p = 0.02$, two-tailed) for H1a of a negative association between prior year CEO long-term equity percentage and high-disclosure restatements. Arguably, CEOs, who oversee the entire senior management team as well as the general wellbeing of the company, have some authority in determining the final disclosure choice (see CEO centrality studies such as Cremers, Bebchuk, and Peyer [2007] or Mande and Son [2012] for more on CEO influence). However, the CFO, as a certifier of the financial statements and the company's technical expert on financial reporting, clearly has influence on these matters. Our results support studies that suggest that financial decisions are the result of discussions between these two executives (Feng et al. 2011; Jiang et al. 2010; Chava and Purnanandam 2010). Other significant control variables are similar to results from Table 4 and in the predicted directions.

DISCUSSION AND CONCLUSIONS

One tenet of the American jurisprudence system is that rules and the punishment for violating them serve as deterrents to those who might otherwise engage in activities that cause harm to others (Pauley 1994). The financial statement certification

[18] Similar to our supplemental analysis of H1a and H1b, we reran our model for H2 while excluding press releases from our high-disclosure restatements. Results of this test provided similar ($p < 0.01$) support for our second hypothesis.

requirement placed on CEOs and CFOs, the non-reliance disclosure requirements, and various materiality standards are examples of such rules in the context of restatements. SEC enforcement actions and class action lawsuits are two examples of potential "punishments" for perceived violation of these financial reporting rules. Behavior leading to a restatement could be explained by errors that are unknown (undetected) or perceived as not violating regulations (aggressive accounting). The risk of an error being discovered that requires a restatement may easily be viewed by executives as highly unlikely. In this information context, it is unsurprising that executives take actions to maximize their compensation as suggested by the extant restatement literature.

Knowing a restatement is necessary (Big R or little r) removes the potential for managers to fix a problem before it is discovered. What remains is a matter of judgment regarding materiality of the restatement and the choice of disclosure method. By maintaining a presumption of innocence and appearance of forthright reporting, executives might reasonably expect to mitigate the likelihood and magnitude of SEC enforcement actions, as well as position themselves more favorably to defend against lawsuits. However, our results suggest that executives with a higher proportion of equity-based pay are less likely to choose a high-transparency restatement disclosure. Thus, either the regulations and stakeholders do not mete out penalties of sufficient severity or the penalties are assessed too infrequently to be a deterrent to low-transparency restatement disclosures.

Our examination of pay structure differences between CEOs and CFOs shows a significant disparity in the proportion of equity-based pay between these executives; CEOs tend to have a substantially higher proportion of equity-based pay (stock options and stock grants). Our results show that as the disparity between the equity-based pay proportions between these two executives increase, the likelihood of a high-transparency disclosure of a restatement increases. Conventional wisdom for executive pay has been to increase the equity component of pay to better align management interests with shareholder interests. However, to the extent greater equity-based pay supports low-transparency disclosures, pay structure alignment between executives may not always be in the best interests of stakeholders.

Another way to view the findings for disparity in pay structure is as a risk-reward opportunity set for these two executives. This opportunity set is substantially different for the CEO versus the CFO. CFOs are more likely to be terminated following a restatement (Burks 2010) and have less potential to benefit from a low-transparency disclosure due to having less equity-based pay than the CEO. This imbalance in the risk-reward opportunity set might reasonably be the source for tension in choosing the restatement disclosure method, with CFOs motivated to be more conservative (high-transparency choice). However, as CFO compensation becomes more aligned with the CEO, in terms of equity-based pay, tension in choosing the disclosure method (and potential for a more transparent disclosure) may diminish. These findings should be of interest to regulators, compensation committees, and investors as stakeholders continue to understand and mitigate agency issues driven by the structure of executive compensation as equity proportion increases.

Our study is subject to several limitations. First, although our results are consistent with a view of managers behaving opportunistically by avoiding high-transparency disclosure of restatements, our data and tests show associations that may or may not be causal. Second, our sample size is limited by the availability of data for relevant variables on companies issuing restatements. However, our sample size is similar to that of other studies on restatements. Finally, although we include a variety of controls for restatement cause and severity to rule out alternate explanations for our results, there could be unobservable factors that cannot be included. These factors, if present, could affect our results.

REFERENCES

Aboody, D., and R. Kasznik. 2000. CEO stock option awards and the timing of corporate voluntary disclosures. *Journal of Accounting & Economics* 29: 73–100.

Accounting Principles Board. (APB). 1971. *Accounting Changes*. APB 20. New York, NY: AICPA.

Advisory Committee on Improvements to Financial Reporting (ACIFR). 2008. *Final Report of the Advisory Committee on Improvements to Financial Reporting to the United States Securities and Exchange Commission*. Washington, DC: Securities and Exchange Commission.

Agrawal, A., and T. Cooper. 2008. *Insider Trading before Accounting Scandals*. Working paper, The University of Alabama and Kansas State University.

Aier, J. K., J. Comprix, M. T. Gunlock, and D. Lee. 2005. The financial expertise of CFOs and accounting restatements. *Accounting Horizons* 19 (3): 123–135.

Arthaud-Day, M. L., S. T. Certo, C. M. Dalton, and D. R. Dalton. 2006. A changing of the guard: Executive and director turnover following corporate financial restatements. *Academy of Management Journal* 49 (6): 1119–1136.

Audit Analytics. (AA). 2010a. *Reissuance Restatements versus Revision Restatements: From 2005–2009*. Sutton, MA: Audit Analytics.

Audit Analytics. (AA). 2010b. *2009 Financial Restatements: A Nine Year Comparison*. Available at: http://www.auditanalytics.com/doc/AuditAnalytics_2009_Restatementseport_02_2010.pdf

Audit Analytics. (AA). 2013. *2012 Financial Restatements: A Twelve-Year Comparison*. Sutton, MA: Audit Analytics.

Baker, T., D. Collins, and A. Reitenga. 2003. Stock option compensation and earnings management. *Journal of Accounting, Auditing & Finance* 18 (4): 557–582.

Bebchuk, L., and Y. Grinstein. 2005. The growth of executive pay. *Oxford Review of Economic Policy* 21 (2): 283–303.
Berle, A., and G. Means. 1932. *The Modern Corporation and Private Property*. New York, NY: The MacMillan Company.
Burks, J. J. 2010. Disciplinary measures in response to restatements after Sarbanes-Oxley. *Journal of Accounting and Public Policy* 29: 195–225.
Burns, N., and S. Kedia. 2006. The impact of performance-based compensation on misreporting. *Journal of Financial Economics* 79: 35–67.
Burns, N., and S. Kedia. 2008. Executive option exercises and financial misreporting. *Journal of Banking & Finance* 32: 845–857.
Callen, J. L., J. Livnat, and D. Segal. 2006. Accounting restatements: Are they always bad news for investors? *The Journal of Investing* (Fall): 57–68.
Chan, L., and K. Hee. 2010. Regulatory and legal implications of stealth restatements. *The CPA Journal* (December).
Chava, S., and A. Purnanandam. 2010. CEOs versus CFOs: Incentives and corporate policies. *Journal of Financial Economics* 97: 263–278.
Cheng, Q., and D. B. Farber. 2008. Earnings restatements, changes in CEO compensation, and firm performance. *The Accounting Review* 83 (5): 1217–1250.
Cheng, Q., and T. D. Warfield. 2005. Equity incentives and earnings management. *The Accounting Review* 80 (2): 441–476.
Collins, D., A. Masli, A. L. Reitenga, and J. M. Sanchez. 2009. Earnings restatements, the Sarbanes-Oxley Act, and the disciplining of chief financial officers. *Journal of Accounting, Auditing & Finance* 28: 1–34.
Core, J., and W. Guay. 2002. Estimating the value of employee stock option portfolios and their sensitivities to price and volatility. *Journal of Accounting Research* 40 (3): 613–630.
CPA Journal, The (*CPAJ*). 2003. Survey shows restatements continuing to rise. *The CPA Journal* 73 (10): 11.
Cremers, M., L. A. Bebchuk, and U. Peyer. 2007. *CEO Centrality*. Harvard Law and Economics Discussion Paper No. 601. Available at: http://ssrn.com/abstract = 1030107
Danilov, A., T. Biemann, T. Kring, and D. Sliwka. 2013. The dark side of team incentives: Experimental evidence on advice quality from financial services professionals. *Journal of Economic Behavior & Organization* 93: 266–272.
DeFond, M. L., and J. Jiambalvo. 1991. Incidents and circumstances of accounting errors. *The Accounting Review* 66 (3): 643–655.
Efendi, J., A. Srivastava, and E. P. Swanson. 2007. Why do corporate managers misstate financial statements? The role of option compensation and other factors. *Journal of Financial Economics* 85: 667–708.
Fama, E. F., and K. R. French. 1988. Permanent and temporary components of stock prices. *Journal of Political Economy* 96: 246–273.
Feng, M., W. Ge, S. Luo, and T. Shevlin. 2011. Why do CFOs become involved in material accounting manipulations? *Journal of Accounting & Economics* 51 (1/2): 21–36.
Files, R. 2012. SEC enforcement: Does forthright disclosure and cooperation really matter? *Journal of Accounting & Economics* 53 (1/2): 353–374.
Files, R., E. P. Swanson, and S. Tse. 2009. Stealth disclosure of accounting restatements. *The Accounting Review* 84 (5): 1495–1520.
Files, R., N. Y. Sharp, and A. M. Thompson. 2014. Empirical evidence on repeat restatement firms. *Accounting Horizons* 28 (1): 93–123.
Financial Accounting Standards Board (FASB). 1980. *Qualitative Characteristics of Accounting Information*. Statement of Financial Accounting Concepts No. 2. Norwalk, CT: FASB.
Financial Accounting Standards Board (FASB). 2004. *Accounting for Stock-Based Compensation*. Summary of Statement No. 123 (revised). Available at: http://www.fasb.org/summary/stsum123r.shtml
Francis, J., P. Michas, and M. Yue. 2013. Office size and client restatements. *Contemporary Accounting Research* 30 (4): 1626–1661.
Glass Lewis & Co. (GLC). 2007. *The Errors of Their Ways: Restatements Trend Alert*. San Francisco, CA: Glass Lewis & Co.
Griffin, P. A. 2003. A league of their own? Financial analysts' responses to restatements and corrective disclosures. *Journal of Accounting, Auditing & Finance* 18 (4): 479–518.
Hammersley, J. S., L. A. Myers, and C. Shakespeare. 2008. Market reactions to the disclosure of internal control weaknesses and to the characteristics of those weaknesses under Section 302 of the Sarbanes-Oxley Act of 2002. *Review of Accounting Studies* 13 (1): 141–165.
Harris, J., and P. Bromiley. 2007. Incentives to cheat: The influence of executive compensation and firm performance on financial misrepresentation. *Organization Science* 18 (3): 350–367.
Hennes, K. M., A. J. Leone, and B. P. Miller. 2008. The importance of distinguishing errors from irregularities in restatement research: The case of restatements and CEO/CFO turnover. *The Accounting Review* 83 (6): 1487–1519.
Hogan, B., and J. Grant. 2010. *Institutional Investor Ownership Changes Surrounding Firm Restatement Disclosure Levels*. Working paper, University of Pittsburgh and Case Western Reserve University.
Huang, Y. 2009. *When and Why Did Market Reactions to Restatement Announcements Attenuate?* Working paper, The University of Kansas.
Huber, J., and S. Bochner. 2012. Surviving a restatement. In *Insights: The Corporate & Securities Law Advisor,* edited by A. Goodman. Available at: https://www.wsgr.com/publications/PDFSearch/bochner-0412.pdf
Ibrahim, S., and C. Lloyd. 2011. The association between non-financial performance measures in executive compensation contracts and earnings management. *Journal of Accounting and Public Policy* 30: 256–274.
Irani, A. J., and L. Xu. 2011. Do stealth restatements convey material information? *Accounting Research Journal* 24 (1): 5–22.

Jensen, M., and W. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics* 3: 305–360.

Jiang, J., K. Petroni, and I. Wang. 2010. CEOs and CFOs: Who have the most influence on earnings management? *Journal of Financial Economics* 96 (3): 513–526.

Kayla, P., and M. Magnan. 2008. Executive pensions, disclosure quality, and rent extraction. *Journal of Accounting and Public Policy* 27: 133–166.

Mande, V., and M. Son. 2012. CEO centrality and meeting or beating analysts' earnings forecasts. *Journal of Business Finance & Accounting* 39 (1/2): 82–112.

Miller, G. 2002. Earnings performance and discretionary disclosure. *Journal of Accounting Research* 40 (1): 173–204.

Myers, L. A., S. Scholz, and N. Y. Sharp. 2013. *Restating under the Radar? Determinants of Restatement Disclosure Choices and the Related Market Reactions*. Working paper, University of Arkansas, The University of Kansas, and Texas A&M University.

Palmrose, Z.-V., and S. Scholz. 2004. The circumstances and legal consequences of non-GAAP reporting: Evidence from restatements. *Contemporary Accounting Research* 21 (1): 142–180.

Palmrose, Z.-V., V. J. Richardson, and S. Scholz. 2004. Determinants of market reactions to restatement announcements. *Journal of Accounting & Economics* 37: 59–89.

Pauley, M. A. 1994. The jurisprudence of crime and punishment from Plato to Hegel. *The American Journal of Jurisprudence* 39: 97–152.

Plumlee, M., and T. L. Yohn. 2008. *Restatements: Investor Response and Firm Reporting Choices*. Working paper, The University of Utah and Indiana University.

Plumlee, M., and T. L. Yohn. 2010. *Do Companies Attempt to Strategically Hide Restatements? An Examination of Companies' Regulatory Filing Choices*. Working paper, The University of Utah and Indiana University.

Pratt, T. C., F. T. Cullen, K. R. Blevins, L. E. Dagle, and T. D. Madensen. 2008. The empirical status of deterrence theory: A meta-analysis. In *Taking Stock: The Status of Criminological Theory,* edited by Cullen, F. T., J. P. Vright, and K. R. Blevins. New Brunswick, NJ: Transaction Publishers.

Public Company Accounting Oversight Board (PCAOB). 2010. *Evaluating Audit Results*. Auditing Standard No. 14. Available at: http://pcaobus.org/Standards/Auditing/Pages/Auditing_Standard_14.aspx

Public Oversight Board (POB). 2000. *The Panel on Audit Effectiveness: Report and Recommendations*. Available at: http://www.iasplus.com/en/binary/resource/pobaudit.pdf

Reilly, D. 2006. No more "stealth restating"—SEC forces companies to highlight earnings changes, not just tack them on to their newest filings. *Wall Street Journal* (September 21).

Scholz, S. 2008. *The Changing Nature and Consequences of Public Company Financial Restatements*. Available at: http://www.iasplus.com/en/binary/resource/0804restatements1997-2006.pdf

Scholz, S. 2014. *Financial Restatement Trends in the United States: 2003–2012*. Available at: http://www.thecaq.org/reports-and-publications/financial-restatement-trends-in-the-united-states-2003-2012/financial-restatement-trends-in-the-united-states-2003-2012

Securities and Exchange Commission (SEC). 1999. *Materiality*. SEC Staff Accounting Bulletin No. 99. Washington, DC: GPO.

Securities and Exchange Commission (SEC). 2002. *Proposed Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date*. Release Nos. 33-8106, 34-46084, File No. S7-22-02. Washington, DC: GPO.

Securities and Exchange Commission (SEC). 2004a. *Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date*. Release Nos. 33-8400, 34-49424, File No. S7-22-02. Washington, DC: GPO.

Securities and Exchange Commission (SEC). 2004b. *Current Report on Form 8-K: Frequently Asked Questions November 23, 2004*. Available at: https://www.sec.gov/divisions/corpfin/form8kfaq.htm

Securities and Exchange Commission (SEC). 2006. *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements*. SEC Staff Accounting Bulletin No. 108. Washington, DC: GPO.

Tan, C. E. L., and S. M. Young. 2015. An analysis of "Little r" restatements. *Accounting Horizons* 29 (3): 667–693.

Taub, S. 2012. *Restatements: Let Me Count the Ways*. Available at: https://www.complianceweek.com/blogs/scott-taub/restatements-let-me-count-the-ways#.VWIQGL3D9jo

Turner, L. E., and T. R. Weirich. 2006. A closer look at restatements. *The CPA Journal* 76 (12): 12–22.

U.S. General Accounting Office (GAO). 2002. *Financial Statement Restatements: Trends, Market Impacts, Regulatory Responses, and Remaining Challenges*. GAO-03-138. Available at: http://www.gao.gov/new.items/d03138.pdf

U.S. Government Accountability Office (GAO). 2006. *Financial Restatements: Update of Public Company Trends, Market Impacts, and Regulatory Enforcement Activities*. GAO-06-678. Available at: http://www.gao.gov/new.items/d06678.pdf

U.S. House of Representatives. 2002. The Sarbanes-Oxley Act of 2002. Public Law 107-204 [H. R. 3763]. Washington, DC: GPO.

Wang, H., W. N. Davidson, and X. Wang. 2010. The Sarbanes-Oxley Act and CEO tenure, turnover, and risk aversion. *The Quarterly Review of Economics and Finance* 50: 367–376.

Yermack, D. 1997. Good timing: CEO stock option awards and company news announcements. *The Journal of Finance* 52 (2): 449–476.