REVISIONS VERSUS RESTATEMENTS: MANAGERIAL DISCRETION IN MATERIALITY ASSESSMENTS

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Abstract

In recent years, firms reporting revisions of prior financial statements outnumber firms reporting restatements. Accounting rules require material misstatements to be transparently disclosed as restatements, whereas immaterial errors/irregularities can be reported as revisions. Given the discretion allowed in materiality assessments, I examine whether firms conceal material misstatements as revisions to avoid the negative consequences of formal restatements. Based on regulatory guidance and widely used materiality benchmarks, I find that almost 40% of revisions meet at least one materiality criterion. These "material" revisions elicit a more negative market response relative to immaterial revisions, suggesting that the market perceives these misstatements as consequential. I further find that misstatements that allow for high materiality discretion are more likely to be revised rather than restated and that these revisions are associated with managements' strategic incentives. Specifically, these misstatements are more likely to be reported as revisions when the firm has compensation clawback provisions, strong capital market pressure, and when past performance is negatively impacted. In addition, I show a significant increase in the propensity to revise rather than restate after an SEC report that encourages even more discretion in the materiality assessment. Overall, my results suggest that materiality discretion can be used opportunistically to conceal material misstatements as revisions which has implications for the FASB's proposed change to materiality guidance.

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1. Introduction

Detection and disclosure of financial reporting errors and irregularities are vital to maintaining investors' trust in the capital markets. Thus, academics, practitioners, and regulators have long been interested in how firms disclose errors and irregularities detected in prior periods' financial statements. Most of the research in this area has focused on formal restatements. However, the number of formal restatements has declined dramatically over the past decade and instead a higher number of detected misstatements are recorded as *revisions* of prior period financial statements. Based on materiality guidance, prior years' financial statements of firms with material misstatements are required be restated on an 8-K filing.[1] In contrast, revisions, sometimes referred to as "little r" restatements, are considered immaterial to prior period financial statements and do not require an 8-K filing. In view of the negative consequences of restatements, such as negative market reaction, increased litigation risk, and potential clawback of compensation, managers have incentives to strategically disclose misstatements as revisions in order to avoid reporting restatements.[2] Thus, it is natural that regulators and the business press have expressed concern regarding firms' disclosures of misstatements as revisions.[3] Yet we have little evidence to substantiate these concerns. My study fills this void by examining (1) whether firms record *material* misstatements as revisions, (2) whether the market recognizes the nature of material revisions, and (3)

[1] See Financial Accounting Standards Board's (FASB) Accounting Standards Codification (ASC) Topics 250 and 105; Securities and Exchange Commission (SEC) 2004: "Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date."

[2] For example, see Palmrose et al. (2004), Palmrose and Scholz (2004), and Pyzoha (2015).

[3] E.g., Francine McKenna, "Where Should the SEC Start a Fraud Crack Down? Maybe Look at Fake Restatements" Forbes. June 18, 2013.

whether revisions of material misstatements are associated with managements' strategic incentives.

Since the decision to revise or restate hinges on the firms' assessment of the materiality of the misstatement, I first examine whether revisions meet the documented materiality guidance. Both the SEC and the FASB emphasize the need to consider *quant*itative as well as *qual*itative criteria in the firms' materiality assessment (SEC Staff Accounting Bulletin (SAB) No. 99, FASB Statement of Financial Accounting Concepts (SCAC) No. 8). *Quant*itative materiality criteria refer to the magnitude of the error compared to relevant benchmarks (e.g., 5% of pre-tax income). On the other hand, the so-called "*qual*itative" materiality criteria refer to other facts and circumstances of the misstatement that could influence financial statement users' decisions, such as whether the misstatement enables the firm to meet or beat analysts' earnings forecasts.[4] Interestingly, nearly 40% of the revisions in my sample meet at least one of the *quant*itative or *qual*itative materiality criteria, suggesting that a significant number of material misstatements may be recorded by firms as revisions rather than restatements.[5]

The fact that a significant number of firms report material misstatements as revisions naturally raises the question: Does the market perceive these revisions as material? If the market correctly recognizes that a revision relates to a material misstatement, we should observe a significant negative abnormal return upon its

[4] For example, the SEC lists several guidelines for determining whether misstatements are "*qual*itatively" material, including whether the prior period error 1) reverses an earnings trend, 2) involves misconduct, 3) causes debt covenant violation, 4) changes the earnings sign, or 5) enables a firm to meet or beat analysts' earnings forecasts, or 6) affects a key portion of the firm's business or operations.

[5] Hereafter, the term material misstatements (material revisions) refers to misstatements (revisions) which meet the documented materiality criteria, rather than whether the firm has deemed the misstatement material or immaterial as inferred by whether the firm reported a restatement or a revision.

disclosure. However, prior results suggest that, on average, the market reaction to revisions is weak or even insignificant.[6] In contrast, formal restatements elicit a significant negative market response. Since I find that a large proportion of revisions meet materiality criteria, the prior on-average finding of weak/insignificant market reaction to *all* revisions pooled together may not hold for *material* revisions. Thus, I focus on *material* revisions to understand whether investors recognize the difference in severity of revisions which are material versus immaterial.

Next, I test whether the recording of material misstatements as revisions is consistent with managements' opportunistic avoidance of restatements. Prior research finds that firms reporting restatements experience a negative market reaction, increased litigation risk, increased executive turnover, increased cost of capital, and a loss of financial reporting credibility (e.g., Palmrose and Scholz 2004, Desai, Hogan, and Wilkins 2006, Collins, Masli, Reitenga, and Sanchez 2009, Hribar and Jenkins 2004, Graham, Li, and Qi 2008, Wilson 2008). Moreover, restatements but not revisions often trigger contractual obligations, such as repayment or forfeiture of executive compensation under clawback provisions. Thus, management has strong incentives to revise rather than restate prior periods' financial statements to avoid the negative consequences of restatements.

Yet, prior studies fail to find evidence that management revises prior-period financial statements in order to conceal misstatements (Tan and Young 2015). While the prior finding relates to the on-average effect for the pooled sample of *all* revisions, I

[6] See Choudhary, Merkley, and Schipper (2016**)**, Files et al. (2009), Plumlee and Yohn (2015), and Myers et al. (2013).

argue that immaterial misstatements are correctly reported as revisions and thus are less likely to be strategic. Moreover, since firms' disclosures must satisfy both auditors and regulators, only certain material misstatements can be concealed as revisions. I predict that the ability to conceal material misstatements as revisions will be the strongest when management has a high level of discretion over the materiality choice. I define a misstatement as having high materiality discretion if its magnitude is not *quant*itatively material, but the misstatement is *qual*itatively material. *Qual*itative criteria encompass a more varied set of considerations and do not necessarily have a clear decision rule, and therefore require management to use a high level of judgment.

By honing in on misstatements that allow for high discretion, I capture misstatements where management has greater opportunities to pursue their incentives for strategic disclosure. Specifically, I test whether firms are more likely to use the discretion provided by materiality guidance to revise rather than restate when managements' incentives to downplay the error are strong, such as when the firm has restatement-related compensation clawback provisions, strong capital market pressure, and when the misstatement has an adverse impact on past performance.

Results of the market reaction tests show that material revisions elicit a stronger negative market response compared to revisions which do not meet the materiality criteria (i.e., immaterial revisions). In the month of the revision announcement, cumulative abnormal returns are significantly negative for material revisions and significantly more negative relative to immaterial revisions. Thus, it appears that the market does recognize the materiality of the revision. Although I find evidence that

investors "see-through" the materiality of the revision disclosure, I cannot tell whether investors fully appreciate the nature of material revisions. If investors have limited attention or limited processing power, they will still respond less to material revisions than restatements since revisions do not require an 8-K filing and hence are less transparent (Hirshleifer and Teoh 2003). Consistent with this prediction, I show that cumulative abnormal returns are significantly more negative for material *restatements* relative to material *revisions,* even after controlling for the severity of the misstatement.

To avoid the stronger negative market response to restatements vis-a-vis revisions and/or other negative consequences of restatements (e.g., increase in litigation risk or clawback of executive compensation), firms may have incentives to revise rather than restate. Since management is more likely to pursue their incentives for strategically reporting revisions when they have flexibility in assessing materiality, I test whether the likelihood of revising relative to restating is higher for misstatements which allow for more materiality discretion. To alleviate the concern that my measure of discretion captures the severity of the misstatement, I carefully control for the magnitude of misstatement by including its effect on both the annual net income and the cumulative stockholders' equity. After controlling for magnitude and other firm and misstatement characteristics, I find strong evidence that firms are more likely to revise misstatements which allow for more materiality discretion; in other words, firms are more likely to revise misstatements that are *qual*itatively but not *quant*itatively material.

Next, I examine whether the concealment of material misstatements with more materiality discretion as revisions is stronger when management has greater incentives to

avoid a restatement. First, I make use of the directional effect of the misstatement and test whether management is more likely to conceal high materiality discretion misstatements when the misstatement affects past performance negatively rather than positively. Second, I investigate whether the existence of compensation clawback provisions, which are often written to require repayment of management compensation upon a material restatement, leads to a stronger propensity to revise rather than restate when the misstatement allows for high materiality discretion. Lastly, since revisions result in an attenuated negative market response relative to restatements, I also predict that management at firms with strong capital market pressure will be more likely to conceal misstatements as revisions when they have high materiality discretion.

Based on the cross-sectional analysis of managerial incentives, I find evidence consistent with my predictions. When incentives to conceal are stronger, such as when the misstatement adversely impacts past performance, the firm has compensation clawback provisions or faces strong capital market pressure, firms are more likely to revise misstatements which allow for high materiality discretion. In addition, I examine a change in the SEC's interpretation of the materiality guidance in 2008 and document that the propensity to conceal misstatements that are associated with high materiality discretion as revisions is stronger after the SEC encourages more discretion in the application of the materiality rules. Lastly, I examine whether Big 4 and expert auditors influence the firms' ability to use materiality discretion to revise rather than restate. I find that whereas Big 4 auditors do not affect the use of discretion, auditors who are industry experts are less likely to allow firms to exploit discretion within the materiality rules to

revise rather than restate, suggesting that higher quality auditors limit the opportunistic use of discretion.

An alternative interpretation of my results is that management reports misstatements to convey meaningful information about the true materiality of the misstatement. To the extent that my measure of high materiality discretion is associated with the manager's private information or unobserved misstatement characteristics, my main results could just be capturing that less severe misstatements are revised. Yet, this story is difficult to reconcile with my cross-sectional results. If management is trying to convey information and not mislead investors, it is not clear why the effect of strategic incentives would be stronger when misstatements allow for high materiality discretion. Additionally, the market response results suggest that the market perceives some revisions as material, indicating that the market does not believe that management is reporting all revisions correctly.

My study contributes to the prior evidence on strategic reporting of misstatements, by showing that not all revisions are truly immaterial, and that firms are using materiality discretion opportunistically to avoid restatements. Prior archival studies have examined the determinants of misstatement disclosure by comparing lease restatements to lease out-of-period adjustments (Acito et al. 2009), waived misstatements to reported misstatements (Keune and Johnstone 2012, 2015), revisions to restatements (Tan and Young 2015), or 8-K filings to amended/periodic filings (Plumlee and Yohn 2015, Myers et al. 2013). Of these studies, only Keune and Johnstone (2012, 2015) document a link between strategic concealment incentives and the misstatement

disclosure choice (i.e., waived versus reported)[7]. My study significantly differs from theirs in that I investigate *revisions* which require disclosure compared to waived misstatements which are not recorded. Moreover, in recent years, revisions outnumber restatements and thus whether revisions are reported correctly is an important question in its own right. To my knowledge, my study is the first to provide evidence consistent with opportunistic reporting of revisions. By focusing on revisions with high materiality discretion, my research design allows for more power in capturing the link between managerial incentives and strategic reporting. My evidence has important implications for regulators, especially in relation to the FASB's recent project on materiality. In late 2015, the FASB released two exposure drafts aiming to clarify when an item is immaterial, including a new definition of materiality.[8] Critics, however, have argued that the proposed definition of materiality allows for increased discretion and thus less transparent information for market participants.[9] My study substantiates this concern and suggests that increases in discretion within the materiality rules could lead more firms to use materiality discretion strategically to report otherwise material misstatements as revisions.

[7] Keune and Johnstone (2012, 2015) use a sample of detected misstatements which were originally left uncorrected, but were later deemed material and disclosed following the release of additional regulatory guidance on materiality in SAB 108.

[8] One of the exposure drafts contains proposed amendments to the FASB's Conceptual Statement No. 8, Chapter 3 "Qualitative Characteristics of Useful Information" and the other is a proposed Accounting Standards Update, ASU Topic 235: "Assessing Whether Disclosures are Material."

[9] For example, "FASB Proposes to Curb What Companies Must Disclose" (New York Times, 2016): http://www.nytimes.com/2016/01/03/business/fasb-proposes-to-curb-what-companies-must-disclose.html?_r=1, SEC Investor Advisory Comment Letter (No. 51 for Project 2015-300, No. 78 for Project 2015-310): https://www.sec.gov/spotlight/investor-advisory-committee-2012/iac-letter-fasb-materiality-012116.pdf. "The Raw Nerve of Materiality" (CFO, 2016): http://ww2.cfo.com/gaap-ifrs/2016/05/raw-nerve-materiality/.

My paper is organized as follows. In the second section, I discuss background information on materiality and develop my hypotheses. In the third section, I explain how I measure materiality and materiality discretion and discuss the materiality summary statistics. The fourth and fifth sections present results and section six concludes.

2. Hypotheses Development

2.1 Misstatement Materiality Assessment: Rules and Implementation

The decision to restate or revise errors or irregularities critically depends on whether the firm determines that the error is material to the prior periods' financial statements. A misstatement which materially affects a prior period is to be formally restated (FASB ASC 250-45-23). A formal restatement requires a correction of misstated prior financial statements, a non-reliance filing on Form 8-K Item 4.02, and a revision of the auditors' opinion (SEC 2004, PCAOB AS 2905). A revision relates to a misstatement that *does not materially* affect a prior period, but still corrects prior years' financial statements. It does not require a non-reliance 8-K filing or a revision of the prior period's audit opinion (FASB ASC 105-10-05-6). Typically, revisions are disclosed in the footnotes of periodic filings (e.g., 10-K or 10-Q) and are not mentioned in the audit opinion.

The FASB does not provide explicit bright line guidance on misstatement materiality; rather the guidance is relatively vague, stating that an item "is material if omitting or misstating it could influence decisions that users make on the basis of the financial information of a specific reporting entity" (FASB SFAC No. 8). They further emphasize that either the "nature" or "magnitude" of an item or both can make the item

material. In practice, the evaluation of the *magnitude* of the item, often done by comparing the annual error magnitude to benchmarks, is an assessment of the *quant*itative materiality of the item; whereas, the evaluation of the *nature* and surrounding circumstances of the item is an assessment of the *qual*itative materiality of the item.

In guidance specific to dealing with detected errors or irregularities in prior periods' financial statements, the SEC echoes the idea that both *quant*itative and *qual*itative criteria should be considered in the misstatement materiality assessment. In 1999, the SEC released SAB 99 on materiality which specifically addresses *qual*itative considerations and lists several criteria which may make a small magnitude misstatement material (e.g., a misstatement that enables a firm to meet analysts' forecasts.) In 2008, the SEC issued SAB 108 which provides additional guidance to firms on how to evaluate the *quant*itative materiality of misstatements. More specifically, SAB 108 requires that the firm evaluate the magnitude of the error in reference to the effect on the balance sheet as well as the effect on the income statement.

Although there is no bright-line guidance specifying thresholds, firms and auditors have developed rule-of-thumb benchmarks for materiality assessments. Prior studies use audit surveys, audit work papers, proprietary audit guidance, comment letter correspondence, and more recently mandatory disclosures of materiality benchmarks (in the UK only) to document the most widely used materiality benchmarks (e.g., Messier, Martinov-Bennie, and Eilifsen 2005, Eilifsen and Messier 2015, Acito et al. 2015, Financial Reporting Council (FRC) 2015). These studies show that the most widely used

*quant*itative benchmark for evaluating misstatement materiality is 5% of income.[10] When net income is near zero or negative, firms often rely on other common benchmarks – income statement benchmarks such as percentage of annual revenue (ranging from 0.5% to 2%) and cumulative balance sheet benchmarks such as total assets (ranging from 0.5% to 2%) and stockholder's equity (ranging from 1% to 5%). On the other hand, *qual*itative materiality considerations usually mirror examples specified in the SEC's SAB 99. Generally following SAB 99, I classify a misstatement as *qual*itatively material if it meets at least one of the following criteria: the misstatement (1) changes a net income to a net loss or vice versa, (2) causes a firm to meet instead of miss analysts' forecasts or vice versa, (3) conceals earnings or other financial trends, (4) causes a debt covenant violation, (5) involves misconduct, (6) affects a core account.[11] I further utilize the above described magnitude benchmarks to measure *quant*itative materiality. These calculations are described in detail in Appendix A. I consider all misstatements which meet at least one of the *quant*itative or *qual*itative criteria to be material. As expected, I find that 85% of sample misstatements that are *restated* are material based on these criteria. Interestingly, 38% of misstatements that are *revised* also meet at least one of my *quant*itative or *qual*itative criteria for materiality.

While firms and auditors have developed various rules-of-thumb to implement materiality guidance, a high level of judgment is still required in materiality assessments

[10] Firms often use pre-tax income or an average income measured over a specified time period (i.e., 3 years) as the income benchmark when assessing materiality.

[11] All of the criteria mirror the SEC's SAB 99 criteria, with the exception of criteria (6) which identifies misstatements that affect a core account. The consideration of whether a misstatement affects a core account has been shown in prior literature to be important to investors' interpretation of the materiality of the misstatement (e.g., Palmrose and Scholz 2004, Srinivasan et al. 2015), and thus is included as a *qual*itative criterion.

due to the lack of mandated bright-line thresholds. Regulators expect that, by giving management a high level of discretion over the materiality decision, management will use all available information and make a comprehensive assessment of the misstatement materiality. However, with increased discretion comes the risk that management may use this discretion opportunistically to revise material misstatements rather than restate.

2.2 Market Response to Material Revisions

Given my finding that a significant percentage of revisions meet at least one of the materiality criteria, I question whether the market can differentiate between material and immaterial revisions of misstatements. Most existing studies examining the market response to misstatements classify the misstatement by its disclosure method (e.g., 8-K versus amended filing). These studies find that the market response to misstatements is only significant when the misstatement is filed in an 8-K or an amended filing (Plumlee and Yohn 2015, Choudhury et al. 2016), or when the misstatement is disclosed in the headline or body of a press release rather than in footnotes (Files et al. 2009). Although most of these studies do not explicitly test whether revisions themselves elicit a significant market response, inferences from these studies would suggest that, on average, revisions, which are frequently disclosed in relatively opaque filings, may lead to a weak or insignificant market reaction.

Yet, when prior studies pool all of the material revisions with the large number of immaterial revisions, they capture only the average effect. In my study, I split revisions into material and immaterial revisions and test whether the market responds to "material" revisions as if it understands that these revisions are consequential. I argue that, even

though the disclosure of a revision is opaque, relevant information about the misstatement is available in the financial statements. Thus, an efficient market should recognize whether a revision is material and incorporate that information into price. Specifically, relative to immaterial revisions, I predict a more negative association between *material* revisions and the firms' cumulative abnormal return around the misstatement disclosure. Moreover, finding a strong market response would indicate that the misstatement is truly material and would validate my classification of these revisions as "material".[12]

Even if the market responds significantly to material revisions, I argue that this reaction is likely to be weaker than the response to restatements even after controlling for the misstatement severity. If investors have limited attention, limited processing power, or otherwise fail to appreciate the materiality of revisions, they may still underreact to information disclosed less transparently in a revision (Hirshleifer and Teoh 2003). Consistent with this line of reasoning, I predict that the market response to material misstatements that are restated is more negative relative to material misstatements that are revised. Thus, my predictions are as follows:

H1a: The market response to the disclosure of *material* revisions is more negative relative to the disclosure of *immaterial* revisions.

H1b: The market response to the disclosure of material *restatements* is more negative relative to the disclosure of material *revisions*.

2.3 Strategic Use of Materiality Discretion

[12] This is consistent with SECs' SAB 99 which notes that the expected market response to a disclosure should be considered when assessing materiality.

If firms report material misstatements as revisions instead of restatements, it is important to consider whether this reporting choice is likely to be strategic. Restating firms face several negative consequences, including a significant loss in market value, an increased risk of litigation, loss of financial reporting credibility, and a higher cost of capital (e.g., Palmrose, Richardson, and Schulz 2004, Palmrose and Schultz 2004, Wilson 2008, Hribar and Jenkins 2004). Thus, firms will prefer revising, all else held equal, if revisions lead to less severe negative consequences compared to restatements. Although not comparing the consequences of revisions versus restatements, Files et al. (2009) and Files (2012) show that misstatements disclosed in the headline of a press release face a higher market penalty, higher litigation risk, and higher likelihood of an SEC enforcement action compared to those described in the body of the press release or in footnotes. Thus I expect that by reporting the less prominent revision instead of the prominent restatement, firms may mitigate the large negative market reaction and reduce litigation risk. In addition, the lower negative visibility of a revision versus a restatement is less likely to lead to forced management turnover and the loss of investors' trust in the firms' financial reporting quality. Lastly, if compensation contracts are written to require repayment of executive compensation under clawback provisions upon restatements and not revisions, management could avoid this negative consequence by revising.

Although the incentives to conceal material misstatements are strong, existing evidence supporting this prediction is surprisingly limited. Keune and Johnstone (2012) show that firms are more likely to waive (not revise or restate) *qual*itative material misstatements when managements' incentives are strong. Myers et al. (2013) show that

some of the most severe misstatements are filed in obscure venues (periodic filings), suggesting the reporting of "stealth" restatements. Yet, they do not test whether these misstatements are reported obscurely as a result of strategic avoidance of transparent filings. More recent studies fail to find evidence of strategic concealment associated with misstatement filing choices. Plumlee and Yohn (2015) examine the reporting choice of financial misstatements and find that the filing choice appears to be driven by economic determinants, such as the misstatement materiality and relevance, and not by strategic incentives. Tan and Young (2015) examine a large set of "little r" versus "Big R" restatements, generally analogous to what I call revisions and restatements, and find that "little r" firms appear to be of better quality than "Big R" firms in terms of higher profitability and stronger corporate governance.[13] They interpret their results as consistent with good faith reporting of "little r" restatements by management.

Overall, the limited evidence that misstatements are reported strategically as revisions is puzzling. In my paper, I suggest that perhaps not all misstatements are strategically reported. Instead, I argue that only when the firm has sufficient discretion over the materiality choice will the firm have the flexibility to disclose material misstatements opportunistically as revisions. Although firms are allowed to use judgment to incorporate all known facts and circumstances into their materiality assessments, firms' decisions are still limited by what the auditors will allow based on what is deemed

[13] In unreported tests, consistent with Tan and Young (2015) I find that, for my sample, revising firms are less likely than restating firms to report an internal control weakness. In the univariate results, revising firms are more profitable and more likely to have independent directors consistent with Tan and Young (2015); however, these results do not hold in the multivariate setting. Further, I do not find evidence that revising firms are less complex in terms of number of business segments. The difference in results is likely due to different samples; whereas I use only disclosed revisions, the main sample in Tan and Young (2015) uses all firms which adjust prior period financial statements regardless of whether there is a disclosure.

acceptable under accounting/auditing guidance. In other words, it is likely too costly or even practically impossible for firms to report highly material misstatements as revisions. I reason that misstatements which exceed a *quant*itatively material benchmark are generally considered too material and do not allow for sufficient judgement, whereas misstatements which meet *qual*itative but not *quant*itative materiality criteria are much more likely to fall into a gray area. Thus, I label misstatements that are *qual*itatively material, but not *quant*itatively material, as having high materiality discretion. I predict that firms with misstatements with high materiality discretion will use this discretion to revise rather than restate.

H2: After controlling for the misstatement severity, firms with material misstatements that allow for high materiality discretion are more likely to revise rather than restate prior financial statements.

On the other hand, a firm may use the discretion to convey meaningful information about the misstatement to investors rather than to mislead investors (e.g., Riedl and Srinivasan 2010). If misstatements with high materiality discretion are less severe based on the firm's private information or other subjective considerations, we could also see a positive association between discretion and revisions. Thus to help distinguish from the alternative that these discretionary misstatements are just less severe and that firms are using discretion to convey additional information, I examine whether these misstatements with high materiality discretion are associated with strategic concealment incentives.

I examine three incentives which are likely to influence managers to use their

materiality discretion strategically to revise rather than restate. First, I examine whether misstatements that negatively affect prior financial statements are recorded differently than misstatements that improve prior financial performance. I predict that firms will be more likely to use high materiality discretion to revise rather than restate when the misstatement adversely impacts past performance. Second, I argue that the existence of compensation clawback provisions will provide strong incentives for management to record revisions over restatements. Clawback provisions related to restatements require top executives to repay bonuses earned as a result of the previously misreported earnings; whereas revisions generally do not trigger the same obligations. In an experimental setting, Pyzoha (2015) finds that, when executives face a significant clawback of compensation upon restating, executives at firms with a lower quality auditor are less likely to agree with an auditor proposed restatement. Thus, I predict that management will be more likely to use materiality to revise rather than restate in the presence of restatement compensation clawback provisions. Third, I examine how capital market incentives affect the propensity to revise misstatements with high materiality discretion. Firms with higher capital market pressure will be more sensitive to the negative market consequences, creating even stronger incentives to revise. Thus my predictions are as follows:

H3: After controlling for the misstatement severity, firms are more likely to use materiality discretion to revise material misstatements rather than restate (1) when the misstatement adversely affects prior financial statements, (2) when the firm has compensation clawback provisions, and (3) when the firm faces strong capital market

pressure.

3. Data, Sample Selection, and Variable Definitions

3.1 Data and Sample

I obtain my sample of revisions and restatements filed between 8/23/2004 to 12/31/2015 from the Audit Analytics Advanced Restatement Module.[14] I start with misstatements filed on or after 8/23/2004 because this is the effective date of the rule requiring 8-K Item 4.02 to be filed for all material misstatements (SEC 2004 "Final Rule Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date"). Prior to this date, although material misstatements were required to be disclosed, the reporting form was unspecified. Thus, prior to 8/23/2004, it is difficult to determine which misstatements were judged by firms to be material to prior period financial statements.

Table 1 summarizes the sample selection process. I obtain my sample from the Audit Analytics Periods Dataset, since I require data to assess materiality based on how the misstatement affects each individual prior period. This dataset covers companies traded on the NYSE, NASDAQ, and AMEX and documents the disclosed effect (e.g., net income effect, stockholder equity effect) of the misstatement on prior periods' annual and quarterly financial statements. This results in an initial sample of 6,567 misstatements. Next, I exclude 2,467 quarterly misstatements from my sample since materiality rules generally require aggregation at the annual level and the materiality guidance is more

[14] Although this module is referred to as the Advanced Restatement Model, it includes restatements, revisions, and out of period adjustments (i.e., corrections of errors made by adjusting the current year's financial statements).

unclear on how to evaluate quarterly misstatements.[15] I also exclude out-of-period adjustments (corrections of prior-periods' errors that are made as adjustments to current year income), because these are likely subject to a different set of incentives. Further, I delete foreign private issuers since they are not subject to the same disclosure rules and are not required to file an Item 4.02 8-K filing upon a restatement. I use Audit Analytics to calculate all misstatement level variables. I also require inclusion in Compustat, CRSP, Thomson Reuters 13-F filings, IBES, and CRSP datasets to calculate control and market response variables. I hand collect clawback provisions using text searches of the past three years of regulatory filings. After excluding observations with missing variables, my final sample includes 2,476 misstatements.

3.2 Misstatement Classification and Materiality Variables

I classify misstatements based on whether the misstatement was reported as a restatement or a revision as well as whether the misstatement meets documented materiality criteria (i.e., material or immaterial). Since a Form 8-K Item 4.02 is only filed when the firm judges the error to be material to prior periods, I use the existence of this filing to identify restatements (RESTATE); the remaining misstatements are classified as revisions (REVISE). I classify misstatements as material (MATERIAL), if the misstatement meets at least one of the *qual*itative materiality criteria as described in SEC SAB 99 or at least one of the widely used *quant*itative materiality benchmarks. See Appendix A for additional details of the criteria used to classify misstatement materiality.

[15] See Ernst & Young's May 2015 "Financial Reporting Developments - Accounting Errors and Changes" for a discussion of the difference between materiality assessments for annual versus quarterly misstatements, available at http://www.ey.com/ul/en/accountinglink.

From Table 1, my sample includes almost an equal split of formal restatements, 1,239, and revisions, 1,237. Of these misstatements, 62% (1,528/2,476) meet at least one of the *quant*itative or *qual*itative materiality criteria. Table 2 shows the percentage of restatements and revisions which meet certain specified materiality criteria. Overall, as expected, a significant percentage of restatements meet materiality criteria (85%). It is surprising to note that 38% of revisions also meet at least one of the materiality criteria. For the sample of all revisions, 6% have an annual net income effect that exceeds both 5% of pre-tax income and 1% of revenue of the prior period, 3% of revisions have a cumulative stockholder equity effect that exceeds 2% of assets, 24% of revisions affect a core account (key expense or revenue), and 11% of revisions cause a firm to meet if it previously missed the analyst forecast error or vice versa. The high proportion of revisions meeting at least one materiality criterion begs the question of whether these revisions truly should have been assessed as immaterial by firms.

To examine firms' strategic reporting of revisions, I further identify misstatements which have high materiality discretion. Although both *quant*itative and *qual*itative materiality considerations are important to materiality assessments, the SEC has noted that misstatements which meet *quant*itative thresholds are likely to be clearly material and thus do not require a high level of judgment. Whereas *quant*itative materiality is determined by comparing the magnitude to relatively well accepted benchmarks, applying *qual*itative materiality criteria is not as straightforward. Since firms are urged not to use a checklist approach but rather to consider whether each factor itself is important, they are more likely to cherry-pick the factors to consider. Evidence

from comment letters and auditors seems to be consistent with the wide variation in how firms apply *qual*itative factors (Acito, et al. 2015, Eilifsen and Messier 2015, Choudhary, et al. 2016). Moreover, further studies indicate that the auditor's monitoring is weaker when the misstatement is not *quant*itatively large (Libby and Kinney 2000, Legoria, Melendrez, and Reynolds 2013), providing even more opportunity for the firms to use discretion opportunistically.[16] Consistent with these arguments, I classify a misstatement as having high materiality discretion if it meets only *qual*itative but not *quant*itative materiality criteria.

4. Market Reaction to Misstatement Disclosure

4.1 Univariate Return Results

Table 3 examines whether the market reaction varies with the materiality of the misstatement. I use the filing date reported in Audit Analytics as the date of disclosure of the misstatement. In general, the first disclosure of a restatement occurs on the 8-K filing date, whereas revisions are commonly filed with 10-K, 10-Q or amended filings. Panel A reports cumulative abnormal returns (CAR) around the disclosure of revisions. Columns (2) and (3) show that the mean 3-day CAR (-1 to +1) for both material and immaterial revisions is indistinguishable from zero. However, when returns are measured over the month of the filing (i.e., 21 trading days, -1 to +20), I find significant abnormal returns of -1.6% for material revisions. Three quarters of the monthly abnormal return, -1.2%, is

[16] Several studies focusing on the auditors' materiality choices, have focused on settings in which the error meets *qual*itative materiality criteria but not *quant*itative materiality criteria (e.g. Legoria, Melendrez, and Reynolds 2013, Libby and Kinney 2000, Ng 2007), suggesting that this setting is appropriate to capture when judgement is more likely to matter.

recognized after the initial market response (drift-CAR, +2 to +20), suggesting a delayed response to material revisions. Additionally, the difference in abnormal returns between material and immaterial revisions is significant for the 1-month window (column 4). Lastly, consistent with prior evidence, I find that, when both material and immaterial revisions are pooled (column 1), revisions are on average perceived as irrelevant by the market. This result highlights the importance of differentiating between material and immaterial revisions.

Panel B reports CARs around restatement filings. Restatements on average elicit a significant negative market response of -2.6% and -3.3% in the 3-day and 1-month windows, respectively (column 1). Column (2) shows that the negative overall response is driven by material restatements only (3-day CAR= -3.2%; 1-month CAR= -3.8%). In contrast to revisions, the drift period (+2 to +20) is not associated with a significant negative abnormal return for restatements. Panel C reports the difference in CARs between restatements and revisions. Column (1) shows that restatements overall earn a significantly more negative abnormal return relative to revisions. Even when comparing *material* misstatements (column 2), I find that material restatements have a much stronger negative effect relative to material revisions (difference in 1-month CAR equals -2.2%). However, the difference appears to be contained in the initial reaction to the misstatement (difference in 3-day CAR equals -2.8%). The Drift-CAR does not show a significant difference between material restatements and material revisions. Overall, these results suggest that market participants understand the materiality implications of misstatements and react more strongly and more quickly to misstatements that are

disclosed transparently as restatements rather than revisions.

4.2 Research Design and Multivariate Results

To examine whether the market differentiates between material and immaterial revisions, I estimate the following regression for the sample of all revisions:

$$CAR_{it} = \alpha + \boldsymbol{\beta_1 MATERIAL}_{it} + \beta_2 GOOD\_NEWS_{it} + \beta_3 BAD\_NEWS_{it} + \sum_k \beta_k FIRM\_CONTROL_k + \varepsilon \quad (1)$$

CAR_{it} equals the cumulative abnormal return estimated using the market model for each firm, and measured over the 3-day window (-1 to +1) or the 1-month window (-1 to +20) around the misstatement filing date. MATERIAL is an indicator variable that equals one if the misstatement meets at least one of the *quant*itative or *qual*itative materiality criteria. GOOD_NEWS (BAD_NEWS) controls for contemporaneous earnings news announced in the filing window. GOOD_NEWS (BAD_NEWS) equals the positive (negative) earnings surprise, measured as the actual EPS minus analysts' consensus EPS forecast. I also control for several firm characteristics that may affect abnormal returns, namely size (SIZE), market-to-book ratio (MTB), leverage (LEV), and return on assets (ROA). All variables are defined in Appendix B.

The coefficient on MATERIAL, β_1, captures the differential response to material versus immaterial revisions. Hypothesis H1a predicts a negative coefficient, β_1, consistent with investors responding as if material revisions are indeed value-relevant to market participants. Table 4 shows the multivariate results for the revision sample. Column (1) shows an insignificant coefficient on MATERIAL when the dependent variable equals the 3-day CAR. Thus, the market does not appear to value the materiality

of the revision immediately. Although column (1) shows that the market does not initially respond to the materiality of the misstatement, column (2) shows evidence that investors incorporate the materiality of the revision into price with a lag. The existence of a material revision is associated with a 2.2% lower cumulative abnormal return in the 1-month disclosure window.

Table 4 also presents results on whether the 1-month cumulative abnormal return is different for 1) material revisions which have an adverse versus favorable effect on past performance, 2) revisions which are material either due to *qual*itative or *quant*itative criteria or due to both, or 3) revisions which vary in cumulative misstatement magnitude. I create an indicator variable, MAT_ADV (MAT_FAV), which equals one if the revision is material (MATERIAL=1) and adversely (favorably) affects past performance. In column (3), I find that market participants only respond significantly to material revisions which negatively affect past performance, eliciting a -1.9% abnormal return. Next, I create the variable QUANT_QUAL which equals 1 if the misstatement meets *either* quantitative or qualitative materiality criteria, and equals 2 if the misstatement meets *both* types of criteria. QUANT_QUAL_ADV (QUANT_QUAL_FAV) equals QUANT_QUAL interacted with an indicator variable that captures whether the misstatement adversely (favorably) affects past performance. Column (4) shows a significant negative abnormal return for QUANT_QUAL_ADV, indicating that the market perceives misstatements which meet both materiality criteria as more severe. Lastly, column (5) shows the effect of the cumulative misstatement magnitude, measured as the absolute value of the cumulative net income effect. For misstatements which

negatively impact past performance, the effect of the cumulative magnitude on returns is negative and significant at the 10% level. Collectively, the results in Table 4 support my prediction that the market responds negatively to revisions that are material.

Whereas the first prediction, H1a, uses only the sample of revisions to test whether the market responds more strongly to material revisions, H1b predicts that the market responds more strongly to material restatements relative to material revisions. Thus, I use only material misstatements to test whether the market still perceives restatements to be more severe, even after explicitly controlling for the materiality of the misstatement. For these tests, the explanatory variable of interest is RESTATE, an indicator variable that equals one if the firm files a Form 8-K Item 4.02 for the misstatement, and zero otherwise:

$$CAR_{it} = \alpha + \boldsymbol{\beta_1 RESTATE}_{it} + \beta_3 GOOD\_NEWS_{it} + \beta_4 BAD\_NEWS_{it} + \sum_m \beta_m MATERIALITY\_CONTROL_m + \sum_k \beta_k FIRM\_CONTROL_k + \varepsilon \quad (2)$$

In a similar manner to testing H1a, I use CAR measured over a 3-day or a 1-month window to test whether the market incorporates information immediately or with a lag. Hypothesis H1b predicts a more negative market reaction to restatements and thus I expect a negative coefficient, β_1.

Since revisions and restatements vary significantly in materiality (see Table 2) it is important to carefully control for the severity of the misstatement. Thus, in the above specification, I control for the *quant*itative and *qual*itative materiality of the misstatement as well as several firm-specific characteristics. For *quant*itative materiality, I include controls to represent the cumulative magnitude as well as the annual magnitude of the

misstatement. CUM_MAG measures the absolute value of cumulative stockholder equity impact of the misstatement scaled by the total assets. ANN_MAG captures the largest absolute value of annual net income magnitude effect for the misstated years relative to revenue measured in the same year. For *qual*itative materiality, I include all of the controls which make a misstatement *qual*itatively material, including FRAUD, CORE_ACCT, DEBT_COV_VIOL, SWITCH_NI_SIGN, BREAK_NI_TREND, and MEET_MISS_AF. I also include firm controls, namely SIZE, MTB, LEV, and ROA. See Appendix A and B for additional details of variable descriptions and measurement.

The results of H1b which predicts that investors respond more negatively to restatements compared to revisions are shown in Table 5. In both the 3-day and 1-month window tests, I find that the coefficient estimate on RESTATE is negative and significant in the subsample of material misstatements both with and without materiality controls (columns (1)-(2) and (3)-(4) respectively), consistent with the market responding more negatively to restatements rather than revisions. These results demonstrate that the market still perceives restatements as more severe even after controlling for the magnitude, providing a strong incentive for management to revise rather than restate.

In summary, the market tests suggest that investors do differentiate between material and immaterial revisions. The fact that investors respond significantly negatively to misstatements which meet materiality criteria suggest that these criteria are important to investors and perhaps these misstatements should have been reported as restatements rather than revisions. Although these material revisions elicit a significant negative cumulative abnormal return, they elicit a less negative cumulative abnormal return

relative to material restatements. This differential market response may incentivize managers to revise rather than restate. In addition, managers may want to avoid restatements if restating leads to increased litigation risk or heightened scrutiny. Moreover, managers may prefer to revise to avoid repayment under restatement clawback provisions.

5. Strategic Disclosure of Misstatements

5.1 Univariate Statistics and Tests

My next set of tests focuses on the subset of misstatements that are material. Since my goal is to examine strategic concealment, I focus on misstatements which should have been restated but instead were revised. Thus, I exclude immaterial revisions and restatements from these tests because they are less likely to be strategically reported. Moreover, the market tests in Table 3 suggest that only material misstatements are important to market participants, further validating the examination of material misstatements.

Summary statistics for the subsample of material misstatements are reported in Table 6. Panel A reports that, of a total of 1,528 material misstatements, 31% percent are revised while 69% are restated. The average cumulative magnitude of the stockholder equity effect of these misstatements equals 2.2% of total assets, where total assets are measured at the end of the fiscal year prior to the misstatement filing. On average, the magnitude of the income effect of these misstatements equals 15% of revenues (median 0.7%), measured in the misstatement year with the maximum net income effect. The average misstatement period equals 3.5 years and the average misstatement involves

approximately 3 issues (e.g., revenue recognition, debt/equity classification, backdating stock-options). About 54% of misstatements meet at least one of the *qual*itative materiality criteria but no *quant*itative criteria, indicating that over half of the sample has a high level of materiality discretion. Consistent with my expectation that it is easier for firms to judge a misstatement as immaterial using the discretion allowed by *qual*itative materiality criteria, Panel B documents that a higher percentage of revisions (80%) include misstatements that allow for high materiality discretion (HIGH_DISCR) relative to restatements (41%). I find that the revision and restatement samples include similar percentages of adverse effects misstatements, 81% and 83% respectively. However, a significantly higher proportion of firms with revisions have clawback provisions relative to firms with restatements (32% vs. 7%), and the difference is significant at the 1% level. Revisions are also more likely to be reported by firms with a higher analyst following. These univariate results suggest that some strategic disclosure behavior may be present in firms' materiality determinations. Yet, I refrain from placing too much emphasis on the univariate results since revisions and restatements vary in severity and controlling for the severity of the misstatement is important.

5.2 Research Design and Multivariate Results

I use the following logit model to test whether material misstatements with high materiality discretion are more likely to be revised:

$$REVISE_{it} = \alpha + \boldsymbol{\beta_1 HIGH\_DISCR_{it}} + \sum_m \beta_m MISSTATEMENT\_CONTROL_m + \sum_k \beta_k FIRM\_CONTROL_k + \varepsilon \quad (3)$$

The main variable of interest in this specification is HIGH_DISCR, which measures

whether the misstatement allows for high discretion. I classify misstatements that meet at least one of the *qual*itative materiality criteria (MEET_MISS_AF, BREAK_NI_TREND, SWITCH_NI_SIGN, CORE_ACCT, FRAUD, DEBT_COV_VIOL), but not a *quant*itative benchmark (EXCEED_ANN_TRSHD, EXCEED_CUM_TRSHD) as having high materiality discretion. I include several control variables to capture misstatement characteristics. Since the materiality discretion classification is based on whether a material misstatement is *only qual*itatively material (but not *quant*itatively material), it is critical to control for the underlying magnitude of the misstatement to ensure that the results are not driven by the differing magnitudes between the two groups. I include controls for both the cumulative stockholders' equity effect (CUM_MAG) as well as the annual net income effect (ANN_MAG). Since the magnitude measures only capture the net income and stockholders' equity effects, I include an indicator variable for reclassifications (RECLASS) to capture the potential for large classification errors within assets, liabilities, or the Statement of Cash Flows. I also include variables to capture the direction of the impact of the misstatement (ADVERSE), the number of issues involved in the misstatement (NUM_ISSUES), the number of annual periods affected by the misstatement (NUM_PERIODS), and whether the misstatement was a result of fraud (FRAUD). Additionally, I control for several firm and auditor characteristics which may affect the disclosure decision. All continuous variables are winsorized at the 1% and 99% levels and all firm level control variables are measured in the fiscal year prior to the restatement filing date. Variable definitions are included in Appendix B.

Hypothesis 2 predicts a positive coefficient on HIGH_DISCR, β_1, reflecting that

high materiality discretion misstatements are more likely to be recorded as revisions compared to misstatements with less materiality discretion. Table 7 shows strong evidence consistent with this prediction. Results of the logit model are reported in column (1) and results of the linear probability model with year and industry fixed effects in column (3).[17] Column (2) shows the marginal effect of a one-unit increase in the variable of interest, holding all other variables at their means. All else equal, column (2) shows that a switch from a low discretion to a high discretion misstatement leads to a 30% increase in the likelihood of revising rather than restating.

Hypothesis 3 predicts that the effect of high materiality discretion will be magnified when management has strong incentives to revise rather than restate. To test these predictions, I use the following logit model:

$$REVISE_{it} = \alpha + \beta_1 HIGH\_DISCR_{it} + \beta_2 INCENTIVE_{it} + \boldsymbol{\beta_3 HIGH\_DISCR_{it}\, x}$$
$$\boldsymbol{INCENTIVE_{it}} + \boldsymbol{\sum_m} \beta_m MISSTATEMENT\_CONTROL_m +$$
$$\boldsymbol{\sum_k} \beta_k FIRM\_CONTROL_k + \varepsilon \qquad (4)$$

H3 predicts that the positive coefficient on HIGH_DISCR is stronger when the misstatement negatively affects prior financial performance, when management has a compensation clawback provision in the event of a restatement, and when the firm has strong capital market pressure. The measure of whether the misstatement negatively affects past financial performance is ADVERSE. To measure clawback provisions, I use a dummy variable to capture whether the firm has disclosed the existence of an executive

[17] In light of Greene's (2004) criticism, I do not incorporate fixed effects in the logit model. Rather I use a linear probability model when including fixed effects.

compensation clawback provision related to misstatements or financial statement misconduct in any of their regulatory filings over a period of three years prior to the misstatement disclosure. I proxy for capital market pressure using two measures, analyst following and high external financing needs. First, since survey evidence has documented that management faces strong pressure to meet or beat analysts' forecasts (Graham, Harvey, and Rajgopal 2005), I argue that firms with higher analyst following will face stronger scrutiny from market participants. I measure analyst following, ANALYSTFOLLOW, as the log of one plus the total number of analysts who have issued an annual EPS forecast for the firm during the year prior to the misstatement filing. Second, I argue that firms planning to access the capital market in the future will be more sensitive to the market's perception. Since I am unable to observe managers' intent to obtain future financing, I instead follow Bradshaw, Richardson, and Sloan (2006) to calculate an ex-post net financing measure as the actual cash flow received from debt and equity financing activities in the fiscal year following the misstatement announcement. To capture high external financing need, I create an indicator variable, HIGH_ISSUANCE, which equals one if the net financing activity is in the top quartile and zero otherwise.

Table 8 Panel A shows the results of whether the higher likelihood of reporting HIGH_DISCR misstatements as revisions is stronger when the misstatement has an adverse effect on prior periods' financial statements. I find evidence that the interaction term on HIGH_DISCR x ADVERSE is positive and significant at the 1% level in the logit model (column 1), consistent with my prediction. Additionally, I show that the

effect of ADVERSE when HIGH_DISCR=1 (i.e., ADVERSE + HIGH_DISCR x ADVERSE) is also positive and significant at the 1% level (column 2). In terms of economic significance, all else held equal, a misstatement which adversely affects past performance is 11% more likely to be reported as a revision if the misstatement has a high level of discretion (i.e., HIGH_DISCR=1). The linear probability model in column (3) with year and industry fixed effects shows similar but weaker results.

I examine the effect of clawback provisions in Panel B. I find a significant positive coefficient on the interaction between HIGH_DISCR and CLAWBACK as well as a significant positive effect of CLAWBACK when HIGH_DISCR=1. These results are significant at the 1% level or less for both the logit and linear probability models. Thus, Panel B presents strong evidence consistent with my prediction that managers with compensation clawback provisions are more likely to avoid restating when they have sufficient materiality discretion to do so.

I find similar results for the effect of capital market pressure, measured by analyst following and high net issuance, in Panels C and D respectively. In Panel C, in the logit model (column 1) the coefficient on interaction term, HIGH_DISCR x ANALYSTFOLLOW, is positive and significant at the 5% level. Column (2) shows that the marginal effect of analyst following when materiality discretion is high is also positive and significant with a p-value of 0.03. Using the marginal effects from the logit model to interpret the economic magnitude, I find that an increase of one standard deviation (1.029) of analyst following leads to an approximately 6.0% increase in the probability of reporting a revision when the misstatement has high materiality discretion.

Column (3) reports the results for the linear probability model with year and industry fixed effects. Using this model, the interaction term between high discretion and analyst following is still significant; however, the total effect of analyst following in misstatements with high materiality discretion becomes insignificant. In Panel D, although I find that HIGH_DISCR x HIGH_ISSUANCE is insignificant for the logit model (column 1), the marginal effects (column 2) and the linear probability model (column 3) show a significant interaction term.[18] Additionally the total effect of HIGH_ISSUANCE when HIGH_DISC=1 is significant in both specifications. Overall, I interpret these results as providing some evidence that management of firms with high capital market pressure strategically avoid reporting restatements when materiality discretion is high.

My results show that management is more likely to disclose material misstatements as revisions when the materiality discretion is high and that this increased likelihood of revising is positively associated with managers' incentives to conceal. More specifically, management with adverse misstatements, restatement clawback provisions, and strong capital market pressure are more likely to revise when the misstatement allows for high materiality discretion. Overall, these results are consistent with management using materiality discretion to avoid reporting restatements, validating concerns that increased discretion may lead to more opportunistic reporting.

5.3 Additional Tests

[18] The difference in significance between the logit model and the marginal effect is likely because the marginal effect is calculated after holding all other variables at their means. Thus at an average level, we can interpret the interaction as significant.

5.3.1 "Exogenous" Change in Materiality Discretion

My analysis uses materiality discretion as the mechanism through which firms have the ability to strategically conceal misstatements. Therefore, I expect that my results should be stronger when higher discretion is allowed and weaker when discretion is lower. Although the formal materiality rules vary little throughout my sample period, on August 1, 2008 the SEC Advisory Committee issued the *Final Report of the Advisory Committee on Improvements to Financial Reporting* which among other items clarified the use of judgment in materiality misstatement assessments. One of the items stressed within this report is the over-disclosure of unnecessary or immaterial information by firms resulting from the overly broad or "one-dimensional" application of SAB 99. The SEC expressed concern that firms were using a checklist approach to classify small misstatements as material due to the *qual*itative criteria. They suggested that firms use a more balanced analysis and place stronger emphasis on judgment and whether a reasonable investor would think the error is important, noting that not meeting certain *qual*itative criteria can be a justification for the immateriality of misstatements.[19] Yet, they maintain that there is only a "remote" likelihood that *quant*itatively large misstatements are truly immaterial. Thus, I interpret this report as reducing the firms' perceived need to strictly adhere to the *qual*itative criteria listed in SAB 99 and instead increasing the allowed discretion, especially for misstatements that meet *qual*itative criteria, but not *quant*itative thresholds.

Using this shift in the SEC's interpretation allows me to capture a somewhat exogenous increase in the allowed discretion for high materiality discretion misstatements. If my results are truly driven by discretion, I would expect my results to be stronger in the post 2008 period. I create an indicator variable, POST, which equals

[19] This interpretation is shared by CALPERS who discuss the 2008 report in their comment letter for the new FASB materiality definition.

one if the misstatement filing date occurs after August 1, 2008 and zero otherwise and use the same test specification as in Table 9.

Panel A of Table 9 shows the results. The interaction HIGH_DISCR x POST is positive and significant and the effect of POST is positive and significant at the 1% level for high discretion misstatements. The marginal effects for HIGH_DISC show that for all material misstatements a high discretion misstatement is 55% more likely to be revised in the post-period, relative to 9% more likely to be revised in the pre-period. These results demonstrate that an increase in discretion leads to an even higher likelihood of managers reporting material misstatements as revisions.

5.3.2 Effect of a Big 4 and Industry Expert Auditor

In addition to exploiting time variation in discretion, I also examine whether Big 4 and industry expert audit firms are less likely to allow firms to use discretion opportunistically. Keune and Johnstone (2012) and Pyzoha (2015) highlight that auditors may play a role in limiting managements' opportunistic misstatement disclosure. To the extent that auditors perceive revisions that meet materiality criteria (i.e., material revisions) to be misreported, these studies suggest that a higher quality auditor would be less likely to use discretion opportunistically to revise rather than restate. If Big 4 auditors or industry experts are better monitors over misstatement reporting, I would expect these auditors to reduce the likelihood of reporting misstatements with high materiality discretion as revisions.

Using a similar design as in Panel A, I test whether Big 4 and industry expert auditors discipline the use of discretion. Panel B of Table 9 shows the results of this

analysis. In the logit model, the interaction and the total effect of BIG4 when HIGH_DISCR=1 are both marginally insignificant. The linear probability model in column (3) confirms these results, showing an insignificant interaction and total effect of BIG4, suggesting that the size of the audit firm alone does not significantly influence the client's use of materiality discretion. However, in columns (4)-(6), I find evidence that industry expert auditors, EXPERT, limit firms' use of discretion to revise rather than restate. In both the marginal effects model while holding all other variables at their means (column 5) and the linear probability model (column 6), I find the interaction between HIGH_DISCR X EXPERT and the total effect of EXPERT when HIGH_DISC=1 are negative and significant. Overall, these results provide some evidence that a high quality auditor can limit managers' strategic use of discretion to revise rather than restate.

5.3.3 Material Revisions: Additional Analysis

In addition to examining the market response to material versus immaterial revisions, I also examine whether material revisions are more likely to be associated with an SEC comment letter and reported internal control weaknesses. In Table 10, Panel A, for the full sample of revisions, I regress an indicator variable, COMMENT, which equals one if the firm received a comment letter regarding its materiality assessment for the revision and zero otherwise, on materiality measures and firm level controls. When I include MATERIAL alone, I find that material revisions are not significantly associated with the receipt of a comment letter related to the materiality assessment. However, when I include all the individual materiality criteria (see Appendix A for details), I find that misstatements which are *quant*itively material due to the annual net income effect (i.e.,

EXCEEDS_ANN_TRSHD=1) are positively associated with materiality related comment letters. Therefore, the SEC appears to be reinforcing the idea that *quant*itatively material misstatements are more suspect, and thus leaving firms more discretion when reporting *qual*itatively material misstatements.

In Table 10, Panel B, I run a similar regression to Panel A with an indicator variable for internal control weaknesses, ICW, as the dependent variable. ICW is equal to one when the firm has recorded ineffective internal controls in the misstatement period up to the fiscal year following the misstatement announcement and zero otherwise. Panel B column (2) shows evidence that material revisions are 7% more likely to have an internal control weakness related to the misstatement relative to immaterial revisions and this difference is significant at the 1% level. These results hold in the linear probability model (column 3) while including firm level controls as well as industry and year fixed effects. Overall, these results provide further validation that my classification of material revisions does indeed capture more severe revisions.

5.3.4 Revise vs. Restate: Additional Analysis

In Table 11, I examine whether strong corporate governance limits the use of discretion to revise rather than restate. I use the MSCI ESG KLD Stats' database to obtain the number of corporate governance strengths as a measure of strong corporate governance, GOV_STRENGTH. Whereas I find strong evidence that the total effect of GOV_STRENGTH is negative and significant in both the logit model's marginal effects (column 2) and the linear probability model (column 3) when HIGH_DISC=1, the interaction term HIGH_DISCR x GOV_STRENGTH is only significant in the linear

probability model. Since the sample of firms covered by MSCI varies over my sample period, I believe it is important to include year fixed effects. Thus, I place little reliance on the logit model results and interpret my linear probability model results as consistent with strong corporate governance limiting the use of discretion to revise.

I also expand my tests by examining how managers use materiality discretion to revise when clawback provisions are in place. It is unlikely that clawback incentives remain if the misstatement improves rather than adversely affects prior financial performance, since these misstatements would not require repayment of compensation. Thus, in Table 12, I compare the effect of CLAWBACK X HIGH_DISCR on the choice to revise or restate in the ADVERSE versus the FAVORABLE (ADVERSE=0) subsample. The interaction effect is significant only in the ADVERSE sample and is significantly more positive relative to the FAVORABLE sample (see the Wald test column 3). This result provides further validation that the use of materiality discretion for managers with compensation clawbacks is likely to be opportunistic.

5.3.5 Robustness of Results

I also test the robustness of my measures and empirical specification in several ways. First, since the classification of HIGH_DISCR is critical to my analysis, I test the robustness of this classification by using several alternative thresholds for *quant*itative materiality such as 5% (instead of 2%) of total assets for the cumulative effect, 5% of net income (rather than 5% of pre-tax income) for the annual effect, and several other numeric variants of the benchmark (e.g., 4% and 6% of pre-tax income). I also exclusively use 5% of pre-tax net income or 1% of revenue to capture the materiality of

the net income effect. Overall, I find the results are similar but generally weaker as I move further away from the most commonly used benchmarks, suggesting that discretion is generally higher at the de-facto benchmark threshold. Second, I replicate my interaction results using the Norton, Wang, and Ai (2004) adjustment to the standard error and find that ADVERSE, CLAWBACK, POST, and EXPERT are still significant at least at the 1% level, ANALYSTFOLLOWING is significant at the 5% level, and both HIGH_ISSUANCE and BIG4 are insignificant. Third, in addition to the interaction model used in the primary tests for Tables 8 and 9, I also use a subsample of high discretion misstatements and find that in a logit model of REVISE on the incentive and control variables, CLAWBACK, ANALYSTFOLLOWING, HIGH_ISSUANCE, POST, and EXPERT remain significant whereas ADVERSE is marginally insignificant (p-value=0.12). Lastly, to alleviate concern that the results are driven by misstatements with high magnitudes, I drop all misstatements with annual net income effect or cumulative shareholders' equity effect in the top decile of the full misstatement sample and find qualitatively similar results.

6. Conclusion

In my study, I examine whether revisions are used strategically by firms to avoid reporting otherwise material misstatements as restatements. Since the FASB and the SEC require all misstatements which are material to prior periods' financial statements to be restated, the existence of material revisions which significantly impact a user's assessment of the firm suggests that firms may have misreported these revisions. I find that a large proportion of misstatements meet at least one of the documented materiality

criteria or exceed at least one of the de-facto materiality thresholds. These "material" revisions are perceived by the market as more serious than immaterial revisions. Although the market reaction between material revisions and immaterial revisions is indistinguishable in a short 3-day window around the misstatement disclosure, material revisions are associated with over a 2% lower cumulative abnormal return relative to immaterial revisions in the 1-month window. These results suggest that a subset of revisions is indeed material and perhaps should have been reported as restatements. Next, when comparing material revisions to material restatements, I show that restatements elicit a more negative market response relative to revisions in both the 3-day and 1-month windows around the misstatement disclosure date. This highlights the negative market penalty of restating even after considering the materiality of the misstatement.

To avoid the negative market reaction and other negative consequences of restatements (e.g., clawbacks and heightened scrutiny), managers may be incentivized to report material misstatements as revisions. I test whether these "material revisions" are opportunistic or strategic in nature. Since the firm is likely to be limited by its duty to disclose clearly material misstatements, I argue and find that the higher propensity to revise material misstatements is concentrated among misstatements in which the firm has a higher level of materiality discretion. Moreover, this association varies predictably with management's incentives to avoid restatements. Management is more likely to revise misstatements that allow for high discretion when the misstatement negatively impacts prior performance, when management is subject to a compensation clawback provision, or when the firm faces strong market pressure. Lastly, I find evidence that the use of

materiality discretion to revise is stronger when the SEC encourages more discretion and is limited by industry expert auditors and strong corporate governance.

These results suggest that management may use discretion provided within materiality guidance opportunistically to avoid restatements and instead revise prior period financial statements. These findings are especially important to regulators, especially the FASB in relation to its recent project on materiality. In clarifying the definition of materiality, the FASB needs to consider whether this clarification will lead to any changes in firms' application of materiality discretion. My study cautions that increases in materiality discretion could make it easier for firms to conceal or avoid reporting misstatements that may otherwise be material to investors. I acknowledge that my study only focuses on one negative consequence of materiality discretion. I leave it open to future research to examine any long-term consequences of exercising high discretion in misstatement materiality assessments and whether there are any potential benefits from utilizing such discretion.

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Appendix A. Measurement of Misstatement Materiality

Quantitative Materiality Classification

Following the widely documented *quant*itative materiality benchmarks discussed in Section 2, I classify a misstatement as *quant*itatively material if it meets either the annual or cumulative magnitude threshold:[20]

1) Annual threshold (EXCEEDS_ANN_TRSHD) equals one when the absolute value of the net income effect in any misstatement year is
    a. >=5% of the absolute value of initial pre-tax income (i.e., before restatement/revision)[21] AND
    b. >=1% of the revenue before restatement/revision
2) Cumulative threshold (EXCEEDS_CUM_TRSHD) equals one when the absolute value of the cumulative effect on stockholders' equity is >=2% of total assets.

In determining the annual threshold, both conditions (a) and (b) are included to account for firms with near zero or negative pre-tax income.

Qualitative Materiality Classification

*Qual*itative materiality considerations, on the other hand, usually mirror those specified in the SEC's guidance (see e.g., Eilifsen and Messier 2015, Acito et al. 2015). Thus, I classify a misstatement as *qual*itatively material if it meets at least one of the following characteristics listed on SEC's SAB 99 or affects a key account:

1) Fraud (FRAUD): Equals one if the misstatement is connected with an SEC or other regulatory investigation, mentions fraud or other misconduct in the disclosure, or is coded

[20] According to SAB 108, firms must evaluate the magnitude of the error which arose during each annual period as well as the cumulative or carryover effect.
[21] Since Audit Analytics does not report initial pre-tax income, I estimate pre-tax income as net income/(1-tax rate), assuming a 30% tax rate.

by Audit Analytics as fraud, and zero otherwise.[22]

2) Debt Covenant Violation (DEBT_COV_VIOL): Equals one if recording the misstatement causes the firm to violate a debt covenant, and zero otherwise.
3) Break Earnings Trend (BREAK_NI_TREND): Equals one if for any misstated year the net income effect of the misstatement causes the firm to go from meeting or beating the prior years' net income to missing the prior years' net income or vice versa, and zero otherwise.
4) Meet/Miss Analyst Forecast Error (MEET_MISS_AF): Equals one if for any misstated year the net income effect of the misstatement causes a firm to switch from missing the analyst consensus forecast to meeting or beating the analyst consensus forecast or vice versa, and zero otherwise.
5) Change Earnings Sign (SWITCH_NI_SIGN): Equals one if the net income effect of the misstatement causes the firm to go from positive to negative net income or vice versa in any of the misstated years, and zero otherwise.
6) Core Account (CORE_ACCT): Equals one if the misstatement affects a core account, namely revenue, payroll expense, depreciation expense, or inventory, and zero otherwise.

All misstatements which meet at least one of either *quant*itative criteria or *qual*itative criteria are considered material (MATERIAL=1). Those misstatements meeting at least one of the *qual*itative criteria but no *quant*itative criteria are considered to have high materiality discretion (HIGH_DISCR=1).

[22] I verify that my FRAUD variable captures only fraudulent misstatement by reading each of the potential fraudulent misstatement disclosures and excluding all misstatements which involve only SEC comment letters (e.g. not a true SEC investigation, but instead only SEC comment letter correspondence).

Appendix B: Variable Definitions

Variable Name	Variable Definition
Misstatement Level Variables	
REVISE	Indicator variable that equals one when the misstating firm revises the prior period financial statements and does *not* file an Item 4.02 8-K filing, and zero otherwise. (Audit Analytics: DATE_OF_8K_402 is blank).
RESTATE	Indicator variable that equals one when the misstating firm restates the prior period financial statements and files an Item 4.02 8-K filing, and zero otherwise. (Audit Analytics: DATE_OF_8K_402).
MATERIAL	Indicator variable that equals one when the misstatement meets at least one of the *quan*titative thresholds (EXCEEDS_ANN_TRSHD, EXCEEDS_MAG_TR SHD) or *qual*itative materiality criteria (CORE_ACCT, FRAUD, DEBT _COV_VIOL, MEET_MISS_AF, BREAK_NI_TREND, SWITCH_ NI_SIGN), and zero otherwise. (Audit Analytics)
HIGH_DISCR	Indicator variable that equals one if at least one of the *qual*itative criteria but none of the *quant*itative criteria are met, and zero otherwise. See Appendix A. (Audit Analytics, Compustat, IBES)
ADVERSE	Indicator variable that equals one if the error negatively affects past performance, and zero otherwise. (Audit Analytics = RES_ADVERSE)
FAVORABLE	Indicator variable that equals one if the error favorably affects past performance, and zero otherwise. (Audit Analytics = RES_IMPROVES)
ANN_MAG	Annual magnitude is a continuous measure of the annual net income effect. For each annual misstated period, I calculate the absolute value of the magnitude of the annual periods' net income misstatement error relative to revenue measured prior to the misstatement. I use Audit Analytics to obtain all of the initial and restated values. When missing period-specific information, I supplement Audit Analytics values with Compustat pre-restated financial information and hand-collect the remaining values from SEC's Edgar. (Audit Analytics, Compustat, SEC Edgar)
CUM_MAG	The cumulative magnitude measures the absolute value of the cumulative stockholder equity effect of the misstatement scaled by the total assets as measured in the year prior to the misstatement filing. When this value is missing, I estimate the cumulative stockholder equity effect as the cumulative net income effect. (Audit Analytics: ABS(CHANGE_CUM_TOTAL_SE_USD)/ PRIORFY _BALSH_ASSETS)

NUM_ISSUES	Number of issues involved in the misstatement. To get the total number of issues I add up all of the issues mentioned within Audit Analytics' RES_ ACCOUNTING_FKEY, RES_FRAUD_KEY, RES_CLERICAL_FKEY, and RES_OTHER_RESTATEMENT_FKEY. (Audit Analytics)
NUM_PERIODS	Number of annual periods with disclosed net income effect according to the Audit Analytics' Periods Dataset. (Audit Analytics)
RECLASS	Indicator variable that equals one if the misstatement only involves reclassifications, and zero otherwise. Reclassifications include balance sheet, equity, debt, EPS, and cash flow classification issues. (Audit Analytics)
MAT_ADV (MAT_FAV)	Equals one if the misstatement is material (MATERIAL=1) and adversely (favorably) affects past performance. (Audit Analytics)
QUANT_QUAL	QUANT_QUAL is a variable which equals 1 if the misstatement meets *either quant*itative or *qual*itative materiality criteria, and equals 2 if the misstatement meets *both* types of criteria. QUANT_QUAL_ADV = QUANT_QUAL x ADVERSE whereas QUANT_QUAL_FAV equals QUANT_QUAL x FAVORABLE. (Audit Analytics)
MAG_ADV (MAG_FAV)	Equals the interaction of the misstatement's cumulative stockholder equity effect, CUM_MAG, times an indicator for whether the variable negatively affects past performance, i.e., ADVERSE (positively affects past performance, i.e., FAVORABLE) if MATERIAL=1 and 0 otherwise.
Firm-Year Level Variables	
CAR	The cumulative abnormal return for the misstating firm as measured using the standard market model using the CRSP value-weighted index to measure the market return. The event date t is the misstatement file date. I use trading days t-240 to t-60 to estimate the model parameters and calculate the cumulative abnormal return for the 3-day, CAR (-1 to +1) as well as the 1-month, CAR (-1 to +20). (CRSP)
GOOD_NEWS	Equals the earnings surprise if the earnings release is issued during the 3-day misstatement disclosure window and the earnings surprise is positive. The earnings surprise is measured as the amount by which reported EPS exceeds the analysts' consensus forecast. (Compustat, IBES)
BAD_NEWS	Equals the earnings surprise if the earnings release is issued during the 3-day misstatement disclosure window and the earnings surprise is negative. The earnings surprise is measured as the difference between reported EPS and the analysts' consensus forecast. (Compustat, IBES)
SIZE	The log of total assets measured at the end of the fiscal year prior to the misstatement filing date. (Compustat: at)

INSTOWN	Institutional ownership percentage for the firm measured from the Thomson Reuters 13f Stock Ownership Summary file, calculated as of the end of the fiscal year prior to the misstatement filing date. (Thomson Reuters: instown_perc)
MTB	Market to book ratio calculated as the market value of equity / total common stockholder equity as of the end of the fiscal year prior to the misstatement filing date. (Compustat: (prcc_f*csho)/ceq).
BIG4	Indicator variable that equals one if the firm employs a Big 4 auditor (Ernst and Young, Deloitte, PwC, or KPMG) at the misstatement filing date, and zero otherwise. (Audit Analytics)
LEV	Leverage is calculated as debt / total assets as of the end of the fiscal year prior to the misstatement filing date. (Compustat: (dlc +dltt +dlo)/at))
ROA	Return on assets equals net income / average assets, measured at the end of the fiscal year prior to the misstatement filing date. (Compustat: $ib/((at_t+at_{t-1})/2)$)
ANALYST FOLLOW	Log (number of analysts issuing an annual EPS forecast for the firm plus one), measured for the fiscal year prior to the misstatement filing date. (IBES)
LIT_RISK	Litigation risk is the firm-specific predicted probability from the Kim and Skinner (2012) litigation model. (CRSP, Compustat)
CLAWBACK	Indicator variable that equals one if the firm has disclosed a clawback provision in its executive compensation related to misstatements or financial statement misconduct in any of its regulatory filings for the three years prior to the misstatement disclosure, and zero otherwise. I search the filings using Edgars' advanced search feature as well as http://pro.edgar-online.com/ for filings which are no longer available on Edgars' search tool. I use the following search term: claw* <or> recov* polic* <or> recoup* polic*(claw*) NEAR5 (polic* or provision*) to identify filings that may describe a clawback provision. I review all of the filings which meet this search criterion to verify that a clawback provision on misstatements or financial misconduct exists at the firm prior to the misstatement filing date. (SEC Edgar)
HIGH_ISSANCE	Indicator variable that equals one if the firm's net capital market financing activity is in the top quartile and zero otherwise. I follow Bradshaw, Richardson, and Sloan (2006) to calculate an ex-post net capital market financing measure as the actual cash flow received from debt and equity financing activities in the fiscal year following the misstatement announcement. (Compustat: Net Capital Market Financing $_{t+1}$ = (sstk $_{t+1}$ - prstkc $_{t+1}$ + dltis $_{t+1}$ - dltr $_{t+1}$ -dv $_{t+1}$ +dlcch $_{t+1}$)/((at_t+at $_{t+1}$)/2);)

EXPERT	Indicator variable which equals one if the auditor during the misstatement disclosure year is *both* a city level and national level industry expert, and zero otherwise. I follow Reichelt and Wang's (2010) two definitions to measure city and national industry experts. Using two-digit SIC codes to define an industry, an auditor is a national level industry expert if either 1) the auditor has the largest audit fee market share in that industry and has at least a 10% larger market share than the second auditor, or 2) the auditor has at least a 30% audit fee market industry share. Using the US Census' Metropolitan and Micropolitan Statistical Areas to define cities, an auditor is a city level expert if either 1) the auditor has the largest audit fee market share in that city-industry and has at least a 10% larger market share than the second auditor, or 2) the auditor has at least a 50% city-industry audit fee market share. All city-industry-year combinations with less than 2 observations are deleted. (Audit Analytics)
COMMENT	An indicator variable which equals one if the firm receives an SEC comment letter questioning the materiality of the revision on any of the filings in which the revision is discussed, and zero otherwise. (Audit Analytics, SEC Edgar)
ICW	An indicator variable which equals one if the firm reports ineffective internal controls during the restatement period up to a year after the misstatement filing date and zero otherwise (Audit Analytics: Effective_Internal_Controls)
GOV_STRENGTH	The raw number of corporate governance strengths as reported by MSCI ESG KLD STATS. (MSCI= CGOV_STR_NUM)

Table 1: Sample Selection and Composition

	Misstatement Sample
Audit Analytics Misstatement Sample (with Misstatement Period Coverage): Misstatement Disclosure Dates: 8/23/2004-12/31/2015	6,567
Exclude:	
Quarterly Misstatements	(2,467)
Out of Period Adjustments	(314)
Foreign Private Issuers	(265)
Misstatements with Missing Data	(1,045)
Final Misstatement Sample	2,476
Restatements	1,239
Revisions	1,237
Total Number of Restatements and Revisions	2,476
Immaterial Misstatements	(948)
Material Misstatement Sample	1,528

Table 2: Misstatement Materiality: Revisions vs. Restatements

Percentage of Misstatements Meeting Materiality Criteria

	Revision	Restatement	Difference
MATERIAL	0.38	0.85	-0.47***
Quantitative Criteria			
EXCEEDS_ANN_TRSHD	0.06	0.44	-0.38***
EXCEEDS_CUM_TRSHD	0.03	0.26	-0.23***
Qualitative Criteria			
CORE_ACCT	0.24	0.43	-0.19***
FRAUD	0.02	0.19	-0.17***
DEBT_COV_VIOL	0.00	0.02	-0.02***
BREAK_NI_TREND	0.03	0.16	-0.13***
SWITCH_NI_SIGN	0.02	0.11	-0.09***
MEET_MISS_AF	0.11	0.38	-0.27***
Number of Observations	1237	1239	

* p<0.10, ** p<0.05, *** p<.01. This panel shows the proportion of misstatements meeting each of the materiality criteria. The final column shows results of the t-test of the difference between the revisions and restatement proportions. See Appendix A and B for details of materiality classification and materiality variable definitions.

Table 3: Cumulative Abnormal Returns: Revisions vs. Restatements

Panel A: Revisions

	(1) All Revisions	(2) Material	(3) Immaterial	(4) Difference
3-Day CAR	-0.002	-0.004	-0.000	-0.004
Drift CAR	-0.002	-0.012**	0.004	-0.016**
1-Month CAR	-0.004	-0.016**	0.004	-0.020**
Observations	1237	475	762	

Panel B: Restatements

	(1) All Restatements	(2) Material	(3) Immaterial	(4) Difference
3-Day CAR	-0.026***	-0.032***	0.005	-0.037***
Drift CAR	-0.006	-0.006	-0.008	0.002
1-Month CAR	-0.033***	-0.038***	-0.003	-0.035*
Observations	1239	1053	186	

Panel C: Restatements minus Revisions

	(1) All Misstatements	(2) Material	(3) Immaterial
3-Day CAR	-0.024***	-0.028***	0.005
Drift CAR	-0.004	0.006	-0.012
1-Month CAR	-0.029***	-0.022**	-0.007
Observations	2476	1528	948

* p<0.10, ** p<0.05, *** p<.01. This table shows the mean cumulative abnormal return of the firm (calculated using the market model) following the misstatement disclosure date for revisions and for restatements. Three-day CARs are measured from -1 to +1 relative to the disclosure date and monthly CARs are measured over the one-month window around the disclosure date, -1 to +20. Drift period CAR equals the monthly CAR excluding the three-day window around the misstatement disclosure, +2 to +20. For each subsample, revisions and restatements, column (4), labeled "Difference," shows results of the t-test of difference in CARs between immaterial and material misstatements within revisions or restatements. See Appendix B for variable definitions.

Table 4: Market Response to Material Revisions

	(1) 3-Day CAR	(2) 1-Month CAR	(3) 1-Month CAR	(4) 1-Month CAR	(5) 1-Month CAR
MATERIAL	-0.003	-0.022**			
	(0.46)	(0.03)			
MAT_ADV			-0.019**		
			(0.05)		
MAT_FAV			-0.037		
			(0.15)		
QUANT_QUAL_ADV				-0.018**	
				(0.05)	
QUANT_QUAL_FAV				-0.019	
				(0.29)	
MAG_ADV					-1.013*
					(0.10)
MAG_FAV					-0.513
					(0.59)
GOOD_NEWS	0.090	0.073	0.067	0.073	0.151
	(0.17)	(0.42)	(0.46)	(0.42)	(0.15)
BAD_NEWS	-0.002	0.023	0.024	0.023	0.022
	(0.27)	(0.54)	(0.53)	(0.54)	(0.56)
SIZE	0.001	0.004	0.004	0.004	0.003
	(0.65)	(0.15)	(0.16)	(0.17)	(0.19)
MTB	0.000	-0.001	-0.001	-0.001	-0.001
	(0.98)	(0.61)	(0.63)	(0.61)	(0.63)
LEV	0.002	0.006	0.007	0.006	0.003
	(0.88)	(0.81)	(0.80)	(0.82)	(0.92)
ROA	0.004	-0.083	-0.084	-0.084	-0.083
	(0.84)	(0.27)	(0.27)	(0.27)	(0.28)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes
Adj-R^2	0.003	0.011	0.011	0.010	0.009
N	1237	1237	1237	1237	1237

* p<0.10, ** p<0.05, *** p<.01. This table reports results of regression (1) of cumulative abnormal returns (CARs) on the materiality of the revision and control variables. CAR is calculated using the market model and is measured relative to the misstatement filing date. Three-day CARs are measured from t-1 to t+1 relative to the disclosure date and monthly CARs are measured over the 1-month window around the disclosure date, t-1 to t+20. P-values based on robust standard errors are reported in parentheses below the coefficients. The firm-level control variables, SIZE, MTB, LEV, and ROA, are measured in the fiscal year ended prior to the misstatement disclosure and all continuous control variables are winsorized at the 1% and 99% levels. The model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification (see http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/Data_Library/det_12_ind_port.html). See Appendix B for variable definitions.

Table 5: Market Response to Material Misstatements: Restate vs. Revise

	(1) 3-Day CAR	(2) 1-Month CAR	(3) 3-Day CAR	(4) 1-Month CAR
RESTATE	-0.039***	-0.043***	-0.029***	-0.033***
	(0.00)	(0.00)	(0.00)	(0.01)
GOOD_NEWS	0.058	0.082	0.052	0.080
	(0.16)	(0.23)	(0.18)	(0.22)
BAD_NEWS	0.004	0.002	0.003	0.001
	(0.22)	(0.71)	(0.33)	(0.80)
Quantitative Materiality Controls				
CUM_MAG			-0.019	-0.056
			(0.73)	(0.66)
ANN_MAG			0.006	0.006
			(0.23)	(0.50)
Qualitative Materiality Controls				
FRAUD			-0.040***	-0.041***
			(0.00)	(0.01)
CORE_ACCT			-0.019***	-0.015
			(0.00)	(0.13)
DEBT_COV_VIOL			-0.059**	-0.088***
			(0.03)	(0.01)
BREAK_NI_TREND			-0.026***	-0.012
			(0.00)	(0.40)
SWITCH_NI_SIGN			0.005	-0.002
			(0.55)	(0.89)
MEET_MISS_AF			-0.006	-0.006
			(0.24)	(0.50)
Firm-Level Controls				
SIZE	0.000	0.004	0.002	0.006**
	(0.87)	(0.10)	(0.12)	(0.03)
MTB	-0.001	-0.001	-0.001	-0.001
	(0.17)	(0.36)	(0.10)	(0.34)
LEV	0.012	0.028	0.013	0.029
	(0.38)	(0.24)	(0.33)	(0.23)
ROA	-0.024	-0.079*	-0.012	-0.068
	(0.23)	(0.06)	(0.54)	(0.12)
Year Fixed Effects	Yes	Yes	Yes	Yes
Industry Fixed Effects	Yes	Yes	Yes	Yes
Adj-R^2	0.026	0.020	0.070	0.030
N	1528	1528	1528	1528

* p<0.10, ** p<0.05, *** p<.01. This table reports results of regression (2) of cumulative abnormal returns (CARs) on the decision to restate or revise and control variables. CAR is calculated using the market model and is measured relative to the misstatement disclosure date. Three-day CARs are measured from t-1 to t+1 relative to the disclosure date and monthly CARs are measured over the 1-month window around the disclosure date, t-1 to t+20. In the above specification, I use the full material misstatement sample (MATERIAL=1). P-values, based on robust standard errors, are reported in parentheses below the coefficients. The firm-level control variables, SIZE, MTB, LEV, and ROA, are measured in the fiscal year ended prior to the misstatement disclosure and all continuous control variables are winsorized at the 1% and 99% levels. The model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. See Appendix B for variable definitions.

Table 6: Descriptive Statistics for the Sample of Material Misstatements

Panel A: Summary Statistics

	Mean	Median	Std. Dev.
REVISE	0.311	0.000	0.463
CUM_MAG	0.022	0.006	0.050
ANN_MAG	0.150	0.007	0.705
NUM_PERIODS	3.500	4.000	1.650
NUM_ISSUES	2.936	2.000	1.890
HIGH_DISCR	0.535	1.000	0.499
ADVERSE	0.823	1.000	0.382
CLAWBACK	0.149	0.000	0.356
ANALYSTFOLLOW	1.810	1.946	1.029
HIGH_ISSUANCE[#]	0.250	0.000	0.433
RECLASS	0.020	0.000	0.141
FRAUD	0.171	0.000	0.377
BIG4	0.766	1.000	0.424
EXPERT[#]	0.161	0.000	0.368
POST	0.437	0.000	0.496
N[#]	1528		

Panel B: Revise versus Restate

	Revise: Mean	Restate: Mean	Revise-Restate
HIGH_DISCR	0.804	0.414	0.390***
ADVERSE	0.811	0.828	-0.017
CLAWBACK	0.322	0.070	0.252***
ANALYSTFOLLOW	1.910	1.764	0.146***
HIGH_ISSUANCE#	0.251	0.249	0.002
BIG4	0.813	0.745	0.068***
EXPERT#	0.138	0.170	-0.032
POST	0.743	0.299	0.444***
N#	475	1053	

* p<0.10, ** p<0.05, *** p<.01. In Panel B, the column titled "Revise-Restate" reports the results of the test of the difference between the means of the revision and restatement sample. All continuous variables are winsorized at the 1% and 99% levels. See Appendix B for variable definitions.

[#] Both HIGH_ISSUANCE and EXPERT require additional variables to calculate and thus the sample is based on 1,072 misstatement observations (342 revisions and 730 restatements) and 1,169 misstatement observations (347 revisions and 822 restatements) respectively.

Table 7: Revise vs. Restate: High Materiality Discretion Misstatements

	Logit Model	***Marginal Effects for Logit Model***	***Linear Probability Model (LPM)***
	(1)	(2)	(3)
	REVISE	REVISE	REVISE
HIGH_DISCR	1.719***	0.296***	0.264***
	(0.00)	(0.00)	(0.00)
ADVERSE	0.068	0.012	0.011
	(0.70)	(0.70)	(0.69)
CUM_MAG	-6.341**	-1.136**	-0.439***
	(0.01)	(0.01)	(0.01)
ANN_MAG	-0.074	-0.013	-0.010
	(0.64)	(0.64)	(0.43)
RECLASS	-0.272	-0.045	0.005
	(0.52)	(0.48)	(0.95)
NUM_PERIODS	-0.330***	-0.059***	-0.039***
	(0.00)	(0.00)	(0.00)
NUM_ISSUES	-0.211***	-0.038***	-0.019***
	(0.00)	(0.00)	(0.00)
FRAUD	-1.491***	-0.201***	-0.166***
	(0.00)	(0.00)	(0.00)
SIZE	0.027	0.005	0.007
	(0.63)	(0.63)	(0.47)
INSTOWN	0.119	0.021	0.036
	(0.69)	(0.70)	(0.41)
LEV	0.130	0.023	-0.005
	(0.65)	(0.65)	(0.91)
MTB	0.005	0.001	-0.000
	(0.72)	(0.72)	(1.00)
BIG4	0.159	0.028	0.055*
	(0.43)	(0.42)	(0.06)
ROA	-0.434	-0.078	0.006
	(0.35)	(0.35)	(0.93)
LIT_RISK	-10.944	-1.961	-0.939
	(0.15)	(0.15)	(0.36)
ANALYSTFOLLOW	0.114	0.020	-0.003
	(0.29)	(0.29)	(0.86)
CLAWBACK	1.615***	0.353***	0.093***
	(0.00)	(0.00)	(0.01)
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
Pseudo R^2 (Adj-R^2)	0.274		0.366
N	1528		1528

* p<0.10, ** p<0.05, *** p<.01. This table reports results of regression (3) of the revise/restate decision on high materiality discretion and control variables. The regression is estimated for the sample of material misstatements (i.e., MATERIAL=1) using a logit model in column (1) and a linear probability model in column (3). Marginal effects for the logit specification in column (1) are reported in column (2). The marginal effects represent the change in the probability of the dependent variable for a one-unit increase in the independent variable while holding all other variables at their means. Both models show p-values based on robust standard errors reported in parentheses below the coefficients. The linear probability model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. All firm level variables are measured in the year prior to the misstatement and all continuous variables are winsorized at the 1% and 99% levels. See Appendix A and B for variable definitions.

Table 8: Revise vs. Restate: Impact of Strategic Incentives

Panel A: Impact of Adverse Misstatements			
	Logit Model	***Marginal Effects for Logit Model***	***Linear Probability Model (LPM)***
	(1)	(2)	(3)
	REVISE	REVISE	REVISE
HIGH_DISCR	0.884***	0.158***	0.177***
	(0.00)	(0.00)	(0.00)
ADVERSE	-0.602**	-0.064*	-0.041
	(0.03)	(0.05)	(0.28)
HIGH_DISCR X ADVERSE	1.116***	0.176***	0.108*
	(0.00)	(0.00)	(0.05)
CUM_MAG	-5.667**	-0.993**	-0.399**
	(0.02)	(0.02)	(0.02)
ANN_MAG	-0.103	-0.018	-0.013
	(0.53)	(0.53)	(0.33)
RECLASS	-0.298	-0.048	0.002
	(0.48)	(0.44)	(0.98)
NUM_PERIODS	-0.334***	-0.059***	-0.039***
	(0.00)	(0.00)	(0.00)
NUM_ISSUES	-0.208***	-0.036***	-0.019***
	(0.00)	(0.00)	(0.00)
FRAUD	-1.521***	-0.199***	-0.165***
	(0.00)	(0.00)	(0.00)
FIRM LEVEL CONTROLS	Yes	Yes	Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
ADVERSE + HIGH_DISC X ADVERSE		**0.112*** **	**0.067***
		(0.01)	**(0.10)**
Pseudo R^2 (Adj-R^2 for LPM)	0.291		0.368
N	1528		1528

Table 8 (continued)

Panel B: Impact of Clawback Provisions

	Logit Model	***Marginal Effects for Logit Model***	***Linear Probability Model (LPM)***
	(1)	(2)	(3)
	REVISE	REVISE	REVISE
HIGH_DISCR	1.501***	0.231***	0.227***
	(0.00)	(0.00)	(0.00)
CLAWBACK	0.762**	0.092**	-0.101*
	(0.02)	(0.05)	(0.07)
HIGH_DISCR X CLAWBACK	1.331***	0.378***	0.285***
	(0.00)	(0.00)	(0.00)
ADVERSE	0.059	0.011	0.005
	(0.74)	(0.74)	(0.86)
CUM_MAG	-6.437**	-1.156***	-0.480***
	(0.01)	(0.01)	(0.00)
ANN_MAG	-0.095	-0.017	-0.014
	(0.54)	(0.53)	(0.28)
RECLASS	-0.204	-0.035	0.023
	(0.63)	(0.61)	(0.81)
NUM_PERIODS	-0.333***	-0.060***	-0.038***
	(0.00)	(0.00)	(0.00)
NUM_ISSUES	-0.215***	-0.039***	-0.018***
	(0.00)	(0.00)	(0.00)
FRAUD	-1.541***	-0.207***	-0.164***
	(0.00)	(0.00)	(0.00)
FIRM LEVEL CONTROLS	Yes	Yes	Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
CLAWBACK + HIGH_DISCR X CLAWBACK		**0.470*** **	**0.184*** **
		(0.00)	**(0.00)**
Pseudo R^2 (Adj-R^2 for LPM)	0.280		0.376
N	1528		1528

Table 8 (continued)

Panel C: Impact of Capital Market Pressure: Analyst Following

	Logit Model	***Marginal Effects for Logit Model***	***Linear Probability Model (LPM)***
	(1) REVISE	(2) REVISE	(3) REVISE
HIGH_DISCR	1.244***	0.297***	0.198***
	(0.00)	(0.00)	(0.00)
ANALYSTFOLLOW	-0.039	-0.004	-0.021
	(0.78)	(0.78)	(0.25)
HIGH_DISCR X ANALYSTFOLLOW	0.278**	0.061**	0.036*
	(0.04)	(0.01)	(0.07)
ADVERSE	0.046	0.008	0.011
	(0.79)	(0.79)	(0.68)
CUM_MAG	-6.711***	-1.186***	-0.495***
	(0.01)	(0.01)	(0.00)
ANN_MAG	-0.113	-0.020	-0.013
	(0.46)	(0.46)	(0.33)
RECLASS	-0.399	-0.063	0.007
	(0.37)	(0.31)	(0.94)
NUM_PERIODS	-0.361***	-0.064***	-0.040***
	(0.00)	(0.00)	(0.00)
NUM_ISSUES	-0.223***	-0.039***	-0.019***
	(0.00)	(0.00)	(0.00)
FRAUD	-1.547***	-0.203***	-0.164***
	(0.00)	(0.00)	(0.00)
FIRM LEVEL CONTROLS	Yes	Yes	Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
ANALYSTFOLLOW + HIGH_DISCR X ANALYSTFOLLOW		**0.058** **(0.03)**	**0.015** **(0.42)**
Pseudo R^2 (Adj-R^2 for LPM)	0.235		0.364
N	1528		1528

Table 8 (continued)

Panel D: Impact of Capital Market Pressure: High Net Debt & Equity Financing

	Logit Model	***Marginal Effects for Logit Model***	***Linear Probability Model (LPM)***
	(1) REVISE	(2) REVISE	(3) REVISE
HIGH_DISCR	1.310***	0.227***	0.204***
	(0.00)	(0.00)	(0.00)
HIGH_ISSUANCE	-0.164	-0.017	-0.061
	(0.62)	(0.61)	(0.11)
HIGH_DISCR X HIGH_ISSUANCE	0.572	0.116*	0.157***
	(0.15)	(0.08)	(0.01)
ADVERSE	0.250	0.046	0.044
	(0.24)	(0.24)	(0.21)
CUM_MAG	-9.407**	-1.737**	-0.647***
	(0.02)	(0.02)	(0.00)
ANN_MAG	0.011	0.002	-0.001
	(0.95)	(0.95)	(0.95)
RECLASS	-0.835	0.046	0.044
	(0.11)	-0.122**	-0.088
NUM_PERIODS	-0.358***	(0.04)	(0.44)
	(0.00)	-0.066***	-0.041***
NUM_ISSUES	-0.225***	(0.00)	(0.00)
	(0.00)	-0.042***	-0.016***
FRAUD	-1.604***	-0.222***	-0.187***
	(0.00)	(0.00)	(0.00)
FIRM LEVEL CONTROLS	Yes	Yes	Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
HIGH_ISSUANCE + HIGH_DISCR X HIGH_ISSUANCE		**0.098***	**0.096****
		(0.08)	**(0.03)**
Pseudo R^2 (Adj-R^2 for LPM)	0.235		0.367
$N^{\#}$	1072		1072

* p<0.10, ** p<0.05, *** p<.01. This table reports results of regression (4) of the revise/restate decision on high materiality discretion and interaction of managerial incentives with high materiality discretion along with control variables. The regression is estimated for the sample of material misstatements (i.e., MATERIAL=1) using a logit model in column (1) and a linear probability model in column (3). In Panel A, marginal effects for the logit specification in column (1) are reported in column (2) as follows: HIGH_DISCR is the marginal effect of a one-unit increase in HIGH_DISCR, holding ADVERSE equal to zero. ADVERSE is the marginal effect of a one-unit increase while holding HIGH_DISCR at zero. All other variables are held equal to their means. All of the other marginal effects are reported as the effect of one-unit increase of the variable holding all other variables at their mean values. The incentive variable is

CLAWBACK, ANALYSTFOLLOW, and HIGH_ISSUANCE in Panels B, C, and D, respectively and marginal effects are calculated similarly to Panel A. P-values for both the logit and linear probability models are reported in parentheses below the coefficients and are based on robust standard errors. The linear probability model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. Firm level control variables, SIZE, MTB, LEV, ROA, LIT_RISK, and INSTOWN, are measured in the year prior to the misstatement and BIG4 is measured as of the misstatement file date. All continuous variables are winsorized at the 1% and 99% levels. See Appendix A and B for variable definitions.

[#] HIGH_ISSUANCE requires additional variables to calculate and thus the sample is based on 1,072 misstatements.

Table 9: Revise vs. Restate: Additional Tests

Panel A: SEC Change in Interpretation of Materiality Guidance

	Logit Model	***Marginal Effects for Logit Model***	***Linear Probability Model (LPM)***
	(1)	(2)	(3)
	REVISE	REVISE	REVISE
HIGH_DISCR	0.781***	0.088***	0.093***
	(0.00)	(0.00)	(0.00)
POST	0.661***	0.071***	-0.025
	(0.01)	(0.01)	(0.77)
HIGH_DISCR x POST	1.744***	0.457***	0.406***
	(0.00)	(0.00)	(0.00)
MISSTATEMENT LEVEL CONTROLS	Yes		Yes
FIRM LEVEL CONTROLS	Yes		Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
POST + HIGH_DISCR X POST		**0.528*** **	**0.381*** **
		(0.00)	**(0.00)**
HIGH_DISC + HIGH_DISCR X POST		**0.545*** **	**0.500*** **
		(0.00)	**(0.00)**
Pseudo R^2 (Adj-R^2 for LPM)	0.339		0.410
N	1528		1528

Table 9 (continued)

Panel B: Effect of Auditor: Big 4 & Industry Expert

	Logit Model	*Marginal Effects*	*Linear Probability Model*	*Logit Model*	*Marginal Effects*	*Linear Probability Model*
	(1)	(2)	(3)	(4)	(5)	(6)
	REVISE	REVISE	REVISE	REVISE	REVISE	REVISE
HIGH_DISCR	1.344***	0.225***	0.225***			
	(0.00)	(0.00)	(0.00)			
BIG4	-0.208	-0.020	0.033			
	(0.45)	(0.46)	(0.33)			
HIGH_DISCR X BIG4	0.517	0.093	0.051			
	(0.12)	(0.10)	(0.34)			
HIGH_DISCR				1.700***	0.301***	0.278***
				(0.00)	(0.00)	(0.00)
EXPERT				-0.028	-0.003	0.026
				(0.94)	(0.94)	(0.51)
HIGH_DISCR X EXPERT				-0.723	-0.161**	-0.151***
				(0.13)	(0.01)	(0.01)
MISSTATEMENT LEVEL CONTROLS	Yes		Yes	Yes		Yes
FIRM LEVEL CONTROLS	Yes		Yes	Yes		Yes
Year Fixed Effects	No		Yes	No		Yes
Industry Fixed Effects	No		Yes	No		Yes
BIG4 + HIGH_DISCR X BIG4		**0.073**	**0.084**			
		(0.19)	**(0.17)**			
EXPERT + HIGH_DISCR X EXPERT					**-0.164*** **	**-0.125*** **
					(0.00)	**(0.00)**
Pseudo R^2 (Adj-R^2 for LPM)	0.235		0.372	0.236		0.358
$N^{\#}$	1528		1528	1169		1169

* p<0.10, ** p<0.05, *** p<.01. I estimate regression (4) of the decision to revise/restate on high materiality discretion interacted with the SEC change time

indicator (POST) in Panel A and BIG4 and EXPERT in Panel B. The regression is estimated for the sample of material misstatements (i.e., MATERIAL=1) using a logit model in column (1) and a linear probability model in column (3). In Panel A, marginal effects for the logit specification in column (1) are reported in column (2) as follows: HIGH_DISCR shows the marginal effect of a one-unit increase in HIGH_DISCR, holding POST equal to zero. POST shows the marginal effect of a one-unit increase in POST while holding HIGH_DISCR at zero. All other variables are held equal to their means. All of the other marginal effects are reported as the effect of one-unit increase of the variable holding all other variables at their mean values. In Panel B, the marginal effects are with respect to BIG4 and EXPERT. P-values are reported in parentheses below the coefficients and are based on robust standard errors. The linear probability model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. Firm level control variables, SIZE, MTB, LEV, ROA, LIT_RISK, and INSTOWN, are measured in the year prior to the misstatement and BIG4 is measured as of the misstatement file date. All continuous variables are winsorized at the 1% and 99% levels. See Appendix A and B for variable definitions.

[#] Due to the additional data requirements for calculating city expert (EXPERT) (county information, at least 2 firms per city), only 1,169 observations are available for this regression.

Table 10 Material Revisions: Additional Analysis

Panel A: Material Revisions and the Likelihood of SEC Comment Letters

	Logit Model	***Marginal Effects***	***Linear Probability Model***	***Logit Model***	***Marginal Effects***	***Linear Probability Model***
	(1) COMMENT	(2) COMMENT	(3) COMMENT	(4) COMMENT	(5) COMMENT	(6) COMMENT
MATERIAL	0.268	0.015	0.011			
	(0.26)	(0.28)	(0.45)			
Materiality Criteria						
EXCEEDS_ANN_TRSHD				1.014**	0.053**	0.101**
				(0.01)	(0.01)	(0.03)
EXCEEDS_CUM_TRSHD				0.199	0.010	0.017
				(0.75)	(0.75)	(0.74)
CORE_ACCT				0.099	0.005	0.003
				(0.71)	(0.71)	(0.86)
FRAUD				-0.092	-0.005	-0.022
				(0.92)	(0.92)	(0.71)
BREAK_NI_TREND				0.492	0.026	0.042
				(0.43)	(0.42)	(0.52)
SWITCH_NI_SIGN				-0.424	-0.022	-0.022
				(0.65)	(0.65)	(0.74)
MEET_MISS_AF				0.502	0.026	0.030
				(0.11)	(0.11)	(0.23)
Firm Level Controls	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	No		Yes	No		Yes
Industry Fixed Effects	No		Yes	No		Yes
Pseudo R^2 (Adj-$R^{2)}$	0.013		0.008	0.032		0.017
N	1237		1237	1237		1237

Table 10 (continued)

Panel B: Material Revisions and the Likelihood of Internal Control Weaknesses

	Logit Model	*Marginal Effects for Logit Model*	*Linear Probability Model (LPM)*
	(1)	(2)	(3)
	ICW	ICW	ICW
MATERIAL	0.375***	0.072***	0.062**
	(0.01)	(0.01)	(0.02)
Firm Level Controls	Yes	Yes	Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
Pseudo R^2 (Adj-R^2 for LPM)	0.062		0.092
N[#]	1200		1200

* p<0.10, ** p<0.05, *** p<.01. I regress COMMENT in Panel A and ICW in Panel B on an indicator variable for material revisions (MATERIAL=1) and control variables. The regression is estimated for the sample of revisions (i.e., REVISE=1) using a logit model in columns (1) and a linear probability model in column (3). Marginal effects for the logit specification in column (1) are reported in column (2) as the marginal effect of a one-unit increase each variable when all other variables are held at their means. Columns (4)-(6) in Panel A are similar to Columns (1)-(3) except they include more detailed indicator variables for the materiality criteria. P-values for both the logit and linear probability models are reported in parentheses below the coefficients and are based on robust standard errors. The linear probability model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. Firm level control variables, SIZE, INSTOWN, LEV, MTB, ROA, and LIT_RISK are measured in the year prior to the misstatement and BIG4 is measured as of the misstatement file date. All continuous variables are winsorized at the 1% and 99% levels. See Appendix A and B for variable definitions. Note that DEBT_COV_VIOL was dropped in Panel A columns (4)-(6) due to multicollinearity (only 1 observation of revisions has a debt covenant violation).

[#]The sample is smaller than the full sample of revisions (1237) because 37 firms early in the sample period did not issue a report on internal controls and thus are excluded from the sample.

Table 11: Revise vs. Restate: Impact of Corporate Governance

	Logit Model	*Marginal Effects for Logit Model*	*Linear Probability Model (LPM)*
	(1)	(2)	(3)
	REVISE	REVISE	REVISE
HIGH_DISCR	1.760***	0.266***	0.298***
	(0.00)	(0.00)	(0.00)
GOV_STRENGTH	-0.854	-0.068	0.026
	(0.27)	(0.25)	(0.57)
HIGH_DISCR X GOV_STRENGTH	-0.068	-0.143	-0.150**
	(0.94)	(0.15)	(0.03)
ADVERSE	0.275	0.044	0.042
	(0.32)	(0.29)	(0.30)
CUM_MAG	-13.862	-2.327	-0.694**
	(0.29)	(0.27)	(0.01)
ANN_MAG	-0.407	-0.068	-0.016
	(0.28)	(0.28)	(0.38)
RECLASS	-0.978	-0.122*	-0.014
	(0.19)	(0.06)	(0.91)
NUM_PERIODS	-0.396***	-0.066***	-0.039***
	(0.00)	(0.00)	(0.00)
NUM_ISSUES	-0.254***	-0.043***	-0.015**
	(0.00)	(0.00)	(0.05)
FRAUD	-1.348***	-0.177***	-0.129***
	(0.00)	(0.00)	(0.00)
FIRM LEVEL CONTROLS	Yes	Yes	Yes
Year Fixed Effects	No		Yes
Industry Fixed Effects	No		Yes
GOV_STRENGTH + HIGH_DISCR X GOV_STRENGTH		**-0.211*** **	**-0.124** **
		(0.01)	**(0.03)**
Pseudo R^2 (Adj-R^2 for LPM)	0.268		0.415
$N^{\#}$	721		721

* p<0.10, ** p<0.05, *** p<.01. This table reports results of regression (4) of the revise/restate decision on high materiality discretion, corporate governance strength and interaction of corporate governance strength with high materiality discretion along with control variables. The regression is estimated for the sample of material misstatements (i.e., MATERIAL=1) using a logit model in column (1) and a linear probability model in column (3). The marginal effects for the logit specification in column (1) are reported in column (2) as follows: HIGH_DISCR is the marginal effect of a one-unit increase in HIGH_DISCR, holding GOV_STRENGTH at its mean. GOV_STRENGTH is the marginal effect of a one-unit increase while holding HIGH_DISCR at zero. All other variables are held equal to their means. All of the other marginal effects are reported as the effect of one-unit increase of the variable holding all other variables at their mean values. P-values for both the logit and linear probability models are reported in parentheses below the

coefficients and are based on robust standard errors. The linear probability model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. Firm level control variables, SIZE, MTB, LEV, ROA, LIT_RISK, and INSTOWN, are measured in the year prior to the misstatement and BIG4 is measured as of the misstatement file date. All continuous variables are winsorized at the 1% and 99% levels. See Appendix A and B for variable definitions.

[#]The sample is smaller than the full sample of material misstatements (1528) because the MSCI ESG KLD Stats database used to calculate GOV_STRENGTH has limited coverage.

Table 12: Impact of Clawback Incentives: Adverse vs. Favorable Subsamples

	Linear Probability Model (LPM)		*Wald Test of Coefficients*
	ADVERSE	***FAVORABLE***	
	(1) REVISE	(2) REVISE	(3)
HIGH_DISCR	0.243***	0.150**	
	(0.00)	(0.00)	
CLAWBACK	-0.186***	0.170	
	(0.00)	(0.17)	
HIGH_DISCR X CLAWBACK	0.355***	0.083	
	(0.94)	(0.57)	
MISTATEMENT LEVEL CONTROLS	Yes	Yes	
FIRM LEVEL CONTROLS	Yes	Yes	
Year Fixed Effects	Yes	Yes	
Industry Fixed Effects	Yes	Yes	
Chi-squared test statistic for HIGH_DISCR X CLAWBACK			3.58*
Prob > Chi-squared			(0.06)
Adj-R^2	0.406	0.249	
N	1257	271	

* p<0.10, ** p<0.05, *** p<.01. This table reports results of regression (4) of the revise/restate decision on high materiality discretion and clawbacks separately estimated for the adverse and favorable subsamples. Column (1) includes only material misstatements which adversely affect past performance (ADVERSE=1) and column (2) includes only material misstatements which do not adversely affect past performance (FAVORABLE=1). P-values for linear probability models are reported in parentheses below the coefficients and are based on robust standard errors. In column (3), I report the results of the Wald test which tests the difference in the coefficients on HIGH_DISCR x CLAWBACK in column (1) compared to column (2). The p-value reported in column (3) is based on the Chi-squared test statistic from the Wald test. The linear probability model includes year and industry fixed effects. Years are coded in the fiscal year in which the misstatement disclosure occurs, and industry is based on Fama-French 12 industry classification. Misstatement level and firm level control variables are identical to those in Table 8, with the exception of ADVERSE. All continuous variables are winsorized at the 1% and 99% levels. See Appendix A and B for variable definitions.