Financial Restatements and Subsequent Auditor Behavior

Essam Elshafie Professor of Accounting Department of Accounting, Business Law, and Finance College of Business and Management, Northeastern Illinois University 5500 North St. Louis St. Chicago, IL 60625 Email: e-elshafie@neiu.edu

Abstract

This study investigates whether restating financial statements affects subsequent auditor behavior. Specifically, I consider whether auditors of restatement firms require more conservative accounting reporting and exert more effort compared to nonrestatement firms. With few exceptions, most prior research on financial restatements either focuses on factors leading to, or associated with, financial restatements or it uses restatements as a proxy for audit or reporting quality. Only a few studies, such as Feldmann et al. (2009), examine the consequences of financial restatements and their effects on auditor behavior. I extend this line of research using data collected from Audit Analytics, Capital IQ, and CRSP over the 2005 to 2019 period to examine whether auditors consider restatements in their assessment of the risk of material misstatement and, as a result, increase their level of effort, force more conservatism, and constrain earnings management on restatement clients. I use audit fees as a proxy for audit effort, Khan and Watts' (2009) C-Score to measure conservatism, and performance-adjusted discretionary accruals as a measure of earnings management. The results show that auditor conservatism is higher for restatement clients in the disclosure year and the following year. The auditor effort and constraint on discretionary accruals are higher for restatement clients only in the disclosure year, but the difference disappears in the following year.

Introduction

Restating financial statements is a significant event that represents audit and reporting failure (Palmrose and Scholz, 2004; Liu et al., 2009; and Schmidt et al., 2012). FASB ASC 250 defines a restatement as "the process of revising previously issued financial statements to reflect the correction of an error in those financial statements." Section 409 of the Sarbanes Oxley Act of 2002 (SOX), "Real Time Issue Disclosure," requires public issuers to disclose information about changes in the financial statements on a rapid and current basis. As a response, the Securities and Exchange Commission (SEC) amended its rules to add items to be disclosed using the 8-K report. These items include what is to be disclosed in the 8-K report under item 4.02, "Non-Reliance of Previously Issued Financial Statements." This requirement was effective as of August 23, 2004 (SEC, 2004). Generally, restatements are classified into "reissuances" or "revisions." A "reissuance" of financial statements, referred to as "Big R," normally involves material misstatements that occur in prior period financial statements and makes them not "suitable to be relied upon"; as a result, filing an 8-K Item 4.02 is required. The "revision" restatement, referred to as "Little R," occurs when firms revise

previously reported amounts in subsequently issued financial statements and is shown in a periodic report.

The focus of this paper is on financial restatements and their effect on auditor behavior, regardless of whether they were disclosed in an 8-K report or in a periodic report. The frequency of restatements has declined over the last few years from a high of 1,859 restatements in 2006 to 484 in 2019, and the number of "Big R," or more material reports, also shows a general declining trend over the last 12 years (Audit Analytics, 2019). However, the number of "Little R" restatements in proportion to the total number of restatements has increased over the last few years, indicating that managers may manipulate the disclosure to avoid the more noticeable 8-K report. Thomson (2020) finds that 36% of the revisions are material enough to qualify for a "Big R" treatment, and the market reacts negatively to these material revisions, suggesting that they are consequential. She suggests that managers may opportunistically revise instead of restate to conceal material misstatements.

Several auditing standards address the effect of restatements. In AU-C 708, for example, the auditor is required to "include an emphasis-of-matter paragraph in the auditor's report when there are adjustments to correct a material misstatement in previously issued financial statements. The auditor should include this type of emphasis-of-matter paragraph in the auditor's report when the related financial statements are restated to correct the prior material misstatement. The paragraph need not be repeated in subsequent periods." Another example is the AU-C700: "If the prior period financial statements are restated, the auditor should determine that the comparative financial statements or comparative information agrees with the restated financial statements." The same message is conveyed in PCAOB AS 2820: "The correction of a material misstatement in previously issued financial statements should be recognized in the auditor's report on the audited financial statements through the addition of an explanatory paragraph."

Auditing standards also require auditors to consider restatements during the risk assessment process. The results of previous audits should be taken into consideration when inherent risk is estimated. For example, AU-C 315-A19 requires auditors to include knowledge gained from previous experience with the entity about matters "such as past misstatements and whether they were corrected on a timely basis." The same standard includes "past misstatements, history of errors, or a significant amount of adjustments at period-end" among the "conditions and events that may indicate risks of material misstatement." AU-C 450 also requires that auditors consider "the effect of uncorrected misstatements related to prior periods on the relevant classes of transactions, account balances, or disclosures and the financial statements as a whole." These standards explicitly require auditors to consider past cases of restatements in their risk assessment and planning. Therefore, I expect auditor behavior in terms of conservatism and effort to be affected by restatement incidences.

The research reviewed below shows that the market reacts negatively to restatements (Hirschey et al., 2015). It also shows that other parties are negatively affected by

restatements, such as auditors (Liu et al., 2009), executives (Desai et al., 2006), and board members (Street and Hermanson, 2019). Huang and Scholz (2012) state that auditors interpret restatements as an indication of increased client risk. Taken together, restatements represent a risk of damage to auditor reputation and future employment prospects. In addition, auditing standards specifically name financial restatement a factor be considered in planning for the amount and type of evidence to be collected. As a result, I expect auditors to adjust their plan and attitude toward their current clients after detecting misstatements that require restatements. I expect auditors to be more conservative, to adjust their materiality level and plans, to perform more tests and to be less tolerant in regard to earnings management. I test the effect of restatements on auditor conservatism, auditor tolerance for earnings management, and audit effort over the period starting in 2005, after the effective date of SOX 409, until the end of 2019.

Most of the prior studies on this topic consider factors that lead to restatements; only few studies consider the consequences. For example, Feldmann et al. (2009) find that restatements result in higher audit fees, reflecting an increased perception of audit risk and loss of organizational legitimacy. However, the authors used a relatively small sample of firms restating their 2003 financial statements during the 15-month period between January 2004 and March 2005. Therefore, it is unclear how the August 23, 2004 effective date of SOX 409 affected the homogeneity of their sample and the reliability of their findings. The current study extends this line of research by using a dataset over a long period extending from 2005 to 2019 and addresses the effect of restatements not only on audit fees, but also on auditor conservatism and tolerance toward earnings management. In addition, the study examines whether the change in auditor behavior persists beyond the year of the restatement announcement or disclosure. The sample is collected from Capital IQ, Audit Analytics, and CRSP. I use propensity score matching (PSM) to match restatement firms with similar non-restatement firms in terms of industry, size, profitability, and growth.

Chung et al. (2003) define auditor conservatism as "the actions and influence of the auditor that result in conservative annual accounts." Following Lee et al. (2015) and Shimamoto and Takeda (2020) I use Khan and Watts' (2009) C-Score as a measure of conservatism. I use the natural log of audit fees as a measure of effort exerted by the auditor and I use performance-adjusted discretionary accruals, following Kothari et al. (2005), as a measure of earnings management. The results demonstrate that auditors react to restatements with increased conservatism, imposing more reporting conservatism on restatement firms in the year of restatement(s) disclosure and the following year. However, the higher levels of effort and strictness with earnings management for restatement firms are significant only in the restatement disclosure year, but not in the following year.

Prior Research and Hypotheses Development

The restatement of financial statements is addressed by numerous studies conducted in different settings and with diverse focuses. Reviewed below is a wide variety of research demonstrating the importance of this topic to investors, directors, board members, market participants, and auditors. These studies are loosely grouped as

follows: (1) factors leading to, or associated with, the occurrence of restatements, (2) the use of restatement as a proxy for auditing or reporting failure, (3) the effect of restatement on market or corporate governance, and (4) the effect of restatement on auditors. Common themes emerging from these reviewed studies are, first, the financial restatements are considered as auditing and reporting failures, and second, that restatements have significant and negative effects on all involved parties. This thematic commonality indicates the importance of the topic and its continuing relevance.

Several studies examine corporate governance characteristics as factors leading to, or associated with, the likelihood of restatement. For example, Abbott et al. (2004) address the effect of audit committees' characteristics on the likelihood of financial statement restatements. The authors examine restatements issued between 1991 and 1995, finding that firms with more independent and active audit committees, as well as firms whose audit committees include at least one financial expert are less likely to restate their financial statements. Schmidt and Wilkins (2013) show that firms with Big 4 auditors and a board member who is financial expert with accounting expertise demonstrate improved financial reporting timeliness. On the other hand, restatements are more likely to be issued to firms whose board members serve on multiple boards. Sharma and Iselin (2012) find a positive association between financial misstatements and multiple directorships, while, Wans (2020) provides evidence that firms with higher levels of corporate social responsibility are more likely to report restatements.

Other studies address the effect of restatements on governance. For example, Street and Hermanson (2019) review literature documenting the effect of financial restatements on outside board directors. They conclude that in the wake of restatements, outside members risk their board seats; although they face little risk of litigation. Hennes et al. (2008) distinguish between restatements resulting from errors versus irregularities, finding that CEO and CFO turnover rates are higher for restatements due to irregularities than those due to errors. Additionally, Leone and Liu (2010) argue that restatements affect CEOs and CFOs differently. They find that when the firm's CEO is also a founder; the turnover probability of a CEO is lower while the turnover probability of CFO is higher in the wake of an accounting irregularity

Focusing only on restatements related to accounting irregularities, Desai et al. (2006) examine management turnover and the subsequent employment of displaced managers at restating firms. They find that restating firms experience significantly higher turnover and that those managers face poorer employment prospects afterward. Srinivasan (2005) shows that earnings restatements result in significant turnover as a penalty for outside directors--especially those on the audit committee--and that turnover is even higher following downward restatements. Additionally, Cheng and Farber (2008) find that the stock options proportion of the CEO's compensation declines significantly after earnings restatements.

In regard to how market participants react to restatements, there is plenty on the significance of that reaction—affecting not only restatement firms, their board members, and auditors, but also affecting non-restatement peer firms in the same industry or even

from the same country. For example, Palmrose et al. (2004) document a negative average abnormal return of approximately 9% over a two-day announcement window. On a deeper level, Palmrose and Scholz (2004) use restatements as a setting in which to examine the legal consequences of non-GAAP reporting. They differentiate between restatements resulting from core and noncore, where core misstatements is a result of misstated earnings from primary operations. The authors find that firms with more core restatements exhibit more fraud and are more susceptible to future bankruptcy and delisting.

Several studies document that restatements negatively affect not only the restatement firm's stock returns but also the stock return of other peer firms. Firth (1990) concludes that the market reacts negatively to audit failure in the form of a negative change in audit firm market share and in the form of a negative return to auditor's other clients after an audit failure. Similar results were found by Weber et al. (2008), who found that KPMG clients sustained negative abnormal returns of 3% during the period surrounding the scandal of Germany ComROAD AG.

Gleason et al. (2008) address the contagion effect of restatements. They find that the market penalizes not only restating firms, but also the non-restating firms in the same industry with higher penalties for those using the same auditor. Akhigbe and Madura (2008) ask whether restatements can trigger industry-wide revaluation. They find that upward or downward restatements are associated with the valuation effect in the same direction across the corresponding industry. The authors conclude that these results support the notion of contagion effects rather than competitive industry effects. Also studying the contagion effect of restatements, Guo et al. (2018) examine the spillover effect of restatements on audit fees and find that restatements lead to increased audit fees for non-misstating peer firms, and this effect increases when the non-misstating firms have weak internal control systems. Continuing this discussion, Ji et al. (2019) find that restatement announcements by clients of an industry specialist auditor also negatively affect that auditor's non-restatement clients. Similarly, Jia and Zhao (2020) who focus on restatements issued by foreign firms traded in the US, conclude that nonrestatement firms from the same country of a restatement firm experience a negative stock return around the restatement announcement date. Related to restatements at foreign firms listed in the U.S., Srinivasan et al. (2015) find that foreign firms are less likely than domestic firms to restate their financial statements. Additionally, the authors argue, firms from foreign countries with weak legal systems are less likely to restate compared to firms from countries with a stronger legal systems. They interpret the results as a signal of opportunistic behavior rather than a lack of accounting irregularities.

Additional studies extend restatement research by examining the effects of restatements on financial analysts and their forecasts. Ye and Yu (2017) demonstrate that restatements, especially those caused by irregularities, affect analyst behavior in terms of analyst coverage and forecast accuracy. Griffin (2003) documents that the number of analysts covering a firm declines significantly in the months following a corrective disclosure and that analysts are more likely to revise their forecasts

downward in the month of, or up to six months following, a corrective disclosure. Barniv and Cao (2009) use restatements as a proxy for uncertainty to measure how investors respond to analyst forecast revisions under conditions of uncertainty. They review literature suggesting that accounting restatements provide a reasonable approximation of uncertainty in capital market settings. They find that investors in restatement firms consider information about analyst characteristics associated with more accurate forecasts.

More related to the topic of the current paper is the role of auditors: how they affect both the likelihood of restatements and market reaction to them, also, how restatements affect their work, reputation, and future employment. For example, among the articles addressing the auditor's role in a restatement case is Palmrose et al. (2004), who study the determinants of the market reaction to restatements. They identify characteristics of restatements most concerning to market participants. Among several factors causing negative market reactions to restatements, they find negative market reaction to restatements attributed to, or identified by, auditors to be more significant. Similarly, Dechow et al. (1996) show that when an auditor raises concerns or gets fired, the market reaction to restatements is significantly higher. In the same way, Haribar and Kenkins (2004) find that the effect of accounting restatement on a firm's cost of equity capital is greatest when it is initiated by auditors. This indicates that market participants notice and appreciate the auditors' role in identifying or signaling misstatements. Additionally, both Czerney et al. (2014) and Fang et al. (2018) find an association between the audit report language and type, and the likelihood of future restatements.

As a result of the importance of the auditor's role in detecting misstatements, Hennes et al. (2014), who study reactions to restatements, find that a firm's auditors are more likely to be dismissed when (1) the restatement is more significant, (2) the audit firm is not one of the Big 4, (3) the client size is small, and (4) the firm's operations are not complex. The authors also find that the market reacts positively to the dismissal if the restatement is severe and if the auditor's replacement is of a comparable size audit firm. Hennes et al. further indicate that stakeholders are likely to hold auditors accountable if they fail to identify inconsistencies that later lead to restatements. Similar results are found by Mande and Son (2013), who document an increase in the likelihood of subsequent auditor turnover after restatement announcements.

Huang and Scholz (2012) study the effect of restatements on auditor continuance decisions. They focus on auditor resignation, which is likely to communicate a troublesome audit to the market. The authors find that restatements involving fraud, reversal of profit to loss, and those disclosed in press releases appear to drive the increased likelihood of resignation. Liu et al. (2009), who consider restatement as an audit failure, also find that shareholders are more likely to vote against auditor ratification after restatements.

In their literature review, DeFond and Francis (2005) indicate that the advantage of using restatements to measure earnings management is that they provide more direct evidence that the auditor failed to either detect or report accounting misstatements.

Schmidt (2012) uses financial statement restatements as an indicator of audit failure. Wang et al. (2015) find that auditor quality affects the rate of future restatements. They consider restatements following an unqualified report as a measure of audit failure. They explain that restatement implies straightforward admissions by both the client and the auditor that the financial report is materially misstated.

Collectively, these studies demonstrate that restatements affect the reputation of audit firms and their market share, they also indicate that restatements are interpreted as audit failures, and that these consequences are consistent with auditors' interpretation of restatements as an indication of increased client risk. Therefore, it is logical to expect that after restatements, auditors increase their assessment of client inherent risk and act more conservatively, as is demonstrated in Fafatas (2010) study of auditor conservatism following audit failures. Fafatas measures conservatism as the level to which auditors monitor clients' reported discretionary accruals, and audit failure is identified based on significant lawsuit. He finds that firm offices implicated in a lawsuit enforce more conservative accounting choices compared to other auditors in the same city. Fafatas' study is different from the current study in many important ways. First, it uses significant lawsuits as a measure of audit failure. Second, it addresses the general reaction of auditors to audit failure, observed in across-the-board changes in auditor behavior after an audit failure has occurred. The current study examines the consideration of audit failure in planning and performing the audit for that particular client where the audit failure happened. In other words, the focus of this study is the effect of restatements on risk assessment for the restatement client. Therefore, I postulate and test the following hypothesis:

H1: Auditors will practice more conservatism in auditing restatement firms compared to non-restatement firms.

Antle and Nalebuff (1991) indicate that "financial statements should be read as a joint statement from the auditor and management." As explained above, restatements represent a situation when both management and auditor admit that previously issued financial statements were not fairly presented (Newton et al. 2013). Palmrose and Scholz (2004) indicate that restatements reflect an acknowledgment that the financial statements, as originally reported, were not in accordance with GAAP. The market reacts after restatements to show that it has less confidence in the reported information. For example, Wilson (2008) examines the effect of restatements on the information content of earnings. He shows that information content declines following restatements, even though this decline is only for the short term. Additionally, he shows that the decline is not significant if the firms dismissed their auditors, demonstrating their commitment to high-quality financial reporting. Hirschey et al. (2015) find that firms with more timely restatement disclosures experience less decline in their information content compared to less timely disclosures. The authors also indicate that high-quality governance, including a Big 4 auditor, is associated with more timely restatement disclosures.

The studies reviewed above show that restatements attract negative attention to the restatement firm and its auditor. This negative attention provides incentives to auditors to be less tolerant of earnings management before issuing their next opinion, and provides justification to auditors to restrict clients' ability to manage earnings. Therefore, I postulate the following hypothesis:

H2: Auditors constraint on earnings management is higher in restatement firms than in non-restatement firms.

Several studies demonstrate a negative association between audit efforts and the likelihood of subsequent restatement. Lobo and Zhao (2013) find that audit effort is negatively associated with annual report restatements. Zhao et al. (2017) show that when auditors test and report on internal controls, as required by SOX 404(b), the likelihood of restatement decreases as long as enough resources, proxied by abnormal audit fees, are dedicated to the audit. Blankley et al. (2012) find a positive association between abnormal audit fees (their proxy for audit effort) and the likelihood of subsequent restatements, contradicting other studies such as Kinney et al. (2004). Feldmann et al. (2009) indicate that since restatement causes an increase in perceived audit risk and a loss of organizational legitimacy, auditors charge higher fees for restatement firms compared with a matched-pair control group of non-restatement firms. Again, I expect auditors to consider restatements as a risk factor that is required be considered in planning and testing for audit evidence; therefore, I test the following hypothesis:

H3: Auditors exert more effort in auditing restatement firms than in auditing non-restatement firms.

Data and Methods Data and Sample

I began with observations from the Capital IQ database, merged the financial data with market data from CRSP, and audit data from Audit Analytics. The sample period commences in January 2005, following the effective date of SOX 409, and ends December 2019. After merging and removing financial institutions (SIC: 6000-6411, 6500-6553, 6700-6799) and utilities (SIC 4800-4999), 13,499 observations remained, of which 866 disclosed financial restatements. After removing outliers and extreme observations, 9,808 observations remained, of which 614 restatements remained. Table 1 illustrates the industry distribution for the 613 restatement companies that were matched with non-restatement companies. The distribution shows a large concentration in the sectors of Machinery and Business Equipment, Construction and Construction Materials, Retail Stores, Computer Programing and Data Processing, and Transportation sectors.

Table	1:	Industry	Distribution
-------	----	----------	--------------

Machinery and Business Equipment10517.13%Construction and Construction Materials386.20%Retail Stores376.04%Computer Programming and Data Processing376.04%Transportation335.38%Chemicals304.89%Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Processing91.47%Computer Processing, Data Preparation and Processing71.14%Surgical, Medical, and Dental Instruments and Supplies71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Payerboard Containers, Boxes, Drums, Tubs50.82%Other11318.43%	Industry	Frequency	Percent
Construction and Construction Materials386.20%Retail Stores376.04%Computer Programming and Data Processing376.04%Transportation335.38%Chemicals304.89%Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Surgical, Medical, and Dental Instruments and50.82%Computer Integrated Systems Design60.98%Computer Integrated Systems Design50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Machinery and Business Equipment	105	17.13%
Retail Stores376.04%Computer Programming and Data Processing376.04%Transportation335.38%Chemicals304.89%Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Supplies71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Computer Rental and Leasing50.82%Equipment Rental and Leasing50.82%Other11318.43%	Construction and Construction Materials	38	6.20%
Computer Programming and Data Processing376.04%Transportation335.38%Chemicals304.89%Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Supplies71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Computer Integrated Systems Design50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Other11318.43%	Retail Stores	37	6.04%
Transportation335.38%Chemicals304.89%Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Supplies71.14%Services - Misc Entertainment71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Other11318.43%	Computer Programming and Data Processing	37	6.04%
Chemicals304.89%Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Surgical, Medical, and Dental Instruments and Supplies71.14%Computer S & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Transportation	33	5.38%
Food294.73%Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Processing91.47%Surgical, Medical, and Dental Instruments and Supplies71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Chemicals	30	4.89%
Drugs, Soap, Perfumes, Tobacco223.59%Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Processing91.47%Surgical, Medical, and Dental Instruments and Supplies71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Other11318.43%	Food	29	4.73%
Oil and Petroleum Products213.43%Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Services - Misc Entertainment71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Other11318.43%	Drugs, Soap, Perfumes, Tobacco	22	3.59%
Textiles, Apparel & Footwear172.77%Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and71.14%Surgical, Medical, and Dental Instruments and71.14%Services - Misc Entertainment71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Oil and Petroleum Products	21	3.43%
Automobiles172.77%Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Processing91.47%Surgical, Medical, and Dental Instruments and Surplies71.14%Computer S & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Textiles, Apparel & Footwear	17	2.77%
Consumer Durables162.61%Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Processing91.47%Surgical, Medical, and Dental Instruments and Supplies71.14%Computer S & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Automobiles	17	2.77%
Mining and Minerals121.96%Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and91.47%Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Services - Misc Entertainment71.14%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Consumer Durables	16	2.61%
Biological Products, Except Diagnostic Substances121.96%Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Processing91.47%Surgical, Medical, and Dental Instruments and Supplies71.14%Services - Misc Entertainment71.14%Computer Integrated Systems Design60.98%Computer Integrated Systems Design60.98%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Mining and Minerals	12	1.96%
Steel Works Etc.101.63%Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and91.47%Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Services - Misc Entertainment71.14%Computer S & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Biological Products, Except Diagnostic Substances	12	1.96%
Retail-Auto Dealers & Gasoline Stations91.47%Computer Processing, Data Preparation and Processing91.47%Surgical, Medical, and Dental Instruments and Supplies71.14%Services - Misc Entertainment71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Steel Works Etc.	10	1.63%
ComputerProcessing, DataPreparation andProcessing91.47%Surgical, Medical, and Dental Instruments and71.14%Supplies71.14%Services - Misc Entertainment71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Services - Educational50.82%Other11318.43%	Retail-Auto Dealers & Gasoline Stations	9	1.47%
Processing91.47%Surgical, Medical, and Dental Instruments and71.14%Supplies71.14%Services - Misc Entertainment71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Computer Processing, Data Preparation and		
Surgical, Medical, and Dental Instruments andSupplies71.14%Services - Misc Entertainment71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Processing	9	1.47%
Supplies71.14%Services - Misc Entertainment71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Surgical, Medical, and Dental Instruments and		
Services - Misc Entertainment71.14%Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Supplies	7	1.14%
Computers & Peripheral Equipment & Software60.98%Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Services - Misc Entertainment	7	1.14%
Computer Integrated Systems Design60.98%Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Computers & Peripheral Equipment & Software	6	0.98%
Fabricated Products50.82%Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Computer Integrated Systems Design	6	0.98%
Paperboard Containers, Boxes, Drums, Tubs50.82%Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Fabricated Products	5	0.82%
Equipment Rental and Leasing50.82%Services - Educational50.82%Other11318.43%	Paperboard Containers, Boxes, Drums, Tubs	5	0.82%
Services - Educational 5 0.82% Other 113 18.43%	Equipment Rental and Leasing	5	0.82%
Other 113 18.43%	Services - Educational	5	0.82%
	Other	113	18.43%
613 100%		613	100%

Table 2 shows the distribution of the restatement observations over the sample period.

YEAR	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
2005	36	5.87	36	5.87%
2006	55	8.97	91	14.85%
2007	31	5.06	122	19.90%
2008	23	3.75	145	23.65%
2009	27	4.40	172	28.06%
2010	27	4.40	199	32.46%
2011	2	0.33	201	32.79%
2012	40	6.53	241	39.31%
2013	68	11.09	309	50.41%
2014	66	10.77	375	61.17%
2015	57	9.30	432	70.47%
2016	67	10.93	499	81.40%
2017	56	9.14	555	90.54%
2018	47	7.67	602	98.21%
2019	11	1.79	613	100.00%

Table 2 Distribution over the dataset period

For the distribution of the restatement firms among audit firms, the majority were audited by PWC, followed by KPMG, then Earnest and Young, and finally Deloitte & Touche; that is, 281, 149, 116, and 11, respectively. Non-Big 4 firms audited 116 restatement firms.

Table 3 includes two separate panels. In Panel A, descriptive statistics for the entire dataset demonstrate, on average, that the restatement firms have lower net income, are riskier in terms of higher beta, have less liquidity, are audited more often by Big 4 firms, are charged higher audit and non-audit fees, report internal control weaknesses more often, and when internal control weaknesses are reported larger number of these weaknesses are reported. Also, the restatements firms are less concentrated in high litigation industries and have higher C_Scores, which is Khan and Watts's (2009) measure of conservatism. To match each restatement firm with the closest control observation of non-restatement firms, I employ propensity score matching (PSM) across the following explanatory variables: industry, natural log of total assets, loss, market-tobook ratio, and sales growth. As explained by Shipman et al. (2017), PSM techniques alleviate the potential biased estimate resulting from "functional form misspecification" in regression models when the treatment and control groups are dissimilar. Basically, the propensity score represents the predicted probability of receiving a "treatment" based on observable covariates; in this case, the covariates are industry, natural log of total assets, loss, market-to-book value ratio, and sales growth. By using this method, a propensity score of restatement is created for each observation. Each restatement observation is then matched to the non-restatement observation with the closest propensity score. The PSM resulted in 1,226 observations, 613 restatement firms and 613 non-restatement firms.

For the matched dataset in Panel B, the restatement firms are significantly lower in terms of current assets, current liabilities, net income, cash flows, Z-Score and absolute discretionary accruals. On the other hand, they are significantly higher in terms of beta, Big4, litigation, the incidents of reported internal control weaknesses and their number, and in the amount of leverage.

Table 4 shows Pearson and Spearman correlations for the matched dataset. The Pearson correlations are shown on the upper right-hand side. They show that the restatement dummy variable is significantly and positively correlated with the C-Score and audit fees and significantly and negatively correlated with the absolute value of the performance-adjusted discretionary accruals. These correlation coefficients are in the expected directions, providing partial support for the three hypotheses. The results of the Spearman correlations are less supportive of the hypotheses; only the absolute value of the performance-adjusted discretionary accruals and the natural log of audit fees are significant.

Methods

The purpose of this study is to determine whether detecting and disclosing restatement(s) affects auditor behavior. I expect the auditor to follow auditing standards that require the consideration of "past misstatements and whether they were corrected" in the risk assessment and planning for the audit. I also expect the auditor to take into consideration the negative effect of restatements not only on the reputation of the audit firm, but also on the restatement client, its investors, other clients and their investors, and other affected stakeholders. I expect auditors of restatement clients to force more conservative reporting, to be less tolerant of earnings management, and to exert more effort with those clients relative to non-restatement clients.

Table 3: Descriptive Statistics for the Matched Dataset

Panel A: The whole dataset

											Non_						
	All					R					R						
Variable	N	Mean	Std.	Min	Max	Ν	Mean	Std.	Min	Мах	N	Mean	Std.	Min	Max	T_Valu	Sig
			Dev					Dev					Dev			e	
ТА	980 8	3600	6531	7	54233	61 4	3626	5597	10	37987	9194	3598	6589	7	54233	-0.1	
TL	980 8	2022	3970	1	47489	61 4	2134	3452	1	26365	9194	2015	4002	1	47489	-0.72	
REV	980 8	3450	8024	0	112640	61 4	3599	7546	0	72483	9194	3440	8055	0	112640	-0.48	
MV	980 8	5002	10728	5	168508	61 4	4811	11333	9	140188	9194	5014	10686	5	168508	0.45	
CA	980 8	1341	2465	2	32963	61 4	1336	2127	5	15587	9194	1341	2486	2	32963	0.05	
CL	980 8	797	1744	1	25904	61 4	759	1318	1	9829	9194	800	1769	1	25904	0.56	
NI	980 8	242	586	-523	10540	61 4	196	471	-517	4956	9194	245	593	-523	10540	1.99	**
ROA	980 8	0.036	0.129	-1.186	0.300	61 4	0.030	0.113	-0.865	0.295	9194	0.037	0.129	-1.186	0.300	1.23	
SALE_G	980 8	0.132	0.715	-1.000	38.673	61 4	0.119	0.427	-0.974	6.707	9194	0.133	0.730	-1.000	38.673	0.44	
C_RATIO	980 8	2.829	2.234	0.390	18.024	61 4	2.521	1.900	0.502	17.978	9194	2.850	2.253	0.390	18.024	3.53	***
BETA	980 8	1.169	0.641	-0.832	3.686	61 4	1.225	0.619	-0.512	3.623	9194	1.165	0.642	-0.832	3.686	-2.26	**
CFO	980 8	405	845	-136	11325	61 4	364	695	-136	6626	9194	408	854	-134	11325	1.26	
BIG4	980 8	0.748	0.434	0	1	61 4	0.852	0.356	0	1	9194	0.741	0.438	0	1	-6.14	***
TENURE	980 8	7.500	6.195	0	44	61 4	7.725	6.738	0	44	9194	7.485	6.157	0	44	-0.93	1
AUD_CH	980 8	0.030281 4	0.171369 3	0	1	61 4	0.033	0.178	0	1	9194	0.030	0.171	0	1	-0.34	

Audit_Fee	980 8	2343139	2,997,200	44,00 0	27,700,00 0	61 4	2,763,52	2,969,39 9	49,45 8	20,500,00 0	9194	2,315,06 5	2,997,10 7	44,00 0	27,700,00 0	-3.59	***
s							, and the second					Ŭ		Ŭ	Ĵ		
N_A_Fees	980 8	512,078	994,379	0	9,728,000	61 4	584,888	982,456	0	7,759,240	9194	507,215	995,034	0	9,728,000	-1.87	*
No_ICMW	980 8	0.074	0.477	0	11	61 4	0.267	0.896	0	8	9194	0.061	0.432	0	11	-10.41	***
ICMW	980 8	0.038	0.190	0	1	61 4	0.130	0.337	0	1	9194	0.031	0.174	0	1	-12.56	***
LIT	980 8	0.274	0.446	0	1	61 4	0.241	0.428	0	1	9194	0.276	0.447	0	1	1.87	*
EPS	980 8	1.508	2.849	- 26.55 0	22.144	61 4	1.348	2.356	- 17.78 3	13.038	9194	1.519	2.879	- 26.55 0	22.144	1.44	
Z_Score	980 8	4.667	4.412	- 11.74 6	32.114	61 4	3.827	3.262	- 10.55 1	32.114	9194	4.724	4.473	- 11.74 6	32.079	4.88	***
МКВК	980 8	3.437	3.545	0.102	38.503	61 4	3.291	3.242	0.114	27.644	9194	3.446	3.564	0.102	38.503	1.05	
LEV	980 8	0.509	0.816	0.000	7.914	61 4	0.669	0.999	0.000	7.834	9194	0.498	0.801	0.000	7.914	-5.01	***
ADJ_DAC	980 8	0.028	0.297	-2.241	6.034	61 4	0.029	0.197	-0.644	1.073	9194	0.028	0.302	-2.241	6.034	-0.13	
ABS_ACC	980 8	0.160	0.251	0.000	6.034	61 4	0.129	0.152	0.000	1.073	9194	0.162	0.256	0.000	6.034	3.17	***
F_Score	980 8	0.005	0.007	0.000	0.385	61 4	0.005	0.003	0.000	0.031	9194	0.005	0.007	0.000	0.385	0.06	
C_Score	980 8	0.981	4.470	-3.723	113.368	61 4	1.468	6.461	-2.938	111.497	9194	0.949	4.303	-3.723	113.368	-2.79	***

Panel B: The matched dataset

	All					R					Non_R						
Variable	Ν	Mean	Std.	Min	Max	Ν	Mean	Std.	Min	Max	N	Mean	Std.	Min	Max	T_Valu	Sig
			Dev					Dev					Dev			е	
ТА	1226	3,893	6,271	10	50,014	613	3,632	5,600	10	37,987	613	4,155	6,872	10	50,014	1.46	
TL	1226	2,257	3,852	1	33,676	613	2,137	3,454	1	26,365	613	2,378	4,212	1	33,676	1.09	
REV	1226	3,985	8,638	0	112,640	613	3,605	7,551	0	72,483	613	4,365	9,595	0	112,640	1.54	

MV	1226	5,227	11,159	6	140,188	613	4,819	11,340	9	140,188	613	5,636	10,968	6	108,331	1.28	
CA	1226	1,454	2,379	5	21,164	613	1,338	2,128	5	15,587	613	1,569	2,602	5	21,164	1.71	*
CL	1226	852	1,630	1	14,739	613	760	1,319	1	9,829	613	944	1,887	1	14,739	1.98	**
NI	1226	235	547	-517	5,400	613	197	471	-517	4,956	613	272	612	-414	5,400	2.42	**
ROA	1226	0.034	0.116	-0.886	0.295	613	0.031	0.112	-0.865	0.295	613	0.038	0.121	-0.886	0.284	1.07	
SALE_G	1226	0.111	0.370	-1.000	6.707	613	0.120	0.427	-0.974	6.707	613	0.103	0.302	-1.000	2.655	-0.83	
C_RATIO	1226	2.586	1.937	0.497	17.978	613	2.522	1.901	0.502	17.978	613	2.650	1.972	0.497	16.787	1.15	
BETA	1226	1.194	0.613	-0.512	3.623	613	1.228	0.617	-0.512	3.623	613	1.161	0.607	-0.286	3.431	-1.91	*
CFO	1226	415	800	-136	6,798	613	365	695	-136	6,626	613	465	890	-134	6,798	2.2	**
BIG4	1226	0.821	0.383	0.000	1.000	613	0.853	0.354	0.000	1.000	613	0.790	0.408	0.000	1.000	-2.92	***
TENURE	1226	7.573	6.300	0.000	44.000	613	7.737	6.736	0.000	44.000	613	7.408	5.833	0.000	44.000	-0.92	
AUD_CH	1226	0.033	0.180	0.000	1.000	613	0.031	0.173	0.000	1.000	613	0.036	0.186	0.000	1.000	0.48	
Audit_Fee	1226	2,678,683	3,029,151	49,458	23,415,0 00	613	2,767,7 27	2,969,992	49,45 8	20,500,0 00	613	2,589,6 39	3,087,032	62,71 0	23,415,0 00	-1	
S																	
N_A_Fee	1226	594,073	1,064,148	0	9,242,00 0	613	585,83 4	982,978	0	7,759,24 0	613	602,31 2	1,140,303	0	9,242,00 0	0	
S																	
No_ICMW	1226	0.162	0.687	0.000	8.000	613	0.268	0.897	0.000	8.000	613	0.057	0.345	0.000	4.000	-5.42	***
ICMW	1226	0.082	0.274	0.000	1.000	613	0.131	0.337	0.000	1.000	613	0.033	0.178	0.000	1.000	-6.36	***
LIT	1226	0.030	0.171	0.000	1.000	613	0.044	0.205	0.000	1.000	613	0.016	0.127	0.000	1.000	-2.84	***
EPS	1226	1.460	2.457	- 17.783	17.166	613	1.352	2.356	- 17.78 3	13.038	613	1.568	2.552	-9.447	17.166	1.54	
Z_Score	1226	4.028	3.394	- 10.551	32.114	613	3.835	3.259	- 10.55 1	32.114	613	4.221	3.516	-7.214	22.327	1.99	**

МКВК	1226	3.360	3.406	0.102	36.047	613	3.295	3.243	0.114	27.644	613	3.426	3.563	0.102	36.047	0.67	
LEV	1226	0.500	0.199	0.036	0.943	613	0.513	0.200	0.036	0.943	613	0.487	0.197	0.046	0.937	-2.31	**
ADJ_DAC	1226	0.029	0.267	-1.126	4.694	613	0.029	0.197	-0.644	1.073	613	0.028	0.321	-1.126	4.694	-0.08	
ABS_AC	1226	0.144	0.226	0.000	4.694	613	0.129	0.152	0.000	1.073	613	0.158	0.281	0.000	4.694	2.22	**
с																	
F_Score	1226	0.005	0.003	0.000	0.033	613	0.005	0.003	0.000	0.031	613	0.005	0.003	0.001	0.033	-0.72	
C_Score	1226	1.298	5.575	-3.516	111.497	613	1.470	6.466	-2.938	111.497	613	1.125	4.510	-3.516	41.457	-1.08	

TA is total assets; TL is total liabilities; REV is sales revenue; MV is market value; CA is current assets; CL is current liabilities; NI is net income; ROA is return on assets; SALE_G is sales growth; CURR_RATIO is current ratio; BETA is beta; CFO is operating cash flows; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4, and zero otherwise; TENURE is the number of years that the firm had the same auditor; AUD_CH is a dummy variable that equals 1 if the auditor is new in the current year, and zero otherwise; Audit_Fees is audit fees; N_A_Fees is non-audit fees; No_ICMW is the number of internal control weaknesses reported; ICMW is a dummy variable that equals 1 if any internal control weakness were reported, and zero otherwise; LIT is a dummy variable that equals 1 if the firm is a member of an industry that has an SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise; EPS is earnings per share; Z_Score is Altman z-score, MKBK is the book to market ratio, LEV is the ratio of total debt to total equity, ADJ_DAC is the performance adjusted accruals estimated following Kothari et al. (2005); ABS_ACC ABS_ADJ_DAC is the absolute value of performance adjusted accruals estimated following Kothari et al. (2005); F_Score is the Detchow et al.'s (2010) fraud score; and C_Score is the Khan and Watts's (2009) conservatism score.

Table 4: Pearson Correlations

Pearson correlation is on the right upper hand side; and Spearman correlation is on the lower left hand side; R is a dummy variable that equals 1 if the firm announced restatement(s) in the current year, and zero otherwise; C_Score is Khan and Watts' (2009) conservatism score; ABS_DAC is the absolute value of performance-adjusted discretionary accruals estimated following Kothari et al. (2005); LN_AF is the natural log of audit fees; Delay is the number of days between the date of the financial statements and the filing date; ROA is the return on assets; BETA is the firm beta; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big4, zero otherwise; TENURE is the number of year the firm is audited by the same auditor; NO_ICMW is the number of reported internal control weaknesses; ICMW is a dummy variable that equals 1 if any internal control weakness is reported; Z_Score is the Altman z-score; and LEV is the ratio of total debt to total equity. *, **, and *** are the significance levels at 10, 5, and 1%, respectively.

PEAR/SPEAR	R	C_Score	ABS_DAC	LN_AF	Delay	ROA	BETA	BIG4	TENURE	NO_ICMW	ICMW	Z_Score	LEV
R	1	0.045*	-0.049**	0.061***	0.056**	-0.023	0.049**	0.071***	0.021	0.161***	0.194***	-0.069***	0.069***
C_Score	0.028	1	0.095***	0.106***	0.023	-0.012	0.025	0.086***	0.039*	0.014	-0.005	-0.052**	0.67***
ABS_DAC	-0.046**	0.012	1	-0.213***	-0.028	-0.214***	-0.018	-0.127***	-0.109***	-0.037	-0.035	0.041*	-0.102***
LN_AF	0.067*	0.117***	-0.198***	1	0.106***	0.242***	0.112***	0.545***	0.243***	0.037	0.046*	-0.106***	0.276***
Delay	0.066***	-0.012	0.063***	-0.214***	1	0.064***	0.06**	0.204***	-0.125***	-0.019	0.023	0.051**	0.021
ROA	-0.077***	0.066***	-0.027	0.147***	-0.05**	1	-0.078***	0.168***	0.064***	-0.035	-0.019	0.349***	0.001
BETA	0.049*	0.018	-0.026	0.105***	-0.021	-0.062***	1	0.146***	-0.027	0.048**	0.066***	-0.048*	0.07***
BIG4	0.071***	0.109***	-0.142***	0.493***	-0.027	0.163***	0.155***	1	0.151***	-0.023	0.004	-0.02	0.161***
TENURE	-0.005	0.075***	-0.125***	0.255***	-0.216***	0.048*	-0.025	0.157***	1	-0.035	-0.041*	-0.055**	0.106***
NO_ICMW	0.193***	0.021	-0.038	0.044*	0.085***	-0.072***	0.06**	0.003	-0.058**	1	0.797***	-0.036	0.058**
ICMW	0.194***	0.02	-0.037	0.044*	0.086***	-0.071***	0.06***	0.004	-0.058**	0.999***	1	-0.027	0.027
Z_Score	-0.073***	-0.143***	0.089***	-0.121***	0.046*	0.542***	-0.064***	-0.012	-0.03	-0.037	-0.035	1	-0.303***
LEV	0.065***	0.582***	-0.232***	0.444***	-0.127***	-0.098***	0.059**	0.266***	0.185***	0.033	0.032	-0.525***	1

The first hypothesis addresses the difference in the level of auditor conservatism applied to restatement vs. non-restatement firms.

To measure conservatism, I follow Ettredge et al. (2012), Beatty and Liao (2011) and Bradford et al. (2017) and use Khan and Watts' (2009) C-Score, a modified version of Basu's (1997) measure of conservatism. Lee et al. (2015) and Shimamoto and Takeda (2020) explain the process of estimating the C-Score and start with the following model: $X_i = \beta_1 + \beta_2 D_{it} + \beta_3 R_i + \beta_4 D^* R_i + \varepsilon_i$ (1) where X_i is earnings per share for firm *i* deflated by the price per share at the beginning of the year, R_i is the stock return of firm *i* from nine months before fiscal year-end to three months after fiscal year-end t, and D_i is a dummy variable that equals 1 if $R_i < 0$ and 0 = otherwise. β_4 is the measure of incremental timeliness of bad news over good news, or conservatism. In other words, β_4 is the difference in sensitivity of earnings to positive (negative) returns proxied for good (bad) news; this difference is positive for conservative reporting, the greater the degree of conservatism in financial reporting is, the greater the value of β_4 will be.

Shimamoto and Takeda then estimate the timeliness of good news and bad news by specifying that both good and bad news are linear functions of firm-specific characteristics each year as follows:

$$G_Score = \beta_3 = \mu_1 + \mu_2 Size_i + \mu_3 MKBK_i + \mu_4 Lev$$

$$C_Score = \beta_4 = \lambda_1 + \lambda_2 Size_i + \lambda_3 MKBK_i + \lambda_4 Lev$$
(2)
(3)

where μ_i and λ_i are constant across firms but vary over time. They then substitute these estimates of β_3 and β_4 in equation (1) to obtain equation (4) below, which is an annual cross-sectional regression model used to estimate the C_Score and G_Score, where the G_Score is a measure of the timeliness of good news.

 $X_{i} = \beta_{1} + \beta_{2} D_{i} + (\mu_{1} + \mu_{2} \text{Size}_{i} + \mu_{3} MKBK_{i} + \mu_{4} Lev_{i}) R_{i} + (\lambda_{1} + \lambda_{2} \text{Size}_{i} + \lambda_{3} MKBK_{i} + \lambda_{4} Lev_{i}) D^{*}R_{i} + (\delta_{1} \text{Size}_{i} + \delta_{2} MKBK_{i} + \delta_{3} Lev_{i} + \delta_{4} D_{i} \text{Size}_{i} + \delta_{5} D_{i} MKBK_{i} + \delta_{6} D_{i} Le_{i}) + \varepsilon_{i}$ (4)

I follow Shimamoto and Takeda (2020) and run this regression annually for the 15-year period (2005-2019). The coefficients are the means of the annual coefficients, and the t-statistics are based on the standard error of the 15 coefficients (Fama and Macbeth, 1973). I estimate the C_Score by plugging in the coefficients estimated from (4) in equation (3).

After estimating the C_Score, I use it as a dependent variable in the following equations to examine the association between restatements and subsequent auditor conservatism. I expect that upon detecting the misstatement and the announcement of the restatement, the auditor will modify her/his behavior in planning for the current engagement. I also examine whether restatement will continue to be a risk factor considered by the auditor in the following year. In identifying the control variables, I follow Hsu et al. (2017), Chen et al. (2014), Kim and Li (2018), Kong et al. (2017), and Intintoli et al. (2018).

 $C_Score_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA_{it} + \beta_3 ROA_{it} + \beta_4 LIT_RISK_{it} + \beta_5 STD_SALE_{it} + \beta_6 STD_CFO_{it} + \beta_7 VOL_{it} + \beta_8 MKBK_{it} + Y_FE_{it} + \varepsilon_{it}$ To see the effect of restatement on the following year engagement, I run the following model:

 $C_Score_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA_{it} + \beta_3 ROA_{it} + \beta_4 LIT_RISK_{it} + \beta_5 STD_SALE_{it} + \beta_6$ $STD_CFO_{it} + \beta_7 VOL_{it} + \beta_8 MKBK_{it} + Y_FE_{it} + \varepsilon_{it}$ (6)

Where C_Score is Khan and Watts' (2009) C-Score explained above, R is a dummy variable that equals 1 if a firms announced a restatement in the current year, and zero otherwise, LN_TA is the natural log of total assets to control for the client size, ROA is the return on assets to control for profitability, LIT_RISK is the litigation risk measured using the Houston et al. (2010) model and coefficients, STD_SALE is the standard deviation of sales revenue over the five-year period of the current and the previous four years, STD_CFO is the standard deviation of operating cash flows over the five year period of the current and the last four years, VOL is the stock turnover measured as the average stock trading volume over a year, and MKBK is the ratio of market to book value. To test the second hypothesis of the relationship between restatement and auditors' tolerance toward earnings management, I use the absolute value of performance-adjusted discretionary accruals as the dependent variable. The discretionary accruals value is estimated using the modified Jones model (Dechow et al., 1995) by running the following regression model without a constant. This model is estimated without including firms in the financial or utilities sectors.

$$ACC_{it}/TA_{it-1} = \alpha_0 1/TA_{it-1} + \alpha_1 (\Delta Revenu_{it} - \Delta AR_{it})/TA_{it-1} + \alpha_2 PPE_{it}/TA_{it-1} + \varepsilon_{it}$$
(7)

where TA is total assets, Δ Revenue is the change in sales revenue, Δ AR is the change in the accounts receivable, and PPE is the level of gross property, plant, and equipment. The dependent variable is estimated as follow:

 $ACC_{it}/TA_{it-1} = (\Delta CA_{it} - \Delta CL_{it} - \Delta CASH_{it} + \Delta STD_{it} - DE_{it})/TA_{it-1}$ (8) where Δ CA is the change in current assets, Δ CL is the change in current liabilities, Δ Cash is the change in cash and cash equivalents, Δ STD is the change in short-term debt, DEP is the depreciation expense, and TA is total assets.

I follow Kothari et al. (2005) and estimate performance-adjusted discretionary accruals. I ranked the observations based on their SIC Code and created deciles of ROA within each SIC group. I then calculate the median of discretionary accruals in each decile and then estimate the performance-adjusted discretionary accruals as the difference between the estimated discretionary accruals of the observation and the median of its decile.

To test H2, I use the absolute value of the performance-adjusted discretionary accruals as the dependent variable and regress it on restatements and control variables. $ABS_ADJ_DAC_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_3 TENURE_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SALE_G_{it} + \beta_8 MKBK_{it} + \beta_9 LOSS_{it} + \beta_{10} LITIGATION_{it} + \beta_{11} FINA_{it} + Y_FE_{it} + \varepsilon_{it}$ (9) Then, to see whether auditors will continue their constraint on earnings management through the following year, I run the following model.

 $\begin{array}{l} ABS_ADJ_DAC_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_3 TENURE_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 \\ ROA_{it} + \beta_7 SALE_G_{it} + \beta_8 MKBK_{it} + \beta_9 LOSS_{it} + \beta_{10} LITIGATION_{it} + \beta_{11} FINA_{it} + Y_FE_{it} \\ + \varepsilon_{it} \end{array}$ (10)

Where ABS_ADJ_DAC is the absolute value of performance-adjusted accruals estimated following Kothari et al. (2005), R is a dummy variable that equals 1 if a firm announced a restatement in the current year, and zero otherwise, BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4 auditing firms, and zero otherwise, Tenure is the number of previous years audited by current auditor, LN_TA is the natural log of total assets, ROA is the return on assets, SALE_G is sales growth, MKBK is the market to book value ratio, LOSS is a dummy variable that equals 1 if the firm reported negative net income, and zero otherwise, LIT is a dummy variable that equals 1 if the firm is a member of an industry that has an SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise, and FINA is dummy variable that equals one if the firm issued new equity or debt, and zero otherwise.

To test the third hypothesis on the effect of restatements on audit effort proxied by audit fees, I use the following model.

 $LN_AF_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA4_{it} + \beta_3 BIG4_{it} + \beta_4 LN_SEG_{it} + \beta_5 FCA_{it} + \beta_6 LOSS_{it} + \beta_7$ $INVTA_{it} + \beta_8 RECTA_{it} + \beta_9 FINA_{it} + \beta_{10} MA_{it} + \beta_{11} AUD_CH_{it} + \beta_{12} LITIGATION_{it} + \beta_{13}$ $LN_NAF_{it} + Y_FE_{it} + \varepsilon_{it}$ (11)

Then, to see whether auditors will continue exerting more effort auditing restatement firms through the following year, I run the following model.

 $LN_AF_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA4_{it} + \beta_3 BIG4_{it} + \beta_4 LN_SEG_{it} + \beta_5 FCA_{it} + \beta_6 LOSS_{it} + \beta_7$ $INVTA_{it} + \beta_8 RECTA_{it} + \beta_9 FINA_{it} + \beta_{10} MA_{it} + \beta_{11} AUD_CH_{it} + \beta_{12} LITIGATION_{it} + \beta_{13}$ $LN_NAF_{it} + Y_FE_{it} + \varepsilon_{it}$ (12)

where LN_AF is the natural log of the audit fees, R is a dummy variable that equals 1 if a firm announced a restatement in the current year, and zero otherwise, LN_TA is the natural log of total assets, STD_ROA is the standard deviation of ROA over the current and last four years, STD_SALE is the standard deviation of sales revenue over the current and last four years, STD_CFO is the standard deviation of operating cash flows over the current and last four years, LN_SEG is the natural log of number of business segments, FCA is a dummy variable that equals 1 if the firm has foreign currency transactions, and zero otherwise, MA is a dummy variable that equals 1 if the firm experienced merger or acquisition, and zero otherwise, BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4 audit firms, and zero otherwise, AUD_CH is a dummy variable that equals 1 if the current auditor is new this year, LIT is a dummy variable that equals 1 if the firm is a member of an industry that has an SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise, LN_N_AF is the natural log of non-audit fees, and N_ICMW is the number of reported internal control material weaknesses.

Results

In this section, the results of the regression models are reported; all models are significant, and all of them include controls for the fixed year effect. Since matching is performed within each industry, the models do not include a control for the fixed industry effect. These models report the results of testing a data set of 1,226 observations of 613 firms with restatement announcements that are matched with 613 firms without restatement announcements. The matching is conducted using the Propensity Score Matching method based on the industry, natural log of total assets, loss, market-to-book ratio, and sales growth.

Table 5 shows the results of the OLS regression of the first model, which measures the effect of restating financial statements on auditor conservatism as measured by Khan and Watts' (2009) C_Score. As explained above, I expect that restatements will affect auditor conservatism. The results indicate that auditor conservatism increases in the restatement year, the coefficient on R is significant at the 10% level. The results also show that the effect of restatements persists in the following year, as the coefficient is positive and highly significant at the 1% level. The results further demonstrate that auditor conservatism is affected by current-year firm size, profitability, volatility of cash flows, and growth measured by the MKBK ratio, and to a lesser extent, by client litigation risk. These results provide support for H1.

Table 5: Auditor Conservatism	OLS Regression
-------------------------------	----------------

 $C_Score_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA_{it} + \beta_3 ROA_{it} + \beta_4 LIT_RISK_{it} + \beta_5 STD_SALE_{it} + \beta_6 STD_CFO_{it} + \beta_7 VOL_{it} + \beta_8 MKBK_{it} + Y_FE_{it} + \varepsilon_{it}$ (5)

 $C_Score_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA_{it} + \beta_3 ROA_{it} + \beta_4 LIT_RISK_{it} + \beta_5 STD_SALE_{it} + \beta_6 STD_CFO_{it} + \beta_7 VOL_{it} + \beta_8 MKBK_{it} + Y_FE_{it} + \varepsilon_{it}$ (6)

		Disclos	ure Year (5)	F	ollowing	g Year (6)
			t-			t-	
Variable		Coeffici	ent value	e Pr > t	Coefficie	nt valu	e Pr > t
Intercept		-4.882	-5.01	<.0001	-4.416	-3.68	0.0002
R		0.435	1.93	0.0537	1.567	3.08	0.0021
LN_TA		0.304	3.32	0.0009	0.462	4.34	<.0001
ROA		-4.331	-4.11	<.0001	-0.528	-0.38	0.703
LIT_RISK		-0.050	-1.87	0.0619	-0.021	-0.71	0.4769
STD_SALE		-0.009	-0.99	0.322	-0.013	-1.11	0.2675
STD_CFO		-0.229	-2.79	0.0053	-0.081	-1.24	0.2151
VOL		0.0661	0.83	0.405	-0.006	-0.58	0.5636
МКВК		1.173	34.87	<.0001	0.657	15.72	<.0001
Year Effect	Yes				Year E	ffect Ye	S
N	1,226				N	1,2	226
Adj. R ²	51.93				Adj. R ²	² 19	.70

C_Score is Khan and Watts' (2009) C-Score, R is a dummy variable that equals 1 if a firm announced a restatement in the current year, LN_TA is the natural log of total assets, ROA is the return on assets, LIT_RISK is the litigation risk measured using a model and coefficients used by Houston et al. (2010), STD_SALE is the standard deviation of sales revenue over a five-year period, the current and the previous four years, STD_CFO is the standard deviation of operating cash flows over a five-year period, the current and last four years, VOL is stock turnover, the average stock trading volume over a year, and MKBK is the market-to-book value ratio.

Table 6 shows the results of running the model measuring the effect of restatement on auditor tolerance for earnings management, as measured by the absolute value of performance-adjusted discretionary accruals.

As explained above I expected that, as a result of the restatement, the auditor will plan and test more conservatively and will be less tolerant toward discretionary reporting. The results show that the effect of restatements is negative and significant at the 5% level in the current year; this is an indication that auditors consider restatements by increasing their strictness toward earnings management in the current year. The results show, however, that this effect disappears in the following year, as the coefficient on R is insignificant. These results additionally show that auditors increase their scrutiny of discretionary reporting with their restatement clients only in the year of restatements; however, in the following year, their level of strictness is the equal for both restatement and non-restatement clients.

Table 6: Discretionary Accruals OLS Regression

 $\begin{aligned} ABS_ADJ_DAC_{it} &= \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_3 TENURE_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 \\ SALE_G_{it} + \beta_8 MKBK_{it} + \beta_9 LOSS_{it} + \beta_{10} LITIGATION_{it} + \beta_{11} FINA_{it} + Y_FE_{it} + \varepsilon_{it} \\ (9) \\ ABS_ADJ_DAC_{it+1} &= \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_3 TENURE_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 \\ SALE_G_{it} + \beta_8 MKBK_{it} + \beta_9 LOSS_{it} + \beta_{10} LITIGATION_{it} + \beta_{11} FINA_{it} + Y_FE_{it} + \varepsilon_{it} \\ (10) \end{aligned}$

		Disclosure	Year (5)		Follow	ving Yea	r (10)
Variable			t Valu	Pr > t		t-	Pr > t
		Coefficien	е		Coefficien	value	
		t			t		
Intercent		0.044	4.00	. 0001	0.070	4.00	. 0001
Intercept		0.241	4.23	<.0001	0.273	4.83	<.0001
R		-0.028	-2.31	0.0209	0.003	0.15	0.884
BIG4		0.0186	0.99	0.3244	0.036	1.89	0.060
TENURE		-0.001	-0.94	0.3463	0.0001	0.00	0.999
LN_TA		-0.020	-4.33	<.0001	-0.022	-4.7	<.0001
LEV		-0.031	-4.15	<.0001	-0.035	-4.52	<.0001
ROA		-0.328	-4.68	<.0001	-0.290	-3.8	0.0002
SALE_G		0.102	6.14	<.0001	0.013	0.86	0.389
MKBK		0.014	7.08	<.0001	0.013	6.68	<.0001
LOSS		0.015	0.7	0.4824	0.005	0.22	0.829
LIT		0.002	0.16	0.8764	-0.005	-0.32	0.747
FINA		0.013	0.46	0.6489	-0.038	-1.36	0.174
Year Effect	Yes				Year Effect	Yes	
Ν	1,22 6				Ν	1,226	
Adj. R ²	14.7 1				Adj. R ²	10.19	

ABS_ADJ_DAC is the absolute value of performance-adjusted accruals estimated following Kothari et al. (2005); R is a dummy variable that equals 1 if a firm announced a restatement in the current year, and zero otherwise; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4, and zero otherwise; Tenure is the number of years previously audited by current auditor; LN_TA is the natural log of total assets, ROA in the return on assets; SALE_G is sales changes in the last year, MKBK is the market-to-book value ratio, LOSS is a dummy variable that equals 1 if the firm reported negative net income, and zero otherwise, LIT is a dummy variable that equals 1 if the firm is a member of an industry that has an SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise, and FINA is dummy variable that equals new equity or debt, and zero otherwise.

Table 7 shows how financial restatements affect auditor effort proxied by audit fees. The results show the same pattern observed in Table 6: restatement affects the auditor's behavior in the current year (the year in which the restatement is disclosed), but that effect fades away in the following year. The coefficient on R is positive and significant at the 5%, indicating increased auditor effort for restatement firms in the year of restatements, while the restatement's effect on audit fees is not significant in the following year. The audit fees model is highly significant, with an adjusted R² of 74.91%. The results also show that audit fees increase with the size of the firm, foreign currency transactions, loss, amount of receivables relative to total assets, merger and acquisition, Big 4, and reported number of internal control weaknesses. The fees are negatively associated with auditor changes, probably indicating low-balling by the newly hired auditor.

Table 7: Audit Fees OLS Regression

 $LN_AF_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA4_{it} + \beta_3 BIG4_{it} + \beta_4 LN_SEG_{it} + \beta_5 FCA_{it} + \beta_6 LOSS_{it} + \beta_7 INVTA_{it} + \beta_8 RECTA_{it} + \beta_9 FINA_{it} + \beta_{10} MA_{it} + \beta_{11} AUD_CH_{it} + \beta_{12} LITIGATION_{it} + \beta_{13} LN_NAF_{it} + Y_FE_{it} + \varepsilon_{it}$ (11)

 $LN_AF_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA4_{it} + \beta_3 BIG4_{it} + \beta_4 LN_SEG_{it} + \beta_5 FCA_{it} + \beta_6 LOSS_{it} + \beta_7 INVTA_{it} + \beta_8 RECTA_{it} + \beta_9 FINA_{it} + \beta_{10} MA_{it} + \beta_{11} AUD_CH_{it} + \beta_{12} LITIGATION_{it} + \beta_{13} LN_NAF_{it} + Y_FE_{it} + \varepsilon_{it}$ (12)

	Disclosure Year (11)			Following Year (12)			
Variable		t-	Pr > t		t-	Pr > t	
	Coefficien	value		Coefficien	value		
	t			t			
Intercept	10.139	62.54	<.0001	10.880	50.97	<.0001	
R	0.074	2.28	0.0228	0.102	1.31	0.1896	
LN_TA	0.448	27.72	<.0001	0.399	21.35	<.0001	
STD_ROA	-0.0004	-0.68	0.494	0.008	4.02	<.0001	
STD_SALE	0.001	0.95	0.3424	0.001	0.76	0.4459	
STD_CF	-0.014	-1.21	0.2284	-0.013	-1.41	0.1587	
LN_SEG	0.01	0.94	0.3495	-0.005	-0.35	0.727	
FCA	0.135	4.14	<.0001	0.089	1.94	0.0531	
LOSS	0.076	1.67	0.0951	0.115	1.8	0.0713	
INVTA	-0.160	-1.25	0.2125	-0.137	-0.78	0.4364	
RECTA	1.225	7.75	<.0001	0.842	3.82	0.0001	
FINA	0.114	1.55	0.1213	0.060	0.61	0.5445	
MA	0.217	6.39	<.0001	0.203	4.25	<.0001	
BIG4	0.478	9.59	<.0001	-0.010	-0.78	0.4375	
AUD_CH	-0.165	-1.86	0.0634	-0.104	-1.94	0.0531	
Litigation	-0.066	-1.72	0.0849	0.041	6.52	<.0001	
LN_N_AF	0.026	5.87	<.0001	0.043	1.22	0.2239	

N_ICMW		0.105	4.51	<.0001	10.880	50.97	<.0001
Year Effect	Yes				Year Effect	Yes	
N Adj. R ²	1,226 74.91				N Adj. R ²	1,226 51.41	

LN_AF is the natural log of the audit fees; R is a dummy variable that equals 1 if a firms announced a restatement in the current year, and zero otherwise; LN_TA is the natural log of total assets; STD_ROA is the standard deviation of ROA over the current and last four years; STD_SALE is the standard deviation of sales revenue over the current and last four years; STD_CFO is the standard deviation of operating cash flows over the current and last four years; LN_SEG is the natural log of number of business segments; FCA is a dummy variable that equals 1 if the firm has foreign currency transactions, and zero otherwise; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4, and zero otherwise; AUD_CH is a dummy variable that equals 1 if the current auditor is new this year; LIT is a dummy variable that equals 1 if the firm is an ember of an industry that has an SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise; LN_AF is the natural log of non-audit fees, and N_ICMW is the number of reported internal control material weaknesses.

Sensitivity Tests

As sensitivity tests, I ran the same models using PSM matching of 1 to 2, so the dataset was 1,839 of 613 restatement firms each matched with two non-restatement firms that are similar in terms of industry, natural log of total assets, loss status, market-to-book ratio, and sales growth. The results were consistent with the previous tests of a match of 1 to 1. That is, as shown in Table 8, auditor conservatism measured using Khan and Watts' (2009) C-Score is higher for restatement firms than for non-restatement firms in the year of restatement disclosure and in the following year. Again, the level of auditor conservatism increases with firm size and firm growth. However, it decreases with the level of profitability, ROA, and volatility of operating cash flows.

Table 8: Auditor Conservatism OLS Regression

 $C_Score_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA_{it} + \beta_3 ROA_{it} + \beta_4 LIT_RISK_{it} + \beta_5 STD_SALE_{it} + \beta_6 STD_CFO_{it} + \beta_7 VOL_{it} + \beta_8 MKBK_{it} + Y_FE_{it} + \varepsilon_{it}$ (5)

 $C_Score_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA_{it} + \beta_3 ROA_{it} + \beta_4 LIT_RISK_{it} + \beta_5 STD_SALE_{it} + \beta_6 STD_CFO_{it} + \beta_7 VOL_{it} + \beta_8 MKBK_{it} + Y_FE_{it} + \varepsilon_{it}$ (6)

	Disclos	ure Year	(5)	Following Year (6)			
		t-			t-		
Variable	Coeffici	ent val	ue Pr > t	Coeff	icient va	lue Pr > t	
Intercept	-4.586	-6.48	<.0001	-3.481	-3.95	<.0001	
R	0.559	3.18	0.0015	1.384	3.45	0.0006	
LN_TA	0.272	4.13	<.0001	0.322	4.11	<.0001	
ROA	-3.514	-4.68	<.0001	-1.535	-1.62	0.1049	

LIT_RISK		-0.032	-1.5	0.1347	-0.023	-0.96	6 0.3378
STD_SALE		-0.010	-1.45	0.1476	-0.009	-1.07	7 0.2845
STD_CFO		-0.155	-2.87	0.0042	-0.059	-1.15	5 0.2519
VOL		0.010	0.18	0.8539	-0.012	-1.6	0.1104
MKBK		1.084	43.53	<.0001	0.645	20.5	5 <.0001
Year Effect	Yes				Year E	Effect	Yes
N Adj. R ²	1,839 52.26				N Adj. R	2	1,839 20.69

C_Score is Khan and Watts' (2009) C-Score; R is a dummy variable that equals 1 if a firm announced a restatement in the current year; LN_TA is the natural log of total assets; ROA is the return on assets; LIT_RISK is the litigation risk measured using a model and coefficients used by Houston et al. (2010); STD_SALE is the standard deviation of sales revenue over a five-year period, the current and the previous four years; STD_CFO is the standard deviation of operating cash flows over a five-year period, the current and last four years; VOL is stock turnover, the average stock trading volume over a year; and MKBK is the market-to-book value ratio.

In Table 9, consistent with the results reported above in Table 6 for the 1:1 matching subset, the level of absolute value of performance-adjusted discretionary accruals is negatively associated with R in the current year, this demonstrate that auditors consider restatement in their planning and testing and allow less reporting of discretionary accruals by restatement firms. However, this effect does not persist into the following year, when auditors' tolerance of discretionary reporting is relatively equal for both restatement and non-restatement firms, as indicated by the in significant coefficient on R in model (10) below.

 Table 9: Discretionary Accruals OLS Regression

 $ABS_ADJ_DAC_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_3 TENURE_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SALE_G_{it} + \beta_8 MKBK_{it} + \beta_9 LOSS_{it} + \beta_{10} LITIGATION_{it} + \beta_{11} FINA_{it} + Y_FE_{it} + \varepsilon_{it}$ (9)

	Disclosure	Following Year (10)				
Variable		t-	Pr > t	Coefficie	t-	Pr > t
	Coefficien	value		nt	value	
	t					
Intercept	0.255	5.94	<.0001	0.265	6.14	<.0001
R	-0.020	-1.99	0.0469	0.002	0.10	0.9164
BIG4	-0.0004	-0.03	0.9746	0.012	0.88	0.3812
TENURE	-0.0009	-1.00	0.318	0.0002	0.26	0.7953
LN_TA	-0.021	-5.94	<.0001	-0.019	-5.28	<.0001

 $ABS_ADJ_DAC_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_3 TENURE_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SALE_G_{it} + \beta_8 MKBK_{it} + \beta_9 LOSS_{it} + \beta_{10} LITIGATION_{it} + \beta_{11} FINA_{it} + Y_FE_{it} + \varepsilon_{it}$ (10)

N Adi D ²	1,839					1,839	
Year Effect	Yes				Year Effe		
FINA		0.009	0.44	0.6566	-0.042	-1.99	0.0466
Litigation		0.002	0.19	0.848	-0.005	-0.41	0.6805
LOSS		0.018	1.12	0.2616	0.006	0.32	0.7459
MKBK		0.012	8.09	<.0001	0.012	8.37	<.0001
SALE_G		0.108	8.33	<.0001	0.014	1.53	0.1263
ROA		-0.267	-5.2	<.0001	-0.271	-5.06	<.0001
LEV		-0.024	-4.13	<.0001	-0.031	-5.03	<.0001

ABS_ADJ_DAC is the absolute value of performance-adjusted accruals estimated following Kothari et al. (2005); R is a dummy variable that equals 1 if a firm announced a restatement in the current year, and zero otherwise; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4, and zero otherwise; Tenure is the number of years previously audited by the current auditor; LN_TA is the natural log 0f total assets; ROA is the return on assets; SALE_G is sales changes on the last year; MKBK is the market-to-book value ratio; LOSS is a dummy variable that equals 1 if the firm reported negative net income and zero otherwise; LIT is a dummy variable that equals 1 if the firm is a member of an industry that has a SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380 and zero otherwise; and FINA is dummy variable that equals new equity or debt.

Additionally, using 1:2 matching in Table 10 provides the same results reported above in Table 7 for audit effort. R is significant in the current year, showing increased auditor effort in the year of restatements disclosure for restatement firms as compared to nonrestatement firms. The results also show that audit fees increase with firm size, foreign currency transactions, losses, receivables relative to total assets, mergers and acquisitions, audits by one of the Big 4 accounting firms, non-audit fees, and the number of internal control weaknesses. On the other hand, fees decrease with the hire of a new auditor. Again, the difference fades away in the year following restatement disclosure, as the coefficient on R in model (12) is not significant.

Table 10: Audit Fees OLS Regression

 $LN_AF_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA4_{it} + \beta_3 BIG4_{it} + \beta_4 LN_SEG_{it} + \beta_5 FCA_{it} + \beta_6 LOSS_{it} + \beta_7 INVTA_{it} + \beta_8 RECTA_{it} + \beta_9 FINA_{it} + \beta_{10} MA_{it} + \beta_{11} AUD_CH_{it} + \beta_{12} LITIGATION_{it} + \beta_{13} LN_NAF_{it} + Y_FE_{it} + \varepsilon_{it}$ (11)

 $LN_AF_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 LN_TA4_{it} + \beta_3 BIG4_{it} + \beta_4 LN_SEG_{it} + \beta_5 FCA_{it} + \beta_6 LOSS_{it} + \beta_7 INVTA_{it} + \beta_8 RECTA_{it} + \beta_9 FINA_{it} + \beta_{10} MA_{it} + \beta_{11} AUD_CH_{it} + \beta_{12} LITIGATION_{it} + \beta_{13} LN_NAF_{it} + Y_FE_{it} + \varepsilon_{it}$ (12)

		Disclosure Year (11)			Following Year (12)			
Variable		Coefficie	t-	Pr > t	Coefficie	t-	Pr > t	
		nt	value		nt	value		
Intercept		10.134	76.1	<.0001	10.902	60.69	<.0001	
R		0.078	2.73	0.0065	0.109	1.56	0.118	
LN_TA		0.451	34.06	<.0001	0.397	25.32	<.0001	
STD_ROA		-0.0005	-0.9	0.3674	0.008	3.95	<.0001	
STD_SALE		0.001	1.07	0.2857	0.001	0.97	0.334	
STD_CF		-0.016	-1.94	0.053	-0.013	-1.53	0.1273	
LN_SEG1		0.010	1.1	0.2736	-0.007	-0.52	0.6042	
FCA		0.121	4.47	<.0001	0.086	2.26	0.0241	
LOSS		0.104	2.78	0.0054	0.127	2.4	0.0166	
INVTA		-0.057	-0.53	0.5966	-0.007	-0.05	0.9627	
RECTA		1.099	8.6	<.0001	0.731	4.03	<.0001	
FINA		0.082	1.41	0.1574	0.065	0.8	0.4263	
MA		0.241	8.55	<.0001	0.199	5.02	<.0001	
BIG4		0.412	10.09	<.0001	-0.114	-1.02	0.3089	
AUDITOR_CH		-0.181	-2.32	0.0202	-0.122	-2.76	0.0059	
Litigation		-0.045	-1.45	0.1472	0.034	6.57	<.0001	
LN_NON_AF		0.0273	7.43	<.0001	0.026	0.84	0.4019	
N_ICMW		0.116	5.37	<.0001	10.902	60.69	<.0001	
Year Effect	Yes				Year Effect	Yes		
Ν	1,83				Ν	1,839		
	9							
Adj. R ²	74.0 o				Adj. R ⁴	49.58		

LN_AF is the natural log of the audit fees; R is a dummy variable that equals 1 if a firm announced a restatement in the current year, and zero otherwise; LN_TA is the natural log of total assets, STD_ROA is the standard deviation of ROA over the current and last four years; STD_SALE is the standard deviation of sales revenue over the current and last four years; LN_SEG is the natural log of number of business segments; FCA is a dummy variable that equals 1 if the firm has foreign currency transactions, and zero otherwise; MA is a dummy variable that equals 1 if the firm experienced merger or acquisition, and zero otherwise; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4, and zero otherwise; AUD_CH is a dummy variable that equals 1 if the current auditor is new this year; LIT is a dummy variable that equals 1 if the firm is a member of an industry that has a SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise; LN_AF is the natural log of non-audit fees, and N_ICMW is the number of reported internal control material weaknesses.

Internal Control Material Weaknesses

As an additional sensitivity test, I examine whether restatement clients continue to report internal control material weaknesses after disclosing restatements. I expect that if the auditor's behavior changes after restatement, the auditor will direct clients to address the weaknesses in their internal control system. If this expectation is correct, it

is possible that the client would have a material weakness in the year of the disclosure; however, more scrutiny from the auditor will result in an improved client internal control system in the following year. Table 11 results support this expectation. Restatement firms are more likely, than non-restatement firms, to report internal control material weaknesses in the year of restatement. In the following year, the results show no significant difference.

Table 11: Internal Control Material Weaknesses Logistic Regression

 $ICMW_{it} = \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_4 LN_TA_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SALE_G_{it} + \beta_8 MKBk_{it} + \beta_9 LOSS_{it} + \beta_{10} LIT_{it} + \beta_{11} FINA_{it} + Y_FE_{it} + \varepsilon_{it}$ (13)

$ICMW_{it+1} = \beta_0 + \beta_1 R_{it} + \beta_2 BIG4_{it} + \beta_4 LN_TA_{it}$	$_{it} + \beta_5 LEV_{it} + \beta_6 ROA_{it} + \beta_7 SALE_G_{it} + \beta_8 MKBk_{it} + \beta_9$
$LOSS_{it} + \beta_{10}LIT_{it} + \beta_{11}FINA_{it} + Y_FE_{it} + \varepsilon_{it}$	(14)

		Disclosure	Year (13)		Following Year (14)			
Variable			Chi_sq	Pr > Chi		Chi_s	Pr > Ch	
		Coefficien			Coefficient	q	i	
		t						
Intercept		-2.328	5.078	0.024	-2.316	5.525	0.019	
R		1.4947	31.976	<.0001	0.171	0.227	0.634	
BIG4		0.207	0.374	0.541	0.140	0.196	0.658	
TENURE		-0.0145	0.492	0.483	0.010	0.273	0.601	
LN_TA		-0.149	2.952	0.086	-0.122	2.229	0.136	
LEV		0.220	3.266	0.071	0.040	0.087	0.768	
ROA		3.142	3.819	0.051	0.949	0.522	0.470	
SLAE_G		-0.241	0.449	0.503	-0.191	0.318	0.573	
MKBK		-0.098	4.233	0.040	-0.039	1.144	0.285	
LOSS		0.986	7.383	0.007	0.382	1.107	0.293	
LIT		-0.022	0.007	0.932	0.087	0.121	0.728	
FINA		0.310	0.314	0.575	0.919	2.187	0.139	
Voor Effoct	Voc				Voor Effoot	Voc		
rear Enect	165				rear Ellect	165		
Ν	1,226				Ν	1,226		
Pseudo R ²	5.70				Pseudo R ²	1.67		

ICMW is a dummy variable that equals 1 if an internal control material weakness(es) is disclosed, and zero otherwise; R is a dummy variable that equals 1 if a firm announced a restatement in the current year, and zero otherwise; BIG4 is a dummy variable that equals 1 if the firm is audited by one of the Big 4, and zero otherwise; Tenure is the number of years previously audited by current auditor; LN_TA is the natural log if total assets; LEV is leverage, ratio of total debt to total assets; ROA is the return on assets ratio; MKBK is market to book ratio; LOSS is a dummy variable that equals 1 of the net income is less than zero, and zero otherwise; LIT is a dummy variable that equals 1 if the firm is a member of an industry that has a SIC of 2832-2837, 3569-3578, 3599-3675, 5199-5962, or 7370-7380, and zero otherwise; and

FINA is a dummy variable that equals 1 if the firm issued new equity or debt securities, and zero otherwise.

Conclusions

Restating financial statements is a significant event that auditors consider seriously in their planning and assessing of the risk of material misstatement. In this study, I examine whether auditors adjust their behavior following a client's restatement of one or more previously reported financial statements. I hypothesize that auditors consider restatement as a risk factor indicating previous reporting and/or audit failure, and that as a result, they act more conservatively and spend more time and effort collecting more reliable evidence. Using propensity score matching, I match a set of firms that disclosed restatement of their financial statements with similar non-restatement firms. The results show that, in comparison to non-restatement clients, auditors enforced more conservative reporting on restatement clients in the year the restatements were detected and disclosed, as well as in the following year. Auditors exerted more effort and increased their restriction of earnings management for restatement disclosure.

References:

Abbott, L., S. Parker, and G. Peters. 2004. Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory.* 23 (1): 69–87.

Akhigbe, A., and J. Madura. 2008. Industry signals relayed by corporate earnings restatements. *The Financial Review.* 43 (4): 569–89.

Antle, R., and B. Nalebuff. 1991. Conservatism and auditor-client negotiations. *Journal of Accounting Research.* 29 (3): 31-54.

Barniv, R. R., and J. Cao. 2009. Does information uncertainty affect investors' responses to analysts' forecast revisions? An investigation of accounting restatements. *Journal of Accounting and Public Policy.* 28 (4): 328-348.

Basu, S. 1997. The Conservatism principle and asymmetric timeliness of earnings. *Journal of Accounting and Economics.* 24 (1): 3-37.

Beatty, A., and S. Liao. 2011. Do delays in expected loss recognition affect banks' willingness to lend? *Journal of Accounting and Economics*. 52 (1): 1-20.

Blankley, A. I., D. N. Hurtt, and J. E. MacGregor. 2012. Abnormal audit fees and restatements. *Auditing: A Journal of Practice & Theory* 31 (1): 79–96.

Bradford, W., C. Chen, and S. Zhu. 2017. Conservative accounting, IFRS convergence and cash dividend payments: evidence from china. *European Financial Management*. 23 (3): 376-414.

Chen, S., X. Chen, and Q. Cheng. 2014. Conservatism and equity ownership of the founding family. *European Accounting Review*. 23(3): 403–30.

Cheng, Q., and D. B. Farber. 2008. Earnings restatements, changes in CEO compensation, and firm performance. *The Accounting Review*. 83 (5): 1217-1250.

Chung, R., M. Firth, and J. Kim. 2003. Auditor conservatism and reported earnings. *Accounting and Business Research*. 33 (1): 19-32.

Czerney, K., J. J. Schmidt, and A. M. Thompson. 2014. Does auditor explanatory language in unqualified audit reports indicate increased financial misstatement risk? *The Accounting Review.* 89 (6): 2115–49.

Dechow, P. M., R. Sloan, and A. Sweeney. 1995. Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*. 13 (1): 1-36.

DeFond, M. L. and J. R. Francis. 2005. Audit research after Sarbanes-Oxley. *Auditing: A Journal of Practice & Theory*. 24 (May): 5-30.

Desai, H., C. E. Hogan, and W. Michael. 2006. The reputational penalty for aggressive accounting: Earnings restatements and management turnover. *The Accounting Review*. 81 (1): 83–112.

Ettredge, M., Y. Huang, and W. Zhang. 2012. Earnings restatements and differential timeliness of accounting conservatism. *Journal of Accounting and Economics.* 53 (3): 489–503.

Fafatas, S. A. 2010. Auditor conservatism following audit failures. *Managerial Auditing Journal.* 25 (7): 639-658.

Fang, L., J. Pittman, Y. Zhang, and Y. Zhao. 2018. Accounting standard precision, corporate governance, and accounting restatements. Working Paper (Social Science Research Network). Available online at: <u>file:///C:/Users/eelshafi/Downloads/SSRN-id3125008%20(1).pdf</u>

Feldmann, D. A., W. J. Read, and M. J. Abdolmohammadi. 2009. Financial restatements, audit Fees, and the moderating effect of CFO turnover. *Auditing: A Journal of Practice and Theory*. 28 (1): 205-223.

Firth, M. 1990. Auditor reputation: the impact of critical reports issued by government inspectors. *RAND Journal of Economics*. 21 (3): 374-87.

Gleason, C. A., N. T. Jenkins, and W. B. Johnson. 2008. The contagion effects of accounting restatements. *The Accounting Review* 83 (1): 83–110.

Griffin. P. A. 2003. A League of their own? Financial analysts' responses to restatements and corrective disclosures. *Journal of Accounting, auditing and Finance*. 18 (4): 479-518.

Guo, F., T. R. Kubick, and A. Masli. 2018. The effects of restatements for misreporting on auditor scrutiny of peer firms. *Accounting Horizons*. 32 (1): 65–85.

Haribar, P., and N. T. Jenkins. 2004. The effect of accounting restatements on earnings revisions and the estimated cost of capital. *Review of Accounting Studies*. 9 (2/3): 337–356.

Hennes, K. M., A. J. Leone, and B. P. Miller. 2008. The importance of distinguishing errors from irregularities in restatement research: The case of restatements and CEO/CFO turnover. *The Accounting Review*. 83 (6): 1487-1519.

Hennes, K. M., A. J. Leone, and B. P. Miller. 2014. Determinants and market consequences of auditor dismissals after accounting restatements. *The Accounting Review.* 89 (3): 1051–1082.

Hirschey, M., K. R. Smith, and W. M. Wilson. 2015. The timeliness of restatement disclosures and financial reporting credibility. *Journal of Business Finance & Accounting.* 42 (7/8): 826–859.

Houston, J. F., B. Lev, and J. W. Tucker. 2010. To guide or not to guide? Causes and consequences of stopping quarterly earnings guidance. *Contemporary Accounting Research*. 27 (1): 143-185.

Hsu, C., K. E. Novoselov, and R. Wang. 2017. Does accounting conservatism mitigate the shortcomings of CEO overconfidence? *Accounting Review*. 92 (6): 77–101.

Huang, Y., and S. Scholz. 2012. Evidence on the association between financial restatements and auditor resignations. *Accounting Horizons*. 26 (3): 439–464.

Intintoli, V. J., K.M. Kahle, and W. Zhao. 2018. Director connectedness: Monitoring efficacy and career prospects. *Journal of Financial & Quantitative Analysis.* 53 (1): 65–108.

Ji, A. E., K. R. Kumar, H. Pei, and Y. Xue. 2019. Does the market value auditors' industry specializations? Evidence from the contagion effects of restatements. *Accounting Horizons*. 33 (1): 125-152.

Jia, W., and J. Zhao. 2020. Does the market punish the many for the sins of the few? The contagion effect of accounting restatements for foreign firms listed in the United States. *Journal of Accounting Auditing and Finance*. 31 (1): 196-228.

Khan, M., and R. L. Watts. 2009. Estimation and empirical properties of a firm-year measure of accounting conservatism. *Journal of Accounting and Economics*. 48 (2/3): 132-150.

Kim, J., and T. M. Li. 2018. Are offshore firms less conservative in financial reporting? International evidence. *Journal of International Financial Management and Accounting.* 29 (2): 131–65.

Kinney. W. R., Z. Palmrose, and S. Scholtz. 2004. Auditor independence, non-audit services, and restatements: Was the U. S. government right? *Journal of Accounting Research*. 42 (3): 561-588.

Kong, X., S. Radhakrishnan, and A. Tsang. 2017. Corporate lobbying, visibility and accounting conservatism. *Journal of Business Finance and Accounting*. 44 (5/6): 527–557.

Kothari, S., A. Leone, and C. Wasley. 2005. Performance matched discretionary accrual measures. *Journal of Accounting and Economics*. 39 (1): 163–197.

Leone, A. J., and M. Liu. 2020. Accounting irregularities and executive turnover in founder-managed firms. *The Accounting Review*. 85 (1):287-314.

Liu, L., k. Raghunandan, and D. Rama. 2009. Financial restatements and shareholder ratifications of the auditor. *Auditing: A Journal of Practice and Theory*. 28 (1): 225-240.

Lobo, G., and Y. Zhao. 2013. Relation between audit effort and financial report misstatements: evidence from quarterly and annual restatements. *Accounting Review* 88 (4): 1385–1412.

Mande, V., and M. Son. 2013. Do financial restatements lead to auditor changes? *Auditing: A Journal of Practice and Theory.* 32 (2): 119–45.

Newton, N. J., D. Wang, and M. S. Wilkins. 2013. Does a lack of choice lead to lower quality? Evidence from auditor competition and client restatements. *Auditing: A Journal of Practice and Theory.* 32 (3): 31–67.

Palmrose, Z., and S. Scholz. 2004. The Circumstances and legal consequences of non-GAAP reporting: evidence from restatements. *Contemporary Accounting Research*. 21 (1): 139-180.

Palmrose, Z., V. J. Richardson, and S. Scholz. 2004. Determinants of market reactions to restatement announcements. *Journal of Accounting and Economics*. 37 (1): 59-89.

Schmidt, J. J. 2012. Perceived auditor independence and audit litigation: The role of non-audit services fees. *The Accounting Review*. 87(3): 1033–1065.

Schmidt, J., and M. S. Wilkins. 2013. Bringing darkness to light: The influence of auditor quality and audit committee expertise on the timeliness of financial statement restatement disclosures. *Auditing: A Journal of Practice & Theory.* 32 (1): 221–44.

Security and Exchange Commission (SEC). 2004. Final Rule: Additional Form 8-K Disclosure Requirements and Acceleration of Filing Date. Washington, DC, available at https://www.sec.gov/rules/final/33-8400.htm#P18_1555

Sharma, V. D., and E. R. Iselin. 2012. The association between audit committee multiple-directorships, tenure, and financial misstatements. *Auditing: A Journal of Practice & Theory.* 31 (3): 149-175.

Shimamoto, K., and F. Takeda. 2020. IFRS adoption and accounting conservatism of Japanese firms with governance system transition. *International Advances in Economic Research.* 26 (2): 161–73.

Shipman, J. E., Q. T. Swanquist, and R. L. Whited. 2017. Propensity score matching in accounting studies. *The Accounting Review*. 92 (1): 213–244.

Street, D. A., and D. R. Hermanson. 2019. How do restatements affect outside directors and boards? A review of the literature. *Journal of Accounting Literature*. 43: 19-46.

Srinivasan, S. 2005. Consequences of financial reporting failure for outside directors: Evidence from accounting restatements and audit committee members. *Journal of Accounting Research*. 43 (2): 291-334.

Srinivasan, S., A. S. Wahid, and G. Yu. 2015. Admitting mistakes: Home country effect on the reliability of restatement reporting. *The Accounting Review*. 90 (3): 1201-1240.

Thomson, R. 2020. Reporting misstatements as revisions: An evaluation of managers' use of materiality discretion. Working Paper (Social Science Research Network). Available online at: <u>https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3450828</u>.

Wang, Y. L. Yu, and Y. Zhao. 2015. The Association between Audit-Partner Quality and engagement quality: evidence from financial report misstatements. *Auditing: A Journal of Practice and Theory*. 34 (3): 81-111.

Wans, N. 2020. Corporate social responsibility and market-based consequences of adverse corporate events: Evidence from restatement announcements. *Journal of Accounting Auditing and Finance*. 35 (2): 231-262.

Weber, J., M. Willenborg, and J. Zhang. 2008. Does auditor reputation matter? The case of KPMG Germany and ComROAD AG. *Journal of Accounting Research*. 46 (4): 941–972.

Wilson, W. M. 2008. An empirical analysis of the decline in the information content of earnings following restatements. *The Accounting Review*. 83 (2): 519–548.

Ye, C., and L. Yu. 2017. The effect of restatements on analyst behavior. *Journal of Business Finance and Accounting*. 44 (7/8): 986-1014.

Zhao, Y., J. C. Bedard, and R. Hoitash. 2017. SOX 404, auditor effort, and the prevention of financial report misstatements. *Auditing: A Journal of Practice and Theory*. 36 (4): 151-177.