



The Impact of Financial Restatements on Audit Fees: Consideration of Restatement Severity

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Abstract: This study extends prior research on audit fees and financial restatements by examining whether audit fees are higher for firms with more severe types of restatements. We hypothesize that auditors charge higher audit fees following a firm's restatement to compensate for the risk of audit increased from the restatement as restatements are considered as financial reporting failures. We further hypothesize that more severe restatements lead to higher audit fees due to the increased audit risk from the severity of the restatements. We first separate restatements into three subgroups based on their perceived severity (from most to least severe): restatements that affect net income, restatements that do not affect net income, and technical restatements. We then test for the effect that each type of restatement has on audit fees relative to firms that have no restatements. We find evidence that audit fees are higher for more severe types of restatements: net income restatements have the highest audit fees out of the three subgroups; non-net income restatements have lower audit fees than net income restatements, but higher audit fees than technical restatements; and technical restatements have the lowest audit fees. Furthermore, we find evidence that restatements related to fraud result in higher audit fees than restatements in general. Overall, the evidence suggest that audit fees increase in response to restatements and that the extent audit fees increase depends on the severity of the restatements.

1. Introduction

The purpose of this paper is to examine the effect that different categories of financial restatements have on audit pricing in a subsequent period. A financial restatement is generally considered as a reporting failure since it

represents an acknowledgement that previously issued financial statements were not in accordance with generally accepted accounting principles (GAAP) (Srinivason, 2005; Kinney et al., 2004). Accordingly, we hypothesize that auditors charge higher audit fees following a restatement to compensate for the increased risk of audit from the restatement. We further hypothesize that a more severe form of restatement leads to higher audit fees due to the greater audit risk associated with it. Given the rise in audit fees and an increasing number of financial restatements in recent years (Taub, 2009; Taub, 2008; Turner & Weirich, 2006), it is important to examine how audit fees are related to a firm's disclosure of restatements, to provide increased transparency into the drivers of rising audit costs and to add further insight into the consequences of financial misstatements.

The body of research on audit fees and determinants of audit fees is extensive. In prior literature, audit risk has been identified as one of the most influential drivers of audit fees (Hay et al., 2006). For example, prior research has documented that higher audit fees are associated with higher-risk clients (e.g., Bedard & Johnstone, 2004). In particular, Kinney, Palmrose, and Scholz (2004) found that there is a significant positive relationship between audit fees and the riskiness of a client having financial restatements. They conjecture that this positive relationship could reflect the additional risk of misstatement undertaken by the auditor, and that the increase in audit fees may be the result of expanded audit effort required in the subsequent audit engagement. As such, prior research suggests that auditors likely assign a higher audit risk to clients who experienced a financial reporting failure in prior periods, and thereby plan increased audit effort, which in turn may lead to higher audit costs and fees to be claimed.

While studies concerning the determinants of audit fees are numerous, there are fewer recent studies looking at the relationship between audit fees and financial restatements. Among them, Feldmann, Read, and Abdolmohammadi (2009) observed that firms that restated their 2003 financial statements experienced higher audit fees in subsequent years compared to firms that did not restate. Although these authors provide evidence that higher audit fees are additional costs that firms bear when the reporting credibility was compromised, their evidence is limited by the relatively short sample period. In addition, they did not identify the specific nature of restatements included in their sample, although it may be important to

distinguish different types of restatements which could have differential impacts on audit fees (Turner & Weirich, 2006; Srinivasan, 2005; Palmrose & Scholz, 2004).¹

The present study extends Feldmann et al.'s (2009) work in several ways. First, we used data from multiple years, thereby increasing the sample size. With a larger number of firm-year observations, we hoped to improve the generalizability of the findings by Feldmann et al. Second, we considered the specific nature of restatements by determining the type of restatements and examining the separate effects of these variables on audit fees. Specifically, we divided our restatement observations into three different categories based on the severity of the corrections involved, as follows (from most to least severe): restatements that affected net income, restatements that did not affect net income, and restatements due to technical errors. These three subgroups of financial restatements were then included as separate indicator variables in our regression model to compare their effect sizes on audit fees, relative to the control group of non-restatements. Finally, given its significant implications for auditors' risk assessment, we considered fraud-related restatements as a separate group and examined whether this group of restatements have any incremental effect on audit fees over other types of restatements that are not related to fraud.

Empirical results were generally consistent with our hypotheses. After controlling for various other factors known to affect audit fees, we found that audit fees are higher for financial restatements with greater severity: the net income restatement group had the highest audit fees out of the three subgroups; the non-net income restatement group had lower audit fees than the net income restatement group, but higher audit fees than the technical restatement group; and the technical restatement group had the lowest audit fees and their fees were not statistically different from those of the control group with no restatements. Further, in a separate comparison of fraud versus non-fraud related restatements, we found that fraud related restatements resulted in higher audit fees than any other types of restatements. Overall, this evidence is supportive of our prediction that more severe types of financial restatements will be related to higher audit fees, perhaps due to the increased audit risk perceived for those types.

The remainder of this paper is organized as follows. The next section provides background information on financial restatements. This is followed by an overview

¹ Financial restatements can occur due to fraud, error, or merely technical changes. Stanley and DeZoort (2007), however, suggest that restatements related to fraud or error are "de facto reporting errors" (p. 133).

of prior literature and development of hypotheses. Next is the research method used to test the hypotheses, followed by empirical results and concluding remarks.

2. Literature Review and Hypothesis Development

2.1 Background on Financial Restatements

Restatements are an acknowledgement that the financial statements, as originally issued to the public, were not in accordance with GAAP and thus need to be corrected (Palmrose & Scholz, 2004). A firm's financial restatement is typically disclosed on the U.S. Securities and Exchange Commission's (SEC) Form 8-K ("*Current Report*") under Item 4.02, "*Non-Reliance on Previously Issued Financial Statements or a Related Audit Report or Completed Interim Review.*" Upon discovery of a material error that indicates that financial statements issued previously are no longer reliable, a company has four days to file Form 8-K to announce the restatement and to alert investors of this important event. The restatement is then filed on an amended report for the period affected.

Although restatements are required to be disclosed on Form 8-K, some companies restate their financial statements without making the necessary disclosures, a practice known as "stealth restatements" (GAO, 2006; Turner & Weirich, 2006). Turner and Weirich (2006) outlined a few different methods used by companies to restate financial statements with less than optimal transparency. For example, companies may restate financial figures from prior periods in their next regularly scheduled quarterly or annual report without filing a separate, amended report for the affected period (i.e., a Form 10-Q/A for a quarterly period or a Form 10-K/A for a year period, where "A" alerts investors that something has changed). Therefore, the restatement may go unnoticed by users of the financial statements.²

In another method, companies may circumvent the Form 8-K filing requirement if they disclose the same information to be reported on the Form 8-K (i.e., the announcement of restatements) in their next quarterly or annual report, provided that such information is disclosed within four days after the necessity of restatement is determined. Since companies have control over the timing of when they identify the need for a restatement, they may be able to issue a stealth

² Turner and Weirich (2006) suspect that this problem is by design because investors reading a company's current financial statements simply may not notice the small print or may dismiss a restatement as relatively insignificant when the company was able to tuck it away quietly behind the current period's numbers.

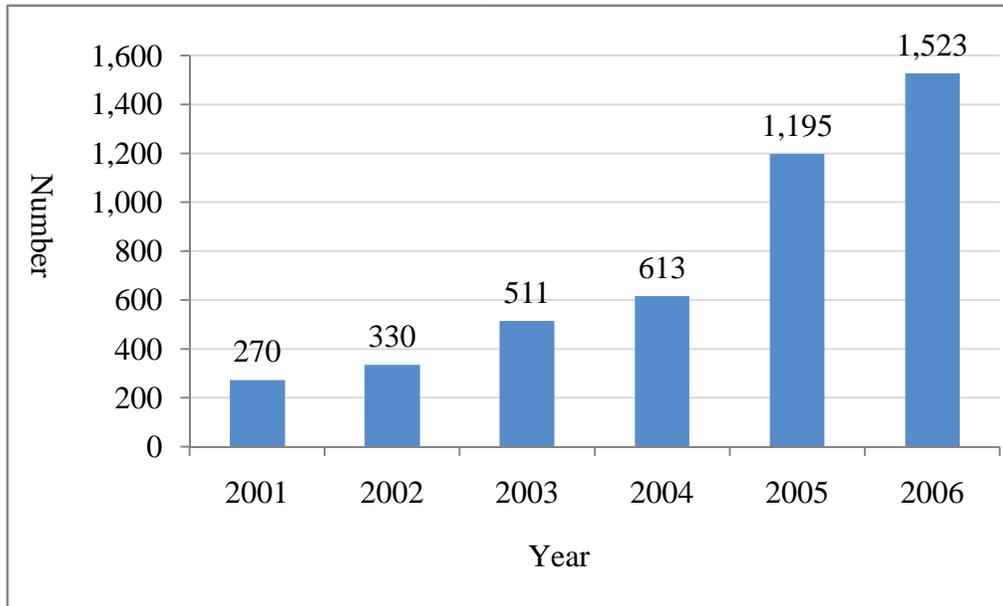
restatement and claim that the decision to restate happened to fall within four days of their next regularly scheduled periodic reports.

The number of financial restatements filed in recent years increased dramatically after 2002 and reached its peak in 2006. From 1997 to 2002, the number of restatements rose slowly from year to year, and by 2002, public companies in the U.S. had filed 330 restatements (Turner & Weirich, 2006). In subsequent years, the upward trend in the number of restatements accelerated sharply.

In 2005, there were 1,195 restatements filed by U.S. public companies, an increase of 362% from 2002 (Turner & Weirich, 2006). In the following year of 2006, the number of restatements increased 27% to 1,523 (Taub, 2008). Figure 1 shows a historical overview of the trend of financial restatements filed by U.S. public companies from 2001 to 2006. The rising trend reversed in 2007 and 2008, when the number of restatements declined to 1,235 and 869, respectively (Taub, 2009).

Figure 1:

Number of financial restatements by U.S. public companies from 2001-2006



This rise in the number of restatements is critical because restatements can lead to concerns regarding the quality of management and auditors engaged. Such a loss of investor confidence may carry serious financial consequences in the form

of decreased market capitalization. For instance, Hribar and Jenkins (2004) observe that a firm's cost of capital increases following a restatement announcement. Other research has shown that restatements have a material adverse effect on firm valuation (GAO, 2006; Palmrose et al., 2004; Wu, 2003). Among others, Palmrose, Richardson, and Scholz (2004) show that announcing restatements are associated with negative market reactions. In particular, they find greater stock price declines when restatements involve fraudulent activity (i.e., intentional misstatements), are initiated externally (i.e., attributed to auditors), and have large, negative income effects. This provides evidence that the content or nature of a restatement as well as the fact of the restatement can be an important determinant of the market responses. The same expectation may be applied to the research on the relations between audit fees and restatements because different types of restatements may have differential effects on audit fees, which is of primary interest to the current study.

The recent surge in restatements can be attributed to two major factors. First, the Sarbanes-Oxley Act of 2002 (SOX) created more stringent financial reporting requirements, specifically in sections 302 and 404. Section 302 requires the chief executive officer (CEO) and chief financial officer (CFO) to evaluate the effectiveness of their firm's internal control systems and to include their conclusions in quarterly and annual reports. Section 404 requires that companies hire independent auditors to attest to the management's report on the effectiveness of internal controls over financial reporting. Compliance with these new requirements inevitably resulted in a higher number of restatements since a greater amount of misstatements were uncovered through the examination of companies' internal controls.

Second, in their 2006 study on financial restatement trends, the U.S. Government Accountability Office (GAO) attributed the surge in restatements to the increasing pressure from governmental bodies on both public companies and auditors. For example, as a result of additional resources available in their enforcement division, the SEC was able to increase their reviews of company filings, after which more companies had to restate their financial statements in accordance with the findings of the SEC (GAO, 2006; Palmrose et al., 2004).

Meanwhile, the creation of the Public Company Accounting Oversight Board (PCAOB) in 2002 increased scrutiny placed on auditors in the form of annual inspections for larger audit firms (GAO, 2006; Turner & Weirich, 2006). Under this heightened scrutiny from government regulators, auditors should have

experienced a greater pressure to catch their client's reporting errors that eventually required restatements. As such, a soaring number of financial restatements in recent years have been caused mainly by enhanced government scrutiny in response to growing investor concerns over the quality of financial reporting in the wake of numerous accounting scandals (e.g., Enron, WorldCom, Adelphia, Tyco, etc.).

2.2 Audit Fees and Severity of Financial Restatements

While earlier research on financial restatements focused on various financial costs that can be imposed on restatement firms (e.g., stock price declines, higher cost of capital, increased likelihood of litigation), Feldmann et al. (2009) are among the first to show that higher audit fees are another cost levied on firms experiencing restatements. In particular, they propose that the higher audit fees are reflective of both an increase in perceived audit risk and a loss of organizational legitimacy resulting from financial restatements.

A financial restatement is likely to increase an auditor's assessment of the client's audit risk as the restatement is indicative of financial reporting failure and may call management credibility in question. As the SEC continues to describe restatements as "the most visible indicator of improper accounting – and source of new investigations"(Schroeder, 2001), a recent reporting failure admitted by a client may lower the auditor's perception of the client's competence and integrity in reporting process, thereby increasing their perceived risk of material misstatements. Accordingly, firms that restated their financial figures in prior periods are more likely to be perceived as high-risk clients.

Auditors are subject to professional guidance from the American Institute of Certified Public Accountants (AICPA). According to this guideline, especially as described in Statement on Auditing Standards (SAS) No. 107, *Audit Risk and Materiality in Conducting an Audit*, auditors are required to plan their audit procedures and coverage appropriately based on their assessment of audit risk associated with the client (AICPA, 2006). If a higher audit risk is perceived, they must provide additional substantive testing to reduce the risk of failing to recognize material misstatements, thereby increasing their planned audit hours and scope. This enhanced audit effort would be costly, thus increasing audit fees as the costs of audit are passed on to the client. Audit fees may also increase due to a fee premium implicitly charged by audit firms to offset additional costs or losses from

potential litigation (Feldmann et al., 2009).³ Hence, it follows that firms with a higher audit risk will likely experience higher audit fees.

As described above, auditors may consider restatement firms to be higher-risk clients due to a higher assessed risk of material misstatements, and higher-risk clients are typically charged higher audit fees. Accordingly, for a firm that had prior financial restatements, auditors would likely charge higher audit fees than they would for a firm with no financial restatements. Feldmann et al. (2009) tested this proposition empirically and reported evidence in support of it: firms that restated their 2003 financial statements had higher audit fees than did a control group of non-restatement firms. The authors posited that the higher audit fees are a result, in part, of the higher audit risk assessed by auditors.

Although Feldmann et al. (2009) demonstrate a positive association between audit fees and financial restatements, showing that higher audit fees are additional costs or penalties that firms bear when the quality of accounting was impaired, they did not consider the specific nature of restatements examined. Prior studies, however, suggest that it is important to distinguish between the types of restatements, especially in terms of their severity (Turner & Weirich, 2006; Srinivasan, 2005; Palmrose & Scholz, 2004). This is because different types of restatements may have different implications and may lead to different economic consequences. To the extent that the severity or type of restatements affects audit fees differentially, it would be important to examine various subgroups of restatements. We consider this issue explicitly by identifying different types of restatements and examining their effects on audit fees separately.

Our first hypothesis considers potentially differential effects of fraud versus non-fraud related restatements on audit fees. As implied in the above discussion, auditors' assessed risk of clients may vary depending on the type of a restatement identified. A restatement related to fraudulent financial reporting would be considered more severe than a regular restatement. Prior research has shown that restatements with greater severity (e.g., fraud-related) are associated with more negative market reactions (Palmrose et al., 2004) and higher likelihood of costly litigation (Palmrose & Scholz, 2004), consistent with investors being more

³ Civil litigation has long been considered an important potential consequence for both issuers and auditors of non-GAAP financial reporting. Palmrose and Scholz (2004), in particular, provide evidence that restatements involving the misstatement of core earnings (earnings from primary, recurring operations) increase both the likelihood of lawsuits and payments by defendants to resolve them. They also find that having auditors as defendants tends to increase total resolution amounts.

concerned about the potential for material misstatements when there is a severe reporting failure. In their 2004 study, Palmrose et al. define fraud as “intentional, non-GAAP financial reporting” (p. 63). As such, fraud indicates a lack of management integrity and thus further increases uncertainty about the reliability of management representation. Accordingly, the risk of audit perceived for this type of restatement should be higher than those perceived for other types of regular restatements. Thus we expect that restatements related to fraud will be associated with higher audit fees relative to restatements not related to fraud. The following hypothesis formalizes this expectation:

H1: Audit fees are higher for firms issuing restatements that are related to fraud relative to firms issuing restatements that are not related to fraud.

Our second hypothesis is concerned with a more detailed categorization of financial restatements. A firm’s restatement (whether fraud-related or not) may be classified into one of the three mutually exclusive categories based on the perceived severity of the amendment involved: restatements that affect reported net income (net income restatements), restatements that do not affect reported income (non-net income restatements), and technical restatements (not misstatements and arising from routine actions, such as compliance with new accounting rules and guidance).

Similar to Palmrose et al. (2004), we define a net income restatement as involving changes to revenue, cost of sales, operating expenses, gains or losses, and accruals. This type of restatement should be considered more serious than a non-net income restatement because it compromises the reliability of a firm’s performance measure, an item generally considered more important than others. A non-net income restatement includes reclassification of the balance sheet and statement of cash flow items, which should not affect the firm’s performance prospect substantially. Accordingly, a lower level of perceived severity will follow. A technical restatement includes merger- and acquisition-related items and effects of accounting principle changes. This type of restatement will be regarded as the least severe because it does not imply improper accounting. We based our classification of restatements on a firm’s audit information available in the *Audit Analytics* database (see Appendix).

As explained above and verified by Feldmann et al. (2009), if audit fees and financial restatements are positively associated, the extent of an increase in audit

fees would likely depend on the severity of the problems addressed in the restatement. In other words, given its greater negative implication for reporting credibility, a restatement with greater severity may lead to higher perceived audit risk, which in turn requires a higher level of audit scope to be planned. Hence, higher audit costs and fees are expected to occur for more severe types of restatements.

The following hypotheses formalize this prediction.

H2a: Audit fees are higher for firms issuing net income restatements relative to firms issuing either non-net income restatements or technical restatements.

H2b: Audit fees are higher for firms issuing non-net income restatements relative to firms issuing technical restatements, but lower relative to firms issuing net income restatements.

H2c: Audit fees are lower for firms issuing technical restatements relative to firms issuing restatements that are not technical.

3. Methodology

3.1 Sample Selection

The sample used in this study includes firms that restated financial statements in the years 2000 to 2005. Our sample consists of firms whose audit reports are available on *Audit Analytics*. It is noted that the *Audit Analytics* database includes stealth restatements, which are financial statements that are restated in a quarterly or annual report without formally filing a disclosure announcement in Form 8-K. Firms that changed auditors in this time period are excluded from the study to remove any effect that changes in auditors would have on audit fees.⁴

To estimate our multivariable models of audit fees, it was necessary to assure that each restatement firm had financial information available in the *Compustat* database. Thus excluding firms that restated but were not available in *Compustat*

⁴ In their 2009 study on financial restatements, Feldmann, et al. found that many companies in their sample, especially in the restatement sample, changed auditors within the period of investigation; most of these changes were from Big 4 audit firms to non-Big 4 firms. Consistent with this observation, their regression analyses on audit fees show that an auditor change has a significantly negative impact on audit fees, suggesting that this variable be controlled for when testing other factors affecting audit fees.

resulted in a sample of 2,114 restatement cases, which included multiple restatements from a given unique filer if the restatement incidences were related to separate issues.

Out of these total observations, 58 restatements (2.74%) are flagged as fraud-related restatements. Additionally, 1,208 (57.14%) are identified as net income restatements, 704 (33.30%) as non-net income restatements, and 202 (9.56%) as technical restatements. The entire sample population of audit fees from 2001 to 2006 consists of 33,911 firm-year observations, including both restatement and non-restatement firms.⁵

3.2 Regression Models

To test the hypotheses proposed earlier, we estimate multivariate regression models of audit fees as shown in Equations (1) and (2). Equation (1) tests for the relationship between the natural log of audit fees (*LAF*) in year *t* and the test variables of fraud-related restatements (*FRAUD*) and restatements other than frauds (*REST*) in the prior year, *t-1*. There is one-year lag between *LAF* and the two test variables (*FRAUD* and *REST*) as well as other control variables, as an attempt to draw a cause-and-effect relationship. As noted earlier, *FRAUD* and *REST* are mutually exclusive two distinct groups since we define *REST* as restatements filed for reasons other than frauds. Equation (1) is used to test our first hypothesis.

$$\begin{aligned}
 LAF_t = & \beta_0 + \beta_1 FRAUD_{t-1} + \beta_2 REST_{t-1} + \beta_3 SIZE_{t-1} + \beta_4 FOREIGN_{t-1} + \\
 & \beta_5 SEGNUM_{t-1} + \beta_6 ABSACC_{t-1} + \beta_7 RECV_{t-1} + \beta_8 INVT_{t-1} + \\
 & \beta_9 OPINION_{t-1} + \beta_{10} DY_{t-1} + \beta_{11} BIG4_{t-1} + \beta_{12} LVRG_{t-1} + \beta_{13} LOSS_{t-1} + \\
 & \beta_{14} CATA_{t-1} + \beta_{15} EBIT_{t-1} + \beta_{16} QUICK_{t-1} + Year\ fixed\ effects + \\
 & Industry\ fixed\ effects + \varepsilon
 \end{aligned} \tag{1}$$

Equation (2) tests for the relationship between the natural log of audit fees in year *t* and the test variables representing the presence of the three subgroups of non-fraud restatements (*INCREST*, *NONINCREST*, and *TECHREST*) in year *t-1*. The fraud-related restatement group (*FRAUD*) is also included here for a comparison purpose. As defined earlier, *INCREST* represents a group of restatements that affect reported net income, *NONINCREST* a group of restatements that do not affect reported income, and *TECHREST* a group of

⁵ The SEC rules requiring the disclosure of audit and non-audit service fees became effective for proxies filed on or after February 5, 2001.

restatements that include only technical issues. More detailed explanations of this classification can be found in Appendix (Mande & Son, 2011). Equation (2) is used to test our second hypotheses.

$$\begin{aligned}
 LAF_t = & \beta_0 + \beta_1 INCREST_{t-1} + \beta_2 NONINCREST_{t-1} + \beta_3 TECHREST_{t-1} + \\
 & \beta_4 FRAUD_{t-1} + \beta_5 SIZE_{t-1} + \beta_6 FOREIGN_{t-1} + \beta_7 SEGNUM_{t-1} + \\
 & \beta_8 ABSACC_{t-1} + \beta_9 RECV_{t-1} + \beta_{10} INVT_{t-1} + \beta_{11} OPINION_{t-1} + \beta_{12} DY_{t-1} + \\
 & \beta_{13} BIG4_{t-1} + \beta_{14} LVRG_{t-1} + \beta_{15} LOSS_{t-1} + \beta_{16} CATA_{t-1} + \beta_{17} EBIT_{t-1} + \\
 & \beta_{18} QUICK_{t-1} + Year\ fixed\ effects + Industry\ fixed\ effects + \varepsilon
 \end{aligned} \tag{2}$$

Table 1 provides descriptions of the dependent variable (*LAF*) and test variables (*FRAUD*, *REST*, *INCREST*, *NONINCREST*, and *TECHREST*) used in Equations (1) and (2) above. The primary purpose of these models is to determine whether the predicted fee differences hold after controlling for other factors known to influence audit fees. Accordingly, along with the test variables, various factors known as drivers of audit fees are included as control variables, whose definitions are also provided in Table 1.

The control variables in Equations (1) and (2) are related to characteristics of the audit itself, the auditor and the client firm, closely modeled after Francis and Wang (2005). More specifically, client firms with larger, more complex operations, proxied by *SIZE*, *FOREIGN*, *SEGNUM*, *ABSACC*, *RECV* and *INVT*, are expected to create greater audit complexity and require lengthier audit process, thereby associated with higher audit fees. Higher audit fees are also expected for firms with qualified audit opinions (*OPINION*) since qualified opinions may require additional audit effort to be planned. Firms with December fiscal year ends (*DY*) are also expected to have higher audit fees due to peak-season audit staff constraints. The same expectation is made for firms engaging Big 4 audit firms (*BIG4*) as it is well known that large auditors have a fee premium relative to smaller auditors due to their reputation and quality of service. Additionally, clients with higher litigation risk, proxied by *LVRG*, *LOSS* and *CATA*, may experience higher audit fees due to the higher assessed audit risk or fee premium charged by auditors who take on a potentially insolvent company (Feldmann et al., 2009). In contrast, clients with lower litigation risk (*EBIT* and *QUICK*) are expected to have lower audit fees. Finally, our regression models also include indicator variables for year and industry (*Year and industry fixed effects*) to control for temporal

variations or general trends in audit fees across the sample period and industry (measured by two-digit SIC codes).

Table 1:
Definitions of variables

Variable	Expected Sign	Definition
<i>Dependent Variable</i>		
<i>LAF</i>		Natural log of audit fees in millions of dollars;
<i>Test Variables</i>		
<i>FRAUD</i>	+	1 if the restatement is related to a fraud, and 0 otherwise;
<i>REST</i>	+	1 if a firm announces a non-fraud restatement, and 0 otherwise;
<i>INCREST</i>	+	1 if the restatement has impact on net income, and 0 otherwise;
<i>NONINCREST</i>	+	1 if the restatement has no impact on net income, and 0 otherwise;
<i>TECHREST</i>	+	1 if the restatement is only a technical issue, and 0 otherwise;
<i>Audit and Auditor Characteristics</i>		
<i>SIZE</i>	+	Natural logarithm of the firm's market value of equity;
<i>FOREIGN</i>	+	Ratio of sales made by foreign subsidiaries to total sales;
<i>SEGNUM</i>	+	Number of business segments;
<i>ABSACC</i>	+	Absolute value of total accruals divided by total assets;
<i>RECV</i>	+	Ratio of total receivables to total assets;
<i>INVT</i>	+	Ratio of total inventory to total assets;
<i>OPINION</i>	-	1 if unqualified opinion, and 0 otherwise;
<i>DY</i>	+	1 if December fiscal year end, and 0 otherwise;
<i>BIG4</i>	+	1 if Big 4 auditor, and 0 otherwise;
<i>Firm Characteristics</i>		
<i>LVRG</i>	+	Ratio of debt to total assets;
<i>LOSS</i>	+	1 if earnings before extraordinary items is less than 0, and 0 otherwise;
<i>CATA</i>	+	Ratio of current assets to total assets;
<i>EBIT</i>	-	Ratio of earnings before interest and tax to total assets; and
<i>QUICK</i>	-	Ratio of current assets (less inventory) to current liabilities.

4. Results

4.1 Descriptive Statistics

Table 2 presents the summary statistics (mean, median, and standard deviation) of variables for the sample data used in this study. Audit fees for 2001 to 2006 had a mean of \$1.154 million and a median of \$336 thousand. Table 2 also shows that 56.7% of the firm years received unqualified opinions from auditors and 74.9% of the observations were audited by a Big 4 firm. In addition, 40.1% involved earnings losses, and the average return on total assets (*EBIT*) was -27.2% with a median of 4.4%.

Table 2:
Descriptive statistics ($n = 33,911$)

Variable	Mean	Median	Std. Dev.
<i>AF</i> (\$ millions)	1.154	0.336	2.431
<i>SIZE</i>	5.373	5.483	2.64
<i>FOREIGN</i>	0.08	0	0.326
<i>SEGNUM</i>	2.187	1	1.75
<i>ABSACC</i>	0.427	0.07	1.388
<i>RECV</i>	0.157	0.116	0.161
<i>INVT</i>	0.094	0.028	0.135
<i>OPINION</i>	0.567	1	0.496
<i>DY</i>	0.7	1	0.458
<i>BIG4</i>	0.749	1	0.434
<i>LVRG</i>	0.789	0.538	1.577
<i>LOSS</i>	0.401	0	0.49
<i>CATA</i>	0.445	0.449	0.3
<i>EBIT</i>	-0.272	0.044	1.362
<i>QUICK</i>	2.105	1.153	3.211

4.2 Multivariate Tests of Hypotheses 1 and 2

Table 3 provides the ordinary least square regression results for the two models used to test our hypotheses. The table shows the coefficient estimates and their associated t-statistics for Equations (1) and (2), by which we attempted to test the relationships between audit fees and different categories of restatements, relative to the control sample (non-restatement firms).

Table 3:
OLS regression results for Equations (1) and (2)
Dependent Variable: LAF

Variable	Predicted Sign	Equation 1		Equation 2	
		Estimate	t-value	Estimate	t-value
<i>Intercept</i>	?	8.986	256.14***	8.988	256.20***
<i>FRAUD</i>	+	0.261	3.02***	0.334	3.69***
<i>REST</i>	+	0.169	11.29***	-	-
<i>INCREST</i>	+	-	-	0.201	10.47***
<i>NONINCREST</i>	+	-	-	0.146	5.87***
<i>TECHREST</i>	+	-	-	0.034	0.69
<i>SIZE</i>	+	0.533	275.99***	0.533	275.95***
<i>FOREIGN</i>	+	0.235	20.86***	0.235	20.86***
<i>SEGNUM</i>	+	0.044	19.67***	0.044	19.65***
<i>ABSACC</i>	+	-0.024	-4.80***	-0.024	-4.78***
<i>RECV</i>	+	0.026	0.89	0.026	0.88
<i>INVT</i>	+	-0.194	-5.10***	-0.194	-5.11***
<i>OPINION</i>	-	-0.143	-18.44***	-0.143	-18.46***
<i>DY</i>	+	0.137	16.67***	0.137	16.63***
<i>BIG4</i>	+	0.303	30.90***	0.303	30.88***
<i>LVRG</i>	+	0.006	1.98**	0.006	1.97**
<i>LOSS</i>	+	0.216	24.85***	0.216	24.84***
<i>CATA</i>	+	0.616	31.53***	0.615	31.50***
<i>EBIT</i>	-	-0.005	-1.03	-0.005	-1.02
<i>QUICK</i>	-	-0.043	-29.87***	-0.043	-29.84***
F-Value		1860.52***		1818.90***	
Adjusted R ²		0.825		0.825	
N		33911		33911	

*, **, *** represent significance at 0.10, 0.05, and 0.01 levels, respectively.

In Equation (1), we tested the relationship between audit fees and fraud-related restatements (*FRAUD*) as well as the relationship between audit fees and restatements in general which do not involve fraud (*REST*). The estimated regression model was highly significant ($p < 0.0001$) with an adjusted R² of 0.8251,

indicating that 82.51% of the variation in audit fees was explained by the two test variables and control variables included. We find that the coefficient for the test variable *FRAUD* is positive (0.261) and statistically significant ($p = 0.0026$). This indicates that firms with fraud-related restatements experience higher audit fees than those with no restatements, after filing their restatement. The coefficient for another test variable *REST* is also positive (0.169) and significant ($p < 0.0001$). This finding is comparable to Feldmann et al.'s (2009) and suggests that in general, financial restatements are positively associated with audit fees, i.e. the presence of restatements leads to higher audit fees in a subsequent period.

Perhaps a more interesting observation would be whether fraud-related restatements will lead to higher audit fees than non-fraud restatements, as predicted in our first hypothesis. As shown in Table 3, the coefficient of *FRAUD* (0.261) is greater than that of *REST* (0.169) and an F-test revealed that this difference is statistically significant ($p < 0.01$). This evidence supports H1 and suggests that fraud-related restatements have a significant incremental effect on audit fees.

Also presented in Table 3 are the results for the second model used to test our second hypotheses. In Equation (2), we tested the relationship between audit fees and the three subgroups of restatements which were categorized by the level of severity (*INCREST*, *NONINCREST* and *TECHREST*). The group of fraud-related restatements (*FRAUD*) was also included in this model to compare its effects with those of other subgroups. The regression model was statistically significant ($p < 0.0001$) and its adjusted R^2 was 0.8251, which is identical to that of the first model.

As in the first model, the *FRAUD* variable was found significant and positively related to audit fees, with a coefficient of 0.334 ($p < 0.0002$). More importantly, this variable appeared to have a more positive association with audit fees than all the other test variables included in the model. This implies that auditors are more concerned about fraudulent financial reporting than any other types of reporting failures. Among the variables of main interest in the second model, *INCREST* and *NONINCREST* had a positive and significant coefficient with a value of 0.201 and 0.146 respectively ($p < 0.0001$ for both), whereas the coefficient of *TECHREST* (0.034) did not reach statistical significance ($p = 0.489$) although it has a positive sign.

A series of F-tests comparing the coefficients of *INCREST*, *NONINCREST* and *TECHREST* revealed that net income restatements have higher fees than non-net income restatements ($p < 0.05$) and that non-net income restatements have

higher fees than technical restatements ($p < 0.01$). These results indicate that the different categories of restatements with varying degrees of severity have differential effects on audit fees. As predicted, the most severe form of restatement, net income restatements, was more positively associated with audit fees than either of the less severe forms of restatements. Technical restatements were least positively associated with audit fees, while non-net income restatements fell in between the other two categories in terms of their effects on audit fees. These findings support H2a, H2b and H2c.

5. Conclusions

This study confirms Feldmann et al.'s (2009) initial evidence that firms announcing financial restatements tend to experience higher audit fees in a subsequent period than those with no financial restatements. Feldmann et al. suggest that higher audit fees experienced by restating firms may reflect an additional cost that firms bear when there is a reporting failure, as auditors likely assign a higher audit risk to clients with financial reporting errors. Using an expanded sample of restatements which includes observations from multiple years rather than a single year, we confirmed the generalizability of this idea. Throughout the entire sample period, we found a significantly positive association between audit fees and financial restatements, regardless of the type of restatement (except for technical), which implies that auditors are more likely to increase their audit fees in response to the filing of restatements by firms.

This study also extends Feldmann et al.'s (2009) work by examining the potentially differential effects of different types of restatements on audit fees. It was found that the extent that audit fees increase depends on the level of severity associated with the restatement. Relative to control firms that had no restatements, firms with restatements affecting net income had significantly higher audit fees in the following year, perhaps due to the increased audit risk perceived by auditors. Firms issuing restatements that did not affect net income also had higher fees, but with a lesser extent. Restatements related to technical issues, on the other hand, did not lead to statistically different fees from those of control firms, but significantly lower fees than those of the other two categories of restatements. Finally, restatements related to fraud led to higher fees than any other categories of restatements included in this study. We believe this evidence is of importance to the management of restating firms because it suggests that auditors would likely assess their clients' audit risk differentially depending on the severity of the

restatements identified. Accordingly, the management needs to know that they could suffer significantly higher audit costs and fees in addition to other types of costs (e.g., stock price declines, potential loss from lawsuits, etc.) if the reporting failure they need to address through financial restatements involves greater severity (e.g., fraud).

As noted earlier, this study benefited from the SEC's decision to mandate registrants to disclose audit fees paid to auditors and also from their regulative effort to increase financial reporting scrutiny on both management and auditors. The SEC's mandated public disclosure of audit fees made such informative data more readily accessible and their increased regulatory scrutiny on firms' reporting process resulted in a higher number of detections of financial reporting failures than ever before. These two critical events together allowed us to test and find a potentially important relationship between audit fees and restatements, which otherwise may not be easily discovered.

One limitation of this study is that while it examined the effects of restatements that changed net income, it did not differentiate between the directions of the change, i.e. an increase or decrease in net income. This was due in part to the time constraints we experienced with the large sample size, as it would have been difficult to subdivide the numerous observations further based on the direction of the income change. This concern may be addressed in future research with an additional effort in classification. Future research may also expand our research model to include other potentially relevant factors, such as a stealth restatement (e.g., does a stealth restatement lead to higher audit fees than a more appropriate type of disclosure of restatement, such as filing a Form 8-K or a Form 10-K/A? are stealth restatements more likely to be observed with severe forms of restatements, such as fraud-related or income-decreasing restatements?)

Although the number of restatements has fallen in the past two years, the numbers are still at historically high levels. By demonstrating the increase in audit fees following restatements, this study contributes to the growing body of research on the financial and reputational ramifications of restatements. In particular, this study shows that more severe types of restatements are more positively associated with audit fees. Firms are, thus, informed that while there may be a financial cost to most types of restatements, those resulting from willful fraud or those causing an income change could carry an additional penalty. With a knowledge of the growing costs of misstating financials, firms may be motivated to avoid unnecessary restatements by enhancing their internal controls or by taking other

measures to accurately disclose their financial condition to the investing public in their initial report.

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APPENDIX: Restatements Classification

INCOME	NOINCOME	TECH
Capitalization of expenditures issues	Accounts/loans receivable, investments & cash issues	Acquisitions, mergers, disposals, re-org acct issues
Deferred, stock-based and/or executive comp issues	Audit or auditor related restatements or non-reliance	Acquisitions, mergers, only (subcategory) acct
Depreciation, depletion or amortization errors	Audit (or) consent re opinion in f/s issues	GAAP- Changes in Acct Principles FASB/EITF or Foreign GAAP
Expense (payroll, SGA, other) recording issues	Balance sheet classification of assets issues	Others without explanation
Gain or loss recognition issues	Capital adequacy and calculation issues	Restatements made while in bankruptcy/receivership
Inventory, vendor and/or cost of sales issues	Cash flow statement (SFAS 95) classification errors	Retrospective revisions to p/y financials for consistency
Lease, leasehold and FAS 13 (98) only	Comprehensive income issues	Unspecified restatement adjustments
Liabilities, payables, reserves and accrual estimate failures	Consolidation issues incl Fin 46 variable interest & off-B/S	
PPE intangible or fixed asset (value/diminution) issues	Consolidation, foreign currency/inflation (subcategory) issue	
Revenue recognition issues	Debt and/or equity classification issues	
Tax expense/benefit/deferral/ other (FAS 109)	Debt, quasi-debt, warrants & equity (BCF) security issues Derivatives/hedging (FAS 133)	
	EPS, ratio and classification of income statement issues	
	Fin Statement, footnote & segment disclosure issues	
	Financial derivatives/hedging (FAS 133) acct issues	
	Foreign, related party, affiliated, or subsidiary issues	
	Foreign, subsidiary only issues (subcategory)	
	Intercompany, investment in subs./affiliate	
	Lease, SFAS 5, legal, contingency and commitment issues	
	Loan covenant violations/issues	
	Material Weakness - Section 404 or 302 issues	
	Pension and other post-retirement benefit issues	
	Proforma financial information reporting issues	
	Registration/security (incl. debt) issuance issues	

This classification is based on the field 'RES_ACC_RES_TITLE_LIST' in Audit Analytics. If RES_ACC_RES_TITLE_LIST contains any item of INCOME,

then the observation is classified into INCOME. If RES_ACC_RES_TITLE_LIST contains any item of NOINCOME, but not any of INCOME, then the observation is classified into NOINCOME. If RES_ACC_RES_TITLE_LIST contains only items of TECH, then the observation is classified into TECH.