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Association between PCAOB international registration and Accounting Restatements

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Abstract

In recent times, many studies have investigated the impact of registration with the Public Company Accounting Oversight Board (PCAOB). The PCAOB allows the registration of audit firms from non-US countries. In this paper, we examine the association between the registration of non us companies with the PCAOB and accounting restatements due to the misapplication of accounting principles. The sample will cover all registered firms in question from 2012 to 2021. A logistic regression model was fitted to determine the probability of restatement as a function of PCAOB international registration while controlling for several other factors. Our study finds an overall decrease in firm account restatements in recent years. Also, we found a significant reduction in account restatement post-PCAOB registration.

Keywords: PCAOB, Accounting Restatement

INTRODUCTION

We investigate the relationship between a number of outcome-based metrics of audit quality and PCAOB inspection outcomes in order to determine whether PCAOB inspections can discriminate audit quality throughout the time investigated. The American Institute of Certified Public Accountants (AICPAs) peer review for public company auditors was found to be inefficient as an oversight tool by the U.S. Congress in 2002 as a result of prominent corporate governance failures. In order to regulate the auditing sector, the Sarbanes-Oxley Act (SOX) established the Public Company Accounting Oversight Board (PCAOB). Given the significant change in the accounting companies' regulatory environment, it is crucial to comprehend the PCAOB inspection procedure.

Registration, inspections, standard-setting, and enforcement are the four main program areas of the PCAOB. Inspections are the key component in the accounting profession's transition from self-regulation to independent regulation within the four categories (DeFond, 2010). The PCAOB conducts annual inspections of registered public accounting firms that produce audit reports for more than 100 publicly traded corporations, and triennial examinations of organizations with fewer than 100. Despite the fact that inspections are a key component of the PCAOB, previous research has shown that inspection reports are not helpful to customers in terms of selecting an auditor (Lennox and Pittman, 2010). However, Abbott et al. (2012) discover that for triennially inspected auditors, the PCAOB inspection

report's usefulness (in terms of auditor selection) depends on the report's severity.

Since the PCAOB allocates the majority of its resources to the inspection division and has unparalleled access to clients' and documents' sensitive information when conducting inspections, we anticipate that the results of PCAOB inspections will be related to audit quality. PCAOB inspection reports, however, may not be associated with audit quality for a number of reasons, including their representativeness and substance. Since the client base is sizable and the PCAOB inspects auditors on a yearly basis, we anticipate that representativeness will make it even more difficult for the reports to discriminate between audit quality throughout the period inspected. Additionally, there is only a small range in the seriousness of the PCAOB inspection reports for accountants who are audited annually, but there is a large range for auditors who are evaluated three times a year. Therefore, we investigate the relationship between PCAOB inspection results and audit quality.

Numerous research look at the PCAOB's external monitoring system. When small auditors leave the market and their clients switch to the successor auditor, the audit quality is higher, according to DeFond and Lennox's (2011) assessment of the registration program following SOX and PCAOB. Carcello et al. (2011) look into the Big 4 auditors particularly and discover that the PCAOB inspection improved the audit quality (measured by abnormal accruals). We concentrate on the direct relationship between the PCAOB inspection report outcomes and the underlying audit quality of an auditor's



portfolio of clients, as opposed to the two studies that look at general audit quality surrounding the adoption of SOX and/or the PCAOB.

For a number of reasons, we think it's crucial to investigate if PCAOB inspection reports are related to actual audit quality in order to better comprehend how this rule will be affected. First, information about audit quality obtained from PCAOB inspection results can have a beneficial and long-lasting impact on the incentives of auditing firms to pursue high quality. Second, the PCAOB is crucial for enhancing public perceptions of audit quality in addition to real audit quality improvement (Francis, 2004). Public confidence in financial reports is boosted by the fairness and credibility (i.e., capacity to identify audit quality) of PCAOB inspection outcomes. Third, any shortcomings found during the inspection may result in PCAOB enforcement procedures such as investigations, hearings, sanctions, and maybe disciplinary action against the auditor. PCAOB inspection results are sent to the SEC and pertinent state regulatory bodies. Understanding the capacity of the reports to identify audit quality during the time inspected is crucial given the significant role that PCAOB inspection results play as an input into other regulatory systems. Thus, in this study, we used the restatement *due to accounting application error as a measure* of audit quality and then investigates the relationship with PCAOB international registration.

Restatement Measurements and Research Hypothesis

Restatement

Restatements of audited financial statements are direct indicators of audit quality because they indicate auditor errors, that is, an unqualified (clean) audit report is issued when a firm's financial statements have material misstatements (DeFond and Zhang, 2014). The occurrence of restatements also indicates auditors' improper client acceptance and continuance processes in accepting high-risk clients (Raghunandan et al., 2003) and their lack of specific knowledge of client businesses, especially in cases of new clients (Stanley and DeZoort, 2007). Thus, in this paper, we will use the restatement of audited financial statements as a measure of audit quality.

Restatements in financial reporting can be categorized as either accounting errors (inadvertent misapplications of GAAP) or irregularities (intentional misreporting). In restatement research, it's critical to distinguish between errors and irregularities, according to Hennes et al. (2008). They state that independent investigations by "the SEC, the Attorney General's Office, or by the company's Board" constitute accounting errors. They discover that restatements are more often caused by unintentional mistakes than by intentional irregularities based on this indicator of irregularities. However, the repercussions of deception are much more severe than those of mistakes. According to their findings, organizations that record restatements had higher rates of CEO/CFO change due to deliberate errors. Market response to restatements because of anomalies was minus

14% compared to minus 2% for errors. And practically all instances of the CEO or CFO being replaced following a restatement came as a result of fraud.

When auditing a company that would later disclose a restatement owing to irregularities vs one where honest mistakes were made, auditors may encounter very different situations. For instance, in 2003, LeNature, Inc., a sizable beverage manufacturer with headquarters in LaTrobe, Pennsylvania, USA, was being audited by Ernst & Young, one of the Big Four auditing firms. The CFO was questioned by the lead audit partner about whether he knew about or had reason to believe any fraudulent activities within the company. Honestly stating his doubts about the claimed sales revenue, the CFO responded. Gregory Podlucky, the CEO, refused to give important documentation to back up the reported sales figures.

Examples of error-related accounting restatements are given by Hennes et al. (2008). Because management discovered a mistake in spreadsheets combining tiny project balances, the CECO Environmental Corporation had to restate its financial accounts in 2005. This was done in order to properly account for income. Another illustration is Applebee's International, which corrected its accounting treatment of leases when the SEC clarified its view on how to address specific lease aspects by restating its financial statements. Numerous other businesses in the culinary and retail sectors also changed how they treated leases in their accounting. In either instance, there was no proof that the restatement was the result of willful misreporting or overly aggressive accounting decisions. It's possible that the audit firms in these engagements recognized the potential for these mistakes and increased their risk assessments and testing as a result. The original financial statements obtained a clean audit opinion and the errors were inadvertent, therefore it's also plausible that the audit companies failed to find any problems that called for further investigation.

PCAOB Registration

The PCAOB was founded as a nonprofit corporation under Section 101 of the Sarbanes-Oxley Act (SOX) of 2002. The PCAOB comprises four core programs: (1) registration with the PCAOB; (2) inspections; (3) standard setting; and (4) enforcement to carry out its function as the watchdog for audit firms (Abbott et al., 2013). According to SOX, a company must be registered with the PCAOB in order to draft or publish an audit report for American issuers, brokers, or dealers. Foreign audit firms with U.S. issuer clients must also register with the PCAOB, according to Section 106(a) of SOX. Additionally, the PCAOB permits registration by domestic and international audit companies that don't currently carry out any audit work for American issuers, brokers, or dealers. Even though it is not required under SOX or PCAOB regulations, audit firms may choose to register "simply to be in a better position to compete for future contracts for which registration is necessary" (PCAOB Release 2003-011E).

Audit firms must complete and submit an electronic application form that has nine required components and one optional tenth part in order to register with the PCAOB (PCAOB Form 1 Sample). The firm's location, legal structure, affiliated entities, licenses, and contact and signatory staff must all be fully disclosed in Part I. Applying firms must include all existing clients who are U.S. issuers, brokers, or dealers in Parts II and III, along with the costs associated with these clients. Fees must be divided into categories for audit services, non-audit services, and other accounting services. A list of U.S. issuers, brokers, or dealers to whom the company plans to offer audit services in the upcoming year is furthermore required for Parts II and III. The applicant's quality control measures for its accounting and auditing operations are described in Part IV in "a narrative, short description,... including procedures used to monitor compliance with independence standards" (PCAOB Form 1 Sample, p.13). Firms are required to declare any ongoing criminal, civil, or administrative legal actions involving the firm or affiliated individuals in Part V; any audit-related disputes with issuer, broker, or dealer clients in Part VI; and the list of affiliated accountants for the application firm in Part VII. Part VIII mandates that applying firms consent to give testimony or records in response to inquiries from the PCAOB. They must also acknowledge that failure to comply could result in registration cancellation for all of their affiliated staff. Part X is for further exhibits, while Part IX attests to the application's accuracy (Abbott et al., 2013).

According to Section 101 of SOX, PCAOB must inspect registered auditors with more than 100 issuer customers in the United States annually, and registered auditors with less than 100 clients must be inspected at least once every three years (Calderon and Song, 2014). During the inspection procedure, quality control flaws are found and discretely informed to firm staff. These flaws are kept a secret for a full year. If businesses work diligently to fix the problems, the report is kept confidential.

In 2004, the PCAOB first began performing inspections. However, because to legislative limitations, questions of sovereignty, or opposition from local authorities, the PCAOB is unable to undertake inspections in several non-U.S. jurisdictions. The PCAOB cannot access the data it needs to scrutinize the audit firms in these non-US jurisdictions. Inspections, according to the PCAOB, are essential to "defend investors' interests and serve the public interest in the compilation of relevant, accurate, and impartial audit reports," particularly when public businesses are utilizing American capital markets (Section 101 of SOX). Despite taking this stance, the PCAOB up until recently allowed audit firms to register in states where it was not authorized to conduct inspections (Abbott et al., 2013).

Using a sample of post-SOX data, Blankley, Hurtt, and MacGregor (2012) employ a logit model to examine the relationship between audit fees and the risk of following restatements in general. They discover a bad correlation between audit fees collected in the years before restatements were filed and restatements that followed. Their findings

support a logical hypothesis that generally speaking, as audit firms charge higher audit fees, which are probably tied to more audit work accomplished, the likelihood of future restatements is decreased (Lobo and Zhao, 2013). Both articles employed restatements without categorizing them by the basis for the restatement.

Research Hypothesis Development

In 2004, the PCAOB first began performing inspections. However, because to legislative limitations, questions of sovereignty, or opposition from local authorities, the PCAOB is unable to undertake inspections in several non-U.S. jurisdictions. The PCAOB cannot access the data it needs to scrutinize the audit firms in these non-US jurisdictions. Inspections, according to the PCAOB, are essential to "defend investors' interests and serve the public interest in the compilation of relevant, accurate, and impartial audit reports," particularly when public businesses are utilizing American capital markets (Section 101 of SOX). Despite taking this stance, the PCAOB up until recently allowed audit firms to register in states where it was not authorized to conduct inspections. According to Fung et al. (2017), joining the PCAOB without inspections may increase the risk of reputational harm for foreign audit firms that are PCAOB-registered if they fail to maintain good audit quality.

One benefit of registering with a strict regulator like the PCAOB is that the registration process can assist audit companies in identifying and resolving quality control problems, enhancing audit quality. "Provide an overview of firm's policies with respect to independence, honesty, and objectivity; engagement performance; personnel management; acceptance and continuity of clients and engagements; and monitoring" is what the PCAOB registration procedure demands of audit companies (PCAOB Release 2003-011E). Additionally, the PCAOB mandates that audit companies self-evaluate their quality control procedures and that they, along with any related individuals, must cooperate with the PCAOB when it requests testimony or supporting documents. Additionally, updated data must be provided by registered audit firms at least once a year or as frequently as necessary. The periodic reporting obligations provide the PCAOB with information on the audit firm's and its staff's fundamental demographic changes, audit procedures, and audit quality (Abernathy et al., 2013). Additionally, PCAOB-registered businesses are required to submit yearly updates proving compliance with these regulations. Audit firms are required to become familiar with higher standards of financial reporting to register with the PCAOB. As a result, improved audit quality for registered audit companies should be connected with the incentive to maintain a reputation as well as self-assessment of quality control of audit processes and knowledge discovery during registration. These justifications lead us to the following hypotheses:

Hypothesis 1: *The incidence of restatement for auditing firms that register with the PCAOB is lower after registration than before registration.*

Sample and Research Design

Sample

We obtained our sample data from Audit Analytics which has been used in previous studies. We extracted data on audit opinions, audit directors, and restatement. From our initial sample of 11,204 company-year observations across 88 First 3-digits NAICS listed industries, we eliminated 2,170 observations for industries with less than the minimum of 10 observations in a given year. This reduces the number of industries to 29 and a total of 9,034 company-year observations. The reduced dataset was found to be highly unbalanced, with more non-restated accounts than restated accounts (8974:170, 98%:2%). Analysis performed on this type of dataset will predict more non-restated accounts than restated accounts. Thus, we randomly selected the same size as in the restated accounts. This leaves us with a final sample size of 340 used. The detailed sample selection table is presented below.

Panel A: Sample Selection (the unit of observation is a company year)

Listed number of observations during (2012 – 2022)	11,204
Observations from industries with less than eight observations in an industry-year	(2,170)
Observations from restated accounts	170
Observations from non-restated accounts (not used)	(8,804)
Random sample from non-restated accounts (used)	170

Model

The conceptual framework of the restatement model is given as

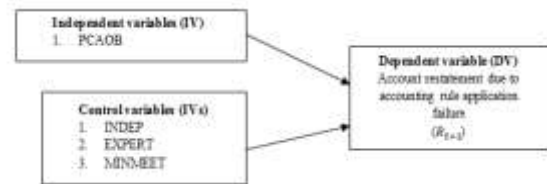


Figure 1: Conceptual Framework

The logistic regression model of financial restatement and audit fees, non-audit fees auditors' experience, year of audit is given below as

$$R_{t+1} = \beta_0 + \beta_1 PCAOB_t + \sum_{t=1}^{10} \beta_t Year_t + \gamma \sum Controls + e_t$$

where

$$R_{t+1} = \begin{cases} 1, & \text{Account restatement due to accounting rule application failures} \\ 0, & \text{otherwise} \end{cases}$$

β_0 is the intercept, $\sum_{t=1}^9 \beta_t$ is the effect of each fiscal year which serves as trend effect, β_1 is the effect of PCAOB = 1 if the client is audited by a PCAOB-registered audit firm after the firm registered with the PCAOB, and 0 otherwise, γ is the effect of the control variables which include INDEP = 1 if all audit committee members are independent by BRC definition, else 0, EXPERT = 1 if audit committee includes at least 1 director with financial expertise per the BRC's definition, else 0; and MINMEET = 1 if audit committee meets at least four times annually during the sample year, else 0.

Results

Panel B: Table 2: Univariate analysis results

Variable Name	Restatement Firms (n=170)			Control (n=170)			Difference	
	Mean	Median	SD	Mean	Median	SD	Diff in Means	Mann-Whitney
PCAOB	0.88	1.00	0.33	0.99	1.00	0.11	-0.11	-13.04***
INDEP	0.35	0.00	0.48	0.37	0.00	0.48	-0.02	-0.54
EXPERT	0.22	0.00	0.42	0.25	0.00	0.43	-0.03	-0.91
MINMEET	0.07	0.00	0.26	0.08	0.00	0.26	-0.01	-0.50

Sig. 1% ***, 5% **, 10% *, >10%, SD: Standard Deviation.

Table 2 results showed that there were more registered firms with the PCAOB in the control group than in the restated groups. This implies that firms that are registered with PCAOB are less likely to have restatement. The difference of 11% on average is significant ($p < .001$). However, for audit firms with independent auditors as defined in BRC, board members, including experts, and having at least five meetings in a year also have more firms in the control group than the restated group on average but the difference is not significant at the 5% level.

Table 3: Correlation Matrix

Variable	Restatement	PCAOB	INDEP	EXPERT	MINMEET
Restatement	1.00				
PCAOB	-0.22***	1.00			
INDEP	-0.02	0.03	1.00		
EXPERT	-0.03	0.04	-0.37	1.00	
MINMEET	-0.02	0.08	0.20	-0.11	1.00

Sig. 1% ***, 5% **, 10% *, >10%.

Table 4: Logistics regression

$$R_{t+1} = \beta_0 + \beta_1 PCAOB_t + \sum_{t=1}^{10} \beta_t Year_t + \gamma \sum Controls + e_t$$

	Expected Sign	Estimate	Std. Error	Z	P-value	Sig	Decision
(Intercept)		2.870	0.839	3.423	0.0006	***	
PCAOB	-ve	-2.141	0.780	-2.746	0.0060	**	Accepted
INDEP	-ve	-0.234	0.281	-0.833	0.4047		NS
EXPERT	-ve	-0.282	0.310	-0.909	0.3635		NS
MINMEET	-ve	-0.113	0.459	-0.246	0.8059		NS
2013		-1.833	0.516	-3.554	0.0004	***	
2014		-0.715	0.450	-1.588	0.1123		
2015		-0.609	0.455	-1.338	0.1808		
2016		0.529	0.626	0.845	0.3979		
2017		-1.318	0.543	-2.430	0.0151	*	
2018		-1.568	0.546	-2.871	0.0041	**	
2019		-0.072	0.546	-0.132	0.8947		
2020		0.460	0.524	0.877	0.3805		
2021		-2.387	0.842	-2.836	0.0046	**	

Sig. 1% ***, 5% **, 10% *, >10%, NS: Not Significant. Year-2012 is the base year.

The year effects showed that there is an overall decrease in accounting restatements over the years, starting from the year 2013 upward when compared to the base year 2012, except in the years 2016 and 2020. The primary hypothesis tested: *The incidence of restatement for auditing firms that register with the PCAOB is lower after registration than before registration* is accepted at the 5% level. There is about an 11% decrease in the percentage of restated firm accounts post-PCAOB registration.

Conclusion

There are not many studies on the PCAOB registration process, despite the expanding body of literature on the factors that influence the PCAOB inspection process and how it affects audit quality (Abernathy et al., 2013). Our research

is an effort to close this gap. We specifically look into the effects of PCAOB registration on audit quality as measured by accounting restatement. Our study finds an overall decrease in firm account restatements in recent years. Also, we found a significant reduction in account restatement post-PCAOB registration

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