BIG 4 GLOBAL NETWORKS: DEGREE OF HOMOGENEITY OF AUDIT QUALITY AMONG AFFILIATES AND RELEVANCE OF PCAOB INSPECTIONS

by

M. Paulina Kassawat

A Dissertation Submitted to the Faculty of

the College of Business

in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

Florida Atlantic University

Boca Raton, Florida

May 2015

BIG 4 GLOBAL NETWORKS: DEGREE OF HOMOGENEITY OF AUDIT QUALITY AMONG AFFILIATES AND RELEVANCE OF PCAOB INSPECTIONS

by

M. Paulina Kassawat

This dissertation was prepared under the direction of the candidate's dissertation advisor, Dr. Julia Higgs, School of Accounting, and has been approved by the members of her supervisory committee. It was submitted to the faculty of the College of Business and was accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

SUPERVISORY COMMITTEE:

Julia L. Higgs, Ph.D.
Dissertation Advisor

Jian Cao, Ph.D.

George Young, Ph.D.

Kimberly Dunn, Ph.D.
Director, School of Accounting

Daniel Gropper, Ph.D.
Dean, College of Business

Deborah L. Floyd, Ed.D.
Dean, Graduate College

Date 3/30/15

ACKNOWLEDGEMENTS

I would like to thank my dissertation committee members, Dr. Julia Higgs, Dr. Jian Cao, and Dr. George Young for their guidance, insight, and time invested in the development of my dissertation. I sincerely thank Dr. Higgs for being my doctoral program advisor and the chair of my dissertation committee. Her support and mentorship has been invaluable for my professional development.

I also want to thank my fellow Ph.D. students; I appreciate having your friendship during this journey. Lastly, I would like to thank my family for all their support, encouragement, and patience during these years.

ABSTRACT

Author: M. Paulina Kassawat

Title: Big 4 Global Networks: Degree of Homogeneity of Audit Quality among Affiliates and Relevance of PCAOG Inspections

Dissertation Advisor: Julia L. Higgs

Degree: Doctor of Philosophy

Year: 2015

The Big 4 global networks (Deloitte, Ernst & Young [E&Y], KPMG, and PricewaterhouseCoopers [PwC]) market themselves as providers of worldwide seamless services and consistent audit quality through their members. Under the current environment in which these auditors operate, there are three types of global network members: inspected non-U.S. affiliates (inspected affiliates, hereafter), non-inspected non-U.S. affiliates (non-inspected affiliates, hereafter), and inspected U.S. offices (U.S. offices, hereafter). The recent suspension of the China-based Big 4 affiliates from auditing U.S.-listed companies calls into question whether these global networks can deliver the same level of audit quality across all their members and whether those located in jurisdictions denying access to the Public Company Accounting Oversight Board (PCAOB or Board, hereafter) to conduct inspections may benefit from such inspections. This study examines the effect of being an affiliate and the effect of PCAOB inspections on perceived audit quality. I use earnings response coefficients (ERCs) as a proxy for perceived audit quality. This study finds no evidence that affiliates have lower perceived

audit quality than that of the U.S. offices. Additionally, I find no evidence that PCAOB inspected members have higher perceived audit quality than that of the non-inspected members. These results are robust to different measures of unexpected returns, unexpected earnings, and to using alternative approaches to determine when an auditor has been inspected. These findings are relevant because they provide evidence that the Big 4 global networks are delivering on their promise of providing similar audit quality through all their members. Additionally, the lack of results of the effect of PCAOB inspections on audit quality is inconsistent with accountability theory but may suggest that the internal review systems and other internally developed mechanisms by the global networks are as effective as external accountability measures.

DEDICATION

To my family

BIG 4 GLOBAL NETWORKS: DEGREE OF HOMOGENEITY OF AUDIT QUALITY AMONG AFFILIATES AND RELEVANCE OF PCAOB INSPECTIONS

LIST OF TABLES

CHAPTER 1: INTRODUCTION

The Big 4 global networks (Deloitte, Ernst & Young [E&Y], KPMG, and PricewaterhouseCoopers [PwC]) market themselves as providers of worldwide seamless services and consistent audit quality through their members. This branding as global standardized service providers started during the 1990s (Hopwood, 1998).[1] Colin Sharman, former international chairman of KPMG, states that in terms of standardized services KPMG wants to be like McDonalds: "McDonalds has achieved uniform, global brand awareness, a common feel about the organization, a common range of products and common process (…) that is equivalent to what we want to do (…)" (as cited in Hopwood, 1998, para. 1). Under the current environment in which these auditors operate, there are three types of global network members: inspected non-U.S. affiliates (inspected affiliates, hereafter), non-inspected non-U.S. affiliates (non-inspected affiliates, hereafter), and inspected U.S. offices (U.S. offices, hereafter).

In its annual global report, E&Y emphasizes how the global nature of its clients drives its business organization since E&Y "transformed…to keep in step with globalization and the changing needs of…clients and…people" (E&Y, 2013, p. 4). Additionally, E&Y highlights the advantage this global approach plays in providing

[1] Gills and Thompson (2006) point out that the phenomenon of globalization has always been present in human history. However, it is not until the 1970s that the term globalization appears in business studies (Pieterse, 2012), and it is during the 1990s that globalization spreads in a general and conscious way in the business environment (Pieterse, 2012).

services as it allows E&Y to "deliver better, more consistent quality, enhancing their ability to serve global clients" (E&Y, 2013, p. 4).

Similarly, Deloitte claims that one of the advantages of operating as a global network is being able to pull together human and technological resources. Deloitte states that by "combining…skills and work in teams across geographic, functional, and business borders" (Deloitte, 2013, p. 10) it is able to improve "member firms' professional services and deliver a market-leading client service experience" (Deloitte, 2013, p. 10). Additionally, Deloitte emphasizes that one of its strategic choices during 2013 was to operate globally, which allowed it to ensure "consistent, high-quality client service" (Deloitte, 2013, p. 10). Deloitte conveys that one of the mechanisms through which consistent audit quality is achieved is its proprietary technology – one of these being "The Deloitte Audit" (Deloitte, 2013). With such an audit platform Deloitte claims to ensure "consistent execution of Deloitte audits, leveraging scalable content and technology, to provide quality service to member firm clients across the globe" (Deloitte, 2013, p. 26).

Another mechanism through which these global networks aim to ensure consistent services and homogenous quality is through internal assurance quality review programs. PwC provides a detailed explanation of its own program in its 2013 global report. It features quality management systems and peer-reviews of selected audit engagements (PwC, 2013).

In their annual global reports, the Big 4 claim to provide consistent services worldwide and to achieve high quality throughout all of their affiliates. However, events such as the failure of Deloitte's Italian affiliate to promptly discover Parmalat's fictitious

$4.9 billion bank accounts and $7.1 billion in other non-existent assets (Hall, 2010), the involvement of ChuoAoyama (PwC Japanese affiliate) in the Kanebo scandal (Culy, 2006), and the recent Securities and Exchange Commission (SEC) fraud investigations of cross-listed Chinese firms[2] (U.S. SEC, 2012) calls into question whether consistent audit quality is a deliverable promise.

The brand reputation of the Big 4, as providers of higher quality audits, has been widely established (e.g., Teoh & Wong, 1993; Becker et al., 1998; Francis, Maydew, & Sparks, 1999). A major contributor to the reputation of the Big 4 as providers of higher audit quality has been their U.S. offices (Beelde, Gonthier-Besacier & Mikol, 2009; Carson, 2009). Carson (2009) documents the positive effect of the U.S. office reputation on the global network, since clients of a Big 4 affiliate pay a premium when the U.S. office is the industry specialist at a national level. Hence, I examine whether the global networks' members provide homogenous audit quality. Specifically, I test whether the affiliates of the global networks have lower perceived audit quality than the U.S. offices by using the earnings response coefficients (ERCs) derived from the regression model of unexpected earnings on unexpected returns. This study finds no evidence that the perceived audit quality of affiliates is lower than that of the U.S. offices.

Another relevant aspect in the operation of the Big 4 affiliates is the effect of the Public Company Accounting Oversight Board (PCAOB or Board, hereafter) inspections have on the audit quality provided by network members. The limited research on the effect PCAOB inspections have on non-U.S. auditors finds no improvement in audit

[2] The Chinese affiliates of BDO Seidman, E&Y, KPMG, Deloitte, and PwC's failure to provide documents related to such fraud investigations resulted on the SEC initiating public administrative proceeding No. 3-15116 against these auditors (U.S. SEC, 2012). On January 22, 2014, these five accounting firms were suspended from auditing U.S. listed firms for six months (U.S. SEC, 2014).

quality (Bishop, Hermanson, & Houston, 2013; Calderon & Song, 2014). Such findings are puzzling since the new post-audit review system may have improved the audit quality of U.S.-based auditors (e.g., Hermanson & Houston, 2009; Gramling, Krishnan & Zhang, 2011; Church & Shefchik, 2012). This research stream measures changes in the number of inspection findings over time.

The Sarbanes-Oxley Act of 2002 (SOX) established the PCAOB to supervise the auditors of U.S. publicly traded companies (U.S. Congress, 2002), and gave it the power to establish audit standards, to regulate audit firm registrants, and to conduct inspections of registered auditors (SOX 2002, Sec. 101(c)).

PCAOB inspections aim to detect deficiencies in audit engagements and to identify defects in an audit firm's quality controls (PCAOB, 2012). Subsequently, the PCAOB releases a report on the findings of the firm's audit engagements (part 1) and the findings on its quality control system (part 2). Specifically, part 1 is made public upon the immediate release of the report and covers the deficiencies on audit engagements that did not satisfy the regulator. One commonly reported deficiency is that the firm did not have sufficient evidence to support its audit opinion. Part 2 reports the firm's quality control deficiencies and is not made public unless the firm fails to satisfactorily address the deficiencies within 12 months (SOX 2002, Sec. 104).

The Board's external inspection program may add value over the internal inspection programs of the global networks. In Part II of Deloitte's 2007 inspection report, the PCAOB reveals that although Deloitte has a "global internal inspection program" to monitor the network affiliates' compliance with policies, procedures, and audit performance, the effectiveness of this program may be questionable (PCAOB, 2008, p. 18). The PCAOB finds limited communication of the findings of internal inspections among network members. This restriction, on whom and when members are made aware of the internal inspection findings, may decrease the level of accountability an affiliate believes it has. Specifically, the U.S. office only learns about a deficiency identified during the internal inspection of an affiliate if – and only if – the deficiency relates to the work performed on a client of the U.S. office by the internally inspected affiliate (PCAOB, 2008).

The PCAOB inspection process has elements identified by Bergsteiner (2012) in its Integrative Responsibility and Accountability Model (IRAM) as critical factors in achieving an efficient accountability mechanism. First, it is an *a priori* mechanism, which allows adaptive and desirable reactive strategies such as pre-emptive self-criticism (Lerner & Tetlock, 1999). Second, it is focused on process accountability instead of outcome accountability, as noted in the two areas of the inspection report – audit deficiencies and quality control defects. Finally, there is always feedback provided by the accountor (in the form of the inspection report, and other subsequent reports issued by the PCAOB). Since the underlying theory of IRAM points to an expectation of increased audit quality as a result of the PCAOB inspections, I examine whether the inspected members of the Big 4 have different perceived audit quality than that of the non-inspected members, using ERCs as a proxy for perceived audit quality. I find no evidence that the inspected members have higher perceived audit quality than that of the non-inspected affiliates, which is inconsistent with accountability theory. However, this does not mean that PCAOB inspections have no value; rather it raises the question of whether the benefits of the Board's inspections have already permeated to the other members of the network through the network's internal mechanisms.

The Big 4 play a substantial role in the audit market since they audit 98 percent of all U.S. public companies with revenues over $1 billion (Government Accountability Office [GAO], 2008). The Advisory Committee on the Auditing Profession (ACAP) (2008) acknowledges the Big 4's key role in the capital markets, and calls for transparency and governance of these firms. This study is relevant because it provides evidence that global networks are providing similar audit quality through all their members regardless of whether a member has been subject to a PCAOB inspection.

The remainder of this paper is organized as follows. Section two provides a review of the prior literature and hypotheses development. Section three explains the research design of this study used to test the hypotheses. Section four explains the sample selection process and descriptive statistics. Section five presents regression results and sensitivity analyses. Lastly, section six provides my concluding remarks and limitations of this study.

CHAPTER 2: LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 Reputation and Quality

Shapiro (1983) proposes that, when buyers have imperfect information and are unable to determine product quality prior to purchase, a predictor of high quality can be the good reputation of the seller. Firms with outstanding reputations are associated with ownership of valuable assets. Reputation is built by delivering high-quality products over time, which develops an expectation of high-quality products in the present and into the future. The benefits of providing high-quality products in the present are reaped in the future through reputation building. Firms have an incentive to forgo short-term gains associated with quality cutting in order to realize a premium in the future.

As Shapiro (1983) explains, a new firm first has to go through an investment period during which it must sell its product at a price below cost. In the beginning, a company cannot signal quality through pricing since it has yet to establish its reputation. Once it has achieved this by consistently delivering high quality products, the firm can start selling its product at a premium above production cost. Such premiums also provide an incentive for a seller to keep delivering high quality and to maintain its reputation. Subsequent premiums are a return on the initial investment in reputation.

In their brand investment model, Klein and Leffler (1981) assume consumers have no cost in communicating with one another. Hence, if a firm provides lower quality than the one contracted for, all consumers in the market become aware of the situation and the seller's future sales are lost. In this brand investment model, once a firm establishes its brand name, it has an incentive to provide certain quality in order to avoid losing quasi-rents, which would occur if it was to provide inferior quality products than the consumer had come to expect.

In the audit research area, DeAngelo (1981) is among the first to examine reputation and audit quality; specifically the audit quality provided by larger auditors. DeAngelo (1981) argues that an incumbent auditor is at risk of losing quasi-rents if the market discovers that it provided lower quality than promised. Therefore, the larger the auditor, in terms of number of current clients, the larger the quasi-rents this auditor risks losing. This curtails opportunistic behavior and leads to larger auditors having higher perceived audit quality. Hence, DeAngelo (1981) provides a basis for a positive relationship between auditor size and audit quality, thus implying a higher reputation among larger auditors since these are providers of higher audit quality.

An alternative explanation to the positive relationship between auditor size and audit quality is derived from Dye's (1993) 'deep pockets' model, which argues that the positive relationship between auditor size and auditor accuracy originates from the threat of litigation. Dye (1993) states that the value of an audit has two elements: informational value about the reliability of the financial information provided by the issuer and an option value on the auditor's wealth. This option is exercised when the auditor issues an incorrect audit opinion and investors sue the auditor. Therefore, it is the threat of litigation and not the possible loss of client-specific rents that drives the higher audit quality of larger auditors. Lennox (1999) provides empirical evidence showing that larger auditors are more likely to be sued.

Within this framework of auditor reputation development, the Big 4 have already gone through a significant investment period in their branding and are currently realizing brand premiums as predicted by Shapiro's (1983) model.[3] Additionally, the Big 4 auditors are providers of higher audit quality in accordance with DeAngelo (1981) since these are the firms that have more quasi-rents at stake in case of an audit failure

2.2 Big 4 As Providers of Higher Audit Quality

Evidence supporting DeAngelo's (1981) proposed positive relationship between auditor size and audit quality is provided by Teoh and Wong (1993), Becker et al. (1998), and Francis et al. (1999), and Francis (1984), among others. Teoh and Wong (1993) explore the effect of auditor size on audit quality using earnings response coefficients (ERCs). Larger ERCs indicate more reliable earnings information and that reliable financial information is the result of a high-quality audit. Teoh and Wong (1993) use a dichotomous variable to indicate auditor size (Big N[4] versus non-Big N). The authors find that ERCs of Big N clients are statistically significantly higher than those of non-Big N clients, concluding that auditor size is positively associated with audit quality.

Becker et al. (1998) find evidence that Big N auditors are providers of higher quality audits, as evidenced by their clients having lower discretionary accruals than clients of non-Big N firms – an indication of better accounting practices due to higher audit quality.

---

[3] Francis (1984) examines the positive relationship between auditor size and audit quality from the perspective of product differentiation conveyed by a fee premium. Specifically, Francis (1984) studies the effect of auditor size on audit fees on the Australian audit market, and finds that Big 8 auditors charge significantly larger audit fees than non-Big 8 auditors. These findings provide support for the argument of product differentiation for larger firms evidenced by a fee premium. Additionally, Craswell, Francis, and Taylor (1995) find the big auditor brand name is associated with a premium of 30 percent.

[4] "Big N" refers to Big 8 (1985–1989), Big 6 (1990–1997), Big 5 (1998–2002) and Big 4 (after 2002) due to the series of consolidations of public audit firms.

Francis et al. (1999) propose that managers of "high accrual" firms are motivated to engage a high-quality auditor to provide credibility to the earnings they are reporting. The authors conclude that firms with higher endogenous propensity for accruals management (proxied by relatively longer operating cycles and enhanced capital intensity) are more likely to hire a Big N auditor. Moreover, such companies have lower discretionary accruals, which lends support to the argument that Big N auditors constrain aggressive and opportunistic reporting.

Companies experience certain benefits of hiring a Big N auditor as a result of the higher audit quality provided (Beatty, 1989; Menon & Williams, 1991; Pittman & Fortin, 2003). Beatty (1989) finds that Big N auditors are associated with lower underpricing in an initial public offering (IPO), which provides evidence that owners are willing to hire auditors with better reputational capital. Beatty (1989) concludes that having a Big N auditor reduces the ex-ante uncertainty about information around a securities issue and the financial position of a company, which results in less "money left on the table" at IPO.

Menon and Williams (1991) demonstrate another benefit associated with hiring a Big N auditor: lower information asymmetry. The authors find that companies switching auditors in the two years prior to an IPO involve firms with a small auditor (local) being replaced by a larger auditor (national or Big N). Furthermore, in the case of a firm commitment offering, investment banks charge lower fees to those firms engaging a Big N auditor. This finding suggests that investment bankers prefer Big N firms because these auditors attenuate information asymmetry due to their higher audit quality, which helps to signalize the true value of the firm.

Pittman and Fortin (2003) find that larger auditors bring more credibility to financial information. This reduces debt-monitoring cost, resulting in a lower debt cost for Big N clients. In general, Big N auditors have built a reputation as providers of higher audit quality and as a result their clients are able to provide more reliable financial information to investors.

In an international setting, studies have also been conducted into the relationship between the reputation of large auditors and audit quality. In particular, Chen, Lin, and Zhou (2005) examine the effect of auditor size (Big N versus non-Big N) and industry specialization on the degree of earnings management in Taiwan IPO firms. They find lower unexpected accruals for Big N clients going through an IPO than for those with a non-Big N auditor. Chen et al. (2005) conclude that Big N auditors are associated with lower earnings management in Taiwan IPOs.

The presence of a fee premium for Big N auditors due to higher reputation has been documented in Australia (Francis, 1984; Craswell et al., 1995), Hong Kong (Simon, Teoh, & Trompeter, 1992), India (Simon, Ramanan, & Dugar, 1986), New Zealand (Johnson, Walker, & Westergaard, 1995), Singapore (Simon, et al., 1992), and the United Kingdom (Brinn, Peel, & Roberts, 1994; and Chan, Ezzamel, & Gwilliam, 1993).

In summary, extensive research in this area has established that Big 4 auditors are providers of higher audit quality (DeAngelo, 1981; Lennox, 1999; Dye, 1993; Teoh & Wong, 1993; Beatty, 1989; Becker et al. 1998; Francis et al. 1999). This relationship has also been validated in non-U.S. audit markets (Cheng et al. 2012; Chen et al. 2005). The benefits of engaging a Big 4 auditor, with the reputation of higher audit quality provider, are lower information asymmetry, lower monitoring costs, and more reliable financial information (Francis et al, 1999; Beatty 1989; Menon & Williams, 1991; Pittman & Fortin, 2003). All these studies have relied on the underlying assumption of a homogenous audit quality among the Big N affiliates, and do not make any distinction between affiliates and U.S. offices.

2.3 Big 4 Global Networks

The demand for large international audit firms is rooted in the development of multinational enterprises (Lenz & James, 2007), since these need to access homogeneous quality audit services for their different locations throughout the world. In response to such need, the Big 4 have established global networks of affiliates to achieve a seamless provision of professional services.

The Big 4 are professional service firms and, as such, are characterized by knowledge intensity, low capital requirements and a professional workforce (Von Nordenflycht, 2010). A key factor of the organizational form of the Big 4 as a professional service firm is the low capital requirements, which allows them to be organized as partnerships at the national level and not as corporations, and to arrange themselves as global networks (Zimmermann & Volckmer, 2012) at the international level.

Lenz and James (2007) define these international audit firms as "strategic networks" (p. 367) aiming to gain competitive advantages over non-members through a set of contractual agreements with other legally and economically autonomous entities. By entering such network agreements, the members commit to adhere to quality standards, to undergo quality reviews, to operate in a specific geographic area, and to cover their share of the network costs (Lenz & James, 2007). In return, the members gain certain rights, such as the ability to use a brand name (with the consequent ability to realize associated price premiums)[5] along with access to a network's resources and know-how (human capital, audit manuals, IT, etc.) (Lenz & James, 2007). By joining a global auditing network affiliates gain access to information, resources, markets, technologies, learning opportunities, and benefit from scale and scope economies (Gulati, Nohria, & Zaheer, 2000). Furthermore, as denoted by Morris and Empson (1998), global networks have well-developed knowledge management systems in which knowledge is codified in several ways (i.e. manuals, databases, training courses, and standardized techniques). These systems' objective is to standardize behaviors and skills within a firm and to take advantage of knowledge leverage[6] (Morris and Empson, 1998).

A critical point is that a global network itself does not provide services to clients; instead, its role is that of a "meta-coordinator or information broker within the network" (Lenz & James, 2007, p. 380). This structure has been developed to limit the transferability of liability between network members. The Big 4 global networks are organized as a Swiss cooperative (KPMG[7]), a Swiss association or *verein* (Deloitte[8]) or a British Company Limited by Guarantee (PwC[9] and E&Y[10]). One member firm dominates the network through its economic impact and plays the role of strategic leader, developing most of the firm's resources (audit manuals, software, etc.). This strategic

---

[5] Craswell et al. (1995) find the big auditor brand name is associated with a premium of 30 percent above the fees of non-big auditors (Big 8 auditors at that time). Similarly, Palmrose (1986) finds a positive association between auditor size and audit fees, and argues this is due to the Big N designation being a surrogate for quality. Further evidence of product differentiation through a fee premium for Big N auditors is provided by Francis (1984) and Francis and Stoke (1986).
[6] Knowledge leverage refers to the process of transferring knowledge from the top of the organization to the bottom (Morris and Empson, 1998).
[7] See "2012 KPMG International Transparency Report" (KPMG, 2012, p. 2).
[8] See "2013 Deloitte Global Impact Report" (Deloitte, 2013).
[9] See "How are we structured?" (PwC, 2015).
[10] See "Transparency Report 2013 – EY Global" (E&Y, 2013, p. 5).

leader sets the firm methodologies, technologies and procedures (Lenz & James, 2007).

Global networks admit affiliates in order to access country-specific know-how such as language, culture, and legal systems (Lenz & James, 2007), which can be used by all network members. Global audit networks aim to deliver standardized audit quality by means of each of its members. In order to achieve this goal, global networks coordinate personnel (mutual exchange of employees, create useful formal and informal communication venues among employees, etc.), organization strategy (a unique network vision, mission and culture, etc.), and technology (harmonized IT, audit guidelines and tools) (Lenz & James 2004).

Most of the research involving global networks has focused on the impact of the global firms on the development of the audit profession in a specific country (e.g. De Beelde et al., 2009); reputation spillover effects among affiliates (e.g. Cahan, Emanuel, & Sun, 2009; Saito & Takeda, 2014); premiums realized by global network affiliates (Carson, 2009); challenges faced by global networks, such as the applicability of a global audit approach (e.g. Abdullatif & Al-Khadash, 2010), the intricacies of multinational audits (Barrett, Cooper, & Jamal, 2005), the factors limiting cross-border integration of affiliates (e.g. Zimmermann & Volcker, 2012), and the implementation of monitoring mechanisms (Bedard, Johnstone, & Smith, 2010).

De Beelde et al. (2009) point out that since the 1960s, Anglo-American firms in France have enjoyed a good reputation, mainly due to methodological advantages over native firms. In general, the Anglo-American firms were perceived as well organized with better audit methodologies and more efficient staff allocation (De Beelde et al., 2009). At that time, Anglo-American firms were deemed as more competent since the

French auditors did not have formal audit tools or methodologies. During the 1980s, the Anglo-American firms came to dominate the French audit market (De Beelde et al., 2009).

Reputation spillover effects have been documented in two directions, from the U.S. office to the affiliates and from a non-U.S. affiliate to the other affiliates. Cahan et al. (2009) examine whether damage to the name brand of one of the global network auditors in one country spills over to other countries in which these auditors operate. Specifically, the authors test the effect of two events of Arthur Andersen's involvement during the Enron scandal[11] on the stock price reaction of Andersen's non-U.S. clients, examining whether investors viewed Andersen as a unified firm with a single global reputation. Cahan et al. (2009) find significant negative cumulative abnormal returns for the two events and conclude that Andersen's damaged U.S. reputation and audit quality concerns spilled over to other countries. The authors suggest that the reputation of global network affiliates have an international component.

Saito and Takeda (2014) examine the effect of an audit failure of a non-U.S. global network affiliate on the other global network affiliates' clients. They analyze the effect of audit failure of ChuoAoyama (the Japanese affiliate of PwC) in its engagement with Kanebo Ltd. on other PwC clients around the world. The authors conclude global networks have created a global reputation and this might be diminished by audit failures in any affiliate.

Another aspect of reputation is the realization of premiums as reflected by the Shapiro (1983) model. Carson (2009) examines fee premiums associated with global

[11] When Andersen notified the SEC about shredding documents related to the Enron audit and when Enron's board released a report that was critical of Andersen.

brand name and industry specialization. In particular, Carson (2009) examines industry specialization at the global network level and whether this has an effect on the audit fees charged by the auditors beyond that of national industry specialization. Carson (2009) uses different levels of industry specialization: (1) global industry leadership jointly with national industry leadership, (2) global industry leadership alone, (3) national industry leadership alone. The author documents a 15 percent global network brand premium and a global-national specialist and global (only) specialist premiums (12 and 7 percent respectively) beyond the brand premium, regardless of whether the network is regarded as the national specialist.

An additional factor explored by Carson (2009) is the effect of the U.S. affiliate being the U.S. industry leader on the premiums realized by the other members of the network. In 2000 and 2004 non-U.S. affiliates realize a 24 percent and 20 percent fee premium, respectively, when the U.S. affiliate is the U.S. industry specialist. Carson (2009) concludes that the reputation of U.S. specialist as the "hub" of a global network makes clients of non-U.S. affiliates (within the network) pay a premium in order to obtain U.S. specialist audit services. This is evidence the U.S. affiliate's reputation benefits other affiliates in the network.

Among the challenges faced by global networks is the applicability of a global audit approach or methodology. Abdullatif and Al-Khadash (2010) are concerned with whether a unified methodology mandated by the global network can be appropriately localized. The authors conduct a series of semi-structured interviews of audit partners and managers from the ten largest audit firms operating in Jordan. Their findings suggest that local business risk factors are not reflected under the international approach. The exclusion of local business risks factors undermines the appropriateness of adopting a unified international audit approach in different audit markets. Additionally, the authors find that the strength of the relationship with the global network determines the degree of application of the local audit approach.

The globalization of audits is another challenge faced by the global networks. Barrett, Cooper and Jamal (2005) conduct an observational study of a multinational audit (in an undisclosed European country, U.S. and Canada) from July 1996 to September 1997 by one Big N global network, and summarize the challenges an audit of this nature presents to the engagement team. They provide evidence of how coordinating mechanisms (inter-office instructions and an internally developed audit technology) aid in the audit process, along with how these were applied differently by the national audit firms. Such coordinating mechanisms have been fundamental to the success of Big N firms in providing an image of seamless organization. Barrett et al. (2005) find that the local application of inter-office instructions differs within and between national teams. They also document that the North American audit teams were able to exercise a higher influence on how the audit was conducted, arguing that this shows these offices enjoy a higher status in comparison to audit offices located in other countries. Barrett et al. (2005) point out that North American auditors are perceived within the global network as having “legitimate resources and reputable institutions” (p. 20).

Although global networks aim to provide seamless services, Zimmermann and Volcker (2012) highlight limits in cross-border cooperation among affiliates. In order to determine the degree of integration in global accounting networks, Zimmermann and Volcker (2012) calculate two measures of cross-border integration of member firms:

cross-border integration of national boards and the international transfer of staff between affiliates. The cross-border integration of board metric[12] for the US, UK, Germany and France reflects low integration among the members of the global networks, since only the German affiliates of the Big 4 have a few foreigners on their supervisory boards.[13] The metric of international transfer of staff between affiliates is relevant because people are carriers of specialized knowledge in professional service firms; specifically tacit knowledge. Zimmermann and Volcker (2012) find that from 2009 to 2011 between 0.99 and 2.44 percent of personnel were involved in an international assignment. They find that this rate is relatively high in comparison to their review of other studies of international assignments. Hence, in terms of international transfer of staff, the Big 4 have relatively close cooperation among their different affiliates, reflecting a more knowledge-sharing approach. Finally, Zimmermann and Volcker (2012) conclude that national regulations are the main limiting factor militating against cross-border cooperation by national entities.

Overall, an audit global network's biggest challenge lies in ensuring the adequacy of resources, the competencies of its members and the safeguarding of its reputation by monitoring whether or not these affiliates are meeting agreed quality standards (to avoid moral hazard, free-riders and opportunistic behavior). Big 4 global networks monitor the audit quality of their respective member firms through internal inspections, electronics systems and training (Bedard et al., 2010). However the existence of free-riding among affiliates has not been explored in the literature.

[12] The number of seats in the board occupied by individuals from other country affiliates of the global network.
[13] Deloitte's German affiliate has one individual from a different country affiliate among the 12 members of its supervisory board (8%); E&Y has one of 13 (7.7%); and, KPMG three of 12 (25%); while PwC has zero representation of foreigners in its supervisory board.

2.4 Free-riding

Albanese and Van Fleet (1985) propose that rational individuals will operate in such a way that they minimize the costs they incur in relation to the benefits they receive. Albanese and Van Fleet (1985) define a 'free-rider' as "a member of a group who obtains benefits from group membership but does not bear a proportional share of the cost of providing the benefits" (p. 244). The free-rider theory relies on individuals acting rationally in social situations, with homogeneous value systems, similar information and perception of reality (Albanese & Van Fleet, 1985).

An individual will free-ride when the net benefits of free-riding exceed the net benefits of contributing to the group's common interest (Strobe & Frey, 1982). Furthermore, free-riding may occur even when all the group members are committed to the group's common purpose (Albanese & Van Fleet, 1985).

A public good is "one for which it is not feasible or economic to exclude one or more group member" (Albanese & Van Fleet, 1985, p. 346). Brand reputation is an example of a public good since, as explained by Albanese and Van Fleet (1985), no group member can be excluded from sharing the status conveyed by the brand.

Group size impacts the probability of its members engaging in free-riding. Albanese and Van Fleet (1985) postulate that as group size increases the noticeability of a member's contribution decreases, resulting in a higher probability of free-riding. Similarly, as group size increases, members are more likely to believe their individual contributions will not have a perceptible impact on the group's public good (Albanese & Van Fleet, 1985).

Rubin (1978) explores the opportunities for free-riding in a franchise agreement. The parties to a franchisee agreement are the franchisor - the parent company, which has developed a product or service and the franchisee, a firm paying to acquire the rights to sell the franchisor's product or service in a determined geographical area (Rubin, 1978). Usually, the franchisor provides managerial assistance such as training programs, operating manuals, advertising, etc., and the franchisee agrees to operate the franchise as specified by the franchisor. In a franchisee agreement, the key element is the trademark. This is valuable because consumers know the price and quality associated with a given trademark. Since the franchisor is in a different location, monitoring mechanisms are put in place to ensure the franchisee meets the quality standards established by the franchisor. Free-riding occurs when a franchisee engages in providing an inferior product but still generates revenues since consumers believe its goods and services will be of a certain standard because the local branch operates under a trademark that denotes a certain quality.

The audit global network arrangement mimics that of a franchise agreement since affiliates pay a fee to use the brand name,[14] agree to quality standards, and have the rights to operate within a certain geographical area. Hence, there is the opportunity for free-riding, which intensifies due to the large number of members these networks have.[15] As pointed out by Albanese and Van Fleet (1985), as group size increases the noticeability of a single member's contribution decreases, resulting in a higher probability of free-riding. Research shows the existence of a global network reputation by the Big 4 firms (Cahan et al., 2009; Saito & Takeda, 2014; Carson, 2009), but the cornerstone is the U.S. office,

---

[14] In 2013, the Big 4 were among the 100 most valuable brands on BrandFinance ranking "The World's Most Valuable Brands". PwC was ranked 51st with a brand value of US$16.4 billions; Deloitte was ranked 72nd (US$12.8 billions); KPMG was ranked 85th (US$10.9 billions); and E&Y was ranked 92nd (US$10.1 billions) (BrandFinance, 2014).

[15] KPMG operates in 152 countries (KPMG, 2014b), E&Y in 151 (E&Y, 2014b), Deloitte in 137 (Deloitte, 2014b), and PwC in 157 (PwC, 2013).

which has developed a higher reputation. For instance, in the 1960s in France, U.S. auditors were deemed more competent (De Beelde et al., 2009). Carson (2009) concludes that the U.S. office reputation as a specialist and as the hub of the global network translates into a premium paid by clients of a non-U.S. affiliate (within the network) in order to obtain U.S. specialist audit services through the network capabilities. Barrett et al. (2005) documents that the members of a large audit network considered U.S.-based personnel more capable and as having more valuable opinions than those of non-U.S. personnel. Thus, I hypothesize:

> *H1: Ceteris paribus, the non-U.S. affiliates of a Big 4 global network have lower perceived audit quality than the U.S. office.*

2.5 Accountability

An early definition of accountability by Tetlock (1983) describes it as the "pressures to justify one's opinions to others" (p. 74). Subsequent research in the area develops a more robust definition as "the implicit or explicit expectation that one may be called on to justify one's beliefs, feelings, and actions to others" (Lerner & Tetlock, 1999, p. 255). Bergsteiner (2012) provides one of the most recent and comprehensive definitions of external accountability, within his Integrative Responsibility and Accountability Model (IRAM), as:

> "The process of subjectively or objectively evaluating the contribution that others have made to a consequence; where appropriate, calling on these others to account for the consequence and for how this consequence came about; and applying accountability responses such as rewarding, sponsoring, mentoring,

supporting, giving feedback, counseling, training, directing, sectioning or punishing," (p. 153).

Furthermore, Bergsteiner (2012) states that the purpose of external accountability is to "remedy poor or undesired accountee behavior, where feasible to seek continuous improvement in behavior or to maintain desired behavior, or to maintain, always with the intention of enabling and, where possible, inspiring optimal future behavior" (p. 169). Bergsteiner's (2012) IRAM formally examines the accountability phenomenon, from the first encounter between accountee and accountor, to the ultimate stage of future accountor and accountee behavior. It is important to notice that although not depicted as such, the accountability phenomenon is a reiterative process, as depicted in the Holistic Accountability Model (HAM) (Bergsteiner, 2012), where a feedback loop is added to the IRAM, formalizing the continuous nature of the accountability phenomenon.

The different effects of accountability on accountee behavior have been widely explored (e.g., Staw 1980; Tetlock, 1985b). There are two relevant reactive strategies deployed by accountees: strategic attitude shifting and pre-emptive self-criticism. Strategic attitude shifting occurs when the accountee is aware of the accountor's view and adopts it in order to avoid cognitive processing involved in evaluating different alternatives (Lerner & Tetlock, 1999); this strategy is mainly used when the accountor is perceived as powerful and seriously committed to a position (Bergsteiner, 2012). Pre-emptive self-criticism is implemented when the accountee does not know his accountor's preferences and the accountor is perceived as well informed and powerful (Bergsteiner, 2012). An accountee engaging in pre-emptive self-criticism displays substantial cognitive effort and more complex cognitive processing; carefully evaluates multiple perspectives;

and anticipates possible objections to a decision before committing to one course of action (Lerner & Tetlock, 1999).

Additionally, the timing of when accountees become aware that they will be held accountable is critical. If accountability is established in a post-decisional setting, accountees will engage in defensive bolstering (Tetlock, Skitka, & Boettger, 1989) characterized by exercising more cognitive effort to justify their decisions.

Simonson and Staw (1992) suggest that process accountability is more desirable than outcome accountability, since process accountability leads accountees to comprehensively evaluate alternatives before engaging in a decision.

In experimental settings there is support for a positive effect of accountability on auditors' behavior (e.g., Buchman, Tetlock, & Reed, 1996; Asare, Trompeter & Wright, 2000; Dezoort, Harrison, & Taylor, 2006).

Johnson and Kaplan (1991) examine the effect of accountability on auditors' judgment on the risk of inventory obsolescence. The authors find that auditors who are accountable reach higher consensus and higher self-insight than those who are non-accountable.

In determining whether or not to disclose a contingent liability and what type of audit of opinion should be issued for the associated financial statements of a company, Buchman et al. (1996) find that experienced auditors, under an accountability manipulation, consider more items when rendering an opinion. The authors conclude that accountability leads auditors to engage in a more complex cognitive process.

Asare et al. (2000) examine the effect of accountability on auditors' testing strategies and conclude that accountability results in an increase in the extent and breadth of testing.

DeZoort et al. (2006) study the effect of different levels of accountability (review, justification, and feedback) on a task involving planning audit materiality and an audit materiality adjustment. The authors find that auditors who are subject to higher levels of accountability engage in more complex processing of information, as evidenced by more time and effort spent in the task, and display more conservative behavior.

2.6 PCAOB Inspections

The current research examining Big 4 affiliates and PCAOB inspections is restricted mainly to a few general studies exploring audit quality among international auditors (Bishop et al., 2013; and Calderon & Song, 2014). The specific effect of PCAOB inspections on the audit quality of Big 4 affiliates has not been addressed.

Bishop et al. (2013) examine the rate of audit deficiencies and quality control defects described in the inspection reports of international audit firms. For first-time inspections, Bishop et al. (2013) find that 56 percent of the inspections identify audit deficiencies and 68 percent identify quality control defects. When comparing first-time versus second-time inspection, Bishop et al. (2013) find no difference in the rate of audit or quality control deficiencies for inspections of international auditors. On the contrary, for firms with two inspections, the rate of audit deficiencies increased from 52 percent to 59 percent, and the rate of quality control defects increased from 64 percent to 68 percent. This study's findings conflict with those of similar studies conducted in the U.S., where a decrease in both rates has been documented. Hermanson, Houston, and

Rice (2007) find audit and quality control deficiencies of 60 percent and 72 percent, respectively for the first inspections of triennially-inspected firms. Subsequently, these rates drop to 3 percent and 28 percent, respectively, for the second inspection (Hermanson & Houston, 2009). Another relevant finding of Bishop et al. (2013) is that Big 4 affiliates have lower deficiency rates in comparison to unaffiliated firms. Nevertheless, the authors do not document an improvement in the rates of deficiencies from the first to the second inspection for Big 4 affiliates.

Calderon and Song (2014) examine the differences between PCAOB inspections' characteristics and inspection report findings of auditors affiliated with the Big 4 and the second-tier (BDO Seidman [BDO] and Grant Thornton) international audit firms in comparison to unaffiliated foreign auditors. The authors analyze the inspection reports of foreign audit firms, from January 2005 to December 2011, to classify audit deficiencies and quality control defects. The authors follow a methodology similar to Bishop et al. (2013). Calderon and Song (2014) find audit deficiencies and quality control defects rates similar to those of the U.S. triennially inspected firms (Hermanson et al., 2007). However, in this international setting, there is no decrease in the rate of deficiencies identified from the first to the second inspection. Audit deficiencies increased from 52 percent to 57 percent, while quality control defects increased from 60 percent to 68 percent respectively.

The lack of reduction in audit deficiencies and quality control defects, as supported by Bishop et al. (2013) and Calderon and Song (2014), suggests that audit quality does not improve in foreign auditors as a result of PCAOB inspections. This runs contrary to the research that suggests an improvement in audit quality in U.S. auditors as a result of such inspections.

As previously stated, substantial research suggests an increase of audit quality associated with PCAOB inspections in the U.S. audit market (e.g., Hermanson & Houston, 2009; DeFond & Lennox, 2011; Carcello, Hollingsworth, & Mastrolia, 2011). From the supplier side, DeFond and Lennox (2011) find that the mere implementation of the new PCAOB post-audit review system increases the quality of the audit market, since low audit quality firms have exited the market as a result of the new inspection system. After the implementation of the PCAOB inspections, non-exiting firms have a higher probability of issuing a going concern, which DeFond and Lennox (2011) consider further evidence of an improvement in the overall audit quality of the market.

Moreover, according to Gramling, Krishnan, and Zhang (2011), when the inspection report has audit quality deficiencies and quality control defects, auditors engage in more conservative behavior. Gramling et al. (2011) find evidence of a higher probability of issuing a going concern opinion for financially distressed issuers when the auditor receives an inspection report with such deficiencies.

In general, the inspection process appears to increase the audit quality of large audit firms, as documented by Church and Shefchik (2012). The authors find that from 2004 to 2009 there is a decrease in the number of audit deficiencies of annually inspected firms. Nevertheless, the authors acknowledge that pinpointing the source of such a decline is difficult. Church and Shefchik (2012) postulate three explanations for the decline in deficiencies: (1) an increase in the overall audit quality of all engagements, (2) an increase in audit quality of only high-risk audits that by their own nature are more likely to be selected by the PCAOB team for review, and (3) a change in the inspection process itself.

Carcello et al. (2011) study the effect of the first two rounds of inspections on the audit quality of Big 4 firms in the U.S. In particular, they examine the change in auditees' abnormal accruals for the first and second inspections. The authors find a significant reduction in abnormal accruals for the first year following the inspection and for the year following the second inspection. Carcello et al. (2011) conclude that PCAOB inspections improved audit quality as evidenced by a reduction in earnings management.

The current evidence, although mainly limited to the U.S. audit market, suggests that PACOB inspections improve audit quality. Such improvement in audit quality may be due to the auditor being accountable to an external party, the PCAOB. As previously stated, accountability increases an auditor's self-insight, cognitive process and conservatism (Johnson & Kaplan, 1991; Buchman et al., 1996; Asare et al., 2000; DeZoort et al., 2006). The purpose of accountability is to seek continuous improvement in an accountee's behavior (Bergsteiner, 2012), and PCAOB inspections, as an accountability mechanism, aim to improve audit quality (the accountee's desired behavior). The PCAOB aims "to improve audit quality, reduce the risks of auditing failures in the U.S. public securities market and promote public trust in both the financial reporting process and auditing profession" (PCAOB, 2014, para. 2). Hence I hypothesize;

H2: Ceteris paribus, the inspected Big 4 members have higher perceived audit quality than the non-inspected Big 4 members.

CHAPTER 3: RESEARCH DESIGN

In their literature review of audit quality proxies, Knechel et al. (2013) acknowledge that the main difficulties in measuring audit quality are the lack of a unique and comprehensive definition of audit quality[16] and the non-existence of an observable audit quality outcome. Despite such limitations, there are several proxies used in this area of research such as the *ex-ante* equity risk premium (e.g., Boone et al., 2010); abnormal accruals (e.g., Becker et al., 1998; Francis et al., 1999; Chen, Lin & Zhou, 2005; Carcello et al., 2011); the likelihood of issuing a going-concern audit opinion for financially distressed companies (e.g., Francis & Yu, 2009; Gramling et al., 2011; DeFond & Lennox, 2011); earnings response coefficients (e.g., Teoh & Wong, 1993; Balsam, Krishnan, & Yang, 2003; Higgs & Skantz, 2006); financial restatements (e.g., Kinney, Palmrose, & Scholz, 2004; Gunny & Zhang, 2012; Francis, Michas & Yu , 2013); and more recently, the rate of deficiencies identified in reviews performed by auditors' regulators (Hermanson et al. , 2007; Hermanson & Houston, 2009; Church & Shefchik, 2012).

In the area of capital markets research in accounting, ERCs were initially examined by Miller and Rock (1985), Kormendi and Lipe (1987), and Holthausen and Verrechia (1988). ERCs are a measure of market responsiveness to earnings surprises (Scott, 2009). Hence, ERCs reflect the perceived quality of the financial information

[16] However, the most commonly referenced definition of audit quality is attributable to DeAngelo (1981) in which it is defined as "the market assessed joint probability that a given auditor will *both* discover a breach in a client's accounting system, and report the breach" (p.186).

being reported, and ERCs, along with abnormal accruals, have been used to measure earnings quality (e.g., Jenkins, Kane & Velury, 2006).

Watkins, Hillison, and Morecroft (2004) provide an audit quality framework useful in understanding ERCs as a proxy for audit quality. Based on DeAngelo's (1981) definition of audit quality as "the market assessed joint probability that a given auditor will both discover a breach in a client's accounting system, and report the breach" (p.186), Watkins et al. (2004) posit that there are two drivers of audit quality: auditor competence and auditor independence. Furthermore, they address a relevant point of DeAngelo's definition of audit quality, which is that audit quality is framed within the context of a "market assessment". This recognizes that each of the previously identified drivers of audit quality (i.e. competence and independence) have an actual and a perceived dimension. Thus, Watkins et al. (2004) establish two components within audit quality: auditor reputation (due to perceived auditor competence and perceived auditor independence) and auditor monitoring strength (due to actual auditor competence and actual auditor independence).

Additionally, Watkins et al. (2004) identify two products of audit quality: information credibility and information quality. Information credibility stems from auditor reputation and reflects "the degree of confidence the user places in information" (Watkins et al., 2004, p. 155). Information quality, derived from the auditor's monitoring strength, demonstrates "how well information reflects true economic circumstances" (Watkins et al., 2006, p. 155). Both of these audit quality products are available in the issued financial statements of a public company.

Since ERCs reflect the market receptiveness to earnings announcements, it can be concluded that ERCs capture the degree of confidence users place in the information released by the company (information credibility) in their valuation of the issuer. Since Watkins et al. (2006) relate that information credibility is a product of audit quality, ERCs are an indicator of perceived quality.

ERCs have been used in audit research to assess the effect of non-audit services (Krishnan, Sami, & Zhang, 2005; Lim, Ding, & Charoenwong, 2013; Higgs & Skantz, 2006), client dependence (Ghosh, Kallapur, & Moon, 2009), and industry specialization (Balsam et al., 2003) on perceived audit quality.

For the aforementioned reasons, ERCs derived from a multiple linear regression of abnormal returns on unexpected earnings are used to test whether Big 4 affiliates provide lower audit quality than their U.S. offices, and whether inspected members have higher perceived audit quality than non-inspected members. The proposed model is,

$$UR_{(-1,+1)it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}*AFF_{it} + \beta_3 INSP_{it} + \beta_4\, UE_{it}*INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}*SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}*LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}*BETA_{it} + \varepsilon_{it} \quad (1)$$

where:

$UR_{(-1,+1)it}$= Cumulative abnormal return for firm *i*, for the three-day window surrounding the annual earnings announcement date (-1, +1) using the market model as benchmark,

UE_{it} = Unexpected earnings for firm *i* using I/B/E/S forecasts,

AFF_{it} = 1, if the auditor of firm *i* is a Big 4 affiliate in a non-U.S. jurisdiction, and 0 otherwise;

$INSP_{it}$ = 1, if the auditor of firm *i* has been inspected before the date the auditor report date, and 0 otherwise;

$SIZE_{it}$ = Natural logarithm of market capitalization of firm *i* at the end of the fiscal year,

$LNMB_{it}$= Natural logarithm of market to book value of firm *i* at the end of the fiscal year,

$BETA_{it}$ = Beta from the market model for firm *i*, estimated using 255 daily returns ending four days before the earnings announcement.

UE is determined as the difference between actual earnings and I/B/E/S mean consensus earnings forecasts issued before the annual earnings announcement, scaled by the stock price four days before the earnings announcement.

To establish whether an auditor has been inspected (*INSP*), I retrieve the beginning date of the first inspection of each member from the inspection report and compare it to the auditor's report date for the associated financial statements. If the auditor's first inspection date takes place before the auditor's report date, then the auditor is classified as inspected (and the firm-year observation is classified as having an inspected auditor), otherwise the auditor is classified as non-inspected. Members that do not have an inspection report available on the PCAOB's website are classified as non-inspected.[17]

Model (1) includes *SIZE* as a control for the level of information in the pre-disclosure environment since the amount of information in the pre-disclosure environment is directly related to the size of the firm (Atiase, 1985). Furthermore, *LNMB*

[17] Alternative approaches to determine whether an auditor has been inspected are tested and results are described in the sensitivity analysis section.

controls for growth since Collins and Kothari (1989) provide evidence that ERCs vary cross-sectionally with growth. Based on Easton and Zmijewski's (1989) and Collins and Kothari's (1989) findings, *BETA* is included to control for systematic risk because ERCs decline with such risk.

Additionally, model (1) is estimated with alternative measures of *UR* over a 5-day ($UR_{(-2,+2)}$) and a 7 day-window ($UR_{(-3,+3)}$).

The coefficient of interest to test the affiliate effect hypothesis *(H1)* is β_2. If the Big 4 affiliates have lower perceived audit quality than that of the U.S. offices (*H1*) then β_2 will be negative and statistically significant. For the inspection effect hypothesis (*H2*), the coefficient of interest is β_4. If the inspected members have higher perceived audit quality than that of non-inspected members then β_4 will be positive and statistically significant.

Since model (1) is estimated from data that contains firm information over several years there is the possibility that autocorrelation or cross-sectional correlation in the residuals may be present. Hence, model (1) includes fiscal year and two-digit SIC fixed effects indicator variables. Also, clustering the standard error by firm is used to control for cross-sectional correlation (Petersen, 2009).

CHAPTER 4: SAMPLE SELECTION AND DESCRIPTIVE STATISTICS

This chapter explains the selection process to determine the firm-years included in the sample and discusses the related descriptive statistics for such a sample.

4.1 Sample Selection

In the AuditAnalytics' Audit Opinion file I identify 86,746 firm-years with an audit opinion issued by a Big 4 auditor for fiscal years ending between January 1, 2004 and December 31, 2013 (see Table 2). Subsequently, I eliminate 45,595 observations that do not have financial information in Compustat's North America-Fundamentals Annual file. I use annual data because only annual financial statements are required to be audited. Furthermore, I eliminate 16,272 firm-years that do not have earnings forecasts available in I/B/E/S. Additionally, I eliminate 2,876 firm-years associated with firms not identified in the Center for Research Security Prices (CRSP) Daily Stock file since daily security prices are required to determine unexpected returns.

Furthermore, I eliminate 2,876 observations of firms that are not listed in a major U.S. exchange (New York Stock Exchange [NYSE], American Stock Exchange [AMEX], and National Association of Securities Dealers Automated Quotations [NASDAQ]). I eliminate 50 observations of firms subject to France's requirement of having at least two statutory auditors.[18]

Following prior research, I exclude from the sample 5,706 firm-years in regulated industries such as utilities (SIC 4900-4999) and financial services (SIC 6000-6999).

[18] French Commercial Code, Article L823-2 (LegiFrance, 2014).

Additionally, 115 firm-years are excluded from the sample because these do not have all the necessary data to estimate model (1). The final sample has 15,268 firm-year observations.

4.2 Descriptive Statistics

Of the 15,268 firm-year observations, 13,159 belong to firms where the U.S. office is the auditor and 2,109 firm-years where an affiliate is the auditor. All the U.S. office observations are inspected since the first inspection of these offices began on June 2003 and the sample includes only firm-years with fiscal year-end after January 1, 2004. Among the affiliates, 1,214 firm-years are inspected and 895 are non-inspected (See Table 3).

There are 39 non-U.S. jurisdictions represented in the sample (See Table 4). The non-U.S. jurisdictions with the highest representation in the sample are China (2.78 percent), Canada (2.09 percent), Israel (1.54 percent) and United Kingdom (1.03 percent). The clients of the U.S. offices represent 86.19 percent of the sample.

Table 4, Panel A shows the descriptive statistics for the sample by affiliate status (U.S. office versus affiliate) as reflected by the *AFF* variable. The continuous explanatory variables are winsorized at the one and 99 percent levels to minimize the effect of extreme observations. The *UE* for the U.S. office clients is -0.0018 while for the clients of affiliates it is -0.0062, the difference is statistically significant (p-value<0.001). The mean value of *SIZE* for U.S. clients is 7.0025 while for affiliate clients is 7.7560 these are statistically different (p-value<0.001). Additionally, the mean of *LNMB* is higher for clients of U.S. offices (0.9101) than for clients of affiliates (0.7413) and significant (p-value<0.001). The mean value of *BETA* is statistically different between clients of the

U.S. office (1.3116) and clients of affiliates (1.2013) (p-value < 0.001). On average, the clients of U.S. offices are different than the clients of affiliates in terms of firm size, growth potential, and systematic risk.

Table 4, Panel B shows the descriptive statistics for the sample by inspection status (non-inspected versus inspected) as reflected by the *INSP* variable. The mean *UE* of non-inspected members is -0.0062; for clients of inspected members it is -0.0021 – these are significantly different at the 0.001 level. The mean value of *SIZE* is different between clients of non-inspected members (7.7511) and clients of inspected members (7.0509) (p-value<0.001). Furthermore, the mean of *LNMB* is different between clients of non-inspected members (0.7535) and clients of inspected members (0.8983) (p-value<0.001). The mean value of *BETA* is statistically different between clients of non-inspected members (1.2372) and clients of inspected members (1.3015) (p-value < 0.001). On average, the clients of non-inspected members are different than the clients inspected members in terms of size of firms, growth, and systematic risk, hence, as previously stated, controlling for these factors in model (1) is necessary.

Table 6 shows the Pearson and Spearman correlation coefficients for the sample. The correlation coefficient for *UE* and *UR* is 0.086 and it is statistically significant at the 0.001 level. Additionally, the correlation coefficient for *UE* and *LNMB* is -0.021 and it is statistically significant (p-value<0.05). Most of the correlation coefficients among the explanatory variables are statistically significant at different levels (0.10, 0.05, and

0.001). However, their values are not close to 0.70 (Hair et al., 2010, p. 204) and multicollinearity among the individual explanatory variables is not a concern.[19]

[19] The first inspection of the U.S. offices began in June 2003. Consequently, all of the non-inspected observations in the sample are of clients of affiliates. Because of this, the correlation coefficient between *AFF* and *INSP* is -0.734 and it is statistically significant (p-value<0.001) which may be a concern in terms of multicollinearity. As an additional test I estimate model (1) using an alternative coding to capture the inspection and affiliate status: U.S. office, inspected affiliates, and non-inspected affiliates. This approach results in two indicator variables *INSP_AFF* (=1, if the firm is client of an inspected affiliate, and 0 otherwise) and *NON_INSP_AFF* (=1, if the firm is client of a non-inspected affiliate, and 0 otherwise). The benchmark category is clients of U.S. offices (INSP_AFF=0 and NON_INSP_AFF=0). In this setting, the correlation coefficient between *INSP_AFF* and *NON_INSP_AFF* is -0.0733. Although it is statistically significant (p-value<0.001) it is not close to the 0.70 threshold (Hair et al., 2010, p. 204), thus multicollinearity is not an issue. The results of using model (1) with the variables *INSP_AFF* and *NON_INSP_AFF* (results not shown) are similar to those of estimating model (1) using *INSP* and *AFF*. I present the results using *AFF* and *INSP* as the indicator variables because of ease of interpretation.

CHAPTER 5: REGRESSION RESULTS

This section presents the main regression results for testing hypothesis one and hypothesis two, and concludes with several sensitivity analyses to determine the robustness of the results.

5.1 Regression Results

Table 7 shows the regression results of estimating model (1) using 3, 5, and 7-day windows for the dependent variable *UR*. As previously indicated, multicollinearity originating from correlated control variables is not an issue given the low correlation coefficients among them (See Table 6). Nevertheless I estimate model (1) using centered data to avoid multicollinearity issues that might originate from interacting each one of the control variables with *UE*.

Model (1) is statistically significant at the 0.001 level and has an R^2 of 2.11 percent when using $UR_{(-1, +1)}$ as the dependent variable. When using $UR_{(-2, +2)}$ and $UR_{(-3, +3)}$ the estimated models are also statistically significant (p-value < 0.001) and have comparable R^2 (2.12 and 2.17 percent, respectively). Since similar results are found using the three different windows for *UR,* the remaining discussion of this subsection focuses on the results of model (1) using $UR_{(-1, +1)}$ as the dependent variable.

The coefficient of interest to test *H1* is β_2, associated with the variable *UE*AFF*, which tests the effect of affiliate status on perceived audit quality. *H1* states that the non-U.S. affiliates of a Big 4 global network have lower perceived audit quality than the U.S. office. In order to find support for this hypothesis β_2 should be negative and statistically significant. As shown in table 7, the estimated coefficient of *UE*AFF* is positive but not statistically significant different from zero (β_2 = 0.0287, p-value= 0.41[20]). Thus, I find no evidence that the perceived audit quality of non-U.S. affiliates is lower than that of the U.S. offices.

The coefficient β_4 tests the effect of PCAOB inspections on perceived audit quality. *H2* states that the non-inspected members of a Big 4 global network have different perceived audit quality than the U.S. office. In order to find support for this hypothesis β_4 should be positive and statistically significant. As shown in table 7, the estimated coefficient of *UE*INSP* is positive but not statistically significant (β_4 = 0.0568, p-value= 0.34). Therefore, I find no evidence the perceived audit quality of non-inspected members differs from that of inspected members.

The estimated coefficient of *UE* (β_0) is statistically significant and positive (0.4576, $p<0.05$). Additionally, the control variables interacted with *UE* (*UE*SIZE*, *UE*LNMB*, and *UE*BETA*) are statistically significant at different levels (p-value < 0.05, 0.001, and 0.10, respectively).

In summary, I find no evidence that affiliates have lower perceived audit quality than their U.S. counterparts. Also, I find no evidence that inspected members of a Big 4 global network have higher perceived audit quality than non-inspected members.

5.2 Sensitivity Analysis

I use alternative proxies for *UE*, *UR*, *INSP*, and additional control variables to assess the robustness of the previously stated results. Table 8 provides the results of estimating model (1) using UE_{med}. UE_{med} is the difference between actual earnings and

[20] The p-values reported for β_2 and β_4 are one-tailed.

the I/B/E/S median consensus earnings forecasts issued before the annual earnings announcement, scaled by the stock price four days before the earnings announcement. When using UE_{med}, model (1) is statistically significant at the 0.001 level and has an R^2 of 2.13 percent. As with the main results, β_2 (0.0146, p-value=0.45) and β_4 (0.0563, p-value=0.34) are not statistically significant. Therefore, I find no evidence that affiliate status and PACOB inspections have an effect on the perceived audit quality of the Big 4 global network members.

There are several milestones during the inspection process that can be used to determine when an audit has taken place, such as: (1) the beginning date of the first inspection, (2) the end date of the first inspection, (3) the date when the auditor receives the initial inspection draft from the PCAOB before it is made public, (4) the memorandum's date when the auditor responds to the PCAOB's inspection draft (such memorandum is included in the final PCAOB report released to the public), and (5) the date when the final inspection report is made public. [21] I manually collected this information from the inspection reports available on the PCAOB's website. Additionally, there are two relevant dates to consider when determining whether a firm-year observation should be classified as having an inspected auditor: (1) the fiscal year end of the related financial statements and (2) the corresponding auditor's report date. My main

[21] It can be argued that this approach potentially misclassifies auditors as non-inspected, since the absence of an inspection report available on the PCAOB's website does not necessarily mean that the auditor has not been inspected. The lack of a report on the PCAOB's website may be due to the report simply not being released to the public yet. I use the fiscal year-end date of the financial statements or the auditor's report date in conjunction to a critical date in the first inspection to establish whether an observation is classified as having had an inspected auditor. The last fiscal year-end for a non-inspected observation in my sample was September 30, 2013 and the last auditor's report date was December 30, 2013. Blankley, Kerr, and Wiggins (2012) report that it takes on average 288 days (median 245 days) for a report to be released by the PCAOB. Because of the previous reasons and the time at which the sample was retrieved and the data was collected, I do not consider the potential for misclassifying auditors as non-inspected as an issue in my sample.

results classify a firm-year observation as having an inspected auditor if the *beginning* date of the auditor's first inspection occurred before the auditor's report date of such a firm-year observation. Table 9 shows the results of an alternative specification for *INSP*. I classify a firm-year observation as having an inspected auditor if the *end* date of the auditor's first inspection occurred before the *auditor's report date*. For this case, model (1) is statistically significant at the 0.001 level and has an R^2 of 2.11 percent. The *UE*AFF* coefficient, β_2 (0.0274, p-value=0.41), and the UE*INSP coefficient, β_4 (0.0533, p-value=0.35), are not statistically significant. Therefore, I find no evidence to support *H1* and *H2* under this alternative proxy for *INSP*.

Additionally, I also classify a firm-year observation as having an inspected auditor if the *beginning* date of the first inspection occurred before the *fiscal year end* of the associated financial statements (Table 10). Model (1) remains statistically significant with this *INSP* specification and has an R^2 of 2.11 percent. Nevertheless, the coefficient of interest β_2 (0.0354, p-value=0.38) and β_4 (0.0678, p-value=0.31) are not statistically significant.

Another specification of *INSP* classifies a firm-year observation as having an inspected auditor if the *end* date of the first auditor's inspection occurred before the *fiscal year end* (Table 11). Similar results are found; β_2 (0.0349, p-value=0.385) and β_4 (0.0655, p-value=0.316) are not statistically significant.

The inspection process can be deemed as fully completed once the inspection report (part 1) is made public. Therefore, I additionally classify a firm-year observation as having an inspected auditor if the first inspection *report was released* before the *auditor's report date*. Consistent with the previous results, β_2 (-0.0671, p-value=0.30) and β_4 (-0.0761, p-value=0.29) are not statistically significant. Lastly, I also estimate model (1) using *INSP* equal to1 when the auditor of the firm had its first *inspection report released* before the *fiscal year-end* of the associated financial statements (Table 12). β_2 (-0.0819, p-value=0.26) and β_4 (-0.0929, p-value=0.25) are not statistically significant.

Overall, I find no support for *H1* and *H2*, and conclude that the lack of evidence is not due to the misspecification of the inspection status of the auditor.[22]

Table 13 measures *UR* using the market-adjusted model as a benchmark over 3, 5 and 7-day windows. For these three alternative measures of *UR* the estimated model is statistically significant (p-value<0.001) and has an R^2 of 2.03, 1.84 percent, and 1.83 percent, respectively. Nevertheless, the coefficient of *UE*AFF* and UE*INSP are not statistically significant under this alternative measure of *UR*. Furthermore, model (1) is also estimated using raw returns to measure *UR* over 3, 5 and 7-day windows centered on the earnings announcement date. As the results show on Table 14, β_2 and β_4 are not statistically significant. Finally, alternative return windows are also tested ([-1, +2], [-1, +3], [-1, +4], and [-1, +5]) for model (1) using the market model (Table 15, Panel A) and using the adjusted market model (Table 15, Panel B) as the benchmark. I find that in all these model estimations β_2 and β_4 are not statistically significant.

Lastly, model (1) is augmented with the variable *OFFICE_SIZE* since previous research suggests that larger offices of Big 4 auditors have higher audit quality (e.g.

[22] An alternative approach is *INSP* equal to 1 if the Big 4 auditor of the firm is located in a jurisdiction where the PCAOB has access to conduct inspections, and 0 otherwise. This information is obtained from the list the PCAOB released on May 18, 2010: "Issuers That Are Audit Clients of PCAOB-Registered Firms from Non-U.S. Jurisdictions where the PCAOB is Denied Access to Conduct Inspections" (PCAOB, 2010). I estimate model (1) using this *INSP* (results not shown). The sample size decreases to 5,336 observations since only earnings announcements after May 18, 2010 are included. The findings do not differ from the previous specification of *INSP*. Model (1) remains statistically significant at the 0.001 and has an R^2 of 3.66 percent. However, the coefficient of UE*INSP remains not significant (0.0936, p-value=0.29).

Francis & Yu, 2009; Choi et al., 2010; Francis et al., 2013) than the smaller offices and with *CPI* to control for country specific characteristics[23]. Table 16 shows the results for the augmented model, which are consistent with my previous results. I find that β_2 and β_4 are not statistically significant.

In summary, the results are robust to different measures of unexpected earnings, return metrics (market model returns, market-adjusted returns, and raw returns), different event windows ([-1, +1], [-1, +2], [-1, +3], [-1, +4], [-1, +5], [-2, +2], and [-3, +3]), alternative specifications of the inspected status of an auditor (*INSP*), and additional control variables for office size and for country-specific characteristics. Hence, I find no indication that non-U.S. affiliates of a Big 4 global network have lower perceived audit quality than that of the U.S. office. Similarly, I find no evidence that inspected members have higher perceived audit quality than non-inspected members.

[23] *CPI* is the Corruption Perception Index. From 1995 to 2011 Transparency International uses a scale from 0 to 10 for the *CPI*. Subsequently, the scale changes from 0 to 100 for 2012 and after. Hence, the observations related to 2004-2011 are adjusted to a 0 to 100 scale to assure consistency with the 2012 and 2013 *CPI* values.

CHAPTER 6: CONCLUSIONS

The Big 4 auditors have gone through a brand investment period and developed a reputation as high quality providers (e.g. DeAngelo, 1981; Teoh & Wong, 1993; Becker et al., 1998). Maintaining such a reputation is relevant because it allows the firms to realize a premium (Shapiro, 1983). If a firm engages in quality-cutting behavior then it risks losing its future premiums (Klein & Leffler, 1983). Therefore, firms such as the Big 4 realize it is critical to protect the reputation of their brands.

The Big 4 auditors have organized into global networks in response to their clients' needs (Lenz & James, 2007). Basically, a global network is a contractual agreement in which a local firm pays a fee to the network in order to have access to the network resources, know-how and branding. Additionally, the local firm agrees to meet the standards set by the network (Lenz & James, 2007). A core component of such agreements is that these affiliates remain independent of each other. The members share the same brand name and claim to provide the same level of services but they are not a single entity.

Research suggests that the performance of the U.S. office has helped to develop the reputation of the Big 4 (De Beelde et al., 2009; Carson, 2009). Hence, this raises the question of whether all the members in the network are able to provide the same audit quality or whether the perception of high-quality providers is mainly driven by the performance of the U.S. office. Additionally, such network arrangements may be associated with free-riding behavior in which not all the members deliver the same level of quality. Within this context, this study examines the possible effect that being an affiliate - as opposed to a U.S. office - may have on audit quality. The first hypothesis postulates that affiliates have lower perceived audit quality than the U.S. office. I use ERCs as a proxy for audit quality and find no evidence that the perceived audit quality of non-U.S. affiliates is lower than that of the U.S. offices.

PCAOB inspections are another aspect relevant to the operation of these global networks. The objective of these inspections is to improve audit quality. Currently, there are three types of members: inspected affiliates, non-inspected affiliates, and inspected U.S. offices. A member is not inspected either because the PCAOB has not yet performed an inspection of a certain auditor or because the PCAOB is being denied access to conduct an inspection in the jurisdiction in which the auditor is located. Therefore, the second issue examined in this study is the effect of PCAOB inspections on audit quality. Specifically, *H2* examines whether the inspected members have higher perceived audit quality than that of non-inspected members. I use ERCs as a proxy for perceived audit quality and do not find an indication that the perceived audit quality of inspected members is higher than that of non-inspected members.

This study is relevant because its findings indicate that all the members of a Big 4 network are perceived as providers of the same level of audit quality. This may suggest that the global networks have effective internal review assurance programs; that they are able to properly disseminate knowledge among members and that they have enough internal controls to curb free-riding behavior while enforcing consistent levels of audit quality. Additionally, the lack of evidence for inspected members having higher perceived audit quality, although contrary to what accountability theory suggests, cannot be interpreted as an indication that PCAOB inspections have no value. It is possible a non-inspected member has already benefited indirectly from inspections of peer members of its global network. As previously mentioned, the global networks have common methodologies, standards, knowledge systems, and their personnel are routinely involved in international assignments. Therefore, it is very unlikely that the particular benefits and experiences from a PCAOB inspection are confined solely to the inspected member. On the contrary, my results may be an indication that inspected and non-inspected members attain similar audit quality because the change in audit quality has already permeated from inspected members to non-inspected ones.

The main limitation of this study is that only companies listed in the U.S. are included in the sample. Additional research should explore the effect of companies listed in other countries in order to have a more complete picture of the global nature of the audit quality provided by such networks.

APPENDIX

Table 1: Variable Descriptions

Variable	Definition
Dependent Variable:	
$UR_{(-1,+1)}$	Cumulative abnormal returns of the firm for the three-day window surrounding the annual earnings announcement date (-1, +1), using the market model as a benchmark.
$UR_{(-2,+2)}$	Cumulative abnormal returns of the firm for the five-day window surrounding the annual earnings announcement date (-2, +2), using the market model as a benchmark.
$UR_{(-3,+3)}$	Cumulative abnormal returns of the firm for the seven-day window surrounding the annual earnings announcement date (-3, +3), using the market model as a benchmark.
Independent Variables:	
UE	Unexpected earnings of the firms calculated as the difference between actual annual earnings and the mean I/B/E/S analyst forecast scaled by the stock price four days prior to annual earnings announcement.
UE_{med}	Unexpected earnings of the firms calculated as the difference between actual annual earnings and the median I/B/E/S analyst forecast scaled by the stock price four days prior to annual earnings announcement.
AFF	Indicator variable equal to 1 if the Big 4 auditor of the firm is a non-U.S. affiliate, and 0 otherwise.
INSP	Indicator variable equal to 1 if the Big 4 auditor of the firm's first inspection date is before than the signature date of the audit report date.
SIZE	The natural logarithm of market capitalization of the firm at fiscal year-end.
LNMB	The natural logarithm of Market-to-book value.
BETA	Beta of the firm from the market model estimated using 255 daily returns ending four days before the earnings announcement.
OFFICE_SIZE	The ratio of audit fees of an auditor office to the total audit fees for the fiscal year of the global network auditor.
CPI	Transparency International's Corruption Perception Index (CPI) for the country in which the auditor of the firm is located.

Table 2: Sample Selection Process

Opinions in AuditAnalytics' Opinion file between 01/01/2004 and 12/31/2013			86,746
Less:	Firm-years not identified in Compustat	45,595	41,151
	Firm-years not identified in I/B/E/S	16,272	24,879
	Firms-years not identified in CRSP	2,876	22,003
	Firms-years of issuers not traded on the NYSE, AMEX or NASDAQ	864	21,139
	Firms-years of issuers subject to France's double statutory auditor requirement	50	21,089
	Utilities (4900-4999) and financial services (6000-6999)	5,706	15,383
	Incomplete data for the model	115	15,268
Final Sample			15,268

Table 3: Global Network - Member Types

Member type	Number of observations	Percentage
U.S. Office	13,159	86
Inspected affiliates	895	6
Non-inspected affiliates	1,214	8
Total	15,268	100

Table 4: Auditor Jurisdiction

Jurisdiction	Observations	Percentage
Argentina	48	0.31
Australia	28	0.18
Belgium	15	0.1
Brazil	38	0.25
Canada	319	2.09
Chile	29	0.19
China	424	2.78
Colombia	4	0.03
Denmark	7	0.05
Finland	9	0.06
Germany	39	0.26
Greece	89	0.58
India	60	0.39
Indonesia	5	0.03
Ireland	35	0.23
Israel	235	1.54
Italy	29	0.19
Japan	73	0.48
Kazakhstan	1	0.01
Luxembourg	10	0.07
Mexico	83	0.54
Netherlands	38	0.25
Norway	32	0.21
Panama	7	0.05
Papua New Guinea	2	0.01
Peru	9	0.06
Philippines	7	0.05
Portugal	8	0.05
Russia	33	0.22
Singapore	10	0.07
South Africa	46	0.3
South Korea	33	0.22
Spain	9	0.06
Sweden	18	0.12
Switzerland	41	0.27
Taiwan	66	0.43
Turkey	9	0.06
United Kingdom	158	1.03
United States	13,159	86.19
Venezuela	3	0.02
Total	15,268	100.00

Table 5: Descriptive Statistics

Panel A: Descriptive Statistics by AFF Variable

	Clients of U.S. offices AFF=0 (n=13,159)			Clients of affiliates AFF=1 (n=2,109)				
Variable[a]	Mean (a)	Median (b)	Standard Deviation (c)	Mean (d)	Median (e)	Standard Deviation (f)	Difference (a)-(d)	*t*-statistic[b]
UR	0.0040	0.0024	0.0822	0.0013	0.0008	0.0690	0.0028	1.67*
UE	-0.0018	0.0005	0.0227	-0.0062	0.0000	0.0336	0.0044	2.19***
SIZE	7.0025	6.8824	1.6357	7.7560	7.5976	2.1735	-0.7535	-15.24***
LNMB	0.9101	0.8432	0.7490	0.7413	0.7189	0.7923	0.1688	9.15***
BETA	1.3116	1.2699	0.5395	1.2013	1.1233	0.5447	0.1103	8.65***

Panel B: Descriptive Statistics by INSP Variable

	Clients of non-inspected members INSP=0 (n=1,214)			Clients of inspected members INSP=1 (n=14,054)				
Variable[a]	Mean (a)	Median (b)	Standard Deviation (c)	Mean (d)	Median (e)	Standard Deviation (f)	Difference (a)-(d)	*t*-statistic[b]
UR	0.0028	0.0025	0.0715	0.0037	0.0021	0.0813	-0.0009	-0.41
UE	-0.0062	0.0000	0.0346	-0.0021	0.0004	0.0235	-0.0041	-4.06***
SIZE	7.7511	7.4974	2.1814	7.0509	6.9183	1.6845	0.7002	10.91***
LNMB	0.7535	0.7485	0.7950	0.8983	0.8328	0.7530	-0.1447	-6.11***
BETA	1.2372	1.1744	0.5692	1.3015	1.2593	0.5388	-0.0643	-3.79***

Note:

[a] See Table 1 for variable definitions.

[b] Test the hypothesis that the means are significantly different between the two groups.

* $p < 0.10$. ** $p < 0.05$. *** $p < 0.001$.

Table 6: Pearson (above) and Spearman (below) Correlation Coefficients

Variable[a]	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) UR		0.086	-0.012	0.003	-0.008	-0.021	-0.01
		*0.000****	*0.142*	*0.713*	*0.296*	*0.008***	*0.21*
(2) UE	0.258		-0.062	0.045	0.119	0.119	-0.001
	*0.000****		*0.000****	*0.000****	*0.000****	*0.000****	*0.9112*
(3) AFF	-0.012	-0.056		-0.734	0.149	-0.077	-0.07
	0.136	*0.000****		*0.000****	*0.000****	*0.000****	*0.000****
(4) INSP	0.003	0.037	-0.734		-0.109	0.052	0.032
	0.756	*0.000****	*0.000****		*0.000****	*0.000****	*0.000****
(5) SIZE	0.005	0.006	0.119	-0.083		0.279	-0.075
	0.567	*0.441*	*0.000****	*0.000****		*0.000****	*0.000****
(6) LNMB	-0.014	-0.003	-0.07	0.043	0.302		-0.018
	*0.094**	*0.699*	*0.000****	*0.000****	*0.000****		*0.023***
(7) BETA	-0.015	0.017	-0.079	0.038	-0.074	-0.037	
	*0.056**	*0.035***	*0.000****	*0.000****	*0.000****	*0.000****	

Note: Two-tailed p-values are presented below the correlation coefficients in italics.

[a] See Table 1 for variable definitions.

* $p < 0.10$. ** $p < 0.05$. *** $p < 0.001$.

Table 7: Regression Results for Model (1)

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}*AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}*INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}*SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}*LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}*BETA_{it} + \varepsilon_{it}$$

		$UR_{(-1, +1)}$			$UR_{(-2, +2)}$			$UR_{(-3, +3)}$		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0107	0.0199	-0.54	-0.0071	0.0236	-0.30	-0.0108	0.0229	-0.47
UE	+	0.4576**	0.1613	2.84	0.6768***	0.1935	3.50	0.6519**	0.2239	2.91
AFF	?	-0.0021	0.0024	-0.86	-0.0042	0.0029	-1.48	-0.0036	0.0034	-1.06
UE*AFF	-	0.0287	0.1171	0.24	-0.1328	0.1490	-0.89	-0.1127	0.1711	-0.66
INSP	?	-0.0028	0.0028	-1.00	-0.0069*	0.0033	-2.07	-0.0063*	0.0037	-1.69
UE*INSP	+	0.0568	0.1361	0.42	-0.1160	0.1665	-0.70	-0.1000	0.1949	-0.51
SIZE	?	-0.0003	0.0004	-0.83	-0.0007	0.0005	-1.46	-0.0008	0.0005	-1.57
UE*SIZE	-	0.0505**	0.0275	1.83	0.0437*	0.0307	1.42	0.0244	0.0341	0.72
LNMB	?	-0.0027**	0.0011	-2.57	-0.0047***	0.0012	-3.97	-0.0067***	0.0013	-5.10
UE*LNMB	+	0.1788***	0.0490	3.65	0.2232***	0.0565	3.95	0.2380***	0.0624	3.81
BETA	?	-0.0001	0.0013	-0.07	-0.0013	0.0016	-0.85	-0.0020	0.0017	-1.14
UE*BETA	+	0.0939*	0.0649	1.45	0.1089*	0.0747	1.46	0.1330**	0.0816	1.63
R^2		2.11%			2.12%			2.17%		
Number of observations		15,268			15,268			15,268		

Note:
[a] See Table 1 for variable definitions.
* p < 0.10, ** p < 0.05, *** p < 0.001, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 8: Sensitivity Analysis - Unexpected Earnings Using Median I/B/E/S Analyst Forecasts

$$UR_{it} = \alpha_0 + \beta_0 UE_{med\,it} + \beta_1 AFF_{it} + \beta_2 UE_{med\,it}{*}AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{med\,it}{*}INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{med\,it}{*}SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{med\,it}{*}LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{med\,it}{*}BETA_{it} + \varepsilon_{it}$$

		$UR_{(-1, +1)}$			$UR_{(-2, +2)}$			$UR_{(-3, +3)}$		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0102	0.0199	-0.51	-0.0065	0.0235	-0.28	-0.0102	0.0229	-0.45
UE_{med}	+	0.4650***	0.1596	2.91	0.6734***	0.1899	3.55	0.6651**	0.2209	3.01
AFF	?	-0.0022	0.0024	-0.88	-0.0043	0.0029	-1.5	-0.0036	0.0034	-1.08
UE_{med}*AFF	-	0.0146	0.1154	0.13	-0.1390	0.1448	-0.96	-0.1311	0.1673	-0.78
INSP	?	-0.0029	0.0028	-1.01	-0.0069**	0.0033	-2.08	-0.0063*	0.0037	-1.7
UE_{med}*INSP	+	0.0563	0.1343	0.42	-0.1212	0.1625	-0.75	-0.1071	0.1918	-0.56
SIZE	?	-0.0003	0.0004	-0.79	-0.0007	0.0005	-1.41	-0.0008	0.0005	-1.54
UE_{med}*SIZE	-	0.0575**	0.0279	2.06	0.0452*	0.0310	1.46	0.0317	0.0342	0.93
LNMB	?	-0.0028**	0.0011	-2.62	-0.0048***	0.0012	-4.01	-0.0067***	0.0013	-5.14
UE_{med}*LNMB	+	0.1671***	0.0497	3.36	0.2132***	0.0566	3.77	0.2272***	0.0626	3.63
BETA	?	-0.0001	0.0013	-0.07	-0.0014	0.0016	-0.87	-0.0020	0.0017	-1.15
UE_{med}*BETA	+	0.1059*	0.0644	1.64	0.1037*	0.0749	1.38	0.1328*	0.0811	1.64
R^2		2.13%			2.09%			2.17%		
Number of observations		15,268			15,268			15,268		

Note:

[a] See Table 1 for variable definitions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 9: Sensitivity Analysis - Inspection Status - End Date of First Inspection versus Auditor's Report Date

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}{*}AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}{*}INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}{*}SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}{*}LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}{*}BETA_{it} + \varepsilon_{it}$$

		$UR_{(-1, +1)}$			$UR_{(-2, +2)}$			$UR_{(-3, +3)}$		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0101	0.0199	-0.51	-0.0064	0.0236	-0.27	-0.0100	0.0229	-0.44
UE	+	0.4612**	0.1616	2.85	0.6308	0.1971	3.2	0.5981**	0.2280	2.62
AFF	?	-0.0025	0.0025	-1.01	-0.0047	0.0029	-1.63	-0.0041	0.0034	-1.21
UE*AFF	-	0.0274	0.1196	0.23	-0.1065	0.1532	-0.7	-0.0815	0.1760	-0.46
INSP	?	-0.0035	0.0029	-1.22	-0.0076	0.0034	-2.26	-0.0071*	0.0037	-1.92
UE*INSP	+	0.0533	0.1371	0.39	-0.0718	0.1711	-0.42	-0.0482	0.2002	-0.24
SIZE	?	-0.0003	0.0004	-0.83	-0.0007	0.0005	-1.46	-0.0008	0.0005	-1.57
UE*SIZE	-	0.0506**	0.0275	1.84	0.0431	0.0306	1.41	0.0238	0.0340	0.7
LNMB	?	-0.0027**	0.0011	-2.56	-0.0047	0.0012	-3.95	-0.0066***	0.0013	-5.08
UE*LNMB	+	0.1788***	0.0490	3.65	0.2221	0.0565	3.93	0.2367***	0.0625	3.79
BETA	?	-0.0001	0.0013	-0.07	-0.0013	0.0016	-0.85	-0.0020	0.0017	-1.15
UE*BETA	+	0.0942*	0.0651	1.45	0.1101	0.0749	1.47	0.1345*	0.0818	1.64
R^2		2.11%			2.12%			2.17%		
Number of observations		15,268			15,268			15,268		

Note:
[a] See Table 1 for variable definitions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 10: Sensitivity Analysis - Inspection Status - Beginning Date of First Inspection versus Fiscal Year End

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}*AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}*INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}*SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}*LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}*BETA_{it} + \varepsilon_{it}$$

		$UR_{(-1, +1)}$			$UR_{(-2, +2)}$			$UR_{(-3, +3)}$		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0115	0.0199	-0.58	-0.0082	0.0236	-0.35	-0.0119	0.0228	-0.52
UE	+	0.4465**	0.1614	2.77	0.6688***	0.1942	3.44	0.6407**	0.2245	2.85
AFF	?	-0.0016	0.0025	-0.63	-0.0036	0.0029	-1.23	-0.0029	0.0034	-0.85
UE*AFF	-	0.0354	0.1178	0.3	-0.1287	0.1501	-0.86	-0.1065	0.1721	-0.62
INSP	?	-0.0020	0.0029	-0.68	-0.0058*	0.0034	-1.69	-0.0051	0.0037	-1.36
UE*INSP	+	0.0678	0.1366	0.5	-0.1082	0.1675	-0.65	-0.0890	0.1959	-0.45
SIZE	?	-0.0003	0.0004	-0.82	-0.0007	0.0005	-1.44	-0.0008	0.0005	-1.56
UE*SIZE	-	0.0505**	0.0275	1.83	0.0436*	0.0306	1.42	0.0243	0.0340	0.71
LNMB	?	-0.0027**	0.0011	-2.57	-0.0047***	0.0012	-3.97	-0.0067***	0.0013	-5.1
UE*LNMB	+	0.1788***	0.0490	3.65	0.2235***	0.0565	3.96	0.2382***	0.0625	3.81
BETA	?	-0.0001	0.0013	-0.06	-0.0013	0.0016	-0.84	-0.0019	0.0017	-1.13
UE*BETA	+	0.0940*	0.0649	1.45	0.1090*	0.0747	1.46	0.1332*	0.0816	1.63
R^2		2.11%			2.12%			2.17%		
Number of bservations		15,268			15,268			15,268		

Note:
[a] See Table 1 for variable definitions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 11: Sensitivity Analysis - Inspection Status - End Date of First Inspection versus Fiscal Year End

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}{*}AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}{*}INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}{*}SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}{*}LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}{*}BETA_{it} + \varepsilon_{it}$$

		$UR_{(-1, +1)}$			$UR_{(-2, +2)}$			$UR_{(-3, +3)}$		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0110	0.0199	-0.55	-0.0074	0.0236	-0.31	-0.0110	0.0228	-0.48
UE	+	0.4488**	0.1615	2.78	0.6207***	0.1971	3.15	0.5882**	0.2281	2.58
AFF	?	-0.0019	0.0025	-0.77	-0.0041	0.0029	-1.42	-0.0035	0.0034	-1.04
UE*AFF	-	0.0349	0.1199	0.29	-0.1008	0.1536	-0.66	-0.0758	0.1766	-0.43
INSP	?	-0.0025	0.0029	-0.86	-0.0066*	0.0034	-1.95	-0.0060	0.0037	-1.63
UE*INSP	+	0.0655	0.1373	0.48	-0.0618	0.1714	-0.36	-0.0385	0.2006	-0.19
SIZE	?	-0.0003	0.0004	-0.82	-0.0007	0.0005	-1.45	-0.0008	0.0005	-1.57
UE*SIZE	-	0.0506**	0.0275	1.84	0.0431*	0.0306	1.41	0.0237	0.0340	0.7
LNMB	?	-0.0027**	0.0011	-2.57	-0.0047***	0.0012	-3.96	-0.0067***	0.0013	-5.09
UE*LNMB	+	0.1787***	0.0490	3.64	0.2222***	0.0565	3.93	0.2368***	0.0625	3.79
BETA	?	-0.0001	0.0013	-0.07	-0.0013	0.0016	-0.85	-0.0020	0.0017	-1.14
UE*BETA	+	0.0943*	0.0651	1.45	0.1102*	0.0749	1.47	0.1347**	0.0818	1.65
R^2		2.11%			2.12%			2.17%		
Number of observations		15,268			15,268			15,268		

Note:

[a] See Table 1 for variable definitions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 12: Sensitivity Analysis - Inspection Status - PCAOB Report Release Date

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}{*}AFF_{it} + \beta_3 INSP_{it} + \beta_4\, UE_{it}{*}INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}{*}SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}{*}LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}{*}BETA_{it} + \varepsilon_{it}$$

		Auditor's Report Date			Fiscal Year End of the Financial Statements		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0123	0.0199	-0.62	-0.0123	0.0199	-0.62
UE	+	0.5936***	0.1580	3.76	0.6102***	0.1537	3.97
AFF	?	-0.0015	0.0029	-0.52	-0.0016	0.0029	-0.54
UE*AFF	-	-0.0671	0.1310	-0.51	-0.0819	0.1285	-0.64
INSP	?	-0.0015	0.0030	-0.49	-0.0015	0.0029	-0.5
UE*INSP	+	-0.0761	0.1396	-0.55	-0.0929	0.1364	-0.68
SIZE	?	-0.0003	0.0004	-0.8	-0.0003	0.0004	-0.8
UE*SIZE	-	0.0515**	0.0275	1.88	0.0515**	0.0275	1.88
LNMB	?	-0.0028**	0.0011	-2.6	-0.0027**	0.0011	-2.59
UE*LNMB	+	0.1817***	0.0487	3.73	0.1818***	0.0486	3.74
BETA	?	-0.0001	0.0013	-0.06	-0.0001	0.0013	-0.06
UE*BETA	+	0.0921*	0.0645	1.43	0.0924*	0.0645	1.43
R^2		2.11%			2.11%		
Number of observations		15,268			15,268		

Note:

[a] See Table 1 for variable definitions.

* p < 0.10, ** p < 0.05, *** p < 0.001, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 13: Sensitivity Analysis - Market-Adjusted Model Returns

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}*AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}*INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}*SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}*LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}*BETA_{it} + \varepsilon_{it}$$

		$UR_{(-1, +1)}$			$UR_{(-2, +2)}$			$UR_{(-3, +3)}$		
Variable	Predicted Sign	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value	Estimate	Standard Error	*t*-value
Intercept	?	-0.0137	0.0185	-0.74	-0.0134	0.0220	-0.61	-0.0204	0.0212	-0.96
UE	+	0.4283**	0.1662	2.58	0.6225***	0.1952	3.19	0.5828**	0.2227	2.62
AFF	?	-0.0016	0.0024	-0.67	-0.0033	0.0029	-1.17	-0.0019	0.0033	-0.59
UE*AFF	-	0.0470	0.1227	0.38	-0.0807	0.1516	-0.53	-0.0528	0.1707	-0.31
INSP	?	-0.0030	0.0028	-1.08	-0.0070**	0.0033	-2.11	-0.0056	0.0036	-1.54
UE*INSP	+	0.0831	0.1393	0.6	-0.0923	0.1663	-0.56	-0.0531	0.1897	-0.28
SIZE	?	-0.0003	0.0004	-0.64	-0.0006	0.0005	-1.2	-0.0007	0.0005	-1.29
UE*SIZE	-	0.0523**	0.0279	1.88	0.0439*	0.0319	1.38	0.0258	0.0346	0.74
LNMB	?	-0.0006	0.0011	-0.54	-0.0010	0.0012	-0.84	-0.0015	0.0013	-1.18
UE*LNMB	+	0.1658***	0.0489	3.39	0.1989***	0.0571	3.48	0.2113***	0.0621	3.4
BETA	?	0.0006	0.0013	0.46	-0.0007	0.0016	-0.43	-0.0012	0.0017	-0.71
UE*BETA	+	0.0730	0.0642	1.14	0.0444	0.0753	0.59	0.0838	0.0835	1
R^2		2.03%			1.84%			1.83%		
Number of observations		15,268			15,268			15,268		

Note:
[a] See Table 1 for variable definitions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 14: Sensitivity Analysis - Raw Returns

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}{*}AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}{*}INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}{*}SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}{*}LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}{*}BETA_{it} + \varepsilon_{it}$$

Variable	Predicted Sign	$UR_{(-1, +1)}$ Estimate	$UR_{(-1, +1)}$ Standard Error	$UR_{(-1, +1)}$ *t*-value	$UR_{(-2, +2)}$ Estimate	$UR_{(-2, +2)}$ Standard Error	$UR_{(-2, +2)}$ *t*-value	$UR_{(-3, +3)}$ Estimate	$UR_{(-3, +3)}$ Standard Error	$UR_{(-3, +3)}$ *t*-value
Intercept	?	-0.0126	0.0181	-0.69	-0.0149	0.0187	-0.8	-0.0245	0.0192	-1.28
UE	+	0.3659**	0.1722	2.12	0.5099**	0.1965	2.6	0.4241**	0.2257	1.88
AFF	?	-0.0014	0.0026	-0.55	-0.0028	0.0031	-0.91	-0.0010	0.0035	-0.29
UE*AFF	-	0.0939	0.1298	0.72	-0.0013	0.1547	-0.01	0.0801	0.1730	0.46
INSP	?	-0.0032	0.0029	-1.11	-0.0072*	0.0035	-2.08	-0.0053	0.0038	-1.41
UE*INSP	+	0.1607	0.1452	1.11	0.0143	0.1689	0.08	0.1242	0.1949	0.64
SIZE	?	0.0001	0.0004	0.22	-0.0002	0.0005	-0.31	-0.0001	0.0005	-0.23
UE*SIZE	-	0.0639**	0.0291	2.19	0.0598**	0.0343	1.74	0.0571*	0.0376	1.52
LNMB	?	-0.0003	0.0011	-0.31	-0.0007	0.0012	-0.55	-0.0015	0.0014	-1.1
UE*LNMB	+	0.1737***	0.0504	3.45	0.2047***	0.0608	3.37	0.2167***	0.0659	3.29
BETA	?	0.0007	0.0014	0.48	-0.0007	0.0016	-0.44	-0.0014	0.0018	-0.77
UE*BETA	+	0.0499	0.0650	0.77	0.0025	0.0789	0.03	0.0171	0.0896	0.19
R^2		2.13%			2.02%			2.40%		
Number of observations		15,268			15,268			15,268		

Note:
[a] See Table 1 for variable definitions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 15: Sensitivity Analysis - Alternative Return Windows

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}*AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}*INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}*SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}*LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}*BETA_{it} + \varepsilon_{it}$$

Panel A: Market-Model Returns

Window	R^2	Variable[a]	Estimate	Standard Error	*t*-value
(-1, +2)	2.16%	UE*AFF	0.0246	0.1293	0.19
		UE*INSP	0.0476	0.1468	0.32
(-1, +3)	2.10%	UE*AFF	0.0749	0.1470	0.51
		UE*INSP	0.0782	0.1705	0.46
(-1, +4)	2.11%	UE*AFF	0.0825	0.1543	0.53
		UE*INSP	0.1125	0.1804	0.62
(-1, +5)	2.07%	UE*AFF	0.1289	0.1489	0.87
		UE*INSP	0.1626	0.1733	0.94
Number of observations		15,268			

Panel B: Market-Model Returns

Window	R^2	Variable[a]	Estimate	Standard Error	*t*-value
(-1, +2)	2.02%	UE*AFF	0.0536	0.1337	0.4
		UE*INSP	0.0601	0.1493	0.4
(-1, +3)	1.97%	UE*AFF	0.1133	0.1455	0.78
		UE*INSP	0.0977	0.1667	0.59
(-1, +4)	1.96%	UE*AFF	0.1509	0.1482	1.02
		UE*INSP	0.1637	0.1720	0.95
(-1, +5)	1.90%	UE*AFF	0.1872	0.1463	1.28
		UE*INSP	0.2010	0.1663	1.21
Number of observations		15,268			

Note:
[a] See Table 1 for variable definitions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

Table 16: Sensitivity Analysis - Additional Control Variables

$$UR_{it} = \alpha_0 + \beta_0 UE_{it} + \beta_1 AFF_{it} + \beta_2 UE_{it}*AFF_{it} + \beta_3 INSP_{it} + \beta_4 UE_{it}*INSP_{it} + \beta_5 SIZE_{it} + \beta_6 UE_{it}*SIZE_{it} + \beta_7 LNMB_{it} + \beta_8 UE_{it}*LNMB_{it} + \beta_9 BETA_{it} + \beta_{10} UE_{it}*BETA_{it} + \beta_{11} OFFICE\_SIZE_{it} + \beta_{12} UE_{it}* OFFICE\_SIZE_{it} + \beta_{13} CPI_{it} + \beta_{14} UE_{it}* CPI_{it} + \varepsilon_{it}$$

Variable	Predicted Sign	$UR_{(-1, +1)}$ Estimate	$UR_{(-1, +1)}$ Standard Error	$UR_{(-1, +1)}$ *t*-value	$UR_{(-2, +2)}$ Estimate	$UR_{(-2, +2)}$ Standard Error	$UR_{(-2, +2)}$ *t*-value	$UR_{(-3, +3)}$ Estimate	$UR_{(-3, +3)}$ Standard Error	$UR_{(-3, +3)}$ *t*-value
Intercept	?	-0.0105	0.0200	-0.52	-0.0171	0.0204	-0.84	-0.0168	0.0205	-0.82
UE	+	0.4512**	0.1619	2.79	0.4030*	0.2568	1.57	0.3994*	0.2569	1.55
AFF	?	-0.0015	0.0025	-0.62	-0.0012	0.0025	-0.49	-0.0007	0.0026	-0.28
UE*AFF	-	0.0488	0.1217	0.4	0.0348	0.1194	0.29	0.0543	0.1237	0.44
INSP	?	-0.0028	0.0028	-1	-0.0039	0.0028	-1.40	-0.0039	0.0028	-1.40
UE*INSP	+	0.0567	0.1361	0.42	0.0397	0.1412	0.28	0.0408	0.1413	0.29
SIZE	?	-0.0004	0.0004	-0.98	-0.0004	0.0004	-0.92	-0.0004	0.0004	-1.06
UE*SIZE	-	0.0492**	0.0275	1.79	0.0511**	0.0276	1.85	0.0498**	0.0275	1.81
LNMB	?	-0.0027**	0.0011	-2.54	-0.0027**	0.0011	-2.55	-0.0027**	0.0011	-2.52
UE*LNMB	+	0.1764***	0.0490	3.6	0.1786***	0.0492	3.63	0.1762***	0.0492	3.58
BETA	?	-0.0001	0.0013	-0.07	-0.0001	0.0013	-0.04	0.0000	0.0013	-0.03
UE*BETA	+	0.0929*	0.0649	1.43	0.0931*	0.0649	1.43	0.0922*	0.0649	1.42
OFFICE_SIZE	?	0.0266	0.0240	1.11				0.0254	0.0241	1.06
UE*OFFICE_SIZE	+	1.0476	1.5090	0.69				1.0390	1.5095	0.69
CPI	?				0.0001	0.0001	1.51	0.0001	0.0001	1.49
UE*CPI	+				0.0010	0.0034	0.30	0.0009	0.0034	0.28
R^2		2.12%			2.12%			2.13%		
Number of observations		15,268			15,268			15,268		

Note:
[a] See Table 1 for variable definitions.
* $p < 0.10$, ** $p < 0.05$, *** $p < 0.001$, p-values are one-tailed when a coefficient prediction was made, two-tailed otherwise.

REFERENCES

Advisory Committee on the Auditing Profession (ACAP) (October 6, 2008). Final Report. The Department of the Treasury. Retrieved from http://www.treasury.gov/about/organizational-structure/offices/Documents/final-report.pdf

Albanese, R., & Van Fleet, D. D. (1985). Rational behavior in groups: The free-riding tendency. *The Academy of Management Review*, *10*(2), 244-255.

Abdullatif, M., & Al-Khadash, H. A. (2010). Putting audit approaches in context: The case of business risk audits in Jordan. *International Journal of Auditing*, *14*(1), 1-24.

Asare, S. K., Trompeter, G. M., & Wright, A. M. (2000). The effect of accountability and time budgets on auditors' testing strategies. *Contemporary Accounting Research*, *17*(4), 539-560.

Atiase, R. K. (1985). Predisclosure Information, Firm Capitalization, and Security Price Behavior Around Earnings Announcements. *Journal of Accounting Research*, *23*(1), 21-36.

Ayers, B. C., Jiang, J. X., & Yeung, P. E. (2006). Discretionary Accruals and Earnings Management: An Analysis of Pseudo Earnings Targets. *The Accounting Review*, *81*(3), 617-652.

Ball, R., Kothari, S. P., & Robin, A. (2000). The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics*, *29*(1), 1-51.

Balsam, S., Krishnan, J., & Yang, J. S. (2003). Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory*, *22*(2), 71-97.

Barrett, M., Cooper, D. J. & Jamal, K. (2005). Globalization and the coordinating of work in multinational audits. *Accounting, Organizations and Society, 30*(2005), 1-24.

Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research*, *46*(3), 467-498.

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

Beatty, R. P. (1989). Auditor reputation and the pricing of initial public offerings. *The Accounting Review*, *64*(4), 693-709.

Becker, C. L., Defond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research, 15*(1), 1-24.

Bedard, J. C., Johnstone, K. M., & Smith, E. F. (2010). Audit quality indicators: A status update on possible public disclosures and insights from audit practice. *Current Issues in Auditing*, *4*(1), C12. doi:10.2308/ciia.2010.4.1.C12

Bergsteiner, H. (2012). *Accountability theory meets accountability practice*. Bingley, UK: Emerald.

Bishop, C.C., Hermanson, D.R., & Houston, R.W. (2013). PCAOB Inspections of International Audit Firms: Initial Evidence. *International Journal of Auditing*, *17*(2013), 1-18.

Blankley, A.I., Kerr, D.S., & Wiggins, C.E. A content analysis of CPA firms' correspondence following PCAOB inspections: 2004–2010. *Research in Accounting Regulation*, *24*, 74-89.

Boone, J. P., Khurana, I. K., & Raman, K. K. (2010). Do the Big 4 and the Second-tier firms provide audits of similar quality?. *Journal of Accounting and Public Policy*, *29*(4), 330-352.

BrandFinance (2014). *Global 500 2014. The World's Most Valuable Brands.* Retrieved from http://brandirectory.com/league_tables/table/global-500-2014

Brinn, T., Peel, M. J. and Roberts, R. (1994) Audit fee determinants of independent and subsidiary unquoted companies in the UK—an exploratory study. *British Accounting Review*, *26*(2), pp. 101–121.

Brown, L. D., & Caylor, M. L. (2005). A Temporal Analysis of Quarterly Earnings Thresholds: Propensities and Valuation Consequences. *The Accounting Review*, *80*(2), 423-440.

Brown, L. D., & Kim, K.J. (1991). Timely Aggregate Analyst Forecasts As Better Proxies for Market Earnings Expectations. *Journal of Accounting Research*, *29*(2), 382-385.

Brown, P., & Preiato, J. (2014). Measuring country differences in enforcement of accounting standards: An audit and enforcement proxy. *Journal of Business Finance & Accounting*, *41*(1/2), 1-52

Buchman, T.A., Tetlock, P.E., & Reed, R.O. (1996). Accountability and Auditors' Judgments About Contingent Events. *Journal of Business, Finance and Accounting*, *23*(3), 379-398.

Cahan, S. F., & Emanuel, D. (2009). Are the reputations of the large accounting firms really international?: Evidence from Andersen-Enron affair. *Auditing: A Journal of Practice & Theory*, *28*(2), 199-226.

Calderon, T. G., & Song, H. (2014). PCAOB international inspections. *The CPA Journal*, *84*(1), 30-39.

Carcello, J.V., Hollingsworth, C., & Mastrolia, S. A. (2011). The effect of PCAOB inspections on Big 4 audit quality. *Research in Accounting Regulation*, *23*(2011), 85-96.

Carson, E. (2009). Industry specialization by global audit firm networks. *The Accounting Review*, *84*(2), 355-382. doi:10.2308/accr.2009.84.2.355

Central Intelligence Agency (CIA) (2014). *The World Factbook*. Retrieved from https://www.cia.gov/library/publications/the-world-factbook/

Chan, P., Ezzamel, M. and Gwilliam, D. (1993) Determinants of audit fees for quoted UK companies. *Journal of Business Finance and Accounting*, *20*(6), pp. 765–786.

Chen, K.Y., Lin, K.L. , & Zhou, J. (2005). Audit Quality and Earnings Management for Taiwan Firms. *Managerial Auditing Journal*, *20*(1), 86-104.

Chinese Institute of Certified Public Accountants (CICPA) (2014). *Information on Top 100 Chinese Accounting Firms Released*. Retrieved from http://www.cicpa.org.cn/BNIE/201406/W020140630412948909614.pdf

Choi, J. H., Kim, C. F., Kim, J. B., & Zang, Y. 2010. Audit office size, audit quality, and audit pricing. *Auditing: A Journal of Practice and Theory*, *29*(1), 73-97.

Church, B.K. & Shefchik, L.B. (2012). PCAOB Inspections and Large Accounting Firms. *Accounting Horizons*, *26*(1), 43-63.

Collins, D. W., & Kothari, S. P. (1989). An analysis of intertemporal and cross-sectional determinants of earnings response coefficients. *Journal of Accounting and Economics*, *11*(2–3), 143-181.

Craswell, A. T., Francis, J. R. and Taylor, S. L. (1995) Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics*, *20*(3), 297–322.

Culy, A. (2006). Global networks under fire. *Accountancymagazine.com*, *138*(1356), 110-111.

DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, *3*, 183-199.

De Beelde, I., Gonthier-Besacier, N., & Mikol, A. (2009). Internationalizing the French auditing profession. *The Accounting Historians Journal*, *36*(1), 29-59.

DeFond, M. L., & Lennox, C. S. (2011). The effect of SOX on small auditor exits and audit quality. *Journal of Accounting and Economics, 52*(1), 21-40.

Deloitte & Touche (D&T). (2013). *Deloitte*. *Global Impact 2013*. Retrieved from http://www2.deloitte.com/content/dam/Deloitte/de/Documents/Corporate%20Responsibility/2013_global-impact-report.pdf

Deloitte & Touche (D&T). (2014a). *History: A Century of Exceeding High Expectations*. Retrieved from http://www.deloitte.com/view/en_US/us/About/History/index.htm

Deloitte & Touche (D&T). (2014b). *Global Office Directory*. Retrieved from http://www2.deloitte.com/global/en/footerlinks/global-office-directory.html

Deloitte & Touche (D&T). (2014c). *Committed to Shaping the Audit of the Future* http://public.deloitte.com/media/0565/2-audit-quality.html

DeZoort, T., Harrison, P., & Taylor, M. (2006). Accountability and auditors' materiality judgments: The effects of differential pressure strength on conservatism, variability, and effort. *Accounting, Organizations and Society, 31, 373-390*.

Doupnik, T. S. and S. B. Salter. (1995). External Environment, Culture, and Accounting Practice: A Preliminary Test of a General Model of International Accounting Development. *International Journal of Accounting*, *30*, 189-207.

Dye, R.A.(1993). Auditing standards, legal liability and auditor wealth. *Journal of Political Economy*, *101*, 887–914.

Easton, P. & Zmijewski, M. (1989), Cross-sectional variation in the stock market response to accounting earnings announcements. *Journal of Accounting and Economics*, *11*(2), 117-141.

Ernst & Young (E&Y). (2013). *Transparency Report 2013 – EY Global*. Retrieved from http://www.ey.com/Publication/vwLUAssets/EY-Global-Transparency-Report-2013/$FILE/EY_Transparency_%20Report_%202013_EY%20Global_final.pdf

Ernest & Young (E&Y). (2014a). *A Timeline of Our History*. Retrieved from http://www.ey.com/GL/en/About-us/Our-people-and-culture/Our-history/About-EY---Key-Facts-and-Figures---History---Timeline

Ernest & Young (E&Y). (2014b). *Our Locations*. Retrieved from http://www.ey.com/GL/en/Home/OurLocations

Ernest & Young (E&Y). (2014c). *Our Assurance Services*. Retrieved from http://www.ey.com/GL/en/Services/Assurance/About-Assurance-Services

Francis, J.R. (1984). The effect of audit firm size on audit prices. *Journal of Accounting and Economics*, *6*(2), 133-151.

Francis, J. R., Khurana, I. K., & Pereira, R. (2003). The role of accounting and auditing in corporate governance and the development of financial markets around the world. *Asia-Pacific Journal of Accounting & Economics*, *10*(1), 1-30

Francis, J. R., Maydew, E. L., & Sparks, H. C. (1999). The role of big 6 auditors in the credible reporting of accruals. *Auditing: A Journal of Practice & Theory,18*(2), 17-34.

Francis, J. R., Michas, P. N., & Yu, M. D. (2013). Office size of big 4 auditors and client restatements. *Contemporary Accounting Research, 30*(4), 1626-1661.

Francis, J. R., & Stokes, D. J. (1986). Audit prices, product differentiation, and scale economies: Further evidence from the Australian market. *Journal of Accounting Research*, *24*(2), 383-393.

Francis, J. R., & Yu, M. D. (2009). The effect of Big 4 office size on audit quality. *The Accounting Review*, *84* (5), 1521–52.

Ghosh, A. Kallapur, S., & Moon, D. (2009). Audit and non-audit fees and capital market perceptions of auditor independence. *Journal of Accounting and Public Policy*, *28*(5), 369-385. doi:10.1016/j.jaccpubpol.2009.07.001.

Gills, B. K., & Thompson, W. R. (2006). *Globalization and global history*. New York; London: Routledge.

Government Accountability Office (GAO). (2006). *GAO Financial Restatements Database*. Retrieved from http://www.gao.gov/special.pubs/gao-06-1079sp/toc.html

Government Accountability Office (GAO). (2008). *Audits of Public Companies: Continued Concentration in Audit Market for Public Companies Does Not Call for Immediate Action*. Retrieved from http://www.gao.gov/products/GAO-08-163

Gramling, A. A., Krishnan, J., & Zhang, Y. (2011). Are PCAOB-identified audit deficiencies associated with a change in reporting decisions of triennially inspected audit firms? *Auditing: A Journal of Practice & Theory, 30*(3), 59-79.

Gulati, R., Nohria, N., & Zaheer, A. (2000). Strategic networks. *Strategic Management Journal*, 21(3), 203-215.

Gunny, K.A., & Zhang, T.C. (2013). PCAOB inspection reports and audit quality. *Journal of Accounting and Public Policy*, *32*(2), 136-160.

Hall, B. J. (2010). Not my brother's keeper: Accounting firms face increased securities claims for audits performed by affiliates in other countries. *St. John's Law Review, 84*(3), 1133-1178.

Hair, J. F., Black, W.C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th ed.). Upper Saddle River, NJ: Prentice Hall.

Hermanson, D. R., & Houston, R. W. (2009). Evidence from the PCAOB's second inspections of small firms. *The CPA Journal, 79*(2), 58-60.

Hermanson, D. R., Houston, R. W., & Rice, J. C. (2007). PCAOB inspections of smaller CPA firms: Initial evidence from inspection reports. *Accounting Horizons*, *21*(2), 137-152.

Higgs, J. L., & Skantz, T. R. (2006). Audit and nonaudit fees and the market's reaction to earnings announcements. *Auditing: A Journal of Practice & Theory, 25*(1), 1-26.

Holthausen, R. W., & Verrecchia, R. E. (1988). The effect of sequential information releases on the variance of price changes in an intertemporal multi-asset market. *Journal of Accounting Research*, *82*(1): 82–106.

Hopwood, A.G. (1998). Exploring the modern audit firm: An introduction. *Accounting, Organizations and Society*, *23*(5/6), 515-516.

Hung, M. (2000). Accounting standards and value relevance of financial statements: An international analysis. *Journal of Accounting and Economics*, *30*(3), 401-420.

Institute of Chartered Accountants in England and Wales. (1994). *Chartered Accountants in England and Wales: A Guide to Historical Records*. Manchester, UK: Manchester University Press

Jaggi, B., & Low, P. Y. (2000). Impact of culture, market forces, and legal system on financial disclosures. *The International Journal of Accounting*, *35*(4), 495.

Jenkins, D. S., Kane, G. D., & Velury, U. (2006). Earnings quality decline and the effect of industry specialist auditors: An analysis of the late 1990s. *Journal of Accounting and Public Policy*, 25(1), 71-90.

Jiang, J. X. (2008). Beating Earnings Benchmarks and the Cost of Debt. *The Accounting Review*, *83*(2), 377-416.

Johnson, V. E., & Kaplan, S. E. (1991). Experimental evidence on the effects of accountability on auditor judgments. *Auditing: A Journal of Practice & Theory*, 10, 96-107.

Johnson, E., Khurana, I. K., & Reynolds, J. K. (2002). Audit- Firm tenure and the quality of financial reports. *Contemporary Accounting Research*, 19(4), 637-660.

Johnson, E. N., Walker, K. B. & Westergaard, E. (1995) Supplier concentration and pricing of audit services in New Zealand. *Auditing: A Journal of Practice and Theory*, *14*(2), 74–89.

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

Klein, B., & Leffler, K. B. (1981). The Role of Market Forces in Assuring Contractual Performance. *Journal of Political Economy*, August, 615-641.

Knechel, W. R., Krishnan, G. V., Pevzner, M., Shefchik, L. B., & Velury, U. K. (2013). Audit quality: Insights from the academic literature. *Auditing: A Journal of Practice and Theory*, *32*, 385-421.

Kormendi, R., & Lipe, R. (1987). Earnings Innovations, Earnings Persistence, and Stock Returns. *The Journal of Business*, *60*(3), 323-345.

Kothari, S.P. (2001). Capital markets research in accounting. *Journal of Accounting and Economics*, *31*, 105-231.

KPMG (2012). *2012 KPMG International Transparency Report*. Retrieved from http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/Documents/transparency-report-2012.pdf

KPMG (2014a). *Our History: A History Built on Relationships*. Retrieved from http://jobs.kpmgcareers.com/why-kpmg/our-history

KPMG (2014b). *About*. Retrieved from http://www.kpmg.com/us/en/about/Pages/default.aspx

Krishnan, J., Sami, H., & Zhang, Y. (2005). Does the provision of nonaudit services affect investor perceptions of auditor independence?. *Auditing: A Journal of Practice & Theory*, *24*(2), 111-135.

La Porta, R., Shleifer, A., & Vishny, R. W. (1997). Legal determinants of external finance. The Journal of Finance, 52(3), 1131-1150.

LegiFrance (2014). *Code de Commerce*. Retrieved from http://www.legifrance.gouv.fr/affichCode.do;jsessionid=7C4A567595124E8BFFC7B341E45786D8.tpdjo15v_1?idSectionTA=LEGISCTA000006161409&cidTexte=LEGITEXT000005634379&dateTexte=20141110

Lennox, C. S. (1999). Audit quality and auditor size: An evaluation of reputation and deep pockets hypotheses. *Journal of Business Finance & Accounting*, *26*(7- 8), 779-805. doi:10.1111/1468-5957.00275

Lenz, H. & James, M. (2007). International audit firms as strategic networks: The evolution of global professional service firms. In: Cliquet, G., Hendriksen, G., Tuunanen, M. & Windspreger, J. (eds), *Economics and Management of Networks: Franchising, Strategic Alliances, Cooperatives*, New York: Physica-Verlag.

Lerner, J. S., & Tetlock, P. E. (1999). Accounting for the effects of accountability. *Psychological Bulletin*, *125*(2), 255-275.

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, *69*(3), 505-527.

Lim, C. Y., Ding, D. K., & Charoenwong, C. (2013). Non-audit fees, institutional monitoring, and audit quality. *Review of Quantitative Finance and Accounting*, *41*(2), 343-384. doi:10.1007/s11156-012-0312-1

Liu, C., Yuen, C. Y., Lee J. Yao (posthumously), & Chan, S. H. (2014). Differences in earnings management between firms using US GAAP and IAS/IFRS. *Review of Accounting and Finance*, *13*(2), 134-155. doi:10.1108/RAF-10-2012-0098

Menon, K., & Williams, D. D. (1991). Auditor credibility and initial public offerings. *The Accounting Review*, *66*(2), 313-332.

Miller, M., & Rock, K. (1985). Dividend policy under asymmetric information. *Journal of Finance*, *40*, 1031–1051.

Morris, T., & Empson, L. (1998). Organisation and expertise: An exploration of knowledge bases and the management of accounting and consulting firms. *Accounting, Organizations and Society*, *23*(5), 609-624. doi:10.1016/S0361-3682(98)00032-4

Palmrose, Z. (1986). Audit Fees and Auditor Size: Further Evidence. *Journal of Accounting Research*, Spring, 97-110.

Petersen, M. A. (2009). *Estimating Standard Errors in Finance Panel Data Sets: Comparing Approaches*, *22*(1), 435-480.

Pieterse, J. N. (2012). Periodizing globalization: Histories of globalization. *New Global Studies*, 6(2), 1-25.

Pittman, J. A., & Fortin, S. (2004). Auditor choice and the cost of debt capital for newly public firms. *Journal of Accounting and Economics*, *37*(1), 113-136.

PricewaterhouseCoopers (PwC). (2013). *Building trust in a time of change*. *Global Annual Review*. Retrieved from http://www.pwc.com/gx/en/annual-review/download-order.jhtml

PricewaterhouseCoopers (PwC). (2015). *How are we structured?*. Retrieved from http://www.pwc.com/structure

Public Company Accounting Oversight Board (PCAOB) (2010). Issuers That Are Audit Clients of PCAOB-Registered Firms from Non-U.S. Jurisdictions where the PCAOB is Denied Access to Conduct Inspections. Retrieved from http://pcaobus.org/International/Inspections/Pages/IssuerClientsWithoutAccess.aspx

Public Company Accounting Oversight Board (PCAOB) (2012). *Information for Audit Committees about the PCAOB Inspection process*. Retrieved from http://pcaobus.org/Inspections/Documents/Inspection_Information_for_Audit_Committees.pdf

Public Company Accounting Oversight Board (PCAOB) (2014). *Mission, Structure & History*. Retrieved from http://pcaobus.org/About/History/Pages/default.aspx

Rubin, P. H. (1978). The theory of the firm and the structure of the franchise contract. *Journal of Law and Economics*, *21*(1), 223-233.

Saito, Y., & Takeda, F. (2014). Global Audit Firm Networks and Their Reputation Risk (Forthcoming, *Journal of Accounting, Auditing and Finance*). Available at SSRN: http://ssrn.com/abstract=1326005

Scott, W.R. (2009). *Financial Accounting Theory* (5th ed.). Toronto, Canada: Pearson Prentice Hall.

Shapiro, C. (1983). Premiums for high quality products as returns to reputations. *The Quarterly Journal of Economics*, *98*(4), 659-679.

Simon, D., Ramanan, R., & Dugar, A. (1986) The market for audit services in India. *International Journal of Accounting*, *21*, 27–35.

Simon, D., Teo, S., & Trompeter, G. (1992) A comparative study of the market for audit services in Hong Kong, Malaysia and Singapore. *International Journal of Accounting*, *27*, 234–253.

Simonson, I., & Staw, B. M. (1992). Deescalation strategies: A comparison of techniques for reducing commitment to losing courses of action. *Journal of Applied Psychology*, *77*(4), 419-426.

Stroebe,W., &Frey, B. S. (1982). Self-interest and collective action: The economics and psychology of public goods. *British Journal of Social Psychology*, *21*, 121-137.

Teoh, S. H., & Wong, T. J. (1993). Perceived auditor quality and the earnings response coefficient. *Accounting Review, 68*(2), 346-366.

Tetlock, P. E. (1983). Accountability and complexity of thought. *Journal of Personality and Social Psychology*, *45*(1), 74-83.

Tetlock, P. E. (1985). Accountability: A social check on the fundamental attribution error. *Social Psychology Quarterly*, *48*(3), 227-236.

Tetlock, P. E., Skitka, L., & Boettger, R. (1989). Social and cognitive strategies for coping with accountability: Conformity, complexity, and bolstering. *Journal of Personality and Social Psychology*, *57*(4), 632-640.

U.S. House of Representatives. 2002. The Sarbanes–Oxley Act of 2002. Public Law 107–204H. R. 3763. Washington, DC: Government Printing Office.

U.S. Securities and Exchange Commission (U.S. SEC). (2012, Dec. 3). *Release No. 34-68335. Administrative Proceeding No. 3-15116*. Retrieved from http://www.sec.gov/litigation/admin/2012/34-68335.pdf

U.S. Securities and Exchange Commission (U.S. SEC). (2014, Jan. 22). Initial Decision Release No. 553. *SEC Docket*, Vol. 108, No. 2 (Jan. 20-24, 2014). Retrieved from http://www.sec.gov/alj/aljdec/2014/id553ce.pdf

Van Tendeloo, B. and Vanstraelen, A. (2005). Earnings management under German

GAAP versus IFRS. *European Accounting Review*, *14*(1), 155-180.

Von Nordenflycht, A. (2010). What is a professional service firm?: Toward a theory and taxonomy of knowledge-intensive firms. *The Academy of Management Review*, *35*(1), 155-174.

Watkins, A. L., Hillison, W., & Morecroft, S. E. (2004). Audit quality: A synthesis of theory and empirical evidence. *Journal of Accounting Literature*, *23*, 153-193.

Zimmermann, Jochen and Volckmer, Jan-Christoph, Accounting Firms: Global Spread with Limited Transnationalization (December 18, 2012). ZenTra Working Paper in Transnational Studies No. 11/2012. Available at SSRN: http://ssrn.com/abstract=2190836 or http://dx.doi.org/10.2139/ssrn.2190836