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Maria Wieczynska Date

The ‘Big’ Consequences of IFRS: How and When Does the Adoption of IFRS Benefit Global Accounting Firms?

By

Maria Wieczynska
Doctor of Philosophy

Business

_____

Grace Pownall, Ph.D.
Advisor

_____

Ilia Dichev, Ph.D.
Committee Member

_____

Kathryn Kadous, Ph.D.
Committee Member

_____

Breno Schmidt, Ph.D.
Committee Member

Accepted:

_____

Lisa A. Tedesco, Ph.D.
Dean of the James T. Laney School of Graduate Studies

_____

Date

The 'Big' Consequences of IFRS: How and When Does the Adoption of IFRS Benefit Global Accounting Firms?

By

Maria Wieczynska

B.B.A., Mercer University, 2008

Advisor: Grace Pownall, Ph.D.

An abstract of
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Abstract

The 'Big' Consequences of IFRS: How and When Does the Adoption of IFRS Benefit Global Accounting Firms?

By Maria Wieczynska

In this paper, I examine how audit markets are affected by the adoption of International Financial Reporting Standards (IFRS) which have been mandated in multiple countries and may soon be introduced in the United States. Specifically, I examine whether and how the probability of an audit firm replacement is affected by IFRS adoption. First, I hypothesize that IFRS adoption creates an expert advantage for global audit firms during a regime shift in reporting standards. This may lead to an increased frequency of switching from small audit firms to the global six. Second, I hypothesize that the likelihood of auditor replacement around IFRS adoption is affected by the strength of a country's regulatory regime. I test my hypotheses by examining the effect of IFRS adoption on the frequency and direction of auditor switching in the years surrounding the mandatory adoption of IFRS in five European Union countries: the United Kingdom, Germany, Spain, Italy, and Poland. First, I find that client firms are more likely to switch from small audit firms to global auditors in the year following IFRS adoption. Second, I find that firms listed in strong regulatory regimes are more likely to switch from small audit firms to global audit firms following IFRS adoption than firms listed in weak regulatory regimes. I also find that firms listed in low quality regulatory regimes are more likely to replace audit firms before IFRS adoption. With the exception of the year following IFRS adoption, I do not find that IFRS adopters are more likely to switch from small auditors to global audit firms before or after IFRS adoption. This indicates that the increase in the likelihood of switching from small auditors to global audit firms is a phenomenon associated with the year following IFRS adoption.

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TABLE OF CONTENTS

LIST OF TABLES

APPENDIX

I. INTRODUCTION

The adoption of International Financial Reporting Standards (IFRS) is affecting the quality and content of financial reports around the world (Barth et al. 2008; Barth et al. 2012; Ahmed et al. 2013). Researchers have dedicated substantial effort to estimating the impact of IFRS adoption on the way financial reports are prepared by firms and later used by financial analysts and individual and institutional investors (Brüggeman et al. 2011; Yu 2010; DeFond et al. 2011). However, significantly less attention has been paid to how IFRS adoption affects auditors, who play an integral role in financial reporting. Only a selected few studies examine how audit markets, auditor judgments, and auditor-client relationships are affected by IFRS adoption (Kim et al. 2012; DeGeorge et al. 2012). To fill this literature gap, I examine whether and how auditors are affected by changes in financial reporting standards regime.

In this paper, I examine whether and how the likelihood of auditor replacement is affected by IFRS adoption for client firms switching to new financial reporting standards. I also examine if the impact of IFRS adoption differs between small auditors and global audit firms (defined as the global six: PricewaterhouseCoopers [PwC], Deloitte Touche Tohmatsu, Ernst & Young, KPMG, Grant Thornton, and BDO). The difference in IFRS adoption's impact is likely to arise from changes that take place in the financial markets when IFRS is implemented for the first time. Specifically, the agency issues between shareholders and client firms' managers may become more pronounced because investors are uncertain of the quality of first-time IFRS reports. Agency issues will likely become even more visible among client firms with weak incentives for IFRS adoption. In order to alleviate these issues, client firms may signal proper implementation of IFRS by using the

services of IFRS expert auditors, i.e., global audit firms. Consequently, based on global audit firms' involvement with IFRS and their experience with IFRS audits, I hypothesize that IFRS adoption gives global audit firms an expert advantage during a regime shift in reporting standards. In turn, this advantage leads to an increased frequency of switching from small audit firms to the global six. At the same time, prior research has shown that audit fees increase around IFRS adoption (Kim et al. 2012; DeGeorge et al. 2012). Considering that global audit firms already charge higher audit fees than smaller audit firms (Moizer 1997; Choi et al. 2008), I hypothesize that client firms are more likely to switch from global audit firms to small auditors following IFRS adoption in order to avoid increased audit fee premiums.

My research methodology is as follows. I test my hypotheses by examining the effect of IFRS adoption on the frequency and direction of auditor switching in the years surrounding the mandatory adoption of IFRS in five European Union (EU) countries: the United Kingdom, Germany, Spain, Italy, and Poland. Using logistic regression analysis to control for various firm characteristics shown by the auditor switching literature to be associated with auditor replacements, I find that the likelihood of switching from a small audit firm to a global auditor increases significantly in the year following IFRS adoption. This result is robust, as it is based upon various samples and variable specifications. In multiple robustness analyses, I also find that the likelihood of audit firm replacement, irrespective of replacement direction, increases significantly following IFRS adoption (based on binary logit model results). However, this result is sensitive to the inclusion of additional variables and to the sample specifications.

In this paper I also build on prior studies which demonstrated that the strength of a country's regulatory regime affects the quality of IFRS implementation (Vulcheva 2012; Daske et al. 2012). Specifically, I test whether firms adopting IFRS that are listed in strong regulatory regimes are more likely to switch from small auditors to global audit firms than firms listed in weak regulatory regimes. Vulcheva (2012) has shown that IFRS adoption affects financial market participants in countries with high regulatory quality more than in countries with poor regulatory quality. She also suggests that this effect arises because firms in countries with strong regulatory regimes have to implement IFRS more strictly, whereas firms in countries with weak regulatory regimes implement IFRS without fully complying with all of the rules (Daske et al. 2012). Using a measure introduced by Kaufmann et al. (2009) that quantifies the ability of a government to implement and enforce regulations, I find that firms listed in stricter regulatory regimes are more likely to switch from small audit firms to global audit firms in the year following IFRS adoption than firms listed in low-quality regulatory regimes.

Finally, I examine whether auditor switching before IFRS adoption is affected by the strength of a regulatory regime. Prior literature suggests that firms listed in strong regulatory regimes have more incentives to engage in superior reporting practices than firms listed in weak regulatory regimes (Christensen et al. 2011). Based on anecdotal evidence that firms need a year or two to prepare for the adoption of new reporting standards (IFAC 2010), I assume that if a client firm previously using a small auditor is looking for a global auditor's expert assistance with IFRS adoption, it will switch from a small auditor to a global audit firm before preparing its first IFRS report. I find evidence of an increased frequency of auditor switching before IFRS adoption for firms from weak

regulatory regimes, and a decreased frequency of auditor replacements for firms from strong regulatory regimes. However, I do not find that IFRS adopters listed in markets with stronger oversight are more likely to switch from small auditors to global audit firms before preparing their first IFRS reports.

In supplemental analyses I examine alternative reasons for auditor-switching that could affect my results. Among other things, I examine if firms switching from small auditors to global audit firms following IFRS adoption are likely to replace audit firms in spite of IFRS adoption. Using a measure of a mismatch between a client and audit firm type (Shu 2000) I find that firms mismatched with their auditors are less likely to switch from small audit firms to global auditors following IFRS adoption. In addition, I examine characteristics of firms switching auditors and firms switching from small audit firms to global auditors. I find that firms switching auditors differ from non-switching firms on fewer dimensions in the year following IFRS adoption than in the sample of all years. I obtain analogous results for firms switching from small audit firms to global auditors: they differ from firms staying with small audit firms on more dimensions in the full sample than in the sample from the year following IFRS adoption. These analyses suggest that the decision to switch auditors and the decision to switch from small auditors to global audit firms are driven by different factors in the year immediately following IFRS adoption than in other years.

In additional analyses I also examine whether IFRS expertise of smaller audit firms is related to auditor switching. I find that in the year following IFRS adoption client firms are more likely to choose small audit firms with IFRS experience or global audit firms than small audit firms with no IFRS experience. This result, along with the

differences between firms switching auditors following IFRS adoption, leads to an interesting conclusion. Firms switching from small audit firms to global auditors following IFRS adoption are driven to do so by reasons other than those that cause switching in non-IFRS adoption years, and these reasons are associated with auditors' IFRS expertise. Additionally, these analyses suggest that small audit firms may avoid losing IFRS adopting clients if they gain sufficient IFRS-related expertise prior to the year of mandatory IFRS adoption.

This paper's findings expand the literature on auditor switching and the literature on the economic consequences of IFRS adoption. Reviewing the auditor switching literature, Stefaniak et al. (2009) stresses the importance of determining the causes of auditor switching. Hail et al. (2010) reviews the issues related to the potential adoption of IFRS in the United States and lists the effects of IFRS on audit markets among the important topics. It does not, however, list any empirical studies related to that topic. My paper addresses the concerns expressed in Stefaniak et al. (2009) and Hail et al. (2010) by providing evidence of an increase in auditor replacement rates following IFRS adoption and an increase in the frequency of switching from small audit firms to global auditors.

The Securities and Exchange Commission (SEC) is currently considering the adoption of IFRS in the United States. In the "Commission Statement in Support of Convergence and Global Accounting" (SEC 2010a) and the "Work Plan for the Consideration of Incorporating International Financial Reporting Standards into the Financial Reporting System for U.S. Issuers" (SEC 2010b), the SEC listed the unresolved issues associated with accounting professionals' and audit firms' readiness to implement IFRS. Among other matters, the SEC noted that the introduction of IFRS may have

positive effects on international audit firms while being burdensome for small audit firms in the United States. Even though some of the largest international audit firms assured the SEC that small accounting firms would not be harmed by the change in the reporting standards, there is no empirical evidence to support or disprove this statement. Answering the SEC's question, my study shows that global audit firms experience an increase in demand for audit services from IFRS adopters. However, I also find that smaller audit firms may obtain a similar benefit, or at least avoid losing IFRS adopting clients, if they obtain a sufficient level of IFRS expertise before mandatory IFRS adoption.

In this paper, I provide evidence directly related to the ongoing debate on whether, when, and how the United States should adopt IFRS by examining one of the consequences of IFRS adoption. However, it is important to note that the countries in my sample have lower-quality regulatory regimes than the United States. Furthermore, countries in my sample were able to keep local reporting standards for unlisted firms and firms preparing single entity financial statements (Pownall and Wieczynska 2013). Therefore, the consequences of IFRS documented in this study are suggestive, but not dispositive of the effects on the American audit market if the United States adopts IFRS for all American firms.

In general, this paper addresses a critical question: what happens to the audit market if a change occurs in its accounting regime? Prior research has examined how changes to individual reporting standards affect audit markets (Atkinson et al. 2002). Additionally, using the Sarbanes-Oxley Act as an example, scholars have studied how audit market regulation affects audit firms (Read et al. 2004; Rama and Read 2006; Landsman et al. 2009). In this paper, I examine the effects of the replacement of a whole

financial reporting regime: the replacement of local reporting standards by IFRS. My findings with respect to increasing reliance on global audit firms also contribute to the literature on increasing audit market concentration. As pointed out by the British Parliament, "The audit of large firms, in the UK and internationally, is dominated by an oligopoly with all dangers that go with that" (House of Lords 2011, p. 9). Although my paper does not suggest how to avoid an increase in audit market concentration, it aids in understanding how market-wide changes exacerbate the issue. The future may bring unexpected reforms or accounting regime changes; knowing how current accounting regime changes affect the audit market may help us prepare for the future.

In Section II, I review the relevant literature, while in Section III, I develop my hypotheses. In Section IV, I describe the research design. In Section V, I describe the sample selection procedures, sample characteristics, and the results of my analyses. In Section VI, I include supplemental and robustness tests. I conclude this study in Section VII.

II. LITERATURE REVIEW

IFRS Adoption

IFRS are mandatory in more than one hundred countries (PwC 2011; Deloitte 2013). The number of countries mandating IFRS and the number of firms preparing financial reports using IFRS continues to increase. Furthermore, even the US, a country with the largest capital market in the world, is considering adopting IFRS in the near future (SEC 2010a; SEC 2010b). Notably, multiple constituents (including individual and institutional investors, analysts, auditors, accountants, and managers) will continue to be

affected by the switch from domestic reporting standards to IFRS. Considering the popularity of IFRS and the constantly growing IFRS adoption rates, it is crucial to examine the consequences of switching to these standards.

In this study I focus on the EU market. The EU announced in 2002 that IFRS would become mandatory for all firms listed on EU-regulated exchanges and preparing consolidated financial statements starting in fiscal year 2005 (Pownall and Wieczynska 2013). However, the mandate provided options for the deferral of IFRS adoption and even exemption from adopting IFRS to specific types of firms, and each country could decide which of these deferrals and exemptions should be allowed. This option for IFRS adoption deferral provides a natural control sample for my analyses. Specifically, because multiple financial market and audit market reforms take place simultaneously (Kim et al. 2012), the dispersion of IFRS adoptions over time assures that other reforms do not coincide with all of the IFRS adoption events. In addition, EU markets provide necessary diversity in regulatory environment characteristics for my analyses. Although other IFRS-adopting countries likely have different characteristics than those in the EU, the effect of the EU's IFRS adoption is suggestive of what may happen in markets that implement similar financial reporting regime changes.

Several papers have examined the intended and unintended consequences of IFRS adoption.[1] However, many of these papers provide conflicting results. A common takeaway from the literature is that the effects of IFRS adoption are highly dependent on the quality of a country's regulatory regime and on individual firms' incentives to provide high-quality financial reports (Christensen et al. 2008; Ahmed et al. 2013). While

[1] Brüggeman et al. (2013) reviews the literature on unintended consequences of IFRS adoption in the EU.

multiple studies focus on financial disclosure and capital market effects of IFRS adoption, only a few papers examine the consequences of IFRS adoption on audit markets. Among others, Kim et al. (2012) and De George et al. (2012) find that audit fees increase for IFRS adopting firms. Kim et al. (2012) finds that fees increase more for clients with more complex IFRS audits, and fees increase less for firms with improvements in accounting quality and for firms domiciled in high-quality regulatory regimes. De George et al. (2012) shows that the increases in audit fees are around eight percent and that the audit fee increases are larger for smaller clients.

Auditor Switching

Audit is an important element of the financial reporting process. The literature on agency conflicts between shareholders and firms' managers emphasizes the role of auditors as the controllers of financial reporting quality and the guardians of shareholders' interests (Williams 1988; Francis and Wilson 1988; Johnson and Lys 1990; DeFond 1992).[2] Financial reporting quality depends on the interaction of managerial incentives with the incentives of shareholders, which may not always align. For example, managers may prefer to inflate (deflate) earnings in times of deteriorating (improving) performance, or to hide expropriation of shareholders' investments. Although financial reporting standards are designed to limit opportunities for managerial misreporting in financial statements (Atkinson et al. 2002), the proper application of these standards is uncertain. Consequently, there is a need to assure that reporting standards are implemented properly, and external auditors are the ones who provide such assurance.

[2] The audited financial statements are used not only by current shareholders, but also by governmental organizations, stock exchanges, potential future investors, financial analysts, etc.

Considering the significance of the assurance function performed by auditors, the choice of an audit firm is determined by multiple firms-specific elements (Johnson and Lys 1990; Stefaniak et al. 2009). For example, larger clients may have to choose larger audit firms in order for auditors not to depend on an individual client's fees. Similarly, because large audit firms are known for charging higher audit fees, small clients may be more likely to choose the services of smaller audit firms (Moizer 1997; Choi et al. 2008). Firms with more complex operations may choose larger audit firms because of their efficiency and their capacity to audit such clients. Additionally, client firms tend to choose audit firms for their expertise. Specifically, prior literature has shown that clients are more likely to hire industry-expert audit firms (Carson 2009; Reichelt and Wang 2010).

Overall, a firm chooses an auditor that best meets that firm's incentives. These incentives may include superior audit quality, or willingness to allow aggressive reporting or even misreporting of accounting events (Williams 1988). Moreover, client firms' characteristics that drive reporting incentives are not static. For example, over time firms will expand or contract, become more or less reliant on shareholders' investment, branch out into new industries, acquire new businesses, expand operations internationally, or downsize and become more specialized. As a consequence of constantly changing firm characteristics and a changing competitive and operational environment client firms must continually evaluate whether their audit firms match their incentives or if they should seek new auditors (Johnson and Lys 1990).

Auditor replacements have long-term consequences for both client firms and auditors. According to Williams (1988) some immediate and longer-term costs associated

with auditor switching include: cost of familiarizing the auditor with the firm's internal and external environment, potential costs associated with an unsuccessful audit due to a lack of understanding of the client's operations, and a "higher degree of information risk assigned to financial statements by financial statement users who suspect that the client 'shopped around' for a more accommodating auditor in an attempt to manipulate earnings" (Williams 1988, p. 243). In addition to these costs, auditor replacements are frequently accompanied by negative stock market reactions (Hackenbrack and Hogan 2002; Stefaniak et al. 2009). Moreover, researchers provide evidence that longer auditor-client relationships help auditors know their clients' operations better and therefore facilitate higher quality audits (Ghosh and Moon 2005; Johnson et al. 2002). Furthermore, because the annual financial reports received by investors are certified by auditors, auditor replacements may directly affect the quality of these reports.

The introduction of the new reporting standards modifies multiple elements of a financial market. For example, firms adjust accounting systems in order to gather the information necessary to prepare IFRS reports. Investors, analysts, and other market participants learn and adapt to interpreting financial statements in accordance with IFRS. IFRS adoption may even change client firms' incentives leading to changes in financial reporting (for example, due to greater exposure to foreign capital [Yu 2010]). The question that arises is whether all audit firms are able to prepare for IFRS in order to meet the changing incentives of their client firms. Because audit firm replacements come with nontrivial costs to client firms, auditors, and market participants, it is important to examine whether and how auditor-client relationships are affected by IFRS adoption.

Comprix et al. (2011) provides some evidence of changes in auditor-client relationships from pre-IFRS to post-IFRS adoption years. The study assumes that if a client firm uses a different audit firm in 2007 than in 2003, then the client replaced the audit firm because of IFRS adoption.[3] Using that assumption, Comprix et al. (2011) finds that in countries with greater differences between local reporting standards and IFRS larger client firms are more likely to switch from small audit firms to the Big Four. However, it is inappropriate to assume that all auditor replacements in the years 2003-2007 are related to IFRS adoption because client firms switch auditors for various reasons, including when they are not adopting new reporting standards. Furthermore, it is unclear whether the audit industry is affected before IFRS adoption or during the IFRS adoption process.

In addition, the probability of auditor switching around IFRS adoption is likely different for firms listed in strong and weak regulatory regimes. Researchers have shown conclusively that it is essential to consider the strength of a regulatory regime when examining the consequences of IFRS adoption (Leuz et al. 2003; Vulcheva 2012; Barth et al. 2012) and when researching various aspects of audit markets (Choi et al. 2008; Francis and Wang 2008). However, there is only limited evidence on the relationship between a regime's regulatory quality and the effects of IFRS adoption on audit markets. In regards to the literature examining the effect of IFRS on audit fees, Kim et al. (2012)

[3] Comprix et al. (2011) paper is similar in nature to this paper. Nonetheless, a number of differences exist between the empirical design in Comprix et al. (2011) and the approach that I take in this paper. Using the Global Vantage database on the largest firms from the EU, Comprix et al. (2011) examines auditor switching around IFRS adoption. I use Worldscope data to form a comprehensive sample of large and small firms from five large European capital markets. In addition, I examine when during the IFRS adoption process firms were more likely to switch auditors. Finally, I find that the quality of the regulatory regime affected the likelihood of auditor switching and the timing of auditor replacement.

finds that even though audit fees increase for client firms after IFRS adoption, the fees increase less for clients listed in strong regulatory regimes. However, I am not aware of research papers examining the effect of regulatory regime quality on the likelihood of audit firm replacement around the adoption of IFRS. To the best of my knowledge, this study is the first to examine the issue.

III. HYPOTHESES DEVELOPMENT

Auditor Switching and IFRS Adoption

The most frequently cited reasons for global adoption of IFRS are related to international capital markets, financial statement comparability, and financial reports' usefulness to global investors (Ball 2006; Barth et al. 2008; Hail et al. 2010; Yu 2010; DeFond et al. 2011). However, along with the benefits it may carry, IFRS adoption is also costly to the preparers of financial statements. Consequently, firms with little expected benefit from IFRS may have incentives to avoid adopting IFRS (Pownall and Wieczynska 2013). Specifically, smaller companies with mostly domestic operations, domestic investors, higher domestic debt financing, and companies that do not have strong internal accounting departments ready for IFRS transition may find the potential benefits of IFRS adoption to be lower than its costs. Pownall and Wieczynska (2013) finds that, consistent with their incentives, multiple EU firms do not adopt IFRS in 2005, or even as late as in 2009. Some of these firms use exemptions or adoption deferrals included in the IFRS mandate, while others change their operating structure or delist from regulated exchanges (Pownall and Wieczynska 2013; Vulcheva 2012). Nonetheless, it is

questionable whether all of the firms whose incentives are not aligned with IFRS adoption are able to avoid the mandatory adoption of the new reporting standards.

For firms that do not have clear and strong incentives to adopt IFRS, market participants may be concerned that the IFRS financial reports do not reflect proper application of the new reporting standards. When IFRS replace domestic standards multiple market participants may have issues with understanding the new reporting standards and with trusting the quality of their implementation. In this initial phase, investors may not yet feel comfortable with the implementation and interpretation of IFRS and may fear an increase in opportunistic reporting by managers. While this uncertainty over the quality of financial reporting is likely to be diminished for firms with strong incentives for IFRS adoption and high-quality financial reporting, it is likely more pronounced for firms that have weak incentives for adopting IFRS.

If managers or governing boards of directors are aware of these concerns, they may try to alleviate them by providing the market with signals associated with high-quality IFRS reporting. In traditional financial reporting regimes boards of directors hire auditors to examine whether financial reports are prepared in compliance with applicable reporting standards. However, because the quality of the audit process relies on auditors' expertise in applicable reporting standards, when old reporting standards are replaced by a new set of rules, the quality of audit services depends on auditors' proficiency in the new rules.[4] Presumably, the three-year period, from the EU announcement of mandatory

[4] The importance of auditors' proficiency in applicable reporting standards for audit quality stems from the literature on industry specialist auditors. Specifically, Carson (2009) and Reichelt and Wang (2010) among others find that the use of industry specific auditors is associated with higher reporting quality. These results are consistent with Williams (1988) showing that clients prefer industry specialist auditors due to their efficiency and effectiveness.

IFRS adoption in 2002 to its implementation in 2005, provided sufficient time for all client firms to become proficient in IFRS implementation, and for all audit firms to prepare for IFRS audits. However, not all client firms and not all audit firms have the same resources and incentives with respect to proper application of IFRS or high quality of IFRS audits, respectively. As suggested by DeFond (1992), audit firms specialize in the quality of audit services they provide. While some audit firms prefer to provide quality driven IFRS audits, others may specialize in less strict audit services. Consequently, the task that lies before each client firm is to assure that the audit firm employed to audit that client's first IFRS financial statements has IFRS audit incentives aligned with the client's reporting incentives.

Undoubtedly, firms with weak incentives for adopting IFRS prefer to spend minimal resources on their transition to IFRS. Such firms may also prefer to take advantage of the change in reporting standards to report more favorable performance or they may disregard the more costly changes in financial reporting due to IFRS adoption. In a setting with changes to individual reporting standards, Atkinson et al. (2002) provides evidence that client firms are more likely to switch auditors when adopting new reporting standards because of disagreements over the application of the new rules. In line with the arguments proposed by Atkinson et al. (2002), client firms adopting IFRS should be more likely to switch auditors for disagreement reasons because the adoption of IFRS is a change to the whole set of applicable reporting standards. This argument is likely to apply especially to the firms with weak incentives for IFRS adoption. Specifically, when faced with auditors who try to enforce proper application of IFRS, such clients will likely switch to audit firms that are more lenient with respect to IFRS

implementation in order to avoid unwanted accounting treatment or an unfavorable audit opinion.

Considering changes in the firms' reporting incentives, investors' uncertainty over IFRS implementation, and increased likelihood of client-auditor disagreements when adopting IFRS, in my first research question I ask whether client firms are more likely to switch to new audit firms for examination of their first-time IFRS reports.[5] I state my first hypotheses in the following form:

H1: The likelihood of auditor replacements is not associated with IFRS adoption.

H1A: The likelihood of auditor replacements increases in the year following IFRS adoption.

The difference in IFRS preparedness between global auditors and small audit firms may prompt an increase in the likelihood of switching from small audit firms to global auditors. The prior literature in management and economics suggests that the largest accounting firms are actively competing with their smaller peers. Specifically, according to McWilliams et al. (2009), global auditors compete with other audit firms based on the quality of auditors and the quality of the resulting audits. For example, large audit firms actively work to limit the quality of human capital resources available to smaller accounting firms through recruiting events at the best business schools around the world. Evidence of the positive outcomes of this firm behavior is seen in the accounting literature, where researchers frequently assume that global audit firms perform superior quality audits. The global accounting firms' involvement with IFRS appears to be another

[5] Because in year *t* auditors examine financial reports for year *t-1*, the first IFRS reports are audited in the fiscal year subsequent to the clients' IFRS adoption year.

example of their competitive strategy. Currently, global accounting firms actively participate in the creation of IFRS and IFRS-specific knowledge. Global audit firms financially support the International Accounting Standards Board (IASB), participate in the creation of new IFRS standards by providing feedback on drafts and proposals, publish IFRS-related guidebooks and study materials, and actively support the adoption of IFRS by the United States. Clearly, global audit firms differentiate themselves from their smaller industry peers on the basis of their prior involvement with IFRS, their IFRS-audit experience, and superior IFRS knowledge, thus gaining an advantage around mandatory IFRS adoption.

Prior literature suggests that an audit firm's expertise in a client's industry affects audit firm choice and the client's reporting quality (Balsam et al. 2003; Krishnan 2003; Velury et al. 2003; Dunn and Mayhew 2004; Carson 2009; Reichelt and Wang 2009).[6] Similarly to industry expertise, an audit firm's IFRS expertise may drive auditor choice when clients adopt IFRS. Specifically, if global audit firms are experts in application of the new reporting standards, clients who have incentives for providing high-quality financial reports under IFRS may be more likely to choose such audit firms. Prior literature established that higher quality firms are more likely to have auditors who are industry specialists or are the largest audit firms (DeAngelo 1981; Krishnan 2003). Furthermore, in the case of firms that have weak incentives for proper IFRS implementation, financial markets may assign greater uncertainty to the quality of their first IFRS financial statements than to the reports of firms with strong IFRS adoption

[6] If audit firm expertise is driving the decision to switch to global audit firms around IFRS adoption, more client firms should switch to global auditors who are also industry specialists, and to smaller audit firms that have prior experience with IFRS audits. I test these propositions in supplemental analyses in Section VI.

incentives. In order to alleviate the uncertainty, the weak-incentive firms may switch to global audit firms to signal proper implementation of IFRS. This theory is consistent with Francis and Wilson (1988) and Barton (2005). Francis and Wilson (1988) finds that client firms that have agency issues are more likely to choose audit firms with reputation for high-quality audits and a brand name (i.e., Big N). Barton (2005) shows that client firms that are more visible to the market and care about their reporting credibility are more likely to switch to Big Four auditors after Arthur Andersen's demise. Consequently, I hypothesize that client firms that used small audit firms before IFRS adoption are more likely to switch to global auditors when adopting IFRS. Accordingly, I test the following alternate to my first null hypothesis:

H1B: The likelihood of switching from small auditors to global audit firms increases in the year following IFRS adoption.

Alternatively, small auditors may benefit from mandatory IFRS adoption. For one, client firms with weak incentives for IFRS adoption will likely seek auditors that are more lenient with respect to the proper implementation of IFRS. In addition, more clients may switch to smaller audit firms due to increasing audit fees. Prior research has found that the Big Four firms charge an audit fee premium: a client firm pays higher audit fees if it uses the audit services of a Big Four auditor than if it used services of a smaller audit firm, *ceteris paribus* (Choi et al. 2008). Moizer (1997) suggests that the Big N audit fee premium could be as high as 37 percent. In addition, prior literature provides evidence that audit fees increase for IFRS adopters by more than eight percent on average, and these fee increases are larger for smaller clients (Kim et al. 2012; De George et al. 2012). As a result, client firms using global auditors pay higher audit fees and these fees increase

when they adopt IFRS. For smaller client firms audit fees increase even more after IFRS adoption (De George et al. 2012), which will likely result in a switch to a smaller and less costly audit firm.[7] Therefore, I test the following alternate to the first null hypothesis:

H1C: The likelihood of switching from global audit firms to smaller audit firms increases in the year following IFRS adoption.

The Timing of Auditor Replacements

Following the argument on client-auditor disagreements over the implementation of new reporting standards from Atkinson et al. (2002), I first examine if client firms are more likely to replace auditors in the year following IFRS adoption. However, during the IFRS adoption process, it is not clear when client firms may switch auditors. For example, Comprix et al. (2011) assumes that all auditor switches that took place between 2003 and 2007 are related to IFRS. Nonetheless, it is not clear whether auditor switches are more likely to take place before IFRS adoption or after IFRS has been implemented. In addition, as noted in Williams (1988), audits are higher quality if auditors have longer tenure with a client firm and thus know the client's operations. Consequently, to obtain all potential benefits of a superior quality audit of the first IFRS financial reports, clients should switch to expert auditors before adopting IFRS.

Alternatively, client firms may use IFRS expert auditors to help prepare for IFRS adoption. A firm switching from a small audit firm to a global audit firm following the IFRS adoption year is likely switching too late to take advantage of the global auditor's IFRS expertise. Based on evidence from firms that have switched to new accounting

[7] An argument can be made that audit fee increases are not a sufficient reason for an audit firm replacement. However, there is an abundance of prior evidence, reviewed in Stefaniak et al. (2009), showing that client firms switch audit firms to obtain lower audit fees and are more likely to retain auditors that charge lower fees.

standards, firms need a few years to prepare for the first-time change in reporting standards (IFAC 2010). [8] Thus, clients seeking global auditors' help with IFRS implementation should switch to these auditors before adopting the new reporting standards. In addition, first-time IFRS financial reports issued in a given year have to include financial data for that year and data for the previous year restated to IFRS. If an audit firm audited the last pre-IFRS report, it may be able to examine the IFRS report including the prior-year's restated data more efficiently and with lower cost. Following this line of reasoning, I ask whether client firms are more likely to switch from small auditors to global audit firms before IFRS adoption in the following hypotheses:

H2: The likelihood of auditor replacement is not different one year (two years) before the issuance of first-time IFRS reports than the likelihood of auditor replacement in other years.

H2A: The likelihood of switching from a small audit firm to a global audit firm is higher one year (two years) before the issuance of first-time IFRS reports than in other years.

Regulatory Regime

Prior literature examining global capital markets has shown that country-level regulatory quality strongly influences how regulations are implemented by firms (Ball et al. 2003; Leuz et al. 2003; Christensen et al. 2008; Christensen et al. 2011; Daske et al. 2012; Vulcheva 2012). Specifically, in countries with strong regulatory regimes, regulations are implemented more strictly. Because firms listed in strong regulatory

[8] Joe Kaeser, Chief Financial Officer of Siemens, commented in an interview that when Siemens switched to new reporting standards, the company needed two years to prepare for the switch (IFAC 2010).

regimes already have strong incentives for proper IFRS implementation, it is not clear whether the incentives to switch auditors are the same for these firms as for the firms listed in weak regulatory regimes. The effect of IFRS adoption on auditor switching is complicated even further because audit quality and a country's regulatory quality may work either as complements or as substitutes for each other. Consequently, to examine how the quality of a regulatory regime moderates the effects of IFRS adoption on auditor switching, I test the following hypothesis in the null form:

H3: The likelihood of auditor replacement in the year following IFRS adoption is the same for firms listed in strong regulatory regimes as for firms listed in weak regulatory regimes.

Daske et al. (2012) and Vulcheva (2012) have suggested that IFRS adoption affects financial market participants to a greater extent in high regulatory quality countries than in low regulatory quality countries because firms from the former implement IFRS more strictly, whereas firms from the latter implement IFRS more as a "label". Consequently, it seems that firms in strong regulatory regimes need global auditors' IFRS expertise to a greater extent than firms in weak regulatory regimes when adopting IFRS.

However, there are multiple contradicting arguments for whether firms from high-quality regulatory regimes are more likely to switch to IFRS expert audit firms when adopting IFRS. On the one hand, firms listed in strong regulatory regimes may not need expert audits to signal high-quality IFRS reporting because they already have higher reporting quality than firms listed in weak regulatory regimes. Firms in strong regulatory regimes are likely to be better prepared for IFRS adoption before it takes place and thus

may have no need for additional IFRS audit expertise. On the other hand, firms from strong regulatory regimes are more concerned with high-quality reporting than firms from weak regulatory regimes because regulatory authorities in strong regulatory regimes are more likely to uncover any reporting inconsistencies. Thus, to assure continuing high-quality reporting firms from strong regulatory regimes may be more likely to switch to global audit firms. In addition, if clients are likely to switch auditors due to disagreements over application of new rules (Atkinson et al. 2002), client firms from high-quality regulatory regimes may switch from small audit firms to global audit firms because they are more likely to agree with the global auditors' expert interpretation of IFRS. Another set of arguments emerges from Kim et al. (2012), finding that the increase in audit fees around IFRS adoption is lower in high-quality regulatory regimes. The lower cost may be caused by lower audit risk in such markets, and thus may result in clients being more likely to switch to global auditors because the cost of their services does not increase as much. Alternatively, lower fees may be caused by audit firms not being able to supply IFRS expertise above what the clients already have, and may thus lead to clients being less likely to switch to global auditors. Finally, reiterating the capital market standpoint, investors in high-quality regulatory regimes assign more credibility to financial reporting in such regimes, and thus may not need an additional assurance of proper IFRS application by listed firms. However, it is equally likely that these investors are more concerned about high-quality reporting and thus require more assurance of the proper implementation of IFRS. Thus, I test the following alternate hypothesis:

H3A: The likelihood of switching from small audit firms to global auditors in the year following IFRS adoption is higher for firms listed in strong regulatory regimes than for firms listed in weak regulatory regimes.

A firm may switch from a small auditor to a global audit firm in the year following IFRS adoption because of the global audit firm's reputation rather than a need for its IFRS expertise. As noted in Vulcheva (2012) and Daske et al. (2012), firms subjected to higher quality oversight have stronger incentives to engage in high-quality IFRS reporting than other firms and are more likely to care about properly applying the new reporting standards. Such client firms should be more likely to switch to global auditors before IFRS adoption to seek their help with IFRS adoption. However, caring about proper IFRS implementation, these firms might invest in IFRS expertise themselves internally and have no need for IFRS expertise of global auditors. Accordingly, I test the following hypotheses:

H4: The likelihood of switching from small audit firms to global auditors before IFRS adoption is not related to the strength of a country's regulatory regime.

H4A: The likelihood of switching from small audit firms to global auditors before IFRS adoption is positively related to the strength of a country's regulatory regime.

IV. RESEARCH DESIGN

To analyze the likelihood of auditor switching around IFRS adoption, I use a sample of European firms from the following countries: United Kingdom, Poland,

Germany, Italy, and Spain. I define the IFRS adoption year as the first year in which firm *i* uses IFRS. Starting in 2005, EU companies preparing consolidated financial statements were generally required to use IFRS in their financial reports. Specifically, firms preparing fiscal year reports for periods starting after January 1st, 2005 are supposed to use IFRS. However, some of the firms in my sample are listed in countries that allowed early IFRS adoption, and some firms were able to postpone the adoption or avoid it altogether (Pownall and Wieczynska 2013). Therefore, I do not use 2005 as the IFRS adoption year in my analyses, but I collect the actual adoption years for my sample firms using the Worldscope database. The inclusion of IFRS adopters from years other than 2005 results in a sample with IFRS adoption events dispersed through time and therefore eliminates a possibility that a concurrent event caused or affected my results. In addition, multiple firms that do not adopt IFRS or adopt it in different years create a sample of IFRS non-adoption firm-years that controls for other reasons that may affect auditor switching in my sample years in the EU countries.

I define global audit firms as the Big Four auditors (i.e., PwC, KPMG, Ernst & Young, and Deloitte Touche Tohmatsu) and two very large international audit firms: BDO and Grant Thornton. I also include Arthur Andersen as a global audit firm in the years before its dissolution. I include BDO and Grant Thornton as global audit firms for three reasons. First, similar to the Big Four, these two firms support IFRS financially and provide professional advice on proposed standards.[9] Second, both firms are present internationally and thus were able to obtain IFRS-related audit experience prior to the

[9] Global audit firms provide International Accounting Standards Board, the creators of IFRS, with substantial funding. Specifically, the IFRS Foundation's financial report for 2011 indicates that the Big Four provided $2.25 million each, and BDO and Grant Thornton donated $150 thousand each (IFRS Foundation 2012).

mandatory adoption in 2005. Third, because as Hodgdon et al. (2009) shows, clients audited by the global six audit firms are more likely to apply IFRS properly in the pre-mandatory IFRS period, investors are likely to be comfortable with all six audit firms' IFRS audit quality. [10]

Following Chan et al. (2006) and Landsman et al. (2009), my analyses of auditor switching behavior are based on logistic and multinomial logistic regressions. However, unlike Chan et al. (2006), including only auditor switching firms in the analyses, or Landsman et al. (2009), excluding all lateral auditor switches among small audit firms, I include firms that switch auditors and those that do not. [11] Because I am interested in whether client firms are more likely to switch auditors when adopting IFRS, I compare the likelihood of each possible direction of auditor switching to the option of no auditor switching. The logistic regression equation takes the following form:

$$Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it\text{-}1} + \sum_{k=2}^{10} \beta_k Controls_{it\text{-}1} + \sum_{c=11}^{14} \gamma_c Country_j + \varepsilon_{it}, \quad (1)$$

where: $Controls_{it\text{-}1} = \{SIZE_{it\text{-}1}, \Delta SIZE_{it\text{-}1}, Net\_Income_{it\text{-}1}, Leverage_{it\text{-}1}, \Delta\text{Sales}_{it\text{-}1}, Loss_{it\text{-}1}, \Delta C\_Stock_{it\text{-}1}, \Delta LTDebt_{it\text{-}1}, \#Exch_i\}$

To test the hypothesis that IFRS adoption affects the likelihood of auditor switching (H1A), I use an indicator variable for auditor replacement as a dependent variable. Chg_{it} equals one if in year *t* firm *i* used a different audit firm to examine its financial report (i.e., the report for year *t-1*) than the audit firm used in year *t-1* (i.e., the

[10] Table 3 panel D presents the distribution of individual global audit firms within the group of firm-year observations designated as audited by global six (plus Arthur Andersen).

[11] Chan et al. (2006) uses logistic regression analysis to determine changes in auditor switching behavior after a regulatory change in China. Landsman et al. (2009) examines auditor replacements prior to and subsequent to Arthur Andersen's demise. In Section VI, I examine whether the Chan et al. (2006) or Landsman et al. (2009) sample selection procedures affect my results.

report for year *t-2*).[12] To test whether IFRS is related to an increased likelihood of auditor switches from small auditors to the global six or vice versa (H1B, H1C), I use a multinomial logistic regression analysis. The multinomial logistic model allows for comparison of the likelihood of each possible direction of audit firm replacement with the base outcome of no auditor change[13]. I create an index variable, Chg_xty_{it}, with a base condition of no auditor change and separate values for each possible auditor replacement type: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). I conduct all of my analyses using both the binary logistic regression model and the multinomial logistic regression model.

$IFRS\_ADOPT_{it-1}$ is an indicator variable for IFRS adoption. I code $IFRS\_ADOPT_{it-1}$ as one if firm *i* used IFRS in year *t-1*, and if it reported using non-IFRS accounting standards in year *t-2*. Otherwise, I code $IFRS\_ADOPT_{it-1}$ as zero. The coefficient on $IFRS\_ADOPT_{it-1}$ is the coefficient of interest because its value indicates whether IFRS adoption is associated with the likelihood of switching auditors.[14]

Control variables are based on prior auditor choice and the auditor switching literature (Francis and Wilson 1988; Simunic 1980; Johnson and Lys 1990; DeFond 1992; Williams 1998; Chan et al. 2006). These control variables include $SIZE_{it-1}$, $\Delta SIZE_{it-1}$, Net_Income_{it-1}, $Leverage_{it-1}$, $\Delta\text{Sales}_{it-1}$, $Loss_{it-1}$, ΔC_Stock_{it-1}, $\Delta LTDebt_{it-1}$, and $\#Exch_i$.

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[12] Specifically, $Chg_{it} = 1$ for firm *i* in year *t* if audit firm "A" audited firm *i*'s financial report for year *t-1*, and audit firm "B" audited firm *i's* annual report in the previous year *t-1* (report for year *t-2)*; and $Chg_{it} = 0$ if firm *i*'s financial reports for both years *t-1* and *t-2*were audited by the same audit firm.

[13] Landsman et al. (2009) also uses a multinomial logit model to examine auditor replacements.

[14] By construction, the control sample for IFRS adopters in the year following the adoption of the new reporting standards consists of IFRS adopters with non-missing Chg_{it} in years when they do not switch reporting standards, and firms with non-missing Chg_{it} which do not adopt IFRS in my sample period.

$SIZE_{it-1}$ is a natural logarithm of total assets. $\Delta SIZE_{it-1}$ is the change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_$Income_{it-1}$ captures a firm's profitability and is defined as net income scaled by total assets. $Leverage_{it-1}$, defined as a ratio of total debt to total assets, controls for financial risk of a company. $\Delta Sales_{it-1}$ is the change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$ is an indicator variable equal to one for firms experiencing negative income in year *t-1* and zero otherwise. ΔC_Stock_{it-1} is the change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$ is the change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. ΔC_Stock_{it-1} and $\Delta LTDebt_{it-1}$ capture changes in firms' financing structures. $\#Exch_i$ controls for the complexity associated with a client firm's listing on multiple exchanges and is defined as the number of exchanges on which firm *i* is listed. $Country_i$ captures country fixed effects. See Table 1 for a detailed description of these variables.

I expect companies that are larger, more profitable, experience higher growth (as represented by change in sales and change in size), or expand their financing structure to be more likely to switch to larger audit firms. Conversely, I expect small firms, firms decreasing in size, firms experiencing losses, and highly levered firms to be more likely to switch to smaller audit firms. I also expect that firms listed on multiple exchanges are more likely to use global auditors, perhaps due to familiarity of investors around the globe with these audit firms.

[Insert Table 1 here]

To examine whether preparation for IFRS adoption is associated with increased likelihood of auditor switching (H2A, H2B), I repeat my first regression model with

additional variables $IFRS\_pre1_{it-1}$ and $IFRS\_pre2_{it-1}$. The variable $IFRS\_pre1_{it-1}$ ($IFRS\_pre2_{it-1}$) is an indicator variable equal to one for firm *i* in year *t* if $IFRS\_ADOPT_{it-1}$ equals one for firm *i* in year *t+1* (*t+2*). The logistic regression takes the following form:

$$Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_pre1_{it-1} + \beta_3 IFRS\_pre2_{it-1} + \sum_{k=4}^{12} \beta_k Controls_{it-1} + \sum_{c=13}^{16} \gamma_c Country_j + \varepsilon_{it} \quad (2)$$

To test whether the strength of a regulatory regime affects auditor switching in the IFRS adoption year (H3A), I repeat my primary regression including $RegQ_{it-1}$, a continuous variable capturing the strength of regulatory regime in firm *i*'s country in year *t-1*.[15] Higher values of $RegQ_{it-1}$ indicate better ability of a country's government to implement and enforce regulations (Kaufmann et al. 2009; Christensen et al. 2011). In my model, I also include an interaction term $IFRS\_ADOPT_{it-1}*RegQ_{it-1}$, which captures the influence of a regulatory regime on the likelihood of auditor switching in the year following IFRS adoption:

$$Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_ADOPT_{it-1}*RegQ_{it-1} + \beta_3 RegQ_{it-1} + \sum_{k=4}^{12} \beta_k Controls_{it-1} + \sum_{c=13}^{16} \gamma_c Country_j + \varepsilon_{it} \quad (3)$$

Next, I examine whether firms listed in strong regulatory regimes are more likely to switch to global auditors before they adopt IFRS (H4A). I repeat my primary regression model with additional variables: $RegQ_{it-1}$, $IFRS\_pre1_{it-1}$, $IFRS\_pre2_{it-1}$, and interaction terms between $RegQ_{it-1}$ and the IFRS adoption timing variables. The coefficients associated with the interaction terms allow me to evaluate whether the

[15] I collect the values of $RegQ_{it-1}$ from Kaufmann et al. (2009) for each country-year in my sample. As in Pownall and Wieczynska (2013), I replace the missing values in 2009 and 2010 with the values from 2008.

strength of the regulatory regime affects the likelihood of auditor switching around IFRS adoption. I estimate the following regression:

$$Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + [\beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_ADOPT_{it-1} * RegQ_{it-1}] + [\beta_3 IFRS\_pre1_{it-1} + \beta_4 IFRS\_pre1_{it-1} * RegQ_{it-1}] + [\beta_5 IFRS\_pre2_{it-1} + \beta_6 IFRS\_pre2_{it-1} * RegQ_{it-1}] + \beta_7 RegQ_{it-1} + \sum_{k=8}^{16} \beta_k Controls_{it-1} + \sum_{c=17}^{20} \gamma_c Country_j + \varepsilon_{it} \quad (4)$$

V. SAMPLE CHARACTERISTICS AND RESULTS

Sample Characteristics

The five EU countries included in my analyses represent the largest capital markets in the EU and have different levels of regulatory regime quality. I exclude France from my analyses because of its dual audit requirement, which causes difficulty in identifying the lead auditor for the purpose of my analyses (Francis et al. 2009).[16]

I collect the firm and auditor data from Worldscope. I select my initial sample of firms based on whether they are domiciled in my sample countries and they have total assets higher than zero in any of the years from 1998 to 2010. These sample selection procedures result in a sample of 6,272 firms, which provide 48,065 firm-years with positive total assets. Next, I collect the names of audit firms from Worldscope. The online version of Worldscope provides the names of firms' auditors only for the most recent fiscal year end for which data are available. I collect the audit firms' names for some of the missing auditor observations from the Worldscope compact discs (available

[16] I determine the financial reporting standards and the name of the audit firm for each firm-year in my sample. Because French companies' audit reports do not specify which auditor is responsible for auditing the current period's financials, I am not able to properly code the data for this country.

only until 2006) and the remaining ones from English and local language annual reports. I remove the observations for which I am not able to determine the auditor. The firm-year observations for the auditor data are organized such that the auditors in year *t* audited the financial statements for year *t-1*. These steps result in 44,116 firm-year auditor observations with 955 unique audit firms.[17] See table 2 for a summary of sample selection procedures.

[Insert Table 2 here]

An indicator variable for auditor replacements, Chg_{it}, is non-missing for the 38,136 firm-years for which I collect the names of the audit firms in year *t* and in year *t-1*. I adjust this variable for audit firm mergers and audit firm failures. Among others, I recode as non-replacements all replacements of Arthur Andersen with other audit firms in the years 2001-2003 because of Arthur Andersen's failure, and the replacements of RSM with Grant Thornton in the United Kingdom in 2007 and 2008 because these audit firms merged in 2007. In total, I recode 460 Chg_{it} indicators from one to zero. The recoding procedures involve 104 audit firm codes. After the variable adjustment my sample has 3,299 (34,837) observations of Chg_{it} equal to one (zero). For my sample characteristics, I split Chg_{it} into four different indicator variables: Chg_STG_{it} (replaced a small audit firm with a global audit firm), Chg_STS_{it} (replaced a small audit firm with another small audit

[17] Alternatively, it is possible to use Compustat Global Vantage to collect audit firms' names. However, compared with Worldscope, Global Vantage has a limited coverage of international firms. Specifically, Global Vantage covers only the largest and most visible firms, whereas Worldscope also includes small firms and firms listed on unregulated markets. For example, Comprix et al. (2011) analyzes the auditor replacements for a sample of fourteen EU countries using the Global Vantage database, resulting in a sample of 1,989 firms. The sample of firms from the five countries that I analyze in this paper, collected from Worldscope, includes 5,235 firms.

firm), Chg_GTG_{it} (replaced a global audit firm with another global audit firm), and Chg_GTS_{it} (replaced a global audit firm with a small audit firm).

[Insert Table 3 here]

In table 3, I report the number of auditor replacements for the sample of all firm-years for which audit firm data are available. Panel A of Table 3 suggests that the frequency of switching from small auditors to global audit firms increased substantially after 2005. Similarly, the frequency of switching from a small auditor to another small auditor increased after 2005. In addition, more client firms switched from global audit firms to smaller auditors in the years 2003-2006. Panel B shows the number of firms adopting IFRS and the number of firms which were using IFRS and local reporting standards in each of my sample years. Consistent with Pownall and Wieczynska (2013), I find that many EU firms continued to use local financial reporting standards even in 2010. Since I am concerned with the effect of IFRS adoption on auditor switching it is not appropriate to pick a particular year as the year of IFRS adoption and examine whether firms used the same auditors before and after that year. It is necessary to consider each firm's IFRS adoption as a specific firm-year event. Moreover, the fact that IFRS adoptions are dispersed through time alleviates the concern that my findings may be affected by another event taking place at the same time as IFRS adoption.

In panel C of table 3, I compare the timing of IFRS adoptions with the number of auditor replacements. The auditor replacement frequencies in this table are only for the firms that adopted IFRS during my sample period. Table 3 reports that more firms switched from small auditors to global audit firms in the year following IFRS adoption. More firms switched from one global audit firm to another global audit firm, and fewer

firms using global auditors switched to small audit firms after IFRS adoption. To assure that the increased frequency of auditor replacements is not associated with increased firm coverage by Worldscope in more recent years, I use logistic regression analysis to examine whether the likelihood of auditor switching around IFRS adoption was significantly different from the likelihood of auditor switching in other sample years.

Table 3 panel D reports percentages of client firms using audit services of each of the global audit firms. I split the sample by country and by period (1998-2004 and 2005-2010). The first time period, which I refer to as pre-IFRS, includes relatively few IFRS using firm-years. The second period, which I refer to as IFRS period, includes almost all the IFRS using firm-years. The distribution of individual global audit firms changes slightly across time. For one, it is clear that Deloitte Touche and BDO have increased their shares of the global audit firms' market in the IFRS period. However, this may be associated with clients of Arthur Andersen moving to other audit firms in the aftermath of Enron's demise. The data suggests that there is no individual global audit firm that takes over the market for audit services in the IFRS period.

Compared with the full sample of 38,136 possible auditor replacement observations, the main regression analysis uses 31,948 potential auditor change observations, of which 2,583 are auditor replacements.[18] Panel A of table 4 presents country and industry composition and panel B contains the characteristics of all variables for the sample of firm-year observations with available auditor data. Panel C (panel D) of table 4 reports the characteristics of all dependent and independent regression variables for the sample used to estimate the main logistic regression (the regression analyses

[18] I lose 6,188 potential auditor change observations due to missing regression variables. See table 2 for sample selection.

including IFRS timing indicators).[19] The firm-years in the main regression sample have higher total assets but lower asset growth and sales growth than the initial sample firm-years. Regression sample firm-years are more profitable, experience fewer losses, have lower change in the number of outstanding shares, are listed on more stock exchanges, have lower regulatory quality, and have higher leverage than the average firm-year in the full sample.[20] The regression sample also has a lower percentage of firms changing auditors than the full sample, but the relative share of different types of auditor switches and change in long-term debt do not differ between the two samples. The sample used to estimate the models with IFRS timing indicator variables differs from the initial sample on similar dimensions as the main regression sample. However, this sample has a lower share of clients switching from small audit firms to global auditors, a higher share of firm-years adopting IFRS, a higher change in long-term debt than the initial sample, and it does not differ from the initial sample in leverage or sales growth.

[Insert Table 4 here]

Panel E of table 4 contains correlation coefficients for the sample used to estimate the main regression.[21] The correlation between $IFRS\_ADOPT_{it-1}$ and Chg_{it} is positive but insignificant. The correlation between IFRS adoption and replacement of a small audit firm with a global audit firm (Chg_STG_{it}) is positive and significant (correlation coefficient=.07, $p<.05$). Moreover, firms adopting IFRS are larger and more profitable than non-IFRS firms. With respect to auditor replacements, larger firms are less likely to

[19] I replace $Size_{it-1}$ (natural log of total assets) with TA_{it-1} (total assets in millions USD) in the summary tables for ease of interpretation.
[20] Differences are significant at 10 percent level or better.
[21] Because Pearson and Spearman correlation coefficients are not appropriate for estimating relations between dichotomous variables, I estimate tetrachoric correlation coefficients for such variables and Pearson and Spearman correlation coefficients for continuous variables (Carroll 1961; Digby 1983).

replace auditors but are more likely to switch from a global audit firm to another global audit firm. Firms issuing debt or equity and growing firms are also more likely to switch auditors and more likely to switch from small auditors to global audit firms.

Results for H1 and H2

Table 5 panel A reports the results of testing whether IFRS adoption is associated with the likelihood of audit firm replacement. The first (second) column of table 5 reports coefficients (standard errors) from estimating the binary logit model. The coefficient on $IFRS\_ADOPT_{it-1}$ is positive but insignificant. The coefficients associated with other explanatory variables suggest that larger firms are less likely to switch auditors (β_2=-0.15, p<.01). Firms that are growing, experiencing a loss, issuing debt or equity, and listed on multiple stock exchanges are more likely to switch auditors.

[Insert Table 5 here]

In the remaining columns of table 5 panel A, I report the results from a multinomial logistic regression analysis where I estimate the effect of IFRS adoption on specific directions of auditor replacements.[22] For the firms switching from small auditors to global audit firms (*STG*), the coefficient associated with $IFRS\_ADOPT_{it-1}$ is positive and significant: β_1=0.35 (p<.05). This result indicates that client firms are more likely to replace small auditors with global audit firms following IFRS adoption. Therefore, I reject hypothesis H1, that IFRS adoption is not related to the likelihood of auditor replacements, and I accept H1A, that a positive relation between these two phenomena exists. The relative odds ratio associated with $IFRS\_ADOPT_{it-1}$ in the *STG* specification is

[22] I performed a Small-Hsiao test for independence of irrelevant alternatives for the multinomial logit model. The results of the test suggest that the independence of irrelevant alternatives assumption holds for my data.

1.43. This suggests that client firms are more than 40 percent more likely to switch from small audit firms to global audit firms in the year following IFRS adoption than in other years as compared to the option of no auditor replacements, *ceteris paribus*. The coefficient associated with $IFRS\_ADOPT_{it-1}$ is not significant in any other specification, thus I reject hypothesis H1C, that IFRS adoption is positively related to the likelihood of replacing global audit firms with small auditors.

Additionally, I find that larger firms are less likely to switch auditors in the *STG, STS,* and *GTS* specifications, but are more likely to switch auditors in the *GTG* specification. Growing firms and firms issuing debt or equity are more likely to switch from small audit firms to global auditors. Client firms experiencing losses are more likely to switch from global audit firms to small auditors or to other global audit and firms with higher leverage are more likely to switch between small audit firms.

Table 5 panel B presents the coefficient estimates for model 2, including all three variables capturing the timing of IFRS adoption. In the binary logit model, $IFRS\_pre1_{it-1}$ has a positive and significant coefficient (β_2=0.15, p<.10). This coefficient suggests that on average client firms are more likely to switch auditors in the year of IFRS adoption but not the year before adopting IFRS (β_3 is insignificant). In the multinomial logit model, the coefficient associated with $IFRS\_ADOPT_{it-1}$ is positive and significant for the client firms switching from small auditors to global audit firms (β_1=0.46, p<.01), consistent with table 5 panel A. Because this is the only coefficient associated with timing of IFRS adoption that is significant in *STG* specification, it provides evidence that switching from small audit firms to global auditors is associated with the IFRS adoption and not with preparation for it. The coefficient associated with $IFRS\_pre1_{it-1}$ is significant

in the *GTS* specification (β_2=0.41, p<.05). Therefore, some clients may prefer to switch away from global audit firms when adopting IFRS, so that small audit firms would be auditing the first IFRS reports. The coefficients associated with the control variables are in most cases consistent with those in table 5 panel A. In addition, firms experiencing losses are more likely to replace audit firms in all specifications, perhaps shopping for a better audit opinion.

Results for H3 and H4

Table 6 presents the results of estimating models 3 and 4, including a variable capturing the quality of a country's regulatory regime. Panel A presents a model including only the IFRS adoption indicator variable, and panel B reports results from estimating a model including the regulatory quality variable and the IFRS adoption timing indicators. In panel A, the coefficients on $RegQ_{it-1}$, $IFRS\_ADOPT_{it-1}$*$RegQ_{it-1}$, and $IFRS\_ADOPT_{it-1}$ are not significant in the model with a binary dependent variable.[23]

[Insert Table 6 here]

The results from estimating the multinomial logit model indicate that firms operating in markets with strong regulatory regimes are more likely to switch from small auditors to global audit firms (β_3=2.33, p<.01 in *STG* specification), and less likely to switch from global audit firms to small auditors (β_3=-2.79, p<.01 in *STG* specification) than firms listed in markets with weak regulatory regimes. In addition, firms listed in

[23] Ai and Norton (2003) suggests that it is incorrect to interpret significance and direction of coefficients on interaction terms in binary dependent variable models. Norton et al. (2004) and Karaca-Mandic et al. (2012) suggest alternative ways interpreting interaction terms in nonlinear models. However, Greene (2010) argues that the Ai and Norton (2003) method for interpreting interaction terms in nonlinear models is not informative. Furthermore, Kolasinski and Siegel (2010) hypothesizes that the Ai and Norton (2003) method of interpretation is not superior to using regular coefficients and their marginal effects. Specifically, "Ai and Norton measure is relevant only to researchers for whom the saturation effect is important. Those unconcerned with such mechanical effect should focus on the interaction term." (Kolasinski and Siegel 2010, p.3). I follow Kolasinski and Siegel (2010) in interpreting the interaction term coefficients.

strong regulatory regimes are more likely to switch from global audit firms to other global audit firms (β_3=0.94, p<.10 in *GTG* specification) than firms listed in weak regulatory regimes. The positive and significant coefficient on $IFRS\_ADOPT_{it-1}*RegQ_{it-1}$ in *STG* specification indicates that in countries with high-quality regulatory regimes, IFRS adoption increases the likelihood of switching from small audit firms to global auditors (β_2=0.78, p<.05). In addition, the lack of significance for the coefficient on $IFRS\_ADOPT_{it-1}$ indicates that the increase in auditor switching from small to global audit firms following the IFRS adoption year is a phenomenon associated with high-quality regulatory regimes. Other results from table 6 panel A are consistent with those reported in table 5. Consequently, I reject hypothesis H3, that regulatory regime quality has no influence on the likelihood that a small audit firm will be replaced by a large auditor in the year following IFRS adoption, in favor of the alternate hypothesis H3A.

Table 6 panel B reports the results of estimating model 4, which examines the auditor replacement practices before IFRS adoption controlling for the quality of regulatory regime. Results indicate that firms domiciled in markets with high-quality regulatory regimes are more likely to switch auditors and to switch to global audit firms (β_7=0.68, p<.10 in the binary model; β_7=1.96, p<0.05 in the *STG* specification, and β_7=1.52, p<.01 in the *GTG* specification) and less likely to switch from global auditors to small audit firms (β_7=-2.27, p<.01). In addition, the results suggest that client firms from lower quality regulatory regimes are on average more likely to switch auditors one year before (between global audit firms) and two years before IFRS adoption (between global audit firms and from global to small audit firms). In contrast, the coefficient on the interaction term associated with the binary model (β_6=-0.45, p<.05) and with the *GTG*

specification in the multinomial model (β_4=-0.53, p<.10 and β_6=-0.68, p<.10) suggest that firms from highly regulated markets are less likely to switch auditors or to switch between global audit firms before IFRS adoption. Coefficients from estimating model 4 clarify the results obtained in table 5 panel B, where coefficients associated with pre-IFRS indicator variables in the *GTS* specification were significant. Specifically, the coefficients from model 4 indicate that the significant results on pre-IFRS variable in table 5 panel B are driven by observations from low quality regulatory regimes. The audit industry in markets with high-quality regulatory regimes is affected differently by IFRS adoption than the audit industry in markets with low quality regulatory regimes. It is important to keep this difference in mind, especially when estimating the consequences of the possible adoption of IFRS in a country with a high-quality regulatory regime, such as the United States.

Overall, Table 6 suggests that auditor switching increased in the years leading to IFRS adoption. What is more, before IFRS adoption firms from weak regulatory regimes are more likely to switch to smaller audit firms, which may be more lenient with respect to IFRS implementation.[24] However, table 6 also implies that for firms listed in markets with strong regulatory regimes, auditor switching before IFRS adoption was significantly diminished. There are no significant results for *STG* direction of auditor switching before IFRS adoption. Also, all tables consistently report that the likelihood of switching from small audit firms to global auditors increases significantly for firms from high-quality regulatory regimes in the year following the IFRS adoption. Considering that financial reporting in strong regulatory regimes is likely subject to more scrutiny than in weak

[24] Hodgdon et al. (2009) shows that within a sample of voluntary IFRS adopters, firms which used global auditors were more likely to fully adopt IFRS than firms using other small audit firms.

regulatory regimes, these results support the view that firms which have more incentives to care about correct application of IFRS, or for the perception of such application, are more likely to switch from small audit firms to global auditors when adopting IFRS.

VI. SUPPLEMENTAL ANALYSES

Additional Explanatory Variables

Audit Fees and Audit Opinion

Because the audit fees and audit opinion data are not available for many firms in my sample, I do not include audit fee or audit opinion variables in my primary regression equation. However, because audit fees and a qualified audit opinion may be associated with auditor switching I include these variables in my supplemental analyses (Simon and Francis 1988, Krishnan 1994, Lennox 2000). Specifically, I include the following three variables in my model: Aud_Fees_{it} is the natural logarithm of audit fees, ΔAud_Fees_{it} is a percentage change in audit fees from year *t-2* to year *t-1*, and $Qualified_{it}$ is an indicator variable equal to one if a firm received a qualified audit opinion for the year *t-2* financial report in year *t-1*. For this analysis I use 19,960 firm-year observations.

Results reported in table 7 suggest that higher audit fees are associated with a lower likelihood of switching between small auditors and from global audit firms to small auditors. Additionally, an increase (decrease) in audit fees is associated with a higher likelihood of switching from small audit firms to global auditors (from global auditors to small audit firms and between global audit firms). These results are consistent with audit fee low-balling. A qualified audit opinion in year *t-1* is associated with an increase in the likelihood of auditor replacement in year *t*. Consistent with the main results, the

likelihood of replacing a small audit firm with a global audit firm is higher in the year following IFRS adoption (β_1 = 0.47, p<.05 in *STG* specification). Overall, the results from model 1 and model 2 are consistent with the primary analyses, but the coefficients associated with the year of IFRS adoption are insignificant in model 3 and model 4 (with the exception that the coefficient associated with the IFRS adoption year is negative and significant in model 3).

[Insert Table 7 here]

Changes in the Complexity of Operations

In the primary analyses, I use firm size to control for complexity. However, prior research (Kim et al. 2012) has used other variables to control for the complexity of a client firm's operations. In supplemental analyses, I use data on the business and geographic segments of the firms in my sample as additional controls for changes in business complexity. Specifically, I create two indicator variables for the firm-years included in my regression analyses, first for change in the number of segments (μ=0.30, σ=0.46), and second for an increase in the number of segments (μ=0.18, σ=0.39). Untabulated results suggest that changes in the number of segments are positively associated with auditor replacements, and positively related to switching to global audit firms. The interpretation of coefficients associated with IFRS adoption is identical with tables 5 and 6.

Likelihood of Bankruptcy

Firms may be more likely to switch auditors because they become financially distressed. Therefore, to test whether financial distress was associated with auditor switching in my sample firms, I include Altman's Z-score in my explanatory variables

(Altman 1968). I calculated Z-score for each of my sample firm-years (μ=4.66, σ=28.00, median=2.53). Untabulated results indicate that the Z-score is not related to auditor replacements. The results from model 1 and model 2 are consistent with the primary analyses, but the coefficients associated with the year of IFRS adoption are insignificant in models 3 and 4.

Mismatched Clients and Audit Firms

Shu (2000) has shown that client firm characteristics may cause these firms to select big (or global) auditors. For larger and more profitable clients it may be more efficient to use global audit firms because of the capacity constraint of small auditors, concerns for audit firm independence, or more efficient audit processes. Conversely, smaller clients with lower profits may be more likely to use local auditors because their services are less costly for such clients. On the auditors' side, larger audit firms may prefer larger clients, whose audits provide higher fees, while smaller audit firms may prefer smaller clients that are more straightforward to audit and perhaps located in close proximity.

In the context of IFRS adoption, it is likely that firms switching auditors had been mismatched with their pre-IFRS auditors and are using an exogenous shock provided by IFRS adoption as an opportunity to switch audit firms.[25] To examine whether client-auditor mismatch is driving my results, I follow Landsman et al. (2009) and include a mismatch indicator variable in my regression models. $Mism_{it-1}$, equals one if an audit firm used by client *i* in year *t-1* to examine the *t-2* annual report is mismatched with that client (i.e., if client *i*'s characteristics from year *t-2* indicate that the client should be using a

[25] Comprix et al. (2011) suggests that mismatch between client characteristics and audit firm type is one of the main reasons for auditor switching around IFRS adoption.

global audit firm in year *t-1* but it used a small auditor, or vice versa). I follow Shu (2000) in estimating which clients are matched with their audit firms. [26]

[Insert Table 8 here]

I re-estimate model 1 including $Mism_{it-1}$ and an interaction term between $Mism_{it-1}$ and $IFRS\_ADOPT_{it-1}$. The results are reported in table 8. First, as expected, the results indicate that clients mismatched with their audit firms are more likely to switch audit firms and are more likely to switch to audit firms of a different type (β_3=0.19, p<.01 in the binary model, β_3=0.97, p<.01 in *STG* specification, and β_3=0.22, p<.10 in *GTS* specification). With respect to IFRS adoption, when I control for mismatch between clients and auditors, client firms are more likely to switch auditors and are more likely to switch from small auditors to global audit firms (β_1=0.21, p<.10 in the binary model and β_1=0.86, p<.01 in *STG* model). However, the coefficient on the interaction between $Mism_{it-1}$ and $IFRS\_ADOPT_{it-1}$ is significant only in *STG* specification and it is negative (β_2=-0.64, p<.10 in *STG* model). Therefore, client firms do not use IFRS adoption to switch to better-matched auditors, but they are even less likely to do so if they previously used small audit firms. Such behavior may be related to the reasons why mismatched clients of small audit firms chose these audit firms in the first place. Specifically, clients may remain with mismatched audit firms because these audit firms have been with them

[26] As in Shu (2000), for each year in my sample I use a probit analysis to regress an indicator for the choice of a global audit firm on an intercept and lagged values of: client's size, acquisition expenditures, changes in external financing, profitability, market to book ratio. I calculate predicted probabilities for each firm in my sample. Next, I split the distribution into twenty intervals and calculate the percentage of clients using each type of audit firms falling into each interval. Finally, I choose a value of predicted probabilities which minimizes the misclassification rate for clients with each type of audit firm. If a firm has predicted probability higher than or equal to the cutoff value then it should be using a global audit firm and if the predicted probability is lower than the cutoff value then it should be using a small audit firm. If in a given year the audit firm used by the client is different than the one predicted using the Shu (2000) method, I code $Mism_{it}$ as one.

long enough to know their operations well and perform efficient audits. Furthermore, mismatched clients using small audit firms may prefer the lower audit fees at small audit firms. Additionally, client firms may have certain characteristics that match them with their type of audit firms but were not considered in Shu (2000) or Landsman et al. (2009) or in this paper. Overall, client-audit firm mismatch does not explain why there is an increase in switching from small audit firm to global auditors in the year following IFRS adoption. The results related to IFRS adoption obtained from the other models including $Mism_{it-1}$ support the same inferences as those from the primary analyses.

Characteristics of Firms Switching Auditors

Throughout this paper, I assume that increased frequency of auditor switching in the year following IFRS adoption is due to the adoption of IFRS. However, it is not clear that the firms switching auditors during IFRS adoption would not have switched auditors in spite of the reporting regime change. The preceding analysis of client-audit firm match possibly controlled for some of the differences between client firms. Here, I examine whether differences in incentives exist between firms switching and firms retaining auditors in the IFRS adoption period. Specifically, I conduct a series of t-tests for difference in means in summary characteristics between a sample of firms switching audit firms and those keeping their previous auditors, and between a sample of firms switching from small to global audit firms and firms keeping small firms or switching to other small auditors. I include four additional variables that may capture market visibility of client firms (Barton 2005): Vol_{it-1}, EPS_ests_{it-1}, REC_ests_{it-1}, and For_assets_{it-1}. Vol_{it-1} is the average daily trading volume over 52 weeks ending at fiscal year-end in year *t-1* divided by the number of shares outstanding at the end of year *t-1* and multiplied by a

hundred. EPS_ests_{it-1} is the number of analysts' EPS estimates as of the fiscal year end in year *t-1*. REC_ests_{it-1} is the number of analysts' recommendations as of the fiscal year end in year *t-1*. For_assets_{it-1} is the percentage of total assets that is held in foreign countries.

[Insert Table 9 here]

Panel A of table 9 suggests that firms switching auditors and firms retaining auditors differ significantly on most of the sample characteristics in the year of IFRS adoption (IFRS), and in all sample firm-years (All). However, differences in profitability, sales growth, and in percentage of foreign assets, which are significant for auditor switching firms in the full sample, are not significant in the IFRS adoption year. Although these characteristics drive auditor switching for firms in the full sample, they do not for the auditor switching firms in the IFRS adoption year. Consequently, auditor switching firms discount these factors in the year following IFRS adoption, or they base auditor switching decisions on additional factors.

Panel B of table 9 shows that firms switching from small audit firms to global auditors do not differ significantly from firms using small auditors on most of the sample characteristics in the year following IFRS adoption. They only differ on size and asset growth. However, when I perform one-sided tests for positive differences between IFRS adopters and non-adopters, sales growth, debt issuance, analyst following and the percentage of foreign assets are significantly higher for auditor switching firms than for non-switchers in the IFRS adoption year. In contrast, firms switching from small to global audit firms in the full sample differ from non-switchers on size, asset growth, sales growth, stock issuance, debt issuance, analyst following, and share turnover. Taken together, these results suggest that companies switching from small audit firms to global

auditors in the year following IFRS adoption may have incentives for audit firm replacement that are independent from organizational development or stock market incentives. Nevertheless, one-sided tests indicate that the firms switching from small audit firms to global auditors around IFRS adoption may be driven to do so because of their international visibility (based on the difference in the percentage of foreign assets) and financial market visibility (based on the difference in size, growth, and analyst following).

Sample Selection

As mentioned in Section IV, Chan et al. (2006) limits analysis to a sample of firms that replaced auditors, while the Landsman et al. (2009) sample excludes switches from small auditors to Big N auditors. In contrast, I use a sample of firms that replaced auditors in each direction and firms that did not replace auditors. To assure robustness of my results to alternative sample specifications, I estimate models 1 and 2 on the following samples: (1) a sample of firms that switched auditors during my sample period; (2) a sample of firms that adopted IFRS during my sample period; (3) a sample that is in the intersection of samples (1) and (2); (4) a sample of firm-years for which the audit firm in year *t-1* is a small audit firm; and (5) a sample excluding firms which adopted IFRS before 2005 (excluding voluntary adopters). Sample (1) has 16,131 firm-years, sample (2) has 21,773 firm-years, sample (3) has 12,147 firm-years, sample (4) has 8,326 firm-years, and sample (5) has 30,107 firm-year observations.

The coefficient associated with IFRS adoption in the binomial model is positive and significant in the non-voluntary (5) sample (model 1 and model 2). The $IFRS\_ADOPT_{it}$ coefficient is positive and significant in sample (5) for the *GTG*

specification (model 1). This coefficient in the multinomial *STG* specification is positive and significant in samples (2), (3), and (5) for model 1 and in all samples for model 2. Thus, my conclusions with respect to IFRS adoption and auditor replacements are consistent with prior results.

Variable Definitions

IFRS Adoption

$IFRS\_ADOPT_{it}$ is defined in my paper as an indicator variable equal to one if firm *i* uses IFRS in year *t-1* and uses non-IFRS reporting standards in year *t-2*. As a robustness test, I examine whether the results of my analyses are sensitive to the definition of this variable. I re-estimate models 1 and 2 using the following conditions: (1) $IFRS\_ADOPT_{it}$ is equal to one if firm *i* used IFRS in year *t-1* and non-IFRS reporting standards in year *t-2* and in year *t-3*, and (2) $IFRS\_ADOPT_{it}$ is equal to one if firm *i* used IFRS in year *t* and either used non-IFRS reporting standards in year *t-1* or had no reporting standards data available for year *t-1*. The conclusions obtained from multinomial logit models using these alternative definitions are consistent with the primary results. The only difference is that the $IFRS\_ADOPT_{it}$ interaction coefficients are not significant in model 4 for the alternative definition (2).

Regulatory Environment

I examine whether the results from the analyses of regulatory quality are affected by the choice of a proxy for regulatory quality. That is, I replace the continuous $RegQ_{it}$ variable based on Kaufmann et al. (2008) with an indicator variable, where the indicator variable equals one for firm-years with above the median values of $RegQ_{it}$. In addition to the results from the primary analyses, β_1 (β_2) is positive (negative) and significant in the

GTS specification in model 4. This indicates that when adopting IFRS, firms from strong regulatory regimes are not only more likely to switch from small auditors to global audit firms, but are also less likely to switch from global auditors to small audit firms.

Alternatively, I also use an indicator variable for firms listing on stock exchanges regulated by the EU. Such firms have to abide by the EU directives which specify additional disclosure requirements and they are also subject to EU-oversight (Pownall and Wieczynska 2013). When I include this indicator variable and its interaction with $IFRS\_ADOPT_{it}$, the coefficient on $IFRS\_ADOPT_{it}$ is positive and significant and the coefficient of the interaction term is negative and significant in the *STG* specification. These coefficients indicate that firms not subject to the EU's regulatory oversight are more likely to retain global audit firms. There are multiple explanations for these results. For one, it is possible that firms regulated by the EU have higher quality accounting systems and may be better prepared for transition to IFRS than firms regulated by national authorities or exchanges only. In addition, almost eighty percent of firms regulated by the EU and sixty percent of firms not regulated by the EU were using global audit firms before IFRS adoption, which naturally limits the sample of potential small auditor replacement observations from the EU regulated markets. Moreover, EU authorities periodically examine financial statements for compliance with IFRS, but for non-regulated firms, such oversight is limited (Pownall and Wieczynska 2013). Therefore, if switching from small audit firms to global auditors following IFRS adoption is a signal of commitment to proper IFRS application, then this signal is relatively more important for firms from non-regulated exchanges.

Alternative Model Specification

Big Four vs. Global Six

In the primary analyses, I define global audit firms as the Big Four (Five) auditors plus BDO and Grant Thornton. Here, I examine how sensitive my results are to the definition of the largest audit firms. I repeat my analyses after replacing the global six with the Big Four. Coefficients of interest lose significance in models using regulatory quality variables. Model 1 and model 2 results are consistent with those using global six audit firms.

Post-IFRS Years

Firms are more likely to switch from small auditors to global audit firms when adopting IFRS. However, these client firms used the services of small auditors before IFRS with no need to switch to global audit firms at that time. Furthermore, global audit firms are likely to charge higher audit fees than small audit firms. Consequently, it is likely that when client firms and small audit firms become proficient in the application of IFRS, clients will switch back to smaller auditors. To test this prediction, I repeat my analyses with $IFRS\_post2_{it-1}$ and $IFRS\_post3_{it-1}$ indicator variables for the second and third IFRS years, respectively. First, I use each of these indicators in place of $IFRS\_ADOPT_{it-1}$ in models 1 and 3. Second, I use these variables instead of indicators for pre-IFRS years in models 2 and 4.

The coefficient on $IFRS\_post2_{it-1}$ in model 1 is positive and significant in the binary model and in the *GTG* specification of the multinomial model. The coefficient on $IFRS\_post3_{it-1}$ in model 1 is positive and significant in the *STS* specification of the multinomial model. Model 2 results are consistent with model 1 results. In the two

versions of model 3, only the coefficients on $IFRS\_post3_{it-1}$ are positive and significant in the *STS* and *GTS* specifications, and the coefficient on $IFRS\_post3_{it-1}$*$RegQ_{it-1}$ is negative and significant in the *GTS* specification. In model 4, only the *GTS* specification results hold for $IFRS\_post3_{it-1}$ and $IFRS\_post3_{it-1}$*$RegQ_{it-1}$. All results with respect to IFRS adoption year in the *STG* specification are consistent with those from the primary analyses, and the coefficient on $IFRS\_ADOPT_{it-1}$ is positive and significant in the binary logit in model 2. Generally, IFRS adoption increases the likelihood of switching from global audit firms to small auditors in low quality regulatory regimes. It also decreases the likelihood of switching from global audit firms to small audit firms in high-quality regulatory regimes two years after adopting IFRS. These results indicate that there is no reversal in the auditor switching behavior of IFRS adopters in subsequent years.

Year and Country Fixed Effects

In the primary analyses I use country-fixed effects. When I remove the country indicator variables from the regression, conclusions with respect to IFRS adoption and auditor switching are the same as in the primary analyses. In addition, the coefficient associated with the IFRS adoption year is positive and significant in model 2 in the binary logit.

Since most IFRS adoptions are concentrated in particular years (see table 3, panel B), I do not include year-fixed effects in the primary analyses. Year fixed effects may capture the effect of IFRS adoption. However, I include year fixed effects as a robustness check. Conclusions from these analyses are consistent with those obtained without year-fixed effects for models 1-3. In model 4 the coefficients associated with $IFRS\_ADOPT_{it-1}$ lose significance, perhaps due to year-effects capturing most of the IFRS adoption events.

Audit Expertise and Accounting Quality

Industry Expertise

Prior literature has shown that a client firm is more likely to switch to (or retain) an audit firm which is an industry specialist in that firm's industry (Carson 2009). One possible reason for switching from small audit firms to global auditors around IFRS adoption is that the global audit firms are perceived as experts on IFRS. If client firms seek any audit expertise, they should also be more likely to switch to audit firms which specialize in auditing that client's industry. To test whether clients are more likely to choose industry expert firms following IFRS adoption I use a binary model. In this model the dependent variable is an indicator variable for industry expert auditor and the independent variables are the same as in model 1. I code an audit firm as an expert for a given industry if in country *j* and year *t*, the audit firm examined at least 5% more of the clients in that industry than any other audit firm. Untabulated results indicate that IFRS adoption is not related to the likelihood of choosing an industry expert auditor.

As an additional check of my results, I modify my regression models to include additional variables: an indicator for whether an audit firm used by a client in year *t-1* is an industry specialist and interaction terms between this variable and the IFRS adoption timing variables. Results from these analyses suggest that firms that used industry expert auditors in the past were less likely to switch away from small audit firms to global auditors or to other small audit firms. These firms were also less likely to switch away from small audit firms in the year following IFRS adoption. However, the coefficients associated with the prior year's audit firm being an industry-expert are positive and significant in model 1 for the G*TS* and *GTG* specifications. The coefficient associated

with $IFRS\_ADOPT_{it-1}$ in the *STG* specification remains positive and significant in models 1 and 2, and is positive and significant when interacted with regulatory quality in model 3. These results can be interpreted in two ways. First, industry expert auditors may charge higher audit fees to clients where the expertise is applied. For global audit firms, when "expert fees" add to the audit fee premium, the benefit of industry expertise may not be sufficient to justify high audit fees. Small audit firms which are also industry specialists possibly provide their clients with industry audit expertise and lower audit fees than charged by global audit firms. This is consistent with clients of industry-specialist global audit firms being more likely to switch away from such auditors. A second possibility is that due to a low number of small audit firms being industry expert auditors, these results are driven by the small numbers of clients using such auditors.

IFRS Expertise

In the hypotheses development section I distinguish two reasons why client firms may be more likely to switch to global audit firms when adopting IFRS. First, clients may want to assure that their financial statements are correct and therefore seek auditors with IFRS expertise. If this is the case, clients should also be more likely to keep (switch to) small audit firms with prior IFRS experience. Second, clients may need an audit firm perceived as high-quality auditor to a greater extent during IFRS adoption than at other times. Specifically, if market participants are uncertain about the quality of the first IFRS financial reports, client firms may need to hire highly reputable global auditors in order to alleviate the decrease in the market's perception of the firm's reporting quality. These two reasons are not mutually exclusive.

As a supplemental analysis, I examine whether the auditor switching behavior

around IFRS adoption is associated with auditors' prior IFRS experience.[27] I use a multinomial logistic regression analysis modeling the choice of audit firm type. The dependent variable is a categorical variable with separate values for the choice of small audit firms with no IFRS experience, small audit firms with IFRS experience, and global audit firms. I estimate IFRS experience for each audit firm-year. Specifically, a small audit firm is coded as having IFRS experience in year *t* if it audited at least one IFRS financial statement in years from 1998 through year *t-1* (1998 is the beginning of my sample for audit firm and reporting standards data). Independent variables are the same as in models 1 through 4. Additionally, I estimate the IFRS experience models on two samples. First, I estimate the models on the regression sample from the main part of the paper. Second, I estimate the models on a subsample of firm-years with auditor switches (i.e., observations with Chg_{it} =1).

Untabulated results indicate that clients are more likely to use audit firms with IFRS experience when adopting IFRS. Specifically, when compared to the base condition of using a small audit firm with no IFRS experience, clients are more likely to use small audit firms with IFRS experience or global audit firms in the year following IFRS adoption. These results hold in the sample of firm-years with auditor switches. Furthermore, the results for analyses including regulatory quality variables are consistent with prior results, in that firms from high (low) quality regulatory regimes are more (less) likely to choose or switch to audit firms with IFRS experience.

Even though the results from the main part of the paper suggest that global audit

[27] In this section I do not examine whether switching to global auditors increases reporting quality for IFRS adopters. For purposes of the current argument, it is only important that the market *perceives* reports audited by global audit firms as higher quality than reports examined by small audit firms.

firms are the only audit firms to benefit from IFRS adoption, the supplemental analyses indicate that a subset of small audit firms may obtain similar benefits. Specifically, small auditors that have prior IFRS experience are more likely to be chosen as auditors by IFRS adopters than small audit firms with no IFRS experience. Taken further, these results suggest that small audit firms may avoid losing clients around IFRS adoption if they gain sufficient IFRS-related expertise. More importantly, my analyses provide evidence that switching from small audit firms to global auditors when adopting IFRS may be driven by client firms seeking auditors with IFRS experience.[28]

Accounting Quality

Multiple accounting papers have explored changes in accounting quality around IFRS adoption (e.g., Barth et al. 2008, Christensen et al. 2008, Barth et al. 2012, Ahmed et al. 2013). Changes in accounting quality are likely to arise because accounting information is prepared and disclosed differently under IFRS than under local reporting standards. Consequently, financial data from annual reports prepared under IFRS and local reporting standards should present different accounting properties. Although there is no consensus, most research suggests that accounting quality is improved by IFRS adoption when compared to the accounting quality under local reporting standards.[29] Among others, Barth et al. (2007) argues that international reporting standards limit opportunities for earnings management when compared to local reporting standards.

[28] I repeat these analyses using two more restrictive definitions of IFRS expertise. First, I limit the time period when an auditor could become and expert to begin in 2002, subsequent to the announcement of mandatory IFRS adoption in the EU and following the implementation of IAS 1, which required IFRS users to fully implement IFRS. Second, I also require that an audit firm examined IFRS reports of at least ten different client firms to be designated as an expert. The conclusions from the IFRS expertise analyses reported here with respect to small IFRS-expert audit firms hold in both of the alternative specifications.

[29] Ahmed et al. (2013) finds evidence of a decline in accounting quality at IFRS adopting firms.

When IFRS became mandatory in the European Union, global audit firms already had experience with implementing and auditing IFRS. If global audit firms became experts in IFRS adoption through their experience, they should implement the standards "more correctly". Consequently, more of the differences between local reporting standards and IFRS should be visible in the annual reports audited by global audit firms than in reports audited by local auditors. Such differences should also be visible in the accounting quality measures.[30]

I examine changes in accounting quality for client firms using global audit firms and small audit firms after adopting IFRS. Because in this paper I am concerned with switching from small audit firms to global auditors, I examine if accounting quality is affected by IFRS adoption to a greater extent for firms which switched from small audit firms to global auditors (hereafter, *STG*) than for firms which retained their small audit firms (hereafter, *SS*) or firms which switched to other small auditors (hereafter, *STS*). First, in order to control for pre-IFRS differences between *STG*, *STS*, and *SS* firms, I calculate and compare accounting quality measures for these three groups of firms prior to IFRS adoption. Second, I estimate these differences subsequent to IFRS adoption. Third, I use a difference-in-differences bootstrap analysis to examine whether changes in accounting quality around IFRS adoption are greater for *STG* firms than for *STS* or *SS* firms. Finally, I use a difference-in-differences regression analysis to examine whether

[30] This relationship only holds to the extent that IFRS differ from local reporting standards, and that the differences are implemented in financial statements. Multiple accounting research papers explore differences between IFRS and various local reporting standards (Ding et al. 2007; Bae et al. 2008). However, more differences in reporting standards may not result in more differences in accounting numbers for all firms. Specifically, if reporting standards which differ do not apply to that particular firm, either because of its industry or because of lack of transactions for which reporting would differ, then the reports may be very similar if not identical.

STG firms experience greater changes in accounting quality than *STS* or *SS* firms following the adoption of IFRS.

I use two measures of accounting quality: the Dechow-Dichev measure of accruals quality (Dechow and Dichev 2002; McNichols 2002; Francis et al. 2005; Francis et al. 2006; Kim et al. 2012) and a measure of abnormal accruals from the Jones model (Jones 1991; DeFond and Subramanyam 1998; Francis et al. 2006; Kim et al. 2012).[31] Lower values of both measures indicate higher accounting quality. In table 10 panels A and B, I report summary characteristics and univariate test results for the Jones model measure and the Dechow-Dichev measure, respectively. In table 10 panel C, I report coefficients from estimating a difference-in-differences regression models with accounting quality measures as dependent variables.

[Insert Table 10 here]

The results reported in table 10 indicate that after IFRS adoption accounting quality does not increase significantly for the majority of the sample firms. Panel A shows that the Jones model residuals are significantly lower following IFRS adoption for *STG*, *STS*, and *SS* groups in the sample of all firms-years. However, the Jones residuals for a constant sample (i.e., firms with accounting quality data in all four sample years) indicate that only client firms keeping prior small audit firms experience a statistically significant increase in accounting quality. This result may be caused by lower accounting quality at these firms prior to the adoption of IFRS. When I use the Dechow-Dichev measure as a proxy for accounting quality, I do not find significant changes in accounting

[31] Kim et al. (2012) paper also uses these accounting quality measures in the analyses of audit fees subsequent to IFRS adoption.

quality following IFRS adoption, except for the *SS* firms in the full sample. In addition, results from univariate difference-in-differences analyses suggest that none of the *STG*, *STS* or *SS* groups experienced greater accounting quality changes than the other client groups. Finally, the coefficients reported in panel C indicate that for the sample of all firms that used small auditors before IFRS adoption, the accounting quality increases following the adoption of the new standards. However, there is no difference in the effect of IFRS adoption on accounting quality for *STG*, *STS* or *SS* firms.[32] In the constant sample, the negative and significant coefficient associated with *STG* firms indicates that these firms have higher accounting quality (only using the Dechow-Dichev measure of accounting quality). However, the coefficients related to IFRS are not significant. Overall, these results suggest that the firms switching to global auditors subsequent to the adoption of IFRS do not experience larger changes in accounting quality under IFRS than the firms using small auditors. Therefore, I conclude that switching from small audit firms to global auditors is associated with client firms seeking auditors with perceived IFRS expertise, and not with client firms' need for a stricter implementation of IFRS.

VII. CONCLUSIONS

In this study, I examine whether IFRS adoption affects auditor replacement behavior. I find that IFRS adoption has different effects on global and small audit firms. In particular, I show that client firms are more likely to replace small audit firms with global audit firms when adopting IFRS, but not before IFRS adoption.

[32] The lack of significance for accounting quality changes at *STG* firms may be caused by small sample sizes used in these analyses. The number of firm-year observations used for the accounting quality analyses is limited due to data requirements. Because client firms using small audit firms are likely to be smaller and less profitable, they are more likely to have limited coverage in financial databases.

Additionally, I study whether the effect of IFRS adoption is moderated by the quality of a regulatory regime. I find that in countries with high-quality regulatory regimes, the difference in the effects of IFRS on small and global audit firms is more pronounced: small audit firms are more likely to lose clients adopting IFRS, whereas global audit firms are more likely to gain these clients. The results of my sensitivity analyses suggest that my conclusions are robust to alternative variable and sample definitions. Supplemental analyses indicate that the increase in the likelihood of switching from small auditors to global audit firms following IFRS adoption is driven primarily by global auditors' IFRS expertise. In addition, small audit firms are more likely to keep their clients or gain clients if they assure a sufficient level of IFRS expertise prior to mandatory IFRS adoption.

Natural extensions of this research paper may use more sample countries to examine the effect of IFRS adoption on audit markets. For example, Canada, a country with a high-quality regulatory regime and a well-developed stock market, adopted IFRS in 2011 and would be an interesting setting for the analysis of auditor switching behavior. Another possible extension could examine audit firms' earnings before and after country-wide IFRS adoptions. Researchers could also focus on small audit firms that retain or gain clients among IFRS adopters to examine their level of IFRS expertise. Finally, researchers may use the IFRS adoption setting and Sarbanes-Oxley Act implementation to examine and suggest how small audit firms can better prepare for mandatory changes in their financial reporting regimes.

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TABLE 1: Variable Definitions

Variable	Definition
Chg_{it}	An indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. The audit firm data are collected from Worldscope database (most recent fiscal year end observations), Worldscope compact disks (available only until 2006), and hand-collected from scanned annual financial reports available in Thomson One Reuters database.
Chg_xty_{it}	An index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). The audit firm data are collected from Worldscope database (most recent fiscal year end observations), Worldscope compact disks (available only until 2006), and hand-collected from scanned annual financial reports available in Thomson One Reuters database.
$IFRS\_\_ADOPT_{it-1}$	An indicator variable equal to one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. The IFRS adoption year is determined based on a data item "Accounting Standards Followed" in Worldscope. The variable is set to missing if there is no accounting standards data available for that year and a prior year.
$IFRS\_pre1_{it-1}$	An indicator variable equal one for firm *i* in year *t* if $IFRS\_ADOPT_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. The IFRS adoption year is determined based on a data item "Accounting Standards Followed" in Worldscope.
$IFRS\_pre2_{it-1}$	An indicator variable equal to one for firm *i* in year *t* if $IFRS\_pre1_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. The IFRS adoption year is determined based on a data item "Accounting Standards Followed" in Worldscope.
TA_{it-1}	Total assets at the end of year *t-1*. Total assets data are denominated in millions USD and have been collected from Worldscope database.
$SIZE_{it-1}$	Natural logarithm of total assets at the end of year *t-1*. Total assets data are denominated in USD and have been collected from Worldscope database.
$\Delta SIZE_{it-1}$	Change in the level of total assets, defined as total assets at the end of the fiscal period *t-1* minus total assets at the end of the period *t-2*, divided by total assets at the end of the period *t-2*. Total assets data are denominated in USD and have been collected from Worldscope database.
Net_Income_{it-1}	Net income scaled by total assets. Net income and total assets data are denominated in USD and have been collected from Worldscope database.
$Leverage_{it-1}$	Total debt divided by total assets. Total debt and total assets data are denominated in USD and have been collected from Worldscope database.
$\Delta Sales_{it-1}$	Change in sales, defined as the difference between sales at the end of period *t-1* minus sales at the end of the period *t-1*, divided by sales at the end of the period *t-2*. Sales data are denominated in USD and have been collected from Worldscope database.

TABLE 1 (continued)

Variable	Definition
$Loss_{it-1}$	An indicator variable equal to one if a firm experienced a loss in year *t-1*. Loss is defined as net income below zero. Net income data are denominated in USD and have been collected from Worldscope database.
ΔC_Stock_{it-1}	A proxy for common equity issuance, defined as change in the number of common shares outstanding during the year divided by the beginning of the year number of shares outstanding.
$\Delta LTDebt_{it-1}$	A proxy for debt issuance, defined as change in firm *i*'s long-term debt from during the year divided by the beginning of the year long-term debt.
$\#Exch_i$	Number of exchanges that firm *i* is listed on. The variable is based on "Exchanges" data item from Worldscope. Where unavailable, it is substituted with "Primary Exchange" data item. For those firms for which neither data items are available I code $\#Exch_i$ as zero.
Aud_Fees_{it-1}	Natural logarithm of audit fees. Audit fees data are denominated in USD and have been downloaded from Worldscope database.
ΔAud_Fees_{it-1}	Change in audit fees from year *t-2* to year *t-1* divided by audit fees in year *t-2*. Audit fees data are denominated in USD and have been downloaded from Worldscope database.
$Qualified_{it-1}$	An indicator variable equal to one if firm *i* received a qualified audit opinion for year *t-2* financial report. The audit opinion data have been collected from Worldscope database.
$RegQ_{it-1}$	The regulatory quality variable collected from Kaufmann et al. (2009). $RegQ_{it-1}$ is a proxy for the ability of a country's government to implement and enforce regulations. I collect values of $RegQ_{it-1}$ from Kaufmann et al. (2009) for each country-year in my sample. As in Pownall and Wieczynska (2013), the 2009 and 2010 missing values are replaced with the values from 2008.
$Mism_{it-1}$	An indicator variable equal to one if a client firm was mismatched with the type of audit firm (small or global) that it was using in year *t-1*. Mismatch occurs if a client firm's probability of using a given type of audit firm indicates that the client should be using a different type of auditor than it is using in that year. The measure is estimated separately for each sample year. The estimation procedure is based on Shu (2000). Data necessary for creation of this variable are collected from Worldscope.
$Country_i$	A set of four indicator variables controlling for country specific effects. Country designation is based on Worldscope database.
Vol_{it-1}	Average daily trading volume over 52 weeks ending with fiscal year end in year *t-1* divided by the number of shares outstanding at the end of year *t-1* and multiplied by 100%
EPS_ests_{it-1}	The number of analysts' EPS estimates as of the fiscal year end in year *t-1*
REC_ests_{it-1}	The number of analysts' recommendations as of the fiscal year end in year *t-1*
For_assets_{it-1}	Foreign assets as a percentage of domestics assets

TABLE 2: Sample Selection

Sample	Firms	Firm-years
Initial sample[#]	6, 272	48, 065
Less:		
- missing audit firm data[#]	67	3, 949
- missing audit firm data for year *t-1*[##]	444	5, 980
- missing regression variables[@]	526	6, 188
Used in regression analyses (models 1 and 3):	5, 235	31, 948
- missing IFRS adoption timing variables[@@]	990	9, 285
Used in regression analyses (models 2 and 4):	4, 245	22, 663

[#] Initial sample is the sample of all publicly traded firms domiciled in the UK, Germany, Italy, Spain, and Poland with total assets higher than zero in any of the years 1998-2010. I created the initial sample in the spring of 2011 based on the total assets data collected from Worldscope database. Subsequently, I collected audit firm data from Worldscope compact discs and from firms' annual financial reports.

[##] I require that the audit firm for the current and prior period can be identified. I use current and prior periods' values to create variable capturing auditor replacements. The initial sample includes data for 1998 because I need this year's data to create auditor replacement and other change variables for the following year. The data sample I examine in this paper includes data from years 1999-2010.

[@] The main regression equation is: Chg_{it} (Chg_xty_{it}) = $\alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \sum_{k=2}^{10} \beta_k Controls_{it-1} + \sum_{c=11}^{14} \gamma_c Country_j + \varepsilon_{it}$, where $Controls_{it-1}$ = {$SIZE_{it-1}$, $\Delta SIZE_{it-1}$, Net_Income_{it-1}, $Leverage_{it-1}$, $\Delta Sales_{it-1}$, $Loss_{it-1}$, ΔC_Stock_{it-1}, $\Delta LTDebt_{it-1}$, $\#Exch_i$ }. For the regression analyses I require that all independent variables are available for the firm-years I analyze. I also truncate the continuous financial variables at 1% and at 99%.

[@@] Models 2 and 4 require that indicator variables for one and two years before IFRS adoption are available. Because I code IFRS adoption indicator as missing for firm-year with missing standards in a given year and the year prior, the lagged indicator variables are missing for multiple observations.

TABLE 3: Audit Firms, Auditor Replacements and IFRS adoption
Panel A: Auditor Replacements per Year

Lagged variable	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total	Average
N	2,569	2,654	2,948	3,063	3,034	3,103	3,254	3,430	3,643	3,630	3,523	3,285	38,136	3,178
$Chg_{it+1} = 1$	199	196	255	209	244	261	292	336	364	346	306	291	3,300	275
Chg_STG_{it+1}	43	34	49	42	30	34	43	67	82	88	47	62	621	52
Chg_STS_{it+1}	45	35	52	56	48	73	81	100	120	93	121	108	932	78
Chg_GTS_{it+1}	24	19	37	43	59	53	68	61	39	46	50	33	532	44
Chg_GTG_{it+1}	87	108	117	68	107	101	100	108	123	119	88	88	1,214	101

Frequencies are provided for the sample of 38,136 firm-years with available total assets and available auditor data for year *t* and year *t-1*, where *t* is 1999-2010. *N* is the number of firm-year observations. Chg_{it} is an indicator variable equal to one for firm *i* in year *t* if firm *i* used a different auditor to examine an annual report for year *t-1* than the auditor who examined a report for year *t-2*. Chg_xty_{it} is a binary indicator variable equal to one if a firm replaces its audit firm from *x* type to *y* type, and it equals zero if auditor change is in a different direction or there is no auditor change; *xty* takes one of the four possible forms: *STG* (small auditor to global six), *STS* (small auditor to small auditor), *GTS* (global six to small auditor) or *GTG* (global six to global six). The frequencies are presented for forwarded variables Chg_{it+1} and Chg_xty_{it+1} (i.e., year *t*'s frequency is the number of clients whose report for year *t* was audited by a different audit firm than their report for year *t-1*).

Panel B: Reporting Standards and IFRS Adoption

Variable	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
$IFRS_{it}$	62	123	159	224	252	318	1,406	2,037	2,573	3,005	2,922	2,751	15,832
$IFRS\_ADOPT_{it}$	24	19	31	39	31	52	1,027	562	426	425	37	26	2,699
$Local_{it}$	2,089	2,120	2,434	2,668	2,647	2,686	1,811	1,369	1,040	604	584	520	20,572

$IFRS_{it}$ is an indicator variable equal to one if firm *i* uses IFRS in an annual report for a given year. $IFRS\_ADOPT_{it}$ is an indicator variable equal to one if firm *i* uses IFRS in year *t*, and reports using non-IFRS accounting standards in years *t-1*. Frequencies are provided for the sample of 38,136 firm-years with available total assets and available auditor change data for year *t* and year *t-1*.

TABLE 3 (continued)
Panel C: Auditor Replacements in the Years Surrounding IFRS Adoption

Variable	T_{IFRS}-2	T_{IFRS}-1	T_{IFRS}	T_{IFRS}+1	T_{IFRS}+2
Chg_{it+1} =1	194	252	259	246	205
Chg_STG_{it+1}	36	41	65	45	33
Chg_STS_{it+1}	46	75	57	65	68
Chg_GTS_{it+1}	41	44	37	32	28
Chg_GTG_{it+1}	71	92	100	104	76

Chg_{it} is an indicator variable equal to one for firm *i* in year *t* if firm *i* uses a different auditor to examine year *t-1* annual report than the auditor who examined year *t-2* annual report. Chg_xty_{it} is a binary indicator variable equal to one if a firm replaces auditors from *x* type to *y* type: *STG* (small auditor to global six), *STS* (small auditor to small auditor), *GTS* (global six to small auditor) or *GTG* (global six to global six). T_{IFRS} is the first year when firm *i* is using IFRS; T_{IFRS}-1 is a year before firm *i* adopts IFRS, etc. Frequencies are provided for the sample of 38,136 firm-years with available total assets and auditor change data. For presentation in this table Chg_{it} and Chg_xty_{it} variables have been forwarded by one period (i.e., the frequency for a given T-period is the number of client firms which use a different audit firm to examine T-period's report than the audit firm that examined the report for the T-1 period).

Panel D: Global Six Audit Firms by Country

	Pre IFRS period						IFRS period					
	Germany	Spain	UK	Italy	Poland	Total	Germany	Spain	UK	Italy	Poland	Total
PwC	27%	26%	26%	26%	18%	26%	23%	24%	21%	28%	11%	22%
Deloitte Touche	4%	22%	16%	21%	20%	14%	11%	47%	19%	26%	19%	20%
Ernst & Young	21%	11%	17%	21%	15%	18%	27%	13%	15%	28%	21%	19%
KPMG	29%	12%	22%	17%	20%	22%	27%	10%	20%	15%	16%	20%
Arthur Andersen	10%	28%	5%	13%	7%	9%						
BDO	9%	1%	7%	<1%	21%	7%	10%	5%	10%	3%	25%	10%
GT	1%	<1%	7%	1%	<1%	5%	1%	1%	15%	<1%	8%	9%

The table contains the distribution of specific global audit firms (plus Arthur Andersen) across countries before and after the IFRS adoption. The percentage values represent how many of the global six observations in a given period belong to a particular accounting firm. Distribution is provided for the sample of firm-years with available total assets. Pre IFRS period summarizes data from 1998 to 2004, IFRS period represents data from 2005 until 2010.

TABLE 4: Sample Characteristics
Panel A: Country and Industry Composition

Country:		%
	Germany	24.05
	Spain	4.80
	UK	57.43
	Italy	7.77
	Poland	5.94
Industry:		%
	Agriculture, forestry, and fishing	<1
	Construction	3
	Finance, insurance, and real estate	29
	Manufacturing	29
	Mining	5
	Public administration	<1
	Retail trade	4
	Services	20
	Utilities	7
	Wholesale trade	3

This table reports industry and country composition of the initial sample firms. The initial sample includes 44,116 firm-year observations (48,065 observations less 3,949 observations with missing audit firm data). Specifically, this sample includes firm-year observations for which total assets and audit firms' data are available in any of the years 1998-2010. Industry is based on two-digit SIC codes from Worldscope.

TABLE 4 (continued)
Panel B: Regression Variables in the Initial Sample

Variable	N	μ	σ	min	p5	p25	p50	p75	p95	max
Chg_{it}	38,136	0.09	0.28	0	0	0	0	0	1	1
Chg_STG_{it}	38,136	0.02	0.13	0	0	0	0	0	0	1
Chg_STS_{it}	38,136	0.02	0.15	0	0	0	0	0	0	1
Chg_GTS_{it}	38,136	0.01	0.12	0	0	0	0	0	0	1
Chg_GTG_{it}	38,136	0.03	0.18	0	0	0	0	0	0	1
$IFRS\_ADOPT_{it-1}$	40,100	0.07	0.25	0	0	0	0	0	1	1
$Loss_{it-1}$	41,296	0.34	0.48	0	0	0	0	1	1	1
TA_{it-1}	40,507	2,307.46	10,352.89	0.43	3.51	24.58	100.88	497.28	9,335.83	146,533.26
$\Delta SIZE_{it-1}$	38,571	0.23	0.80	-0.73	-0.37	-0.08	0.07	0.25	1.27	9.08
Net_Income_{it-1}	40,472	-0.04	0.25	-2.22	-0.47	-0.03	0.02	0.05	0.14	0.31
$Leverage_{it-1}$	40,827	0.19	0.20	0.00	0.00	0.01	0.13	0.31	0.58	0.97
$\Delta Sales_{it-1}$	36,976	0.23	0.85	-1.00	-0.46	-0.09	0.08	0.28	1.28	10.27
ΔC_Stock_{it-1}	37,590	0.09	0.31	-0.17	-0.03	0.00	0.00	0.02	0.52	3.50
$\Delta LTDebt_{it-1}$	38,801	0.41	2.40	-1.00	-0.99	-0.17	0.00	0.20	2.12	35.17
$\#Exch_i$	41,334	1.12	0.79	0.00	0.00	1.00	1.00	1.00	3.00	11.00
$RegQ_{it-1}$	41,334	1.55	0.32	0.61	0.77	1.46	1.68	1.79	1.88	1.88

TABLE 4 (continued)
Panel B (continued)

The sample for this table contains firm-year observations for which audit firm data were available in years 1999-2010. The sample includes 5,982 individual firms (41,334 firm-year observations). I exclude year 1998 for comparability with tables including sample characteristics for main regression sample, where year 1998 is excluded by construction. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Chg_xty_{it} are indicator variables equal to one if a firm replaces auditors: *STG* (small auditor to global six), *STS* (small auditor to small auditor), *GTS* (global six to small auditor) or *GTG* (global six to global six). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. TA_{it-1}=total assets (in millions USD). $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $RegQ_{it-1}$=continuous variable capturing ability of a country's government to implement and enforce regulations from Kaufmann et al. (2009). Values of continuous financial variables were truncated at 1% and 99%.

TABLE 4 (continued)
Panel C: Regression Variables for the Main Regression Sample

Variable	N	μ	σ	min	p5	p25	p50	p75	p95	max
Chg_{it}	31,948	0.08	0.27	0	0	0	0	0	1	1
Chg_STG_{it}	31,948	0.02	0.12	0	0	0	0	0	0	1
Chg_STS_{it}	31,948	0.02	0.14	0	0	0	0	0	0	1
Chg_GTS_{it}	31,948	0.01	0.11	0	0	0	0	0	0	1
Chg_GTG_{it}	31,948	0.03	0.18	0	0	0	0	0	0	1
$IFRS\_ADOPT_{it-1}$	31,948	0.07	0.26	0	0	0	0	0	1	1
$Loss_{it-1}$	31,948	0.30	0.46	0	0	0	0	1	1	1
TA_{it-1}	31,948	2,658.72	11,004.60	0.43	5.87	35.58	139.84	684.04	11,633.60	146,533.26
$\Delta SIZE_{it-1}$	31,948	0.15	0.57	-0.73	-0.35	-0.08	0.06	0.23	0.88	9.02
Net_Income_{it-1}	31,948	-0.02	0.21	-2.21	-0.37	-0.01	0.02	0.06	0.14	0.31
$Leverage_{it-1}$	31,948	0.20	0.19	0.00	0.00	0.02	0.15	0.32	0.57	0.97
$\Delta Sales_{it-1}$	31,948	0.21	0.79	-1.00	-0.43	-0.08	0.08	0.27	1.13	10.27
ΔC_Stock_{it-1}	31,948	0.07	0.27	-0.17	-0.03	0.00	0.00	0.01	0.42	3.50
$\Delta LTDebt_{it-1}$	31,948	0.42	2.41	-1.00	-0.97	-0.18	0.00	0.22	2.15	35.03
$\#Exch_i$	31,948	1.14	0.77	0.00	0.00	1.00	1.00	1.00	3.00	10.00
$RegQ_{it-1}$	31,948	1.54	0.32	0.61	0.77	1.46	1.68	1.79	1.88	1.88

TABLE 4 (continued)
Panel C (continued)

The table summarizes regression variables for the sample used to estimate model 1 and model 3. The sample includes 31,948 firm-year observations from 5,235 individual firms. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Chg_xty_{it} are indicator variables equal to one if a firm replaces auditors: *STG* (small auditor to global six), *STS* (small auditor to small auditor), *GTS* (global six to small auditor) or *GTG* (global six to global six). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. TA_{it-1}=total assets (in millions USD). $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $RegQ_{it-1}$=continuous variable capturing ability of a country's government to implement and enforce regulations from Kaufmann et al. (2009). Values of continuous financial variables were truncated at 1% and 99%.

TABLE 4 (continued)
Panel D: Regression Variables for the IFRS Adoption Timing Regressions

Variable	N	μ	σ	min	p5	p25	p50	p75	p95	max
Chg_{it}	22,663	0.08	0.27	0	0	0	0	0	1	1
Chg_STG_{it}	22,663	0.01	0.12	0	0	0	0	0	0	1
Chg_STS_{it}	22,663	0.02	0.13	0	0	0	0	0	0	1
Chg_GTS_{it}	22,663	0.01	0.11	0	0	0	0	0	0	1
Chg_GTG_{it}	22,663	0.03	0.18	0	0	0	0	0	0	1
$IFRS\_ADOPT_{it-1}$	22,663	0.09	0.28	0	0	0	0	0	1	1
$IFRS\_pre1_{it-1}$	22,663	0.09	0.28	0	0	0	0	0	1	1
$IFRS\_pre2_{it-1}$	22,663	0.09	0.28	0	0	0	0	0	1	1
$Loss_{it-1}$	22,663	0.28	0.45	0	0	0	0	1	1	1
TA_{it-1}	22,663	2,778.69	11,284.78	0.43	6.28	38.27	150.22	747.07	12,427.82	146,533.26
$\Delta SIZE_{it-1}$	22,663	0.19	0.59	-0.73	-0.32	-0.06	0.09	0.25	0.95	9.02
Net_Income_{it-1}	22,663	-0.02	0.20	-2.21	-0.34	-0.01	0.02	0.06	0.14	0.31
$Leverage_{it-1}$	22,663	0.19	0.19	0.00	0.00	0.02	0.15	0.31	0.56	0.96
$\Delta Sales_{it-1}$	22,663	0.24	0.81	-1.00	-0.38	-0.05	0.11	0.30	1.19	10.27
ΔC_Stock_{it-1}	22,663	0.07	0.26	-0.17	-0.03	0.00	0.00	0.01	0.40	3.50
$\Delta LTDebt_{it-1}$	22,663	0.46	2.45	-1.00	-0.96	-0.15	0.00	0.27	2.34	35.03
$\#Exch_i$	22,663	1.21	0.78	0.00	0.00	1.00	1.00	1.00	3.00	10.00
$RegQ_{it-1}$	22,663	1.54	0.32	0.61	0.79	1.45	1.68	1.77	1.88	1.88

TABLE 4 (continued)
Panel D (continued)

The table summarizes regression variables for the sample used to estimate model 2 and model 4. The sample includes 22,663 firm-year observations from 4,245 individual firms. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Chg_xty_{it} are indicator variables equal to one if a firm replaces auditors: *STG* (small auditor to global six), *STS* (small auditor to small auditor), *GTS* (global six to small auditor) or *GTG* (global six to global six). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it did not use IFRS in the report for year *t-2*, zero otherwise. $IFRS\_pre1_{it-1}$=an indicator variable equal one for firm *i* in year *t* if $IFRS\_ADOPT_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. $IFRS\_pre2_{it-1}$=an indicator variable equal one for firm *i* in year *t* if $IFRS\_pre1_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. *IFRS_pre* variables by construction have the same distribution as $IFRS\_ADOPT_{it-1}$. TA_{it-1}=total assets (in millions USD). $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $RegQ_{it-1}$=continuous variable capturing ability of a country's government to implement and enforce regulations from Kaufmann et al. (2009). Values of continuous financial variables were truncated at 1% and 99%.

TABLE 4 (continued)
Panel E: Correlation Coefficients the Main Regression Sample

	Chg_{it}	Chg_STG_{it}	Chg_STS_{it}	Chg_GTS_{it}	Chg_GTG_{it}	$IFRS\_AD_{it-1}$	$Loss_{it-1}$	TA_{it-1}	$\Delta SIZE_{it-1}$	Net_Inc_{it-1}	$Leverage_{it-1}$	$\Delta Sales_{it-1}$	ΔC_Stock_{it-1}	$\Delta LTDebt_{it-1}$	$\#Exch_i$	$RegQ_{it-1}$
Chg_{it}	1							**-0.09**	-0.01	**-0.05**	-0.01	**0.01**	**0.02**	-0.01	**0.02**	**-0.07**
Chg_STG_{it}	**1.00**	1						**-0.04**	**0.02**	**-0.01**	0.00	**0.02**	**0.03**	0.00	**0.01**	**-0.02**
Chg_STS_{it}	**1.00**	**-1.00**	1					**-0.13**	0.00	**-0.03**	**-0.02**	0.01	**0.01**	-0.01	-0.01	**-0.04**
Chg_GTS_{it}	**1.00**	**-1.00**	**-1.00**	1				**-0.08**	**-0.03**	**-0.04**	**-0.01**	**-0.02**	0.00	-0.01	0.01	**-0.02**
Chg_GTG_{it}	**1.00**	**-1.00**	**-1.00**	**-1.00**	1			**0.05**	**-0.01**	**-0.02**	**0.01**	0.00	0.00	-0.01	**0.01**	**-0.05**
$IFRS\_ADOPT_{it-1}$	0.03	**0.07**	-0.04	0.01	0.04	1		**0.02**	0.01	**0.04**	**0.01**	**-0.03**	**0.05**	0.00	**0.04**	**0.03**
$Loss_{it-1}$	**0.13**	0.03	**0.17**	**0.21**	**0.04**	0.00	1	**-0.31**	**-0.29**	**-0.79**	**0.01**	**-0.15**	**0.12**	**-0.06**	-0.01	**0.05**
TA_{it-1}	**-0.02**	**-0.02**	**-0.03**	**-0.03**	**0.03**	0.01	**-0.10**	1	**0.12**	**0.20**	**0.34**	**0.03**	**-0.06**	**0.12**	**0.12**	**-0.17**
$\Delta SIZE_{it-1}$	**0.01**	**0.04**	0.01	-0.01	-0.01	**0.02**	**-0.10**	0.00	1	**0.31**	**0.02**	**0.52**	**0.21**	**0.31**	**0.01**	0.01
Net_Income_{it-1}	**-0.05**	**-0.02**	**-0.05**	**-0.04**	0.00	**0.01**	**-0.57**	**0.06**	**0.14**	1	**-0.09**	**0.18**	**-0.09**	**0.01**	0.01	0.00
$Leverage_{it-1}$	-0.01	0.00	**-0.02**	-0.01	0.01	0.01	**0.05**	**0.13**	**-0.02**	**-0.02**	1	0.01	**0.03**	**0.16**	**0.04**	**-0.16**
$\Delta Sales_{it-1}$	**0.02**	**0.03**	**0.01**	0.00	0.00	-0.01	0.01	**-0.03**	**0.33**	**-0.02**	**-0.02**	1	**0.17**	**0.18**	0.01	**0.03**
ΔC_Stock_{it-1}	**0.04**	**0.04**	**0.03**	0.01	0.01	**0.02**	**0.15**	**-0.02**	**0.31**	**-0.17**	0.00	**0.15**	1	**0.05**	**-0.03**	**0.13**
$\Delta LTDebt_{it-1}$	**0.02**	**0.02**	0.01	0.01	0.00	0.01	**-0.02**	0.00	**0.16**	**0.01**	**0.07**	**0.07**	**0.05**	1	**0.02**	**-0.04**
$\#Exch_i$	0.01	0.01	**-0.01**	0.01	**0.02**	**0.03**	**-0.03**	**0.27**	**-0.01**	**0.03**	**0.04**	**-0.02**	**-0.02**	0.00	1	**-0.20**
$RegQ_{it-1}$	**-0.10**	**-0.03**	**-0.07**	**-0.02**	**-0.06**	**-0.01**	**0.06**	**-0.10**	0.00	**-0.07**	**-0.13**	**0.04**	**0.03**	**-0.04**	**-0.13**	1

TABLE 4 (continued)
Panel E (continued)

The table contains correlation coefficients for the sample used to estimate model 1. The sample includes 31,948 firm-year observations from 5,235 individual firms. The upper-left part of the table contains values of tetrachoric correlation coefficients for dichotomous dependent and independent variables. The remainder of the table contains values of Pearson (lower diagonal) and Spearman (upper diagonal) correlations. Bolded correlation coefficients are significant at 5 percent level. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Chg_xty_{it} are indicator variables equal to one if a firm replaces auditors: *STG* (small auditor to global six), *STS* (small auditor to small auditor), *GTS* (global six to small auditor) or *GTG* (global six to global six). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. TA_{it-1}=total assets (in millions USD). $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $RegQ_{it-1}$=continuous variable capturing ability of a country's government to implement and enforce regulations from Kaufmann et al. (2009). Values of continuous financial variables were truncated at 1% and 99%.

TABLE 5: Auditor Replacements and IFRS Adoption
Panel A: Auditor Replacements Following IFRS Adoption

Model 1: $Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \sum_{k=2}^{10} \beta_k Controls_{it-1} + \sum_{c=11}^{14} \gamma_c Country_j + \varepsilon_{it}$,
where $Controls_{it-1} = \{SIZE_{it-1}, \Delta SIZE_{it-1}, Net\_Income_{it-1}, Leverage_{it-1}, \Delta Sales_{it-1}, Loss_{it-1}, \Delta C\_Stock_{it-1}, \Delta LTDebt_{it-1}, \#Exch_i\}$

	Binary logit model		Multinomial logit model							
	Chg_{it}		*STG*		*STS*		*GTS*		*GTG*	
VARIABLES	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
$IFRS\_ADOPT_{it-1}$	0.12	(0.08)	0.35**	(0.16)	-0.16	(0.17)	0.12	(0.20)	0.16	(0.12)
$SIZE_{it-1}$	-0.15***	(0.01)	-0.17***	(0.02)	-0.57***	(0.02)	-0.40***	(0.03)	0.10***	(0.02)
$\Delta SIZE_{it-1}$	0.04	(0.03)	0.17***	(0.05)	0.05	(0.05)	-0.06	(0.11)	-0.09	(0.07)
Net_Income_{it-1}	-0.08	(0.11)	-0.10	(0.23)	0.23	(0.18)	0.37	(0.23)	-0.02	(0.19)
$Leverage_{it-1}$	0.11	(0.11)	0.36	(0.23)	0.70***	(0.21)	0.44	(0.27)	-0.48***	(0.18)
$\Delta Sales_{it-1}$	0.05**	(0.02)	0.13***	(0.04)	0.03	(0.04)	0.03	(0.06)	0.03	(0.04)
$Loss_{it-1}$	0.26***	(0.05)	0.18	(0.12)	0.14	(0.10)	0.58***	(0.13)	0.30***	(0.08)
ΔC_Stock_{it-1}	0.25***	(0.06)	0.43***	(0.11)	0.19*	(0.12)	0.09	(0.15)	0.22*	(0.11)
$\Delta LTDebt_{it-1}$	0.01*	(0.01)	0.03**	(0.01)	0.02	(0.01)	0.03**	(0.02)	-0.00	(0.01)
$\#Exch_i$	0.06*	(0.03)	-0.00	(0.07)	0.03	(0.08)	0.16*	(0.08)	0.01	(0.04)
Constant	-1.77***	(0.08)	-3.06***	(0.16)	-1.65***	(0.17)	-2.81***	(0.18)	-3.87***	(0.12)
Country fixed effects	Yes		Yes							
Observations	31,948		31,948							
Pseudo R-squared	0.0437		0.0742							

TABLE 5 (continued)
Panel A (continued)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. The dependent variable for the logistic regression for which coefficients and standard errors are reported in the first two columns is Chg_{it}. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Results reported in the following columns are from a multinomial logistic regression where the dependent variable is Chg_xty_{it}. Chg_xty_{it} =an index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $Country_i$=country fixed effects. Values of financial variables were truncated at 1% and 99%.

TABLE 5 (continued)
Panel B: Auditor Replacements before IFRS Adoption

Model 2: $Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_pre1_{it-1} + \beta_3 IFRS\_pre2_{it-1} + \sum_{k=4}^{12} \beta_k Controls_{it-1} + \sum_{c=13}^{16} \gamma_c Country_j + \varepsilon_{it}$,
where $Controls_{it-1} = \{SIZE_{it-1}, \Delta SIZE_{it-1}, Net\_Income_{it-1}, Leverage_{it-1}, \Delta Sales_{it-1}, Loss_{it-1}, \Delta C\_Stock_{it-1}, \Delta LTDebt_{it-1}, \#Exch_i\}$

	Binary logit model		Multinomial logit model							
	Chg_{it}		*STG*		*STS*		*GTS*		*GTG*	
VARIABLES	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
$IFRS\_ADOPT_{it-1}$	0.13	(0.09)	0.46***	(0.17)	-0.13	(0.21)	0.26	(0.21)	0.06	(0.13)
$IFRS\_pre1_{it-1}$	0.15*	(0.08)	-0.08	(0.21)	0.22	(0.17)	0.41**	(0.19)	0.11	(0.12)
$IFRS\_pre2_{it-1}$	0.03	(0.09)	0.17	(0.19)	-0.01	(0.19)	0.32	(0.20)	-0.10	(0.14)
$SIZE_{it-1}$	-0.14***	(0.01)	-0.15***	(0.03)	-0.55***	(0.03)	-0.45***	(0.03)	0.09***	(0.02)
$\Delta SIZE_{it-1}$	0.00	(0.04)	0.18***	(0.06)	0.04	(0.06)	-0.09	(0.12)	-0.19**	(0.09)
Net_Income_{it-1}	0.11	(0.14)	0.05	(0.31)	0.58**	(0.29)	0.50*	(0.27)	0.10	(0.20)
$Leverage_{it-1}$	-0.02	(0.14)	0.43	(0.27)	0.53*	(0.28)	-0.02	(0.34)	-0.51**	(0.21)
$\Delta Sales_{it-1}$	0.07***	(0.03)	0.15***	(0.04)	0.07	(0.05)	0.02	(0.06)	0.03	(0.05)
$Loss_{it-1}$	0.35***	(0.06)	0.24*	(0.14)	0.25*	(0.14)	0.50***	(0.15)	0.41***	(0.10)
ΔC_Stock_{it-1}	0.33***	(0.08)	0.41***	(0.14)	0.32**	(0.14)	0.30*	(0.16)	0.31**	(0.13)
$\Delta LTDebt_{it-1}$	0.01	(0.01)	0.03**	(0.02)	0.00	(0.02)	0.03	(0.02)	0.01	(0.01)
$\#Exch_i$	0.05	(0.04)	-0.04	(0.08)	-0.05	(0.11)	0.22**	(0.10)	0.01	(0.04)
Constant	-1.80***	(0.10)	-3.13***	(0.20)	-1.67***	(0.22)	-2.56***	(0.21)	-3.80***	(0.14)
Country fixed effects	Yes		Yes							
Observations	22,663		22,663							
Pseudo R-squared	0.0419		0.0726							

TABLE 5 (continued)
Panel B (continued)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. The dependent variable for the logistic regression for which coefficients and standard errors are reported in the first two columns is Chg_{it}. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Results reported in the following columns are from a multinomial logistic regression where the dependent variable is Chg_xty_{it}. Chg_xty_{it} =an index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. $IFRS\_pre1_{it-1}$=an indicator variable equal one for firm *i* in year *t* if $IFRS\_ADOPT_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. $IFRS\_pre2_{it-1}$=an indicator variable equal one for firm *i* in year *t* if $IFRS\_pre1_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $Country_i$=country fixed effects. Values of financial variables were truncated at 1% and 99%.

TABLE 6: Regulatory Regime and Auditor Replacements around IFRS Adoption
Panel A: Regulatory Regime and Auditor Switching following IFRS Adoption

Model 3: $Chg_{it}\ (Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_ADOPT_{it-1} * RegQ_{it-1} + \beta_3 RegQ_{it-1} + \sum_{k=4}^{12} \beta_k Controls_{it-1} + \sum_{c=13}^{16} \gamma_c Country_j + \varepsilon_{it}$,
where $Controls_{it-1} = \{SIZE_{it-1}, \Delta SIZE_{it-1}, Net\_Income_{it-1}, Leverage_{it-1}, \Delta Sales_{it-1}, Loss_{it-1}, \Delta C\_Stock_{it-1}, \Delta LTDebt_{it-1}, \#Exch_i\}$

	Binary logit model		Multinomial logit model							
	Chg_{it}		STG		STS		GTS		GTG	
Variables	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
$IFRS\_ADOPT_{it-1}$	-0.15	(0.29)	-0.86	(0.62)	-0.39	(0.56)	-0.16	(0.68)	0.24	(0.45)
$IFRS\_ADOPT_{it-1} * RegQ_{it-1}$	0.18	(0.19)	0.78**	(0.39)	0.15	(0.38)	0.21	(0.45)	-0.05	(0.30)
$RegQ_{it-1}$	0.54	(0.33)	2.33***	(0.77)	0.75	(0.64)	-2.79***	(0.78)	0.94*	(0.50)
$SIZE_{it-1}$	-0.15***	(0.01)	-0.17***	(0.02)	-0.57***	(0.02)	-0.40***	(0.03)	0.10***	(0.02)
$\Delta SIZE_{it-1}$	0.04	(0.03)	0.17***	(0.05)	0.05	(0.05)	-0.06	(0.11)	-0.09	(0.07)
Net_Income_{it-1}	-0.07	(0.11)	-0.08	(0.24)	0.23	(0.18)	0.36	(0.23)	-0.01	(0.19)
$Leverage_{it-1}$	0.12	(0.11)	0.37	(0.23)	0.70***	(0.21)	0.44	(0.27)	-0.47***	(0.18)
$\Delta Sales_{it-1}$	0.05**	(0.02)	0.12***	(0.04)	0.03	(0.04)	0.03	(0.06)	0.03	(0.04)
$Loss_{it-1}$	0.26***	(0.05)	0.17	(0.12)	0.14	(0.10)	0.58***	(0.13)	0.30***	(0.08)
ΔC_Stock_{it-1}	0.24***	(0.06)	0.43***	(0.11)	0.19	(0.12)	0.09	(0.15)	0.22*	(0.11)
$\Delta LTDebt_{it-1}$	0.01*	(0.01)	0.03**	(0.01)	0.02	(0.01)	0.03**	(0.02)	-0.00	(0.01)
$\#Exch_i$	0.06*	(0.03)	-0.01	(0.07)	0.02	(0.08)	0.17**	(0.08)	0.01	(0.04)
Constant	-2.57***	(0.50)	-6.50***	(1.16)	-2.76***	(0.96)	1.31	(1.17)	-5.28***	(0.76)
Country fixed effects	Yes		Yes							
Observations	31,948		31,948							
Pseudo R-squared	0.0440		0.0756							

TABLE 6 (continued)
Panel A (continued)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. The dependent variable for the logistic regression for which coefficients and standard errors are reported in the first two columns is Chg_{it}. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Results reported in the following columns are from a multinomial logistic regression where the dependent variable is Chg_xty_{it}. Chg_xty_{it} =an index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. $RegQ_{it-1}$=continuous variable capturing ability of a country's government to implement and enforce regulations from Kaufmann et al. (2009). $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $Country_i$=country fixed effects. Values of financial variables were truncated at 1% and 99%.

TABLE 6 (continued)

Panel B: Regulatory Regime and Auditor Switching before IFRS Adoption

Model 4: $Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + [\beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_ADOPT_{it-1} * RegQ_{it-1}] + [\beta_3 IFRS\_pre1_{it-1} + \beta_4 IFRS\_pre1_{it-1} * RegQ_{it-1}] + [\beta_5 IFRS\_pre2_{it-1} + \beta_6 IFRS\_pre2_{it-1} * RegQ_{it-1}] + \beta_7 RegQ_{it-1} + \sum_{k=8}^{16} \beta_k Controls_{it-1} + \sum_{c=17}^{20} \gamma_c Country_j + \varepsilon_{it}$, where $Controls_{it-1} = \{SIZE_{it-1}, \Delta SIZE_{it-1}, Net\_Income_{it-1}, Leverage_{it-1}, \Delta Sales_{it-1}, Loss_{it-1}, \Delta C\_Stock_{it-1}, \Delta LTDebt_{it-1}, \#Exch_i\}$

	Binary logit model		Multinomial logit model							
	Chg_{it}		STG		STS		GTS		GTG	
VARIABLES	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
$IFRS\_ADOPT_{it-1}$	0.06	(0.33)	-0.82	(0.72)	-0.62	(0.71)	0.57	(0.75)	0.64	(0.48)
$IFRS\_ADOPT_{it-1} * RegQ_{it-1}$	0.05	(0.22)	0.83*	(0.45)	0.34	(0.48)	-0.20	(0.49)	-0.39	(0.33)
$IFRS\_pre1_{it-1}$	0.59*	(0.31)	-0.99	(0.93)	0.80	(0.54)	0.41	(0.85)	0.91**	(0.44)
$IFRS\_pre1_{it-1} * RegQ_{it-1}$	-0.30	(0.21)	0.59	(0.58)	-0.43	(0.38)	0.01	(0.55)	-0.53*	(0.31)
$IFRS\_pre2_{it-1}$	0.69**	(0.34)	0.15	(0.94)	0.33	(0.59)	1.62**	(0.74)	0.90*	(0.51)
$IFRS\_pre2_{it-1} * RegQ_{it-1}$	-0.45**	(0.23)	0.03	(0.60)	-0.22	(0.40)	-0.93*	(0.50)	-0.68*	(0.36)
$RegQ_{it-1}$	0.68*	(0.37)	1.96**	(0.86)	0.44	(0.79)	-2.27***	(0.86)	1.52***	(0.56)
$SIZE_{it-1}$	-0.14***	(0.01)	-0.16***	(0.03)	-0.55***	(0.03)	-0.45***	(0.03)	0.09***	(0.02)
$\Delta SIZE_{it-1}$	0.00	(0.04)	0.18***	(0.06)	0.04	(0.06)	-0.08	(0.12)	-0.19**	(0.09)
Net_Income_{it-1}	0.12	(0.14)	0.07	(0.31)	0.58**	(0.29)	0.49*	(0.27)	0.11	(0.20)
$Leverage_{it-1}$	-0.01	(0.14)	0.44	(0.27)	0.53*	(0.28)	-0.02	(0.34)	-0.49**	(0.21)
$\Delta Sales_{it-1}$	0.07***	(0.03)	0.15***	(0.04)	0.07	(0.05)	0.03	(0.06)	0.03	(0.05)
$Loss_{it-1}$	0.35***	(0.06)	0.24*	(0.14)	0.25*	(0.14)	0.50***	(0.15)	0.42***	(0.10)
ΔC_Stock_{it-1}	0.33***	(0.08)	0.40***	(0.14)	0.32**	(0.14)	0.30*	(0.16)	0.31**	(0.13)
$\Delta LTDebt_{it-1}$	0.01	(0.01)	0.04**	(0.02)	0.00	(0.02)	0.03	(0.02)	0.01	(0.01)
$\#Exch_i$	0.05	(0.04)	-0.05	(0.08)	-0.05	(0.11)	0.23**	(0.10)	0.01	(0.04)
Constant	-2.82***	(0.57)	-6.02***	(1.30)	-2.33*	(1.20)	0.81	(1.30)	-6.08***	(0.85)
Country fixed effects	Yes		Yes							
Observations	22,663		22,663							
Pseudo R-squared	0.0425		0.0748							

TABLE 6 (continued)
Panel B (continued)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. The dependent variable for the logistic regression for which coefficients and standard errors are reported in the first two columns is Chg_{it}. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Results reported in the following columns are from a multinomial logistic regression where the dependent variable is Chg_xty_{it}. Chg_xty_{it} =an index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. $IFRS\_pre1_{it-1}$=an indicator variable equal one for firm *i* in year *t* if $IFRS\_ADOPT_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. $IFRS\_pre2_{it-1}$=an indicator variable equal one for firm *i* in year *t* if $IFRS\_pre1_{it-1}$ for firm *i* equals to one in year *t+1*, zero otherwise. $RegQ_{it-1}$=continuous variable capturing ability of a country's government to implement and enforce regulations from Kaufmann et al. (2009). $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $Country_i$=country fixed effects. Values of financial variables were truncated at 1% and 99%.

TABLE 7: Regression Analysis with Audit Fee and Audit Opinion Variables

Model: $Chg_{it}\,(Chg\_xty_{it}) = \alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \sum_{k=2}^{10} \beta_k Controls_{it-1} + \beta_{11} Aud\_Fees_{it-1} + \beta_{12} \Delta Aud\_Fees_{it-1} + \beta_{13} Qualified_{it-1} + \sum_{c=14}^{17} \gamma_c Country_j + \varepsilon_{it}$, where $Controls_{it-1} = \{SIZE_{it-1}, \Delta SIZE_{it-1}, Net\_Income_{it-1}, Leverage_{it-1}, \Delta Sales_{it-1}, Loss_{it-1}, \Delta C\_Stock_{it-1}, \Delta LTDebt_{it-1}, \#Exch_i\}$

	Binary logit model		Multinomial logit model							
	Chg_{it}		STG		STS		GTS		GTG	
Variables	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
$IFRS\_ADOPT_{it-1}$	0.17	(0.11)	0.47**	(0.22)	0.01	(0.26)	0.03	(0.32)	0.26	(0.16)
$SIZE_{it-1}$	-0.19***	(0.02)	-0.29***	(0.05)	-0.47***	(0.04)	-0.34***	(0.05)	0.02	(0.03)
$\Delta SIZE_{it-1}$	0.06	(0.04)	0.07	(0.06)	-0.03	(0.09)	0.14	(0.11)	0.04	(0.07)
Net_Income_{it-1}	-0.00	(0.14)	0.05	(0.28)	0.05	(0.25)	0.46	(0.31)	0.00	(0.23)
$Leverage_{it-1}$	0.29*	(0.16)	0.07	(0.36)	1.11***	(0.29)	0.47	(0.36)	-0.29	(0.25)
$\Delta Sales_{it-1}$	0.08***	(0.03)	0.13***	(0.05)	0.00	(0.06)	0.05	(0.06)	0.12***	(0.04)
$Loss_{it-1}$	0.16**	(0.07)	0.11	(0.17)	-0.21	(0.16)	0.47***	(0.18)	0.26**	(0.12)
ΔC_Stock_{it-1}	0.32***	(0.08)	0.62***	(0.13)	0.16	(0.17)	0.17	(0.21)	0.27*	(0.14)
$\Delta LTDebt_{it-1}$	0.02*	(0.01)	0.06***	(0.02)	0.02	(0.02)	0.05***	(0.02)	-0.02	(0.02)
$\#Exch_i$	0.09	(0.06)	0.02	(0.13)	0.16	(0.16)	0.11	(0.15)	-0.01	(0.08)
Aud_Fees_{it}	-0.04	(0.03)	0.04	(0.07)	-0.32***	(0.06)	-0.33***	(0.07)	0.05	(0.04)
ΔAud_Fees_{it}	-0.00	(0.05)	0.27***	(0.06)	0.11	(0.08)	-0.80**	(0.37)	-0.15*	(0.09)
$Qualified_{it}$	0.72***	(0.18)	-0.07	(0.53)	1.43***	(0.24)	0.21	(0.47)	0.49	(0.32)
Constant	-1.67***	(0.20)	-2.35***	(0.46)	-3.06***	(0.50)	-3.47***	(0.49)	-3.17***	(0.27)
Country fixed effects	Yes		Yes							
Observations	19,960		19,960							
Pseudo R-squared	0.0361		0.0703							

TABLE 7 (continued)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. The dependent variable for the logistic regression for which coefficients and standard errors are reported in the first two columns is Chg_{it}. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Results reported in the following columns are from a multinomial logistic regression where the dependent variable is Chg_xty_{it}. Chg_xty_{it} =an index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. Aud_Fees_{it-1}=natural logarithm of audit fees. ΔAud_Fees_{it-1}=change in audit fees from year *t-2* to year *t-1* divided by audit fees in year *t-2*. $Qualified_{it-1}$=an indicator variable equal to one if firm *i* received a qualified audit opinion for year *t-2* financial report. $Country_i$= country fixed effects. Values of financial variables were truncated at 1% and 99%.

TABLE 8: Auditor-Client Mismatch and Auditor Switching around IFRS Adoption

Model: Chg_{it} (Chg_xty_{it}) = $\alpha_0 + \beta_1 IFRS\_ADOPT_{it-1} + \beta_2 IFRS\_ADOPT_{it-1} * Mism_{it-11} + \beta_3 Mism_{it-1} + \sum_{k=4}^{12} \beta_k Controls_{it-1} + \sum_{c=13}^{16} \gamma_c Country_j + \varepsilon_{it}$,
where $Controls_{it-1}$ = {$SIZE_{it-1}$, $\Delta SIZE_{it-1}$, Net_Income_{it-1}, $Leverage_{it-1}$, $\Delta Sales_{it-1}$, $Loss_{it-1}$, ΔC_Stock_{it-1}, $\Delta LTDebt_{it-1}$, $\#Exch_i$ }

	Binary logit model		Multinomial logit model							
	Chg_{it}		STG		STS		GTS		GTG	
Variables	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
$IFRS\_ADOPT_{it-1}$	0.21*	(0.12)	0.86***	(0.28)	-0.01	(0.27)	0.30	(0.31)	0.11	(0.18)
$IFRS\_ADOPT_{it-1} * Mism_{it-1}$	-0.14	(0.16)	-0.64*	(0.34)	-0.25	(0.35)	-0.27	(0.40)	0.06	(0.24)
$Mism_{it-1}$	0.19***	(0.05)	0.97***	(0.13)	0.00	(0.10)	0.22*	(0.13)	-0.23***	(0.07)
$SIZE_{it-1}$	-0.15***	(0.01)	-0.15***	(0.02)	-0.57***	(0.03)	-0.39***	(0.03)	0.11***	(0.02)
$\Delta SIZE_{it-1}$	0.03	(0.03)	0.15***	(0.05)	0.05	(0.05)	-0.07	(0.11)	-0.08	(0.07)
Net_Income_{it-1}	-0.07	(0.11)	-0.07	(0.24)	0.23	(0.18)	0.37	(0.23)	-0.07	(0.19)
$Leverage_{it-1}$	0.10	(0.11)	0.31	(0.23)	0.68***	(0.21)	0.42	(0.27)	-0.46**	(0.18)
$\Delta Sales_{it-1}$	0.05**	(0.02)	0.12***	(0.04)	0.03	(0.04)	0.02	(0.06)	0.04	(0.04)
$Loss_{it-1}$	0.27***	(0.05)	0.19	(0.12)	0.15	(0.10)	0.57***	(0.13)	0.30***	(0.08)
ΔC_Stock_{it-1}	0.25***	(0.06)	0.45***	(0.11)	0.19	(0.12)	0.11	(0.15)	0.22*	(0.12)
$\Delta LTDebt_{it-1}$	0.01*	(0.01)	0.03**	(0.01)	0.02	(0.01)	0.03**	(0.02)	-0.00	(0.01)
$\#Exch_i$	0.06**	(0.03)	0.02	(0.06)	0.02	(0.08)	0.18**	(0.08)	0.00	(0.04)
Constant	-1.93***	(0.09)	-3.96***	(0.21)	-1.63***	(0.21)	-3.03***	(0.21)	-3.75***	(0.13)
Country fixed effects	Yes		Yes							
Observations	31,787		31,787							
Pseudo R-squared	0.0446		0.0777							

TABLE 8 (continued)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. The dependent variable for the logistic regression for which coefficients and standard errors are reported in the first two columns is Chg_{it}. Chg_{it}=an indicator variable equal to one if in year *t* firm *i* used a different auditor to examine its financial statements (i.e., the statements for year *t-1*) than in year *t-1* (i.e., the statements for year *t-2*), zero otherwise. Results reported in the following columns are from a multinomial logistic regression where the dependent variable is Chg_xty_{it}. Chg_xty_{it} =an index variable with a base condition of no auditor change and separate values for auditor change types: *STG* (small auditor to a global auditor), *STS* (small auditor to a small auditor), *GTS* (global auditor to a small auditor), and *GTG* (global auditor to a global auditor). $IFRS\_ADOPT_{it-1}$=an indicator variable equal one if firm *i* used IFRS in a financial report for year *t-1*, and it used non-IFRS accounting standards in the report for year *t-2*, zero otherwise. $Mism_{it-1}$=an indicator variable equal one if a client firm was mismatched with the type of audit firm (small or global) that it was using in year *t*-1, zero otherwise. $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. $\#Exch_i$=number of exchanges on which firm *i* is listed. $Country_i$= country fixed effects. Values of financial variables were truncated at 1% and 99%.

TABLE 9: Summary Characteristics of Auditor Switching Firms
Panel A: Firms Switching Auditors

	Auditor Switchers			*Non-Switchers*			*Switchers* vs. *Non-Switchers*	
Variable	μ	σ	med	μ	σ	med	IFRS	All
$SIZE_{it-1}$	4.66	2.00	4.46	5.36	2.24	5.09	***	***
$\Delta SIZE_{it-1}$	0.32	0.86	0.10	0.18	0.66	0.06	***	***
Net_Income_{it-1}	-0.02	0.20	0.02	-0.01	0.21	0.03	-	***
$Leverage_{it-1}$	0.19	0.19	0.15	0.20	0.19	0.16	-	-
$\Delta Sales_{it-1}$	0.24	0.84	0.06	0.18	0.80	0.03	-	***
$Loss_{it-1}$	0.33	0.47	0.00	0.25	0.43	0.00	**	***
ΔC_Stock_{it-1}	0.14	0.36	0.00	0.09	0.30	0.00	**	***
$\Delta LTDebt_{it-1}$	0.86	3.26	0.00	0.46	2.53	0.00	**	***
Vol_{it-1}	0.30	0.69	0.14	0.38	2.42	0.18	-	-
EPS_ests_{it-1}	3.26	4.33	2.00	4.79	6.00	2.00	***	***
REC_ests_{it-1}	3.69	5.37	1.00	5.47	7.04	2.00	***	***
For_assets_{it-1}	22.93	29.78	8.60	23.45	28.17	11.45	-	**

***, **, *, - Indicate statistical significance at the 10 percent, 5 percent, 1 percent levels, and lack of significance, respectively, using two-tailed tests. Table 10 panel A provides summary statistics for IFRS adoption year for the samples of (1) *Auditor Switchers*, i.e., client firms which have switched audit firms when they adopted IFRS, n=203, and (2) *Non-Switchers*, i.e., companies which have not replaced auditors when they adopted IFRS, n=2,087. The samples are selected from within truncated (at 1% and 99%) firm-year observations that were used in the primary regression analyses. Column titled "IFRS" reports significance levels of t-tests for difference in means between *Auditor Switchers* and *Non-Switchers*, as defined above. Column titled "All" reports significance levels of t-tests for difference in means between *Auditor Switchers* and *Non-Switchers* for all firm-year observations, including firms not adopting IFRS during the sample period. $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. Vol_{it-1}=average daily trading volume over 52 weeks ending with fiscal year end in year *t-1* divided by the number of shares outstanding at the end of year *t-1* and multiplied by 100%, available for 1952 non-switchers and for 192 switchers in the IFRS adoption year. EPS_ests_{it-1}=number of analysts' EPS estimates as of the fiscal year end in year *t-1*, available for 1,390 non-switchers and for 112 switchers. REC_ests_{it-1}=number of analysts' recommendations as of the fiscal year end in year *t-1*, available for 1,586 non-switchers and for 136 switchers. For_assets_{it-1}=foreign assets as a percentage of domestics assets, available for 1145 non-switchers and 84 switchers.

TABLE 9 (continued)
Panel B: Firms Switching from Small Audit Firms to Global Audit Firms

	STG Switchers			*Small Audit Firms*			*STG* vs. *Small Audit Firms*	
Variable	μ	σ	med	μ	σ	med	IFRS	All
$SIZE_{it-1}$	4.49	1.73	4.46	3.72	1.55	3.60	***/***	***/***
$\Delta SIZE_{it-1}$	0.52	1.27	0.12	0.27	0.76	0.09	** / **	***/***
Net_Income_{it-1}	-0.04	0.29	0.03	-0.04	0.22	0.02	- / -	- / -
$Leverage_{it-1}$	0.19	0.17	0.16	0.18	0.19	0.13	-/ -	- / *
$\Delta Sales_{it-1}$	0.49	1.40	0.13	0.26	0.90	0.08	- / *	***/***
$Loss_{it-1}$	0.31	0.47	0.00	0.37	0.48	0.00	- / -	- / -
ΔC_Stock_{it-1}	0.19	0.55	0.00	0.14	0.37	0.00	- / -	***/***
$\Delta LTDebt_{it-1}$	1.18	2.91	0.09	0.55	2.78	0.00	- / *	***/***
Vol_{it-1}	0.37	1.16	0.13	0.26	0.82	0.12	- / -	** / **
EPS_ests_{it-1}	2.69	2.83	2.00	1.89	2.68	1.00	- / *	** / **
REC_ests_{it-1}	2.76	3.67	1.00	1.91	3.13	1.00	- / *	** / **
For_assets_{it-1}	25.62	31.28	15.23	15.58	27.27	0.13	- / *	- / -

, **, *, - (/, /**, /*/-) Indicate statistical significance at the 10 percent, 5 percent, 1 percent levels, and lack of significance, respectively, using two-tailed tests (using one-tailed tests). Table reports summary statistics for IFRS adoption year for the samples of (1) *STG Switchers*, i.e., companies switching from small audit firms to global audit firms when they adopt IFRS, n=48, and (2) *Small Audit Firms*, i.e., firms which have used a small audit firm in the year prior to IFRS adoption and are using a small audit firm in the IFRS adoption year (including replacements from a small audit firm to another small audit firm), n=570. The samples are selected from within observations used in the primary regression analyses. Column titled "IFRS" reports results of t-tests for difference in means between *STG Switchers* and *Small Audit Firms* in the IFRS adoption year. Following "/" sign, the table reports significance levels for one-sided tests for switchers' data characteristics being greater than for non-switchers if they differ from the main t-test's results. Column titled "All" reports results of t-tests for difference in means between *STG Switchers* and *Small Audit Firms* for all firm-year observations, including firms not adopting IFRS during my sample period. $SIZE_{it-1}$=natural logarithm of total assets. $\Delta SIZE_{it-1}$=change in total assets from year *t-2* to year *t-1* scaled by total assets in year *t-2*. Net_Income_{it-1}=net income scaled by total assets. $Leverage_{it-1}$=total debt divided by total assets. $\Delta Sales_{it-1}$=change in sales from year *t-2* to year *t-1* scaled by sales in year *t-2*. $Loss_{it-1}$=an indicator variable equal one for firms with negative income in year *t-1*, zero otherwise. ΔC_Stock_{it-1}=change in the number of common shares outstanding from year *t-2* to year *t-1* scaled by common shares outstanding in year *t-2*. $\Delta LTDebt_{it-1}$=change in firm *i*'s long-term debt from year *t-2* to year *t-1* scaled by long-term debt in year *t-2*. Vol_{it-1}=average daily trading volume over 52 weeks ending with fiscal year end in year *t-1* divided by the number of shares outstanding at the end of year *t-1* and multiplied by one hundred, available for 535 non-switchers and for 44 switchers in the IFRS adoption year. EPS_ests_{it-1}=number of analysts' EPS estimates as of the fiscal year end in year *t-1*, available for 251 non-switchers and for 29 switchers. REC_ests_{it-1}=number of analysts' recommendations as of the fiscal year end in year *t-1*, available for 322 non-switchers and for 33 switchers. For_assets_{it-1}=foreign assets as a percentage of domestics assets, available for 239 non-switchers and 19 switchers.

TABLE 10: Accounting Quality around IFRS Adoption for Client Firms using Small Audit Firms prior to the adoption of IFRS
Panel A: Jones Model Residuals

	(T_{IFRS}-2, T_{IFRS}-1)			(T_{IFRS}+1, T_{IFRS}+2)			
Sample	N	μ (σ)	med	N	μ (σ)	med	*Statistical Tests*
Full Sample							Pre vs. Post
STG Switchers	66	0.22 (0.50)	0.09	52	0.10 (0.14)	0.06	$p = 0.08$
STS Switchers	52	0.34 (0.89)	0.09	37	0.12 (0.14)	0.07	$p = 0.08$
Non-Switchers SS	784	0.36 (1.75)	0.10	651	0.13 (0.23)	0.07	$p = 0.00$
Statistical Tests							*D-in-D*
STG vs. STS		$p = 0.39$			$p = 0.67$		$p = 0.42$
STG vs. SS		$p = 0.10$			$p = 0.18$		$p = 0.18$
STS vs. SS		$p = 0.88$			$p = 0.56$		$p = 0.96$
Constant Sample							*Pre vs. Post*
STG Switchers	30	0.11 (0.14)	0.06	30	0.11 (0.15)	0.07	$p = 0.83$
STS Switchers	20	0.09 (0.09)	0.07	20	0.11 (0.15)	0.08	$p = 0.59$
Non-Switchers SS	282	0.13 (0.20)	0.07	284	0.11 (0.12)	0.07	$p = 0.09$
Statistical Tests							*D-in-D*
STG vs. STS		$p = 0.43$			$p = 0.92$		$p = 0.58$
STG vs. SS		$p = 0.53$			$p = 0.93$		$p = 0.68$
STS vs. SS		$p = 0.05$			$p = 0.97$		$p = 0.27$

Panel A reports summary characteristics for accounting quality measures along with results from testing the significance of the differences in accounting quality measures between clients switching from small audit firms to global auditors (*STG*), clients switching from small audit firms to other small audit firms (*STS*), and clients keeping small audit firms. The accounting quality measure is the absolute values of the residuals from the Jones model (Jones 1991; DeFond and Subramanyam 1998; Francis et al. 2006; Kim et al. 2012). The residuals are estimated from the following regression: $TA_t = \beta_1 * 1 + \beta_2 \Delta Sales_t + \beta_3 PPE_t + e_t$. The variables are defined as follows: TA_t is a measure of total accruals, i.e., income before extraordinary items minus cash flow from operations; $\Delta Sales_t$ is change in sales from year *t-1* to year *t*; PPE_t is gross property plant and equipment. All variables are scaled by the level of total assets at the end of year *t-1*. I estimate coefficients separately for each country, year, Fama-French industry (using ten industries), and IFRS vs. non-IFRS reporting standards. The data presented in this table are for all clients that used small audit firms in the year before IFRS adoption. The firm-years included are two years prior to and two year subsequent to IFRS adoption [(T_{IFRS}-2, T_{IFRS}-1) and (T_{IFRS}+1, T_{IFRS}+2)]. Following Kim et al. (2012), I omit the year of IFRS adoption because the use of restated data from year T_{IFRS}-1 would not result in measures capturing the accounting quality changes due to IFRS. I report *p-values* from bootstrap tests (with one thousand repetitions) for differences in accounting quality between *Pre* and *Post* time periods and between the subsamples, and *p-values* from difference-in-differences bootstrap analyses (*D-in-D*). First, I examine accounting quality in the full sample, i.e., for all firms-years with available accounting quality data. Subsequently, I examine accounting quality in a constant sample, i.e. for firms with data available in all four sample years.

TABLE 10 (continued)
Panel B: Dechow-Dichev Model Residuals

	(T_{IFRS}-2, T_{IFRS}-1)			(T_{IFRS}+1, T_{IFRS}+2)			
Sample	N	μ (σ)	med	N	μ (σ)	med	Statistical Tests
Full Sample							*Pre vs. Post*
STG Switchers	55	0.36 (1.31)	0.06	35	0.06 (0.05)	0.05	$p = 0.11$
STS Switchers	49	0.67 (3.77)	0.08	21	0.07 (0.08)	0.04	$p = 0.26$
Non-Switchers SS	673	0.56 (3.67)	0.07	483	0.09 (0.13)	0.05	$p = 0.00$
Statistical Tests							*D-in-D*
STG vs. STS		$p = 0.58$			$p = 0.53$		$p = 0.60$
STG vs. SS		$p = 0.36$			$p = 0.01$		$p = 0.43$
STS vs. SS		$p = 0.86$			$p = 0.46$		$p = 0.84$
Constant Sample							*Pre vs. Post*
STG Switchers	22	0.13 (0.42)	0.03	22	0.07 (0.05)	0.05	$p = 0.45$
STS Switchers	10	0.05 (0.05)	0.04	10	0.07 (0.10)	0.04	$p = 0.59$
Non-Switchers SS	188	0.10 (0.18)	0.05	188	0.09 (0.12)	0.06	$p = 0.58$
Statistical Tests							*D-in-D*
STG vs. STS		$p = 0.38$			$p = 0.79$		$p = 0.37$
STG vs. SS		$p = 0.68$			$p = 0.13$		$p = 0.53$
STS vs. SS		$p = 0.06$			$p = 0.71$		$p = 0.45$

Panel B reports summary characteristics for accounting quality along with results from testing the significance of the differences in accounting quality between clients switching from small audit firms to global auditors (*STG*), clients switching from small audit firms to other small audit firms (*STS*), and clients keeping small audit firms. The accounting quality measure is the absolute values of the residuals from a modified Dechow-Dichev model (Dechow and Dichev 2002; McNichols 2002; Francis et al.2005; Francis et al. 2006; Kim et al. 2012). The residuals are estimated from the following regression: $TCA_t = \beta_0 + \beta_1 CFO_{t-1} + \beta_2 CFO_t + \beta_3 CFO_{t+1} + \beta_4 \Delta Sales_t + \beta_5 PPE_t + e_t$. The variables are defined as follows: TCA_t is a measure of total current accruals, i.e., change in current assets minus change in cash, minus change in current liabilities, plus change in short-term portion of long-term debt; CFO_t is cash flow from operations in year *t*; $\Delta Sales_t$ is change in sales from year *t-1* to year *t*; PPE_t is gross property plant and equipment. All variables are scaled by the level of total assets at the end of year *t-1*. I estimate coefficients separately for each country, year, Fama-French industry (using ten industries), and IFRS vs. non-IFRS reporting standards. The data presented in this table are for all clients that used small audit firms in the year before IFRS adoption. The firm-years included are two years prior to and two year subsequent to IFRS adoption [(T_{IFRS}-2, T_{IFRS}-1) and (T_{IFRS}+1, T_{IFRS}+2)]. Following Kim et al. (2012), I omit the year of IFRS adoption because the use of restated data from year T_{IFRS}-1 would not result in measures capturing the accounting quality changes due to IFRS. I report *p-values* from bootstrap tests (with one thousand repetitions) for differences in accounting quality between *Pre* and *Post* time periods and between the subsamples, and *p-values* from difference-in-differences bootstrap analyses (*D-in-D*). First, I examine accounting quality in the full sample, i.e., for all firms-years with available accounting quality data. Subsequently, I examine accounting quality in a constant sample, i.e. for firms with data available in all four sample years.

TABLE 10 (continued)
Panel C: Difference-in-Differences Regression Results

	Jones Model Residuals	Dechow-Dichev Model Residuals
Full Sample	N = 1,788	N = 1,422
STG	-0.07 (0.07)	-0.18 (0.25)
IFRS	-0.11 (0.03)***	-0.29 (0.10)***
STG*IFRS	0.04 (0.11)	0.13 (0.41)
Constant Sample	N = 647	N = 435
STG	-0.03 (0.03)	-0.06 (0.03)**
IFRS	-0.01 (0.01)	0.01 (0.01)
STG*IFRS	0.05 (0.04)	0.02 (0.04)

***, **, * Indicate statistical significance at the 10 percent, 5 percent, and 1 percent levels, respectively, using a two-tailed test. Standard errors are reported in parentheses. In this panel , I report coefficients of interest from the following regression: $Acc\_Qual_t = \beta_0 + \beta_1 STG_t + \beta_2 IFRS_t + \beta_3 STG_t * IFRS_t + \beta_4 Size_t + \beta_5 Assets\_growth_t + \beta_6 Sales\_growth_t + \beta_7 Leverage\_change_t + Country\_indicators + e_t$, where Acc_Qual_t is one of the accounting quality measures; STG_t is an indicator for firms switching from small audit firms to global auditors following IFRS adoption; $IFRS_t$ is an indicator for years following IFRS adoption; $Size_t$ is a natural log of total assets, $Assets\_growth_t$, $Sales\_growth_t$, and Leverage_change are changes in total assets, sales, and leverage, respectively, from year *t-1* to year *t* scaled by their respective levels in year *t-1*. The accounting quality measure used in the left column is the absolute values of the residuals from the Jones model (Jones 1991; DeFond and Subramanyam 1998; Francis et al. 2006; Kim et al. 2012). The residuals are estimated from the following regression: $TA_t = \beta_1 * 1 + \beta_2 \Delta Sales_t + \beta_3 PPE_t + e_t$. The accounting quality measure used in the right column is the absolute values of the residuals from a modified Dechow-Dichev model (Dechow and Dichev 2002; McNichols 2002; Francis et al. 2005; Francis et al. 2006; Kim et al. 2012). The residuals are estimated from the following regression: $TCA_t = \beta_0 + \beta_1 CFO_{t-1} + \beta_2 CFO_t + \beta_3 CFO_{t+1} + \beta_4 \Delta Sales_t + \beta_5 PPE_t + e_t$. The variables are defined as follows: TA_t is a measure of total accruals, i.e., income before extraordinary items minus cash flow from operations; TCA_t is a measure of total current accruals, i.e., change in current assets minus change in cash, minus change in current liabilities, plus change in short-term portion of long-term debt; $\Delta Sales_t$ is change in sales from year *t-1* to year *t*; PPE_t is gross property plant and equipment; CFO_t is cash flow from operations in year *t*. For both models all variables are scaled by the level of total assets at the end of year *t-1*. I estimate coefficients for each model separately for each country, year, Fama-French industry (using ten industries), and IFRS vs. non-IFRS reporting standards. The firm-years included are two years prior to and two year subsequent to IFRS adoption [(T_{IFRS}-2, T_{IFRS}-1) and (T_{IFRS}+1, T_{IFRS}+2)]. Following Kim et al. (2012), I omit the year of IFRS adoption because the use of restated data from year T_{IFRS}-1 would not result in measures capturing the accounting quality changes due to IFRS. The regression analyses are performed on samples of client firms that used small audit firms in the year before IFRS adoption. First, I estimate coefficients in the full sample, i.e., for all firms-years with available accounting quality data. Subsequently, I estimate coefficients in a constant sample, i.e. for firms with data available in all four sample years. For brevity, in this table I report only the coefficients of interest.

APPENDIX: UK AUDIT FIRMS' ANALYSIS

Audit Firms' Income and Employment

In the primary analyses, I show that client firms are more likely to switch from small audit firms to global auditors when adopting IFRS. However, this result only indirectly suggests that the adoption of IFRS gives global audit firms a competitive advantage. Therefore, to quantify the actual impact of IFRS on the audit industry I examine the effect of the new reporting standards on audit firms' performance and profitability.

First, I examine changes in the demand for audit services at global and small audit firms. Specifically, I examine whether global audit firms experience increased demand for their services using changes in employment levels in the year of IFRS adoption as proxies for customer demand. Second, I examine various sources of audit firms' income to determine whether global (small) audit firms experience an increase (decrease) in income around IFRS adoption and if smaller audit firms are able to replace revenues from missed IFRS audits with other sources of income. Possibly, smaller audit firms which lose revenue because IFRS adopting clients switch to global audit firms gain clients among firms which continue to use local reporting standards. Furthermore, the increase in revenue from additional IFRS audits for global audit firms may be offset by an increase in the related costs.

Audit Firms' Income and Employment Data Sources

In order to conduct my analyses, I require income and employment data for audit firms. However, these data are not readily available in commercial or academic databases. The majority of small audit firms do not publicly disclose their income, while

international audit firms disclose only consolidated income. The data used for audit market research in the international setting are for the most part hand-collected from financial statements of audit clients. Specifically, researchers collect the names of audit firms and audit fee amounts from publicly available financial statements and use such data in their analyses.[33]

I collect data on the income and employment levels of UK audit firms from *Accountancy Age*, which publishes annual rankings of the largest audit firms in the UK.[34] I acquired the rankings from issues from years 1998 through 2012. The *Accountancy Age* rankings are based on survey data obtained directly from UK audit firms, including total income, audit income, tax services income, consulting income, corporate finance income, professional staff, number of partners, fees per professional staff, fees per partner, percentage of female partners, percentage of male partners, the number of UK offices, firm's status, and fiscal year-end date for the income data.[35] To the best of my knowledge, this is the first paper to examine international audit markets using data on income and employment levels of audit firms around IFRS adoption.

Examining changes in income and employment in specific time periods requires proper alignment of data with the fiscal periods from which the data came. Although the data published in *Accountancy Age* are collected at the same point in time for all firms,

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[33] For example, Ballas and Fafaliou (2008) examines the effects of audit firms' mergers and the demise of Arthur Andersen on audit market concentration. Kallapur et al. (2008) examines the relationship between audit firm size and audit quality and found that higher audit market competition is associated with lower audit quality in the US. Hodgon et al. (2009) examines the relationship between audit firm size and the likelihood of full IFRS adoption. The paper finds that client firms using Big Five international auditors are more likely to fully apply IFRS in a voluntary IFRS adoption setting.

[34] *Accountancy*, a magazine published by The Institute of Chartered Accountants in England and Wales (ICAEW), reports similar rankings to the *Accountancy Age* rankings. However, *Accountancy* discloses only the total income data for the top sixty accounting firms. The reported income data from the two magazines are comparable.

[35] The accounting firm data provided by *Accountancy Age* have been used by UK National Statistics (2004)

fiscal period end dates vary among audit firms. Additionally, in multiple instances when the magazine is not able to obtain data for an audit firm in a given year, it uses data from the previous year. Therefore, I re-align each firm-year observation based on fiscal year end with the year represented by the data. Specifically, I code as year *t* those observations which have fiscal period end dates from April 1st of year *t* to March 31st of year *t*+1. If multiple observations for a given firm fall within the same year, I remove duplicates. For non-duplicates, I retain the observations with a more recent fiscal period end date.

To test my predictions on employment and income levels, I calculate income changes and percentage changes for each firm-year observation in my sample. I use percentage change in addition to change in levels to control for differences in the scale of audit firms' operations. Specifically, Δ is the change in employment or income from year *t-1* to year *t* and $\% \Delta$ is the ratio of the change in employment or income from year *t-1* to year *t* to the employment or income level in year *t-1*, multiplied by 100%. To test for significant differences in changes from pre- to post-IFRS adoption and between global audit firms and other auditors I use t-tests for difference in means and bootstrap estimation for difference-in-differences tests.

Audit Firms' Income and Employment Analyses and Discussion

In my employment and income analyses I use 738 audit firm-year observations based on the data from *Accountancy Age*. Within this sample, 82 observations are for global audit firms, and 656 observations are for smaller audit firms. However, the number of observations for each variable's analysis is different because some audit firms do not report individual data items.

In the first part of my analyses, I compare the employment and income levels (changes) in year 2006 to years 2002 through 2009.[36] Results are reported in table A1 panel A. The differences in income levels and in income changes between global and small audit firms are significant in all years because global audit firms operate at a larger scale than smaller audit firms. Within changes in total income and changes in accounting income, the t-tests for difference in means and difference-in-differences tests show that the 2006 income changes for global audit firms are unusually large. Similarly, when percentage changes are considered, both difference-in-differences tests and simple t-tests indicate that global audit firms experience a significantly larger increase in total income and in accounting income in 2006 than in other sample years. With respect to employment results, both changes in employment level and percentage changes in employment are significantly larger in 2006 when compared to other years. In addition, both the number of professional staff and the number of partners increase. This result indicates that in the year after IFRS adoption, not only has the complexity of work increased (presumably, this would only require an increase in the number of professional staff) but also the number of assignments grew (which likely requires a higher number of senior level employees in order to manage an increase in the number of clients).

[Insert Table A1 here]

Next, I examine whether changes in audit firms' income persist in the years following IFRS adoption. To do this, I divide the sample into four periods. Period 1, 1998 through 2001, captures the years before the announcement of IFRS adoption in the EU. Period 2, 2002 through 2005, captures the years from the announcement of IFRS

[36] I set year 2002 as the sample start year because this is when the mandatory adoption of IFRS in the EU was announced. The sample ends in 2009 to assure that the effects of the financial crisis in the UK do not affect the results.

adoption to the IFRS adoption year. Period 3, 2006 through 2009, captures IFRS adoption years.[37] Period 4, 2010 through 2012, includes the financial crisis period. Table 1A panel B reports the average income levels and changes in income along with the results of difference in means tests for the four periods. The first takeaway from this analysis is that the increases in total income and in accounting income associated with the IFRS adoption year do not recur in the following years. What is more, smaller audit firms also experience slow and persistent income growth.[38] Moreover, it seems that the second period (2002 through 2005) is marked by significant decreases (low growth) in total income (audit income and consulting income). This "slow-down" period may be caused by an increase in the audit threshold at the British firms (Companies Act 1985), which led to a decline in the number of firms required to have their financial statements audited. The next period is the IFRS period, which seems to have given both global and small audit firms a chance to increase their revenues with higher audit fees, and perhaps more consulting services. Unfortunately, in the following time period, the financial crisis takes a toll on all audit firms. It is only natural that audit firms which rely on capital markets for demand experience a decline in their growth rates if the market is not doing well.

The Number of Audit Firms in the UK

The analyses of employment and income levels at global and smaller audit firms indicate that IFRS adoption has real economic effects for affected audit markets. However, firms for which I have the necessary income and employment data are among

[37] See table 3 panel B for IFRS adoption frequencies by year for my sample countries. Based on 2005 as the year of IFRS adoption, the first wave of mandatory IFRS financial statements is audited in 2006. Additionally, because firms listed on Alternative Investment Market of London Stock Exchange were required to adopt IFRS starting in 2007, a second wave of first-time mandatory IFRS financial reports is audited in 2008.

[38] Some of the small audit firms in this sample may have gained IFRS experience prior to the adoption of IFRS by the UK. As shown in supplemental analyses, these audit firms are likely to experience an increase in the number of clients following IFRS adoption.

the fifty largest accounting firms in the UK and the results for audit firms that are not profitable enough to be included in the *Accountancy Age* rankings may be different. Specifically, unranked audit firms are more likely to be the small audit firms with no IFRS experience before IFRS adoption in the UK. These audit firms are most likely the ones that lose IFRS-adopting clients to global audit firms and to small auditors with IFRS experience.

[Insert Table A2 here]

Because it is not feasible to collect employment and income data for all unranked small audit firms, I examine another outcome of changes in demand for audit firms' services: the number of small audit firms in existence in the UK over time. Table A2 reports the number of accounting firms certified to provide audit services in the UK in various size groups (FRC 2005-2012). It is clear from the reported data that the number of audit firms with a single partner has decreased drastically in recent years (from 6,701 in 2005 to 3,749 in 2012). Similarly, the number of firms with two to six partners and the number of firms with seven to ten partners have decreased noticeably. At the same time, the number of firms with more than fifty partners has increased and the number of firms with eleven to fifty partners has remained relatively stable over the years. Nonetheless, the large decrease in the number of smaller audit firms cannot be causally attributed to any one event. Although IFRS adoption may shift some services demand from smaller auditors to global audit firms, the increased audit threshold for British companies implemented in 2004 (Companies Act 1985) likely decreased the customer base for these auditors even more since the smallest client firms no longer needed audit services.

Conclusions

The conclusions from the audit market analyses are as follows. First, global audit firms significantly increase their employment levels associated with the increase in demand for their services following IFRS adoption. Second, global audit firms experience significant increases in total income and in audit income in 2006, which is consistent with higher audit fees being charged to IFRS adopters and with an increase in the number of clients following the IFRS adoption year. Third, small audit firms do not experience a decline in these income levels, but over time exhibit slow and persistent growth. Fourth, the increases in the number of employees and in the income levels at global audit firms do not recur in the following years. Finally, although the decrease in the number of small audit firms in the UK cannot be directly attributed to IFRS adoption, it is clear that the UK audit market became more concentrated, with a higher number of very large accounting firms and fewer small audit firms.

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TABLE A1: Income and Employment at British Audit Firms
Panel A: Mandatory IFRS Adoption Year

Category	Small			Global			Small vs.
	N	μ(σ)	med	N	μ(σ)	med	Global
Total Income							
2006	46	36.02 (43.00)	15.10	6	1112.18 (699.79)	1292.00	**-11.02**
non-2006	313	32.58 (40.28)	14.75	36	1164.01 (671.23)	1246.35	**-29.69**
2006 vs. non-2006		-0.54			0.17		Dp = .86
Audit Income							
2006	36	15.49 (18.38)	7.05	6	436.97 (326.60)	453.00	**-8.19**
non-2006	248	14.95 (18.52)	7.20	35	419.33 (280.82)	383.08	**-22.57**
2006 vs. non-2006		-0.16			-0.14		Dp = .91
Consulting Income							
2006	29	4.13 (7.14)	1.20	4	270.50 (179.06)	307.00	**-8.90**
non-2006	193	2.91 (4.92)	1.40	20	371.75 (212.33)	347.48	**-24.58**
2006 vs. non-2006		-1.16			0.89		Dp = .31
Δ in Total Income							
2006	43	3.95 (6.50)	1.40	6	139.80 (77.95)	179.00	**-11.92**
non-2006	269	2.00 (6.30)	1.10	32	28.56 (185.40)	43.60	**-2.37**
2006 vs. non-2006		**-1.88**			**-1.43**		**Dp = .02**
Δ in Audit Income							
2006	32	0.04 (8.52)	0.50	6	62.56 (38.55)	69.50	**-8.57**
non-2006	209	0.79 (3.60)	0.40	29	8.90 (60.52)	11.20	**-1.94**
2006 vs. non-2006		0.86			**-2.07**		**Dp = .01**
Δ in Consulting Inc.							
2006	25	0.32 (1.19)	0.00	3	35.00 (23.26)	31.00	**-8.67**
non-2006	160	0.15 (0.91)	0.04	15	67.67 (118.17)	33.44	**-7.44**
2006 vs. non-2006		-0.79			0.47		Dp = .32
% Δ in Total Income							
2006	43	10.43% (10.37%)	8.97%	6	15.60% (4.61%)	14.16%	-1.20
non-2006	269	9.70% (23.89%)	7.31%	32	4.56% (12.37%)	5.91%	1.20
2006 vs. non-2006		-0.20			**-2.14**		**Dp = .00**
% Δ in Audit Income							
2006	32	7.65% (19.00%)	7.18%	6	19.72% (5.33%)	20.77%	**-1.53**
non-2006	209	7.74% (16.51%)	5.49%	29	4.44% (13.76%)	3.91%	1.03
2006 vs. non-2006		0.03			**-2.65**		**Dp = .00**
% Δ in Consult. Inc.							
2006	25	10.75% (31.93%)	0.00%	3	10.97% (7.03%)	7.65%	-0.01
non-2006	158	10.66% (43.69%)	1.40%	15	27.73% (42.21%)	13.07%	-1.45
2006 vs. non-2006		-0.01			0.67		Dp = .20
Professional Staff							
2006	42	337.33 (371.03)	155.00	6	6983.5 (4524.88)	7701.00	-9.94
non-2006	274	326.79 (369.70)	170.50	34	6561.18 (3552.76)	6955.50	-28.15
2006 vs. non-2006		-0.17			-0.26		Dp = .83
Partners							
2006	42	45.98 (42.87)	28.00	6	488.83 (221.07)	523.00	**-12.17**
non-2006	275	47.55 (46.23)	26.00	36	513.92 (207.10)	559.50	**-32.02**
2006 vs. non-2006		0.21			0.27		Dp = .81
Δ in Prof. Staff							
2006	37	16.05 (70.18)	11.00	6	1023.50 (1011.15)	665.00	**-6.37**
non-2006	231	7.55 (55.42)	4.00	29	-20.62 (1300.90)	97.00	0.33
2006 vs. non-2006		-0.83			**-1.85**		**Dp = .03**

TABLE A1 (continued)
Panel A (continued)

Category	Small N	Small μ(σ)	Small med	Global N	Global μ(σ)	Global med	Small vs. Global
Δ in Partners							
2006	38	0.47 (4.77)	0.00	6	30.00 (37.67)	21.50	**-4.89**
non-2006	232	-0.39 (18.61)	0.00	32	-9.03 (46.01)	2.00	1.94
2006 vs. non-2006		-0.28			**-1.95**		**Dp = .03**
% Δ in Prof. Staff							
2006	37	7.36% (9.95%)	7.39%	6	14.70% (10.27%)	10.91%	**-1.67**
non-2006	231	4.23% (20.35%)	2.20%	29	0.54% (14.62%)	2.40%	0.94
2006 vs. non-2006		-0.92			**-2.25**		**Dp = .05**
% Δ in Partners							
2006	38	2.06% (11.73%)	0.00%	6	6.73% (9.27%)	3.77%	-0.92
non-2006	232	6.16% (77.76%)	0.00%	32	-1.27% (9.13%)	0.34%	0.54
2006 vs. non-2006		0.32			**-1.97**		**Dp = .08**

The table summarizes income and employment measures for small audit firms and for global audit firms. N is the number of observations, μ(σ) is the mean(standard deviation), and med is the median. The first period presented is year 2006, i.e., the year when audit firms would provide audit services to the first group of mandatory IFRS adopters. Non-2006 periods include years from 2002-2009, excluding year 2006. These years are chosen in order to avoid using data from the economic downturn, which in the UK started in late 2009. Numbers reported to the right of the data are t-values obtained from tests for difference in means within periods, between small and global audit firms. Bolded values indicate that the one-sided difference is significant at least at the 10 percent level (income or change in income for global audit firms' higher than for small audit firms). Numbers reported below the data items are t-values from testing for difference in means between year 2006 and other years, within audit firm type (small or global). Bolded values indicate that the one-sided difference is significant at least at the 10 percent level (income or change in income for 2006 is higher than for other years). The "Dp" numbers are p-values obtained from difference-in-differences testing between the two types of audit firms between the two periods. Bolded values indicate that the difference is significant at the 10 percent level or better. *Total Income* is the total UK fee income. *Audit Income* is fee income from audit and accounting services. *Consulting Income* is income from consultancy and advisory services' fees. *Professional Staff* is the number of staff working at the professional level within the accounting firms. *Partners* is the number of partner level employees in the UK. *Δ* is the difference between the variable's value at the end year *t* and the variable's value at the end of year *t-1*. *% Δ* variables are defined as the variable's value at the end year *t* minus the value at the end of year *t-1*, divided by the value at the end of year *t-1*, multiplied by 100%. Source: *Accountancy Age* (2002-2009).

TABLE A1 (continued)
Panel B: Four-Period Analysis

Category	Small N	Small μ(σ)	Small med	Global N	Global μ(σ)	Global med	Small vs. Global
Total Income							
Period 1 (1998-2001)	186	20.86 (23.70)	9.40	27	771.62 (570.58)	680.80	**-18.09**
Period 2 (2002-2005)	173	28.33 (34.99)	11.90	19	999.20 (593.59)	1018.00	**-21.63**
Period 3 (2006-2009)	186	37.37 (44.84)	16.70	23	1286.63 (708.06)	1454.00	**-24.08**
Period 4 (2010-2012)	111	39.55 (48.50)	18.80	13	1285.09 (832.25)	1465.00	**-16.03**
P 1 vs. P 2		**2.38**			1.31		Dp = .22
P 2 vs. P 3		**2.12**			1.41		Dp = .17
P 3 vs. P 4		0.39			-0.01		Dp = .99
Audit Income							
Period 1 (1998-2001)	142	10.54 (12.17)	5.12	19	195.72 (116.11)	199.70	**-18.62**
Period 2 (2002-2005)	147	13.06 (16.61)	6.00	19	373.64 (155.36)	356.00	**-17.19**
Period 3 (2006-2009)	137	17.12 (20.13)	8.20	22	463.60 (305.49)	474.50	**-17.16**
Period 4 (2010-2012)	80	19.35 (21.42)	10.30	13	417.74 (291.96)	444.00	**-12.35**
P 1 vs. P 2		1.47			**2.76**		**Dp = .01**
P 2 vs. P 3		**1.86**			1.01		Dp = .33
P 3 vs. P 4		0.77			-0.44		Dp = .66
Consulting Income							
Period 1 (1998-2001)	120	1.63 (2.56)	0.61	11	205.16 (68.99)	205.30	**-33.37**
Period 2 (2002-2005)	114	2.54 (4.20)	1.25	8	276.14 (101.97)	307.00	**-29.97**
Period 3 (2006-2009)	108	3.64 (6.15)	1.40	16	394.24 (236.62)	418.00	**-17.53**
Period 4 (2010-2012)	59	3.08 (4.18)	1.80	7	587.43 (227.15)	517.00	**-20.98**
P 1 vs. P 2		**2.01**			**1.82**		Dp = .10
P 2 vs. P 3		1.57			1.34		**Dp = .09**
P 3 vs. P 4		-0.63			**1.82**		**Dp = .07**
Δ in Total Income							
Period 1 (1998-2001)	148	2.33 (7.72)	1.00	23	108.98 (119.03)	97.70	**-10.93**
Period 2 (2002-2005)	144	1.79 (7.34)	1.10	15	-24.81 (250.43)	23.30	1.31
Period 3 (2006-2009)	168	2.67 (5.36)	1.10	23	92.39 (84.12)	96.00	**-13.85**
Period 4 (2010-2012)	100	1.79 (15.26)	0.62	11	44.01 (70.03)	15.50	**-5.17**
P 1 vs. P 2		-0.61			**-2.22**		**Dp = .06**
P 2 vs. P 3		1.22			**2.08**		**Dp = .09**
P 3 vs. P 4		-0.68			-1.65		**Dp = .08**
Δ in Audit Income							
Period 1 (1998-2001)	108	1.05 (4.07)	0.30	17	18.05 (31.40)	22.30	**-5.45**
Period 2 (2002-2005)	119	0.63 (4.09)	0.30	14	6.63 (58.22)	5.60	-1.13
Period 3 (2006-2009)	122	0.74 (4.97)	0.50	21	25.74 (62.12)	21.70	**-4.44**
Period 4 (2010-2012)	71	0.75 (5.67)	0.10	11	14.30 (24.97)	16.00	**-4.06**
P 1 vs. P 2		-0.77			-0.70		Dp = .53
P 2 vs. P 3		0.19			0.91		Dp = .35
P 3 vs. P 4		0.01			-0.58		Dp = .47
Δ in Consulting Income							
Period 1 (1998-2001)	87	0.10 (1.11)	0.10	10	32.63 (51.64)	19.86	**-6.12**
Period 2 (2002-2005)	91	0.23 (1.04)	0.00	5	25.78 (36.05)	27.86	**-7.41**
Period 3 (2006-2009)	94	0.13 (0.85)	0.05	13	76.25 (124.11)	39.00	**-6.13**
Period 4 (2010-2012)	51	-0.60 (0.81)	0.00	7	47.67 (24.25)	58.00	**-14.85**
P 1 vs. P 2		0.80			-0.26		Dp = .76
P 2 vs. P 3		-0.68			0.88		Dp = .17
P 3 vs. P 4		-1.30			-0.60		Dp = .44

TABLE A1 (continued)
Panel B (continued)

Category	Small N	Small μ(σ)	Small med	Global N	Global μ(σ)	Global med	Small vs. Global
% Δ in Total Income							
Period 1 (1998-2001)	148	15.51% (43.28%)	11.39%	23	15.59% (10.54%)	18.33%	-0.01
Period 2 (2002-2005)	144	11.56% (30.11%)	7.22%	15	0.95% (14.27%)	4.53%	1.35
Period 3 (2006-2009)	168	8.29% (12.71%)	7.97%	23	9.80% (9.31%)	8.50%	-0.55
Period 4 (2010-2012)	100	5.66% (21.07%)	3.75%	11	1.97% (4.93%)	3.69%	0.58
P 1 vs. P 2		-0.90			**-3.64**		**Dp = .07**
P 2 vs. P 3		-1.28			**2.32**		**Dp = .01**
P 3 vs. P 4		-1.28			**-2.61**		Dp = .13
% Δ in Audit Income							
Period 1 (1998-2001)	108	9.80% (17.61%)	6.31%	17	11.54% (11.92%)	11.17%	-0.39
Period 2 (2002-2005)	119	7.31% (18.67%)	5.00%	14	2.06% (12.37%)	3.64%	1.02
Period 3 (2006-2009)	122	8.13% (14.85%)	6.10%	21	10.39% (14.21%)	10.14%	-0.65
Period 4 (2010-2012)	70	4.91% (20.41%)	1.27%	11	2.02% (5.69%)	1.79%	0.46
P 1 vs. P 2		-1.03			**-2.17**		Dp = .15
P 2 vs. P 3		0.38			**1.79**		Dp = .13
P 3 vs. P 4		-1.26			**-1.87**		Dp = .23
% Δ in Consult. Inc.							
Period 1 (1998-2001)	85	41.13%(128.67%)	14.29%	10	23.07% (36.27%)	15.76%	0.44
Period 2 (2002-2005)	91	9.91% (45.37%)	0.00%	5	16.16% (22.31%)	9.00%	-0.31
Period 3 (2006-2009)	92	11.44% (39.05%)	2.39%	13	28.31% (43.99%)	13.07%	**-1.44**
Period 4 (2010-2012)	50	10.59% (55.80%)	0.00%	7	9.54% (6.41%)	9.09%	0.05
P 1 vs. P 2		**-2.17**			-0.39		Dp = .25
P 2 vs. P 3		0.25			0.58		Dp = .53
P 3 vs. P 4		-0.11			-1.11		Dp = .24

The table summarizes income level measures for small and global audit firms. N is the number of observations, μ(σ) is the mean(standard deviation), and "med" is the median. The time periods presented are: 1998-2001, 2002-2005, 2006-2009, and 2010-2012. Numbers reported to the right of the data are t-values obtained from tests for difference in means within periods, between audit firm types. Bolded values indicate that the one-sided difference is significant at least at the 10 percent level (income or change in income for global audit firms' higher than for small audit firms). Numbers reported below the data items are t-values from testing for difference in means between adjacent periods, within audit firm type (small or global). Bolded values indicate that the two-sided difference is significant at least at the 10 percent level. The "Dp" numbers are p-values obtained from difference-in-differences testing between the two types of audit firms between the two periods. Bolded values indicate that the difference is significant at least at the 10 percent level. *Total Income* is the total UK fee income. *Audit Income* is fee income from audit and accounting services. *Consulting Income* is income from consultancy and advisory services' fees. All income data are from UK only and are denominated in millions £. *Professional Staff* is the number of staff working at the professional level within the accounting firms. *Partners* is the number of partner level employees in the UK. *Δ* is the difference between the variable's value at the end year *t* and the variable's value at the end of year *t-1*. *% Δ* variable is defined as the variable's value at the end year *t* minus the value at the end of year *t-1*, divided by the value at the end of year *t-1*, multiplied by 100%. Source: *Accountancy Age* (1998-2012).

TABLE A2: The Number of Audit Firms in the UK

Partners	**2012**	**2011**	**2010**	**2009**	**2008**	**2007**	**2006**	**2005**
1	3,749	3,857	4,219	4,599	4,922	5,228	5,837	6,701
2 to 6	3,229	3,188	3,210	3,167	3,217	3,346	3,380	3,617
7 to 10	196	212	207	189	211	212	192	220
11 to 50	122	119	119	126	130	128	121	131
50+	22	20	21	18	15	14	18	16
Total	7,318	7,396	7,776	8,099	8,495	8,928	9,548	10,685

Source: The Financial Reporting Council's publication "Professional Oversight Board. Key Facts and Trends in the Accountancy Profession" (2005-2012), Section "Number of Firms Registered with Recognized Supervisory Bodies". *Partners* is either the number of partners or the number of principals in an audit firm.