# TECHNISCHE UNIVERSITÄT MÜNCHEN

Full Professorship Financial Accounting

Univ.-Prof. Dr. Jürgen Ernstberger


# Essays on Individual Auditors, Corporate Risk-Taking, and Lobbyism in Standard-Setting Processes - Three Perspectives on Financial Accounting Information


Martin Prott



Vollständiger Abdruck der von der Fakultät für Wirtschaftswissenschaften der Technischen Universität München zur Erlangung des akademischen Grades eines Doktors der Wirtschaftswissenschaften (Dr. rer. pol.) genehmigten Dissertation.

| | |
|---|---|
| Vorsitzender: | Prof. Dr. Reiner Braun |
| Prüfer der Dissertation: | 1. Prof. Dr. Jürgen Ernstberger |
| | 2. Prof. Dr. Nicole Ratzinger-Sakel |

Die Dissertation wurde am 10.04.2017 bei der Technischen Universität München eingereicht und durch die Fakultät für Wirtschaftswissenschaften am 15.07.2017 angenommen.

***“Stay hungry. Stay foolish.”***

Steve Jobs

## Short Table of Contents

# Table of Contents

## List of Figures

## List of Tables

## List of Abbreviations

| | |
|---|---|
| 2SLS | two-stage least squares |
| AAA | American Accounting Association |
| AAER | Accounting and Auditing Enforcement Release |
| Abschn. | Abschnitt |
| akt. | aktualisiert |
| APA | academic practitioner auditors |
| AICPA | American Institute of Certified Public Accountants |
| Aufl. | Auflage |
| Avg. | average |
| Big 4 | The four biggest audit firms: Deloitte, EY, KPMG, and PwC (alphabetical order) |
| bspw. | beispielsweise |
| bzw. | beziehungsweise |
| CEO | Chief Executive Officer |
| CFO | Chief Financial Officer |
| DAX 30 | Deutscher Aktienindex |
| DFG | German Research Foundation |
| d.h. | das heißt |
| DP | discussion paper |
| EAA | European Accounting Association |

| | |
|---|---|
| ebd. | ebenda |
| EBIT | earnings before interest and tax |
| EBITDA | earnings before interest, tax, depreciation, and amortization |
| ED | exposure draft |
| ed. | edition |
| Ed. or Eds. | editor(s) |
| e.g. | exempli gratia |
| EPS | earnings per share |
| ERM | Enterprise Risk Management |
| erw. | erweitert |
| et al. | et alii / et aliae |
| etc. | et cetera |
| EU | European Union |
| f. | folgend |
| ff. | folgende |
| FASB | Financial Accounting Standards Board |
| FE | fixed effects |
| FREP | German Financial Reporting Enforcement Panel |
| G4+1 | Zusammenschluss der Standardsetzungsgremien aus Australien, Canada, Neuseeland, Großbritannien und USA |
| GAABR | German Academic Association for Business Research |

| | |
|---|---|
| GAAP | Generally Accepted Accounting Principles |
| GC Opinion | going-concern opinion |
| GDP | gross domestic product |
| H | hypothesis |
| Hg. | Herausgeber |
| HGB | German Generally Accepted Accounting Principles |
| IAS | International Accounting Standards |
| IASB | International Accounting Standards Board |
| IASC | International Accounting Standards Committee |
| i.d.R. | in der Regel |
| i.e. | id est |
| IFRS | International Financial Reporting Standards |
| IMS | Interim Management Statements |
| insb. | insbesondere |
| IPO | initial public offering |
| JAE | Journal of Accounting and Economics |
| JAR | Journal of Accounting Research |
| M&A | merger & acquisition |
| n.a. | not available |
| n | number of observations |

| | |
|---|---|
| NL | The Netherlands |
| No. | number |
| o.g. | oben genannt |
| OLS | ordinary least squares |
| p. or pp. | page(s) |
| PhD | Doctor of Philosophy |
| PCAOB | Public Company Accounting Oversight Board |
| Q | Question |
| ref. | referring |
| resp. | respective/respectively |
| S. | Seite |
| SEC | Securities and Exchange Commission |
| SOX | Sarbanes-Oxley Act |
| SIC | Standard Industrial Classification |
| Std. Dev. | standard deviation |
| SWOT | Strengths, Weaknesses, Opportunities, and Threats |
| *t*-stat | test statistic |
| Tab. | table/Tabelle |
| TAR | The Accounting Review |
| TPD | Transparency Directive |

| | |
|---|---|
| TSR | Total Shareholder Return |
| TV | television |
| u.a. | unter anderem |
| überarb. | überarbeitet |
| UK | United Kingdom |
| U.S./USA | United States (of America) |
| US-GAAP | Generally Accepted Accounting Principles of the United Stated of America |
| Verl. | Verlag |
| vgl. | vergleiche |
| VHB | Verband der Hochschullehrer für Betriebswirtschaft e.V. |
| vs. | versus |
| Y/N | yes/no |
| z. B. | zum Beispiel |
| ZBW | German National Library of Economics |

# 1 Introduction

## 1.1 Motivation and Scope

Investors (principles) delegate decision-making authority to managers (agents), which results in the separation of ownership and control. In case investors, as well as managers, aim at individual utility maximization, it is plausible to assume that managers do not always act in line with the investors' interests (Jensen and Meckling 1976; Jensen 1986). Holmstrom (1979) documents that under the delegation of decision-making authority the risk of moral hazard arises when individuals' actions affect their personal benefits. Due to information asymmetries between managers and investors, the managerial moral hazard can occur if managers use their private information and managerial discretion to benefit their personal interests (Shleifer and Vishny 1997). More specifically, Jensen (1986) shows that managers prefer to reinvest free cash instead of returning it to the investors, as managers are prone to cause firm growth beyond the optimal size. This behavior is incentivized by having more resources under control. The disclosure of financial accounting information is argued to be a central instrument to overcome information asymmetries between managers and investors (Verrecchia 2001; Healy and Palepu 2001; Bushman and Smith 2001). Financial disclosures (e.g., financial reports) are a major source of information for investors to value companies and to make investment decisions (e.g., Healy and Palepu 1993). As investors aim at making the best investment decisions, information asymmetries can threaten the functioning of capital markets in case investors feel disadvantaged with respect to unequally distributed information and the fear of making rigged trades (see, e.g., Akerlof 1970; Jensen and Meckling 1976; Myers 1984; Kyle 1985; Easley and O'Hara 1987). In the absence of disclosed financial accounting information investors are, therefore, not

capable of making adequate investment decisions. This coherence underlines the importance of financial disclosure to maintain the functioning of capital markets (Healy and Palepu 2001).

Bushman and Smith (2001) define disclosed "financial accounting information [as] the product of corporate accounting and external reporting systems that measure and publicly disclose audited, quantitative data concerning the financial position and performance of publicly held firms" (p. 238). This definition underlines that financial accounting information provides investors with essential and reliable information about the firm's underlying economics needed to make adequate decisions about the allocation of capital. In particular, Bushman and Smith (2001) note the importance of auditors in the context of the financial disclosure. Auditors contribute to the reliability of disclosed information by assessing the correctness and alignment with generally accepted accounting principles (GAAP) (Titman and Trueman 1986; Simnett, Vanstraelen, and Chua 2009; DeFond and Zhang 2014). Due to the special meaning of auditors for the functioning of capital markets, research has not only focused on audit quality in general, but also on determinants and consequences of variation in audit quality across audit firms and individual auditors since decades.

The quality of auditors is widely discussed in the literature and starts with a debate on what audit quality is. Following DeAngelo (1981), audit quality is defined as "the market-assessed joint probability that a given auditor will both detect a breach in the client's accounting system, and report the breach" (p. 186). This prominent definition implies that auditors shall ensure that disclosed financial statements are free of material misstatements by law. Consequently, one of the most important definitions of audit quality is built on the legal tasks of auditors to detect GAAP violations which require auditors to make a binary decision whether the disclosed accounting information is free from material misstatements or not (DeFond and Zhang 2014). In case the auditor detects all breaches in the financial statement, the audit quality is high, in

case the auditor does not detect all breaches and, therefore, makes a failure, the audit quality is low. However, prior research documents that auditors often fail to reveal all material misstatements by examining accounting and auditing enforcement releases (AAERs) issued by the U.S. Securities and Exchange Commission (SEC) or going-concern opinions (GC opinion) issued by the auditor. Using data from SEC enforcement actions against auditors, corporate frauds, Type I errors ("the auditor issues a going-concern report and there is no client failure within the next 12 months" (Francis 2011, p. 128)), and Type II errors ("the auditor erred in issuing a clear opinion" (Francis 2011, p. 128)) as indicators of audit failure, prior literature documents low auditor failure rates ranging from less than 1 percent up to 9.5 percent (Dechow Hutton, and Sloan 1996; Lennox 1999; Beasley, Carcello, and Hermanson 1999; Beasley, Carcello, and Hermanson 2011; Francis 2011; DeFond and Zhang 2014).

Given the low proportion of auditor failures, several authors argue that audit quality appears more likely to be a continuum, measured on a continuous scale that ranges from low to high audit quality (Francis 2004; Francis 2011). Restricting audit quality to two possible manifestations, i.e. failure (low audit quality) and non-failure (high audit quality), results in a highly skewed distribution of auditor failures (Francis 2011). Therefore, it is questionable whether the large proportion of non-failure audits should be treated equally, as there is much discretionary power in the disclosure of financial statements, which could be problematical for the information function of accounting information for investors (Becker, DeFond, Jiambalvo, and Subramanyam 1998). DeFond and Zhang (2014) note that audit quality should, besides GAAP compliance and the absence of failures, consider whether the firm's underlying economics are faithfully presented in the audited financial statements. This notion implies that the quality of disclosed information and thus investor's possibilities to "use" financial disclosures for, e.g., valuations, depends on the auditor's abilities to detect and to reduce the

aggressive or too conservative application of accounting standards within the legal boundaries (Phillips 1999; Kim, Chung, and Firth 2003). Consequently, even legal accounting practice might impair the trueness of disclosed accounting information and mislead from the actual underlying economic performance of a firm. In line with the aforementioned definitions of audit quality, a large stream of literature examines the influence of differences in auditor characteristics on audit quality. This stream of research is motivated by the notion that auditors do not provide homogeneous levels of audit quality (DeFond and Zhang 2014). At the first stage, authors look at audit firm characteristics such as Big 4 vs. non-Big 4 effects, industry expertise at the firm level or compensation structures which appear likely to explain variations in the level of audit quality (see, e.g., Trompeter 1994; Craswell, Francis, and Taylor 1995; Ferguson, Francis, and Stokes 2003; Francis, Reichelt, and Wang 2005; Francis and Yu 2009). Breaking it further down to the next stage, the audit office is subject to analysis, as office expertise and composition of industry experts might determine differences in how faithfully disclosed financial accounting information reflects the firm's underlying economic performance (see, e.g., Francis and Yu 2009; Li 2009; Choi, Kim, Kim, and Zang 2010; Reichelt and Wang 2010). At the final stage, people conduct the audit and perform tasks in audit processes (Ferguson et al. 2003; Kachelmeier 2010). Although, the prior literature documents that audit firms perform numerous quality control mechanisms (e.g., review processes) at different levels, such as firm-wide, office-wide or team-wide, individual auditors are in charge of directing total effort, interpreting audit evidence, and directly determining the appropriateness of audit outcomes (Rich, Solomon, and Trotman 1997; Ferguson et al. 2003; Kachelmeier 2010).

The first essay of this dissertation adds to this growing stream of literature on the influence of individual auditor characteristics on audit quality and follows the frequent call for more

research at the individual auditor level (DeFond and Francis 2005; Francis 2011; DeFond and Zhang 2014; Lennox and Wu 2017).[1] This call for research has become particularly prominent since the U.S.-American Public Company Accounting Oversight Board (PCAOB) and the SEC have recently adopted new rules that require disclosing the engagement partner's name in the audit report starting from January 31, 2017 (PCAOB 2015). The first essay specifically focuses on the lead auditor's engagement in research, as there is an ongoing debate about a gap between research and practice (Pathways Commission 2014; Ratzinger-Sakel and Gray 2015). Research often has the goal of being valuable for practitioners as well as for the profession. It shall provide insights that are relevant to practitioners, and that help them to meet their professional needs (Albrecht and Sack 2001; Nearon 2002; Hopwood 2007; Evans, Burritt, and Guthrie 2011; Kaplan 2011). However, practitioners often do not perceive research to be useful for their daily practice (Inanga and Schneider 2005; Moser 2012). Consistent with this view, Nearon (2002) reports a schism between academia and practice in the accounting profession with these two fields appearing to diverge with an only limited integration of academic research skills into practice. The reason for this phenomenon might be, on the one hand, that research focuses too much on rigor and advanced statistical methods, which are potentially not understandable for practitioners. On the other hand, researchers tend to strong simplification of practical auditing problems, which then potentially no longer reveal problems practitioners tackle in their daily business (Moser 2012; Ratzinger-Sakel and Gray 2015). In this vein, the first essay contributes to two streams of academic research. First, research on the impact of individual auditor characteristics on their audit outcomes and, second, research on the gap between academic research and practice. As auditors who engage in research by making

[1] See also DeFond and Francis (2005), Francis (2011), DeFond and Zhang (2014), and Lennox and Wu (2017) for review of literature on individual auditor research.

academic publications (i.e. journal articles, books, and book chapters) appear likely to bridge the gap between academic research and practice it is of particular interest to look into this interaction and shed light on the influence of academic publications on audit quality and audit fees.

While audited financial statements shall provide current and potential shareholders with relevant information for capital allocation, (changes in) financial disclosure regulation might influence behavior itself, beyond the level of accounting standards. Leuz and Wysocki (2016) distinguish between real effects and capital-market effects of financial accounting information. Real effects refer to "situations in which the disclosing person or reporting entity changes its behavior in the real economy (e.g., investment, use of resources, consumption)" (Leuz and Wysocki 2016, p. 545). In contrast, "capital-market effects arise from the behavior of the information receiver, such as investors and financial analysts" (Leuz and Wysocki 2016, p. 545). Focusing on capital-market effects, prior literature examined research questions related to the influence of disclosure on efficient markets, such as the association between disclosed financial accounting information and, for example, market liquidity, firm-level liquidity, cost of capital, earnings quality, earnings volatility or earnings smoothing (see, e.g., Brueggemann, Sellhorn, and Hitz 2013; Leuz and Wysocki 2016 for review).

In contrast, the empirical literature on real effects of disclosed accounting information is scarce (Leuz and Wysocki 2016). This phenomenon, however, appears unintelligible as Gigler, Kanodia, Sapra, and Venugopalan (2014), Kanodia and Sapra (2016) or Graham, Harvey, and Rajgopal (2005) provide analytical and survey-based evidence that financial disclosure affects managerial behavior and is leading to, for example, short-sighted investment decisions. In a similar vein, an emerging stream of literature examines the association between financial

reporting quality[2] and managerial investment decisions assuming that higher reporting quality results in better investment decisions by managers (e.g., Biddle and Hilary 2006; Biddle, Hilary, and Verdi 2009; Badertscher, Shroff, and White 2013). In line with this literature, extant studies show managerial real-effects revealing in a shift from accrual-based to real earnings management around seasoned equity offerings and the Sarbanes-Oxley Act (SOX) (e.g., Cohen, Dey, and Lys 2008; Cohen and Zarowin 2010). The second essay of this dissertation follows the call for more research on the sparse stream of real-effects literature by Leuz and Wysocki (2016) and approaches financial accounting information from the perspective of real effects of accounting information reforms. In detail, we empirically examine the real effects of financial disclosure by investigating corporate risk-taking around changes in the regulation of the disclosure of financial accounting information. On the one side, corporate risk-taking is an essential driver for innovation (Bromiley 1991). On the other side, excessive risk-taking can be associated with unexpected as well as severe losses, which has been shown in the recent financial crisis (Leaven and Levine 2009). Consequently, this dissertation focuses on the research question whether corporate risk-taking changes on major shifts in the accounting information environment. Specifically, this dissertation examines changes in corporate risk-taking with respect to the mandatory adoption of the International Financial Reporting Standards (IFRS), changes in the enforcement of accounting standards, and the adoption of quarterly reporting in the European Union (EU)[3], which taken together, lead to more relevant

[2] In contrast to the aforementioned definition of audit quality, earnings quality defines as follows: "Higher quality earnings provide more information about the features of a firm's financial performance that are relevant to a specific decision made by a specific decision-maker" (Dechow, Ge, and Schrand 2010, p. 344).

[3] The EU's Transparency Directive requires all firms listed on a regulated stock market to disclose Interim Management Statements (IMS), which include information on the financial position and performance for the first and third quarter. The information included in IMS varies between firms, however, we concentrate on the higher reporting frequency, which provides a timelier disclosure of important developments (Ernstberger, Link, Stich, and Vogler 2017).

and comparable, more reliable as well as more timely financial accounting information. These changes represent exogeneous shocks to the firms' information environment, which are suggested to allow managers for a better identification of risks and investors for a better monitoring of managerial risk-taking. However, changes in financial disclosure, for example, the introduction of a new accounting standard, result from a long process in which various organizations participate to take influence on standard setters developing standards, which are applicable to the firms and consider their interests. For this reason, financial accounting information can finally be approached from the perspective of standard setting and lobbyism.

The International Accounting Standard Board (IASB) develops the IFRS aiming at transparency, accountability, and efficiency of worldwide capital markets (IFRS Foundation 2016). The IASB conducts its standard setting through an "open, participatory and transparent due process," which involves the participation of various stakeholder groups such as preparers of financial statements, audit firms, investors, governments, etc. (IFRS Foundation 2016, p. 15). All stakeholder groups are invited to comment on planned IFRS or amendments to existing standards at various stages in the consultative process (IFRS Foundation 2016).[4] Due to divergent interests of involved parties, high participation rates of as diverse stakeholder groups as possible are a major component of the standard setters' legitimacy. This is because the acceptance of developed accounting standards increases when constituents are actively involved in the development process (Suchman 1995; Durocher, Fortin, and Côté 2007; Jorissen, Lybaert, Orens, and Van Der Tas 2012; Larson and Herz 2013). As an example, auditors might prefer standards, which are straightforward, comprehensible, and easy to audit.

[4] The IASB standard-setting process is called "due process." For that reason, we use the terms standard-setting process and due process interchangeably. Further, we use the IASB standard-setting process and IFRS standard-setting process interchangeably.

Whereas in contrast, firms might prefer standards that include many decision rights. Further, an active involvement of constituents enables the IASB to adequately incorporate different opinions and interests of various stakeholder groups in order to develop accounting standards, which are broadly accepted, less likely to be subject to criticism, consistently applicable, and compliant (Zimmermann, Werner, and Volmer 2008; Luthardt and Zimmermann 2009; Larson and Herz 2013). The IASB has anchored this policy in their constitution: "[…] to take account of, as appropriate, the needs of a range of sizes and types of entities in diverse economic settings" (IFRS Foundation 2013a, p. 5). Extant literature has provided initial evidence about the constituents' diversity, for example, by showing that preparers send the most comment letters compared to other stakeholder groups like auditors, user or (national) standard setter, revealing higher motivation to participate in the standard-setting process (Jorissen et al. 2012). Focusing on the geographical distribution, prior literature shows an over-influence of several countries like Germany, France or the United Kingdom as well as some regions in the IASB standard-setting process. This phenomenon might be attributable to differences in the ambition to participate resulting from memberships in the EU or G4+1, or language barriers (Larson 2007; Botzem and Quack 2009; Larson, Herz, and Kenny 2011; Larson and Herz 2013).[5] Hence, there is some initial indication whether it is possible for the IASB to fulfill its objectives, which depends on the constituent's willingness to participate in the standard-setting process directly. Approaching accounting information from the perspective of standard setting, resp. lobbyism[6] in standard setting, this dissertation provides new insights into whether

[5] G4+1-countries refer to Australia, Canada, New Zealand, the United States of America, and the United Kingdom (Botzem and Quack 2009; Larson and Herz 2013).

[6] Based on Sutton (1984), lobbyism can be described as "all the actions which the interested parties take to influence the rule-making body" (p. 81). In this dissertation, we follow Königsgruber (2009) and use the term lobbyism neutral as well as we only refer to lobbyism as sending comment letters to the IASB.

the IASB can reach its target to motivate as many organizations from diverse stakeholder groups and different countries as possible to participate in the standard-setting process. This research question is of particular interest as constituents' active participation in the IASB standard-setting process is seen as fundamentally for broadly accepted and legitimate IFRS.

Taken together, the main research questions of this dissertation address important issues approaching financial accounting information from three different perspectives, i.e. the quality of the auditor to assure a faithful presentation of the firm's underlying economics, the real effects of changes (reforms) in financial accounting information, and lobbyism in the IASB standard-setting process to develop broadly accepted and legitimate IFRS: Does auditor engagement in research has an impact on its work outcomes, i.e. audit quality and audit fees? Does corporate risk-taking change with respect to more relevant and comparable, more reliable as well as more timely financial accounting information? Does the IASB reach its target and motivate diverse stakeholder groups from different countries to participate in the due process to ensure worldwide acceptance and legitimacy of IFRS?

## 1.2 Structure of the Dissertation and Main Findings

This section provides an overview of the structure of the dissertation at hand and gives a brief summary of each essay.[7] This dissertation is a cumulative work consisting of three essays that approach financial accounting information from three different perspectives: individual auditor quality to ensure reliable financial accounting information, real effects of changes in the accounting information environment, and lobbyism in the IASB consultative standard-

[7] Please note that individual essays are currently under review in journals or are in the preparation process for a submission to a journal. For that reason, it is likely that the essays' versions provided in this dissertation will be subject to subsequent revisions aiming at publishing the essays in a journal. Please make sure to only cite the latest version of the papers which will be available upon request or on scientific research platforms.

setting process. After the introduction in Chapter 1, the main part provides Essay 1 on individual auditor characteristics in Chapter 2, Essay 2 on changes in financial accounting information and corporate risk-taking in Chapter 3, and Essay 3 on lobbyism in the IASB standard-setting process in Chapter 4.

The first essay deals with lead auditors that engage in practice-oriented research parallel to their audit activities. More specifically, the essay examines whether academic practitioner auditors (APA) provide higher audit quality and are associated with higher audit fees compared to their non-APA peers. We define APAs as auditors being engaged in practice-oriented research by composing journal articles, books, and book chapters parallel to their actual day-to-day engagement as lead auditors. Focusing on the individual characteristic that APAs appear likely to bridge the gap between research and practice, the first essay contributes to the current debate of the American Accounting Association (AAA) and the American Institute of Certified Public Accountants (AICPA) on the gap between research, practice, and education, which avoids synergies between those three currently separated systems (Pathways Commission 2014). Correspondingly, Ratzinger-Sakel and Grey (2015) quantify the gap between practice and academic in the audit profession showing that 50 percent of research themes manifested by Lesage and Wechtler (2012) did not match with research recommendation provided by the Advisory Committee on the Auditing Profession Final Report (2008). This finding suggests a wide gap between the research and practice community. Despite the emerging stream of auditing literature that deals with individual auditor characteristics and auditor reputation effects (e.g., Craswell et al. 1995; Francis et al. 2005; Gul, Wu, and Yang 2013; Zerni 2012; Sundgren and Svanström 2014; Knechel, Vanstraelen, and Zerni 2015; Goodwin and Wu 2016), Essay 1 considerably contributes to prior literature as we examine non-practical experience and personal reputation, which APA acquire through practice-oriented research, and they make use

of when bridging the gap between research and practice. Due to the scarce literature on practitioner research in auditing, we start our investigations by conducting interviews with ten German APAs to gain deeper insights into their perception of their engagement in research. Our interviews reveal, first, that APAs characterize their publications as practice-oriented research and underline that their publications distinct from public relations material that is also published by their audit firm. Second, APAs emphasize that immersing themselves into the topic and the related literature helps them to gain considerable knowledge that is beneficial to their day-to-day business. Third, APAs argue that publications constitute a valuable signal recognized by the client and that enables individual auditors to differentiate themselves from their non-APA peers. However, interviewed APAs question whether publications help them to generate higher audit fees.

Further, we conduct a survey among editors of journals APAs have published to gain deeper insights into the nature of APAs' articles and the journals' audience. Our survey reveals that APAs mostly publish in journals where the editors describe articles as practice-oriented research that meets academic standards and where all articles are subject to a peer-review process. This evidence increases our confidence that APA publications substantially differ from public relations material also being published by audit firms.

In our empirical analysis, we find that clients of APAs have lower levels of absolute abnormal accruals, are less likely to have accounting restatements, and are associated with higher audit fees. Hence, we provide evidence that APAs provide higher audit quality and are associated with higher audit fees. In additional tests, we find coherent patterns which might allow for a cautious causal interpretation of our results: First, we conduct an instrumental variable approach using the proportion of other APAs in the office as an instrument ("peer encouragement") in addition to instruments which are in line with previous literature (Chi,

Myers, Omer, and Xi 2017). Second, we use matched samples based on Lawrence, Minutti-Meza, and Zhang (2011) to control for selection effects. Third, we examine mandatory rotations in detail and show that a mandatory replacement of a non-APA by an APA has an incremental positive effect on both audit quality and audit fees. Fourth, we consider the characteristics of the article and the journal in which the article is published to establish coherent patterns. For example, we document that the audit quality effects of a publication are stronger for articles published in ranked journals versus non-ranked journals.[8] Fifth, we conduct a change analysis for measuring the effects of an additional publication by keeping auditor characteristics constant, providing evidence for publication effects and not for auditor trait effects. Conducting several sensitivity tests, we finally show that engagement in publications also enhances the accuracy of going-concern modifications and contributes to a longer auditor-client tenure. Comparing Big 4 and non-Big 4 auditors, we show that the APA publication effects appear to be restricted to Big 4 auditors. Based on our interviews, we suggest that the branding of Big 4 audit firms is already strong and Big 4 auditors might rather compose academic publication due to their motivation and the willingness to enhance their skills.

The second essay deals with the real effects of changes in the accounting information environment. More specifically, we examine changes in corporate risk-taking on three accounting information events: (1) the mandatory adoption of IFRS, (2) changes in the enforcement of accounting standards, and (3) the adoption of quarterly reporting in the EU. This essay makes several contributions to the literature. First, we add to the literature on real effects of accounting information and disclosure by showing that corporate risk-taking changes after the accounting information events (Cohen et al. 2008; Cohen and Zarowin 2010;

[8] We use the "JOURQUAL3" journal ranking provided by the German Association for Business Research (VHB) to distinguish between ranked and non-ranked journals.

Gigler et al. 2014). In a similar vein, we contribute to the literature that investigates the economic and real effects of adopting IFRS, enacting enforcement reforms or adopting quarterly reporting (Daske, Hail, Leuz, and Verdi 2008; Cohen et al. 2008; McNichols and Stubben 2008; Horton and Serafeim 2010; Horton, Serafeim, and Serafeim 2013; Christensen, Hail, and Leuz 2013; Daske, Hail, Leuz, and Verdi 2013; Hail, Tahoun, and Wang 2014; Gigler et al. 2014; Ernstberger, Link, Stich, and Vogler 2017). Finally, we add to the extant literature that investigates investor protection as well as a country's legal tradition as determinants of corporate risk-taking by emphasizing that more relevant and comparable, more reliable, and more timely accounting information can affect corporate risk-taking (Wright, Kroll, Krug, and Pettus 2007; John, Litov, and Yeung 2008).

Essay 2 provides evidence that changes in the accounting information environment are associated with decreases in corporate risk-taking. Specifically, this effect can be shown for all firms subject to enforcement reforms. For the mandatory adoption of IFRS as well as for the adoption of quarterly reporting, we cannot find initial evidence to be associated with corporate risk-taking per se. These results appear to be in line with Christensen et al. (2013) documenting that, for the IFRS adoption, only countries with high regulatory quality and thus stronger legal systems, successfully implement this new regulation (Christensen et al. 2013). For this reason, we conduct additional analysis looking into cross-country variation in regulatory quality as well as the enforcement quality (Kaufmann, Kray, and Mastruzzi 2009; Brown, Preiato, and Tarca 2014). We find a statistically significant and negative association between changes in accounting information and corporate risk-taking for all three accounting information events, however, limited to the countries with an already high level of regulatory and enforcement quality. Thus, the impact of the changes in the accounting environment appears to be conditional upon whether a country successfully implements these reforms. Following

Christensen et al. (2013), we examine the mandatory IFRS adoption in more detail, as it represents a considerable external shock to the accounting information environment in the last decade and prior research shows that it is important to differentiate between the adoption of the new accounting regime and (concurring) enforcement reforms (Daske et al. 2008; Christensen et al. 2013). We document that changes in corporate risk-taking appear to be influenced by the bundled effect of mandatorily adopting IFRS and enforcement reforms parallel to each other, emphasizing the importance of enforcement institutions on new accounting regulations. Trying to figure out whether the change in corporate risk-taking is rather associated with better internal decision-making using higher-quality accounting information or closer monitoring of investors due to more transparency, we examine the number of disclosed financial risk categories (Dobler, Lajili, and Zéghal 2011). Our findings indicate that changes in the accounting environment do not influence the identification of risks within the firm. Hence, we cannot find evidence supporting the assertion that managers are better equipped for internal decision-making, which suggests that our findings of lower risk-taking seem to be driven by improved monitoring of external investors. Finally, we examine whether the adjustments in the level of corporate risk-taking are associated with changes in shareholders' returns. Our results indicate that a decrease in corporate risk-taking appears likely to have positive consequences for investors. Taken together, Essay 2 provides evidence that changes in the accounting information environment appear likely to have real effects on the behavior of managers focusing on changes in the corporate risk-taking.

The third essay deals with lobbyism in the IASB consultative IFRS standard-setting process. Prior literature has primarily focused on the determinants of stakeholder participation in the standard-setting process for one single IASB project, for example, Exposure Draft 8 "Operating Segments" or IFRS 4 "Insurance Contracts." These studies show that larger firms and

financially distressed firms are more likely to submit a comment letter (Katselas, Birt, and Kang 2011; Kosi and Reither 2014). In a similar vein, a further stream of literature follows a multi-issue/multi-period approach by examining the participation in the standard-setting process for multiple IASB projects over a period of time (e.g., Georgiou 2004; Jorissen et al. 2012; Larson and Herz 2013). These studies provide indications that preparers submit the most comment letters to the IASB compared to other stakeholder groups (e.g., auditors, financial statement users, and (national) standard setters) and initially document that the motivation to participate in the standard-setting process might be attributable to regional factors such as capital-market development. The third essay contributes to this stream of literature by continuing the multi-issue/multi-period approach by examining over 11,000 comment letters in the period 2009 to 2015 concerning their belonging to a certain stakeholder group and geographical origin. Specifically, the essay shifts the focus on the constitutional target of the IASB to develop IFRS, which are broadly accepted, and contributes to the literature by providing descriptive evidence that the distribution of the participation in the IASB standard-setting process is highly skewed with respect to the commenting stakeholder groups and its geographical origin. For this reason, it is questionable whether the IASB reaches its target to develop standards, which are accepted and legitimized by the participation of as many organizations from diverse stakeholder groups as possible. We show that on average 40 percent of the comment letters are submitted by preparers, followed by auditors (26 percent) and (national) standard setters (18 percent). Therefore, over 80 percent of the comment letters are attributable to only three stakeholder groups. Looking into the diversity within the stakeholder groups, we show that the participation is highly concentrated on the same organizations that frequently submit comment letters. We document that the five organizations with the highest number of comment letters in a respective stakeholder group submit on average 40 percent of

the comment letters of the whole stakeholder group. Focusing on the geographical origin of participating organizations, we find that 39 percent of the comment letters are submitted by European countries, followed by North American countries (21 percent), and Asian countries (16 percent). We further show that organizations from 61 different countries have on average submitted at least one comment letter in the period 2009-2015. Additionally, our results reveal that 47 percent of all submissions to the IASB are comment letters sent from only five countries. In further analysis, we document that organizations from G4+1-countries appear not to dominate other organizations, language barriers might not be a reason for missing participation, and organizations from IASC founding countries noticeably more frequently submit comment letters. Taken together, it appears questionable whether the IASB can incorporate the opinions of a highly diverse distribution of stakeholders and geographical origins. For this reason, it seems unlikely that the IASB can reach its own target to develop IFRS, which are broadly accepted, less likely to be subject to criticism, consistently applicable, and compliant.

Chapter 5 concludes this dissertation and provides an outlook for future research avenues.

# 2 Academic Practitioner Auditors

**Abstract**

Academic practitioner auditors engage in practice-oriented research in terms of publishing journal articles, books, and book chapters on top of their audit activities. Based on theory and interviews with academic practitioner auditors, we argue that engaging in research helps practitioners to deliver higher audit quality and to generate higher audit fees. Using data from Germany, where lead auditors frequently engage in practice-oriented research, we find empirical evidence for these conjectures. Our study contributes to the audit literature as well as to the current debate of the AAA and AICPA about the value of bridging the gap between academia and audit practice.

**Keywords:** academic practitioner; audit quality; restatements; audit fee

**JEL Classification Code:** M40, M41

**Co-authors:** Jürgen Ernstberger and Christopher Koch

**Current status:** Preparation for resubmission (2nd Round) to *The Accounting Review*

**Paper presentations:**
2015 31st EAA Doctoral Colloquium, St. Andrews, UK
2015 European Accounting Association, 38th Annual Congress, Glasgow, UK
2015 21st Annual International Symposium on Audit Research Boston, USA
2015 Research Seminar at Freie Universität Berlin
2016 Research Seminar at University of Mannheim
2017 American Accounting Association, Auditing Section Midyear Meeting, Orlando, USA
2017 Research Seminar at University of Hamburg

**Acknowledgements:** We gratefully thank the following for valuable comments, suggestions, and insights into practice: Clive Lennox (editor), two anonymous reviewers, Matthew Baugh (Discussant), Pietro Bianchi, Jochen Bigus, Jannis Bischof, Joseph Carcello, Holger Daske, Wolfgang Drobetz, Jere Francis, Joachim Gassen, Bernd Grottel, Kris Hardies, Jochen Hundsdoerfer, Steven Kachelmeier, Christian Leuz, Andreas Loeffler, Juliane Lotz, Benjamin Lüders, Roger Meuwissen, Katharina Nicolay, Thomas Omer, Peter Pope, Paul Pronobis, Nicole Ratzinger-Sakel, Klaus Ruhnke, Steven Salterio, Thorsten Sellhorn, Catherine Shakespeare, Susanne Urner-Hemmeter, Dennis Voeller, Johannes Voget. Furthermore, we gratefully thank all interview and survey participants.

## 2.1 Introduction[9]

This study investigates whether auditors benefit from an engagement in research in terms of higher audit quality and higher audit fees. We label auditors as "academic practitioner auditors" (APAs) who engage both in audit practice, by acting as lead auditors, and in research, by publishing journal articles, books, and book chapters. The publications of APAs are usually practice-oriented and discuss, for instance, the interpretation of new accounting or auditing standards. These publications differ from public relations material published by audit firms as they reference other academic articles, offer a balanced discussion of previous literature, and indicate their contribution to the literature.

Our study adds to the current debate about the value of bridging the gap between research and practice. In general, research should provide insights that are relevant for practitioners and that help them meet their professional needs (Albrecht and Sack 2001; Nearon 2002; Hopwood 2007; Evans, Burritt, and Guthrie 2011; Kaplan 2011). However, practitioners often do not perceive research to be useful for their daily practice (Inanga and Schneider 2005; Moser 2012). This is because the complex theoretical or empirical methods and the high level of abstraction of academic research impede its linkage to real-life audit problems (Moser 2012; Ratzinger-Sakel and Gray 2015). Addressing this issue, the Pathways Commission sponsored by the American Accounting Association (AAA) and the American Institute of CPAs (AICPA) argues that "strong linkages between research and practice […] are key to sustaining an intellectually recognized profession" (Pathways Commission 2012, p. 27). As one initiative to strengthen the linkage and to overcome the problem that "accounting practitioners are not significant

[9] The idea of this paper is based on my master thesis (Prott 2014) submitted to the Chair of Accounting and Auditing (Ruhr-University Bochum), May 2014.

consumers of academic accounting research," it formulates the objective to "focus more academic research on relevant practice issues" (Pathways Commission 2012, p. 11). In this paper, we examine the related question whether bridging the gap between research and practice through a stronger engagement of practitioners in research is valuable in terms of allowing practitioners to benefit from it in their daily practice.

To study the impact of engaging in research, we opted for the setting of Germany, where APAs are more prevalent compared to the United States and other countries.[10] In Germany, an integration of research and practice has been achieved (at least to some degree) given an accounting research culture that is "traditionally strongly rooted in codified law" (Küpper and Mattessich 2005, p. 371). In line with this tradition, German accounting researchers have interpreted and developed theoretical foundations of accounting principles (Küpper and Mattessich 2005). As these topics are of high practical relevance, practitioners were both active consumers as well as producers of research, with the consequence that important specialized practitioner journals emerged (Fülbier and Weller 2011). While the German accounting environment has substantially changed over the last two decades and has converged towards international standards, the path-dependency created by the traditional German accounting research culture entails that specialized practitioner journals continue to exist and that audit practitioners continue to engage in research.

[10] APAs are not a pure German phenomenon, though. To compare the prevalence of APAs internationally, we hand-collect information on authors' identities for all articles published in selected journals issued by professional bodies in 2015. The proportion of articles with at least one author being an auditor and the journal ranking according to VHB JOURQUAL3 is as follows: The German *Die Wirtschaftsprüfung* (61.1 percent, C-ranked), the Swiss journal *Expert Focus* (20.3 percent, D-ranked), the U.S.-American *CPA Journal* (12.2 percent, non-ranked), the Austrian *iwp Journal* (10.7 percent, non-ranked), the Scottish *CA Magazine* (9.2 percent, non-ranked), U.S.-American *Journal of Accountancy* (7.0 percent, D-ranked), U.S.-American *Accounting Horizon* (3.6 percent, B-ranked), and the British *Economia* (2.0 percent, non-ranked).

We argue that engagement in research helps APAs to deliver higher audit quality. Active engagement in research enables APAs to internalize and critically reflect on new rules, methods, and concepts of auditing and accounting. We base our expectations on constructivist learning theory, purporting that people generate and preserve knowledge when they are actively involved in a learning process, for example, by reading and producing research (Piaget 1967). Further, proponents of evidence-based management approaches suggest that scientific knowledge and skills improve decision-making processes, as people enhance their critical and systematic thinking when making decisions based on empirical evidence (Leung and Bartunek 2012).

We also predict that APAs generate higher audit fees than their peers. Clients can be expected to have a higher willingness to pay for audit services if they observe the higher audit quality provided by APAs or if they infer it from APAs' reputation developed through academic publications. Academic publications are a fundamental instrument to communicate research findings aimed at developing a reputation (Fox 1983). Hence, academic publications serve APAs as a credential for having advanced knowledge in a certain field. In addition, academic publications are likely to enhance the APAs' personal visibility, as clients and investors could easily recognize an auditor's name from the literature (Merton 1968). Based on these arguments, we expect that academic publications represent a signaling instrument for acquired skills that enables auditors to distinguish themselves from their non-APA peers.

The phenomenon of practitioners engaging in academic research is prevalent in many professional fields, such as law, medicine, psychology, education or social work (e.g., Staudt, Dulmus, and Bennett 2003). However, empirical studies exploring this topic are rare. One exception are studies on library and information science practitioners engaging in research. These studies find that practitioners in this field play an active role as authors and contribute

over 30 percent of all articles published in academic journals (Schlögl and Stock 2008; Finlay, Ni, Tsou, and Sugimoto 2012). Survey-based findings show that the main motivation for librarian and information science practitioners to publish are "to improve practice in the organization," "personal interest," and "to raise personal profile" (Powell, Baker, and Mika 2002; Schlackman 2009). The main factors enabling practitioners to engage in research are "protected time to write" and "peer encouragement" (Clapton 2010; Klobas and Clyde 2010). Powell (1997) argues that conducting research helps practitioners to advance their career, to improve their ability to think critically, and to enhance their status within the community. Yet, prior archival research has not investigated whether these positive effects really exist.

Given the lack of literature on practitioner research in auditing, we conduct interviews with ten German APAs. We find, first, that APAs characterize their publications as practice-oriented research that complies with academic standards and is distinct from the public relations materials of their audit firm. Second, APAs emphasize that immersing themselves into the topic helps them to gain knowledge that is of value in their day-to-day business. Third, APAs acknowledge that publications constitute a valuable signal that is recognized by the client and that enables individual auditors to differentiate themselves from their non-APA peers, but question whether publications help auditors to generate higher audit fees.

We conduct a survey among the editors of the journals in which APAs publish in order to gain a better understanding of the nature of APAs' articles and the journals' readership. We find that many journals from our sample have an anonymous peer-review process in place. Further, most editors characterize the articles published in their journals as practice-oriented research that meets academic standards. They state that the journals' readership consists of academics, top management as well as audit and accounting practitioners.

For our empirical tests, we collect archival data for the German audit market.[11] We use a sample of all non-financial German listed firms, hand-collect data on the identity of lead auditors from audit opinions, and match it with information on auditor characteristics from the German professional register.[12] To identify APAs, we search publication databases. To measure audit quality, we use a cross-sectional performance-adjusted modified Jones model as a proxy for earnings management (Kothari, Leone, and Wasley 2005) and accounting restatements triggered by the German Financial Reporting Enforcement Panel (FREP) as an indicator for low audit quality (Ecker, Francis, Olsen, and Schipper 2013). We hand-collect audit fee information from annual reports.

We find that clients of APAs have lower levels of absolute abnormal accruals, are less likely to have accounting restatements, and are associated with higher audit fees. We provide evidence suggesting that these effects might be causal using several identification strategies: First, we apply an instrumental variable approach using the presence of other APAs in the office as an instrument ("peer encouragement") in addition to instruments used in prior literature (Chi, Myers, Omer, and Xi 2017). Second, we use a matched sample approach to control for the sorting of clients and APAs. Third, we perform a change analysis for a switch in the lead auditor, keeping client characteristics constant. Fourth, we conduct a change analysis for measuring the effects of an additional publication by keeping auditor characteristics constant, providing evidence that we observe publication effects rather than auditor trait effects. Fifth,

[11] Today, the institutional background in Germany for publicly listed companies and for auditors is very similar to that of the United States. A distinct institutional feature is the limitation of auditor liability. In the case of negligence, the liability of auditors is limited at 4 million euros. The audit firm is the only party allowed to initiate a lawsuit (Sect. 323 HGB). An auditor's low litigation risk introduces the benefit that audit fees are less biased by incorporating self-insurance for expected damages from potential low audit quality (Choi, Kim, Liu, and Simunic 2008).

[12] To complete our data and for the purpose of cross-checking data validity, we also use data collected by Jan Oester within the scope of his master thesis (Oester 2016).

we consider publication characteristics to establish coherent patterns and find, for example, that the positive effects on quality are stronger for articles published in ranked journals versus those published in non-ranked journals. In addition, we perform several sensitivity tests. For example, we show that engagement in publications enhances the accuracy of going-concern modifications and contributes to a longer auditor-client tenure. Our results are robust when restricting the sample to Big 4 auditors.

Our study contributes to previous literature, first, by providing novel empirical evidence on the effects of practitioner research in auditing. In this regard, our study relates to the current debate of the AAA and the AICPA on the gap between research, practice, and education (Pathways Commission 2012) by showing how actors are crossing the boundary between practice and research can benefit from it. Going beyond auditing, our study extends the limited prior literature on academic practitioners (e.g., Powell et al. 2002) by providing initial evidence that an engagement in research has a positive influence on their daily work. Second, we add to the literature on the impact of individual auditor attributes on audit quality, following the call for more research at the individual auditor level (e.g., DeFond and Zhang 2014). Our study adds to the prior literature by investigating whether auditors acquire relevant skills for their daily work through engagement in research, whereas most prior research focuses on skills acquired through engagement in practice (e.g., Zerni 2012; Chi et al. 2017). Third, our study identifies engagement in audit research as a driver of auditor reputation (Craswell, Francis, and Taylor 1995; Francis, Reichelt, and Wang 2005; Zerni 2012). Prior literature provides evidence for reputational effects based on the brand name and industry leadership. We extend this literature by providing evidence that publications help auditors to generate an audit fee premium.

We organize the remainder of our paper as follows: Section 2.2 provides our findings from interviews with APAs. Section 2.3 surveys related literature and develops the hypotheses. Section 2.4 describes our sample selection, descriptive statistics on APAs and the journals in which they publish. Section 2.5 explains the methodology and reports the empirical results. Section 2.6 provides tests for addressing potential endogeneity problems. Section 2.7 describes methodological variations and additional tests. Section 2.8 concludes this study.

## 2.2 Interviews with Academic Practitioner Auditors

### 2.2.1 Method and Participants

Given the lack of prior research on the topic of audit practitioners engaging in practice-oriented research, we conduct an explorative interview study with ten German APAs to develop a better understanding of this phenomenon. We interview nine male and one female auditor from Big 4 (five participants) and non-Big 4 audit firms (five participants). Participants have a median of three publications (mean = 38.0) and a high level of audit experience (mean = 15.1 years). We recruit participants who are part of the sample of our empirical study and who had at least one publication within the last six years. We approach the participants based on the contacts of the authors as well as interview requests sent by email.

In our interviews, we cover (1) APAs' perception of the nature of their publications; (2) their motivation to publish; (3) the impact of their publications on their daily audit practice; and (4) the impact of their publications on their reputation (see Appendix 3-A for the interview guidelines). We use a semi-structured interview approach combining open-ended interview questions that allow participants to express their experiences freely with closed-ended questions based on a predefined five-point Likert scale (e.g., Trompeter and Wright 2010). One or two of

the authors conducted the interviews in person or by phone, each taking between 15 and 50 minutes. We audiotaped all interviews with permission and transcribed them word for word. Two of the authors coded the responses independently and reconciled all remaining differences afterward. The inter-coder agreement averaged 92 percent.

### 2.2.2 Findings

Table 2-1 presents the results of the closed-ended questions of our explorative interview study. First, we asked the APAs about the nature of their publications. Overall, we find that APAs characterize their work as practice-oriented but complying with academic standards. In a closed-ended question, participants agree only partly with the statement that their publications are pure guidelines for practice with no academic basis (mean = 3.35).[13] Moreover, all interviewees see their publications as being clearly distinct from public relations materials, mentioning that their publications are longer, provide a more balanced view, reference prior literature in the footnotes, and feature an academic writing style. Among the typical responses on the nature of APAs' publications:

> [Using publications as public relations material] is never our focus, because [publications] are too time-consuming […]. Typical marketing materials that we use are much easier to put together compared to writing a longer article. (R6, Big 4)

> Publications in books and journals usually have a stronger focus on the content and are very topic-based, whereas other materials are more marketing oriented. (R6, Big 4)

Second, we investigate APAs' motivations to publish. Most participants respond that they publish to study specific issues in more detail and to structure these issues systematically for

[13] In all closed-ended questions of our interview study, we asked participants to express their agreement with a statement on a five-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree."

themselves. Moreover, they seek to spread and establish an opinion about how to apply a (new) financial reporting standard, to provide guidance for accountants and the audit profession, and to increase their reputation in terms of signaling their expertise in a certain field. The following quote summarizes some of the main points:

> First, you have the motivation to contribute to the discussion on a certain topic […], second, there is definitely an area where you aim at establishing an opinion by publishing an article on a topic, in order to interpret [standards] for practice. Third, we use publications as a marketing instrument. (R2, non-Big 4)

The APAs unanimously reject the statement that their audit firm provides them with financial incentives to publish (mean = 1.00). They point out that only those colleagues not acting as signing auditors but working in the national office's central research unit may be compensated for publishing research. Instead, our participants acting as signing auditors explain that they are intrinsically motivated to engage in publications. Moreover, we find that APAs disagree with the statement that only exceptionally good auditors are motivated by the audit firm to publish (mean = 1.60). We also asked whether only exceptionally good auditors publish research, for which we identified very limited agreement (mean = 2.50). Instead, auditors state that composing articles is not about being a good auditor but about whether you are willing to spend your spare time doing it:

> There are many competent colleagues who are excellent auditors but who do not publish articles. They would say "I publish audit opinions and not articles." (R8, Big 4)

> It is like being a surgeon. To be a good surgeon, you have to perform surgeries. Giving lectures does not help in this case. (R10, Big 4)

Third, we explore the impact of publications on audit work. Participants agree very strongly with the statement that publications help them to gain knowledge and skills that are relevant to

their day-to-day business (mean = 4.70). APAs say that both performing the literature review and the writing help them to deepen their knowledge, to analyze practical topics from a more theoretical perspective, and to stay up to date with respect to new standards and regulations. The following quotes underline how publications might have an impact on audit outcomes:

> Because [in composing research] you deal with a question independently from a specific client, and this question is often relevant to many other clients. […] Auditing is like sightseeing. Only when you've already seen sights, for example on TV, you will recognize them when you are really there. So, tourists in Paris might pass by a glass pyramid unaware that that's the Louvre […]. Therefore, if I haven't stumbled across something before, I will not recognize it in the audit. (R5, Non-Big 4)

> If you put something specific in writing, this forces you to examine certain topics more deeply. (R8, Big4)

> I am of the opinion that dealing with topics in this way widens your horizons and you approach these topics completely differently. (R1, non-Big 4)

Fourth, we explore reputational effects of APAs' publications. We find that APAs agree that publications help them to enhance their personal reputation (mean = 3.95). They are confident that their clients recognize the publications. Some APAs also send out their publications to clients and make them available for download on their website, copyrights permitting. They partly agree with the statement that their publications help them get new clients (mean = 3.25), at least indirectly by enhancing their professional reputation:

> You don't get audit engagements because you have publications. You get audit engagements because you're regarded as being professionally qualified. Therefore, indirectly. (R7, Big4)

> Simply by demonstrating that there's a competent person, and that the audit firm deals with topics in a sufficiently deep manner. (R2, non-Big 4)

Other auditors are more skeptical about the role of publications in poaching new clients but nevertheless regard publications as helpful for retaining current clients:

> Publications are like barriers for other auditors to poach the client and prevent the relationship to the client from coming under pressure too quickly. (R5, non-Big 4)

Interestingly, while auditors believe that their publications enhance their reputation and might help them to win clients, they do not expect them to have an impact on audit fees (mean = 1.25). Participants justify this by the perceived current conditions of the audit market where clients are not willing to pay a premium:[14]

> [Publications] are only for getting your foot in the door. It doesn't matter how good you are. The client is never willing to pay for publications. Sorry, [it's] a bit depressing. However, that's the situation we're currently facing in the market. (R1, non-Big4)

> […] you negotiate with the procurement, and for them everything else is unimportant. The procurement people require three different proposals [from audit firms] that are identical in their view, and then they negotiate the price. (R6, Big 4)

Overall, the interviews suggest that publications have an impact on the audit work by enabling APAs to gain a deeper knowledge on specific topics, to improve their critical thinking and their analytical skills, and to help them in detecting problems. In addition, APAs expect an increase in their reputation but do not believe that this increase in reputation results in higher audit fees.

[14] We note that auditors might not be willing to disclose their private information on how they generate fee premiums, as this is a topic that is tightly intertwined with their business model.

## Table 2-1: Academic Practitioner Auditors' Perceptions on Publications

| Question | | (1) Average Score (all) | (2) Average Score (Big 4) | (3) Average Score (non-Big 4) | (4) *t*- statistic (2)-(3) |
|---|---|---|---|---|---|
| (Q1) | My publications are pure practice-oriented publications with no academic research standard. | 3.35 | 3.40 | 3.30 | -0.163 |
| (Q2) | The audit firm provides me financial incentives to publish. | 1.00 | 1.00 | 1.00 | - |
| (Q3) | Only exceptionally good auditors are provided with incentives to publish. | 1.60 | 1.40 | 1.80 | 0.566 |
| (Q4) | Only exceptionally good auditors have publications. | 2.50 | 1.60 | 3.40 | 2.286* |
| (Q5) | Due to my publication activity, I gain knowledge and skills which are relevant for my practical work. | 4.70 | 4.80 | 4.60 | -0.633 |
| (Q6) | My publications improve my personal reputation as an auditor. | 3.95 | 4.00 | 3.90 | -0.173 |
| (Q7) | My publications help me to win new clients. | 3.25 | 3.00 | 3.50 | 0.726 |
| (Q8) | Due to my publications, I have advantages in negotiating auditing fees. | 1.25 | 1.50 | 1.00 | -1.291 |

**Notes:** This table presents the results of interviewing APAs. The responses are measured on a five-point Likert scale with 1 = "strongly disagree" and 5 = "strongly agree." In Column 4, we show the tests for the difference in mean between Columns 2 and 3. Statistical significance based on two-tailed t-test at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

## 2.3 Prior Literature and Hypothesis Development

### 2.3.1 Prior Literature

Although auditing is highly regulated, lead auditors have a distinct impact on the audit as they exercise professional judgment in directing effort, in interpreting audit evidence, and in concluding the audit (e.g., Ferguson, Francis, and Stokes 2003). Accordingly, prior research has investigated whether lead auditors' incentives and characteristics matter for audit quality and audit fees (for a literature review, see Lennox and Wu 2017). Most closely related to our study is the research on auditor expertise. This literature has focused on the question of whether industry experts provide higher audit quality (e.g., Chin and Chi 2009; Chi and Chin 2011) and of whether they generate a fee premium (e.g., Zerni 2012; Goodwin and Wu 2014). Our study on APAs adds a new dimension to this literature. While prior research on industry expertise investigates the application of skills and knowledge acquired on the job across the audits of clients within the same industry, we examine the transferal of skills and knowledge that had been acquired from engagement in research to practice.

Another research stream investigates whether audit partners have certain characteristics or traits that are stable over time. Supporting this idea, Gul, Wu, and Yang (2013) find that audit partner have an impact on audit quality that persists over their various engagements. Further, they show that these audit partner fixed effects have some relation to demographic factors (e.g., educational background, Big N audit firm experience, and political affiliation). Relatedly, Knechel, Vanstraelen, and Zerni (2015) observe that auditors have a certain style associated with aggressive or conservative financial reporting that persists over time. He, Kothari, Xiao, and Zuo (2016) find that auditors starting their career during economic downturns continue to be more conservative throughout their career. Our study relates to this research as we assume

that engaging in research shapes auditors' skills and influences audit outcomes. Since prior research (e.g., Clapton 2010; Klobas and Clyde 2010) and the findings of our APA interview study suggest that the main factor enabling practitioner research is the availability of protected time and peer encouragement, we do not assume that publications are a proxy for inherent traits.

### 2.3.2 Impact of Academic Practitioner Auditors on Audit Quality

We expect that auditors engaging in practitioner research provide higher audit quality based on theories of constructivist learning and evidence-based management. Constructivist learning theory emphasizes the value of active involvement in the learning process for developing a deep understanding of the topic (Piaget 1967). Conducting research is an active learning process: It involves the identification of a research question, the processing, and reading of prior research, critical reflections, and discussions with co-authors and referees. Thus, auditors who are active as authors benefit from internalizing new rules, methods, and concepts of auditing and accounting (e.g., Creswell 2013). Further, Dadds (2006) argues that engagement in research helps practitioners to enhance their skills and knowledge.

Moreover, evidence-based management theory suggests that the decision quality improves when people make use of critical thinking as well as reflective judgment and decision skills (Rousseau and McCarthy 2007). Critical thinking includes uncovering implicit values, opinions, and assumptions (Perkins, Jay, and Tishman 1993; Facione 2000; Rousseau and McCarthy 2007). In line with this notion, Fox, Martin, and Green (2007) argue that scientists outline and tackle problems from different directions and introduce different logics compared to practitioners.

Based on this reasoning, we assume that APAs acquire advanced critical thinking skills and start to integrate research skills into practice. APAs may be better able to understand the logic

behind complex issues in audit engagements. Furthermore, engagement in academic research reminds APAs of accounting and auditing rules and theoretical concepts. Based on these assumptions, we state the following hypothesis:

**H1:** *Academic publications of APAs are positively associated with audit quality.*

Alternatively, engagement in research could be irrelevant or even detrimental to audit quality given the gap between academia and practice and the time needed for writing publications. For example, Malmendier and Tate (2009) find that "superstar CEOs" receiving prestigious business awards are more likely to write books than their peers, with the effect that their performance suffers due to distraction effects. One distinction reflected in our study is that superstar CEOs often publish about "the virtues of the CEO" (Malmendier and Tate 2009, p. 1622), whereas APAs publish on specific practical issues. Therefore, while we include the publications in the current year as a control variable for capturing distraction effects, we expect publications to have positive effects on audit quality in the subsequent years.

### 2.3.3 Impact of Academic Practitioner Auditors on Audit Fees

We investigate whether an engagement in research influences audit fees. Prior research regularly attributes fee premiums to higher reputation (e.g., Craswell et al. 1995; Francis et al. 2005; Zerni 2012). As our interview-based study reveals that one main motivation to publish is to develop a personal reputation, APAs could use their publications as a tool for

signaling acquired skills.[15] According to economic theory, signals have to be costly to be credible (Spence 1973). Publications fulfill this criterion as their production is time-consuming.

A client needs to become aware of the publication so that they can serve their function as signals. Publications seem to be a very suitable instrument for achieving the awareness. Auditors can send them to their clients or can provide them as part of the materials provided in audit tenders (Fiolleau, Hoang, Jamal, and Sunder 2013). Further, clients might recognize the auditor's name when reading academic publications, which is in line with Merton's (1968) argumentation about the communication system of science. Further, clients could use the name recognition of the auditor to signal their commitment to high audit quality to outside investors.

As an alternative channel, a positive effect of publications on audit fees could be attributable to the higher audit quality that APAs provide. While this channel seems plausible, it requires that clients can recognize higher audit quality. However, Causholli and Knechel (2012) argue that audits are complex and idiosyncratic with unobservable audit outcomes, with the consequence that clients cannot observe quality even after the service is provided. In summary, we expect that APAs' publications are associated with higher audit fees, either through higher audit quality or through providing a signal for acquired skills:

**H2:** *Academic publications of APAs are positively associated with audit fees.*

As discussed above, our interviews with APAs support the notion that publications are a suitable means for developing a personal reputation. However, while the participants mostly

[15] Please note that we consider it important to distinguish between the signaling of traits and the signaling of acquired skills. Here, we argue that publications enable auditors to make clients aware that they acquired new knowledge and skills by engaging in research (what we call signaling of acquired skills). In addition, auditors might use publications to signal favorable traits. For example, lead auditors who are intrinsically good could seek to differentiate themselves from the crowd by publishing research. Addressing this issue, we conduct tests for disentangling publication effects from trait effects and find evidence for publication effects (see section 2.6.1).

agree that this reputation is helpful for retaining clients, they are less convinced as to whether it helps them gain new clients and are even more skeptical about its positive impact when it comes to audit fees. The skepticism about audit fees might reflect their skepticism about whether it is possible to achieve fee premiums at all given the high level of perceived competition in the audit market.

## 2.4 Research Design

### 2.4.1 Sample

Our initial sample consists of all German non-financial listed firms between 2000 and 2015. Using databases of financial reports (e.g., HV-Info), the firms' homepages, and the electronic German company register, we collected retrievable annual reports for a total set of 651 companies to arrive at a total number of 6,618 firm-year observations. We further gathered financial information from Datastream. Deleting observations with joint audits, a shortened fiscal year, and missing information on lead auditors reduces the initial sample to 5,805 firm-year observations that are available for the regression analyses.

Table 2-2 presents the sample selection process for the empirical models involving the elimination of observations with missing values. The resulting abnormal accruals model includes 3,461 firm-year observations from 459 unique firms for the sample period (2000-2015). The restatement model goes from 2004, the first fiscal year covered by the FREP,

to 2013, the most recent fiscal year comprehensively inspected at the end of 2016.[16] The FREP examines the financial reporting of all German listed firms based on random sampling and specific indications (Ernstberger, Hitz, and Stich 2012). Following Eckers et al. (2013), we use the term restatements for the error announcements triggered by the FREP. The restatement sample consists of 2,439 firm-year observations from 413 unique firms. The audit fee model starts in 2005, the first year of mandatory audit fee disclosure. It consists of 2,590 firm-year observations from 408 unique firms.

[16] Based on our dataset, we observe that the period from the end of the fiscal year until the publication of the inspection result is regularly longer than two years (36.0 percent) but rarely longer than three years (6.1 percent). Accordingly, we can assume that inspections for the fiscal year 2013 are completed as of the end of 2016 when we last updated our data.

## Table 2-2: Sample Selection

| **Panel A: Full Sample (2000-2015)** | **n** | **(Clients/Audit Firms)** |
|---|---|---|
| **Annual reports collected** | **6,618** | **(651/35)** |
| Exclude joint audits | -43 | (-3/0) |
| Exclude shortened fiscal year | -204 | (-28/0) |
| Missing lead auditor identification | -566 | (0/0) |
| **Number of observations for further analyses** | **5,805** | **620/35** |

| **Panel B: Abnormal Accruals Model (2000-2015)** | **n** | **(Clients/Audit Firms)** |
|---|---|---|
| **Number of observations from Panel A** | **5,805** | **(620/35)** |
| Exclude missing dependent variable | -641 | (-49/0) |
| Exclude missing control variables | -1,703 | (-112/-2) |
| **Final sample used in the abnormal accruals model** | **3,461** | **(459/33)** |

| **Panel C: Restatement Model (2004-2013)** | **n** | **(Clients/Audit Firms)** |
|---|---|---|
| **Number of observations from Panel A** | **5,805** | **(620/35)** |
| Restrict sample to the fiscal year 2004-2013 | -1,968 | (-108/-1) |
| Exclude missing control variables | -1,398 | (-99/-1) |
| **Final sample used in the restatement model** | **2,439** | **(413/33)** |

| **Panel D: Audit Fee Model (2005-2015)** | **n** | **(Clients/Audit Firms)** |
|---|---|---|
| **Number of observations from Panel A** | **5,805** | **(620/35)** |
| Restrict sample to the fiscal the year 2005-2015 | -2,144 | (-130/-1) |
| Exclude missing dependent variable | -64 | (-5/0) |
| Exclude missing control variables | -1,007 | (-77/-2) |
| **Final sample used in the audit fee model** | **2,590** | **(408/32)** |

**Notes:** This table shows the sample selection for the abnormal accruals model, restatement model, and audit fee model.

### 2.4.2 Academic Practitioner Auditors

To identify APAs, we retrieve data about publications such as journal articles, books, and book chapters and from the publication databases *EconBiz*, *Google Scholar*, and *WISO*.[17]

Table 2-3, Panel A presents information about the journals in which APAs publish based on an email survey among all 50 journals' editors with 34 responses (response rate of 68.0 percent).[18] First, we find that editors characterize the articles published in their journals most frequently as "practice-oriented articles with high academic standards" (94.1 percent) or "academic research articles" (58.8 percent) and less frequently as "practice-oriented articles without high academic standards" (32.4 percent). Second, the target audience of the journals are academics (91.2 percent), auditors (76.5 percent), executive and non-executive board members (67.6 percent), and employees of accounting or accounting-related departments (64.7 percent). Third, almost all journals have a review process that often involves external academics (58.8 percent) or practitioners (52.9 percent). The review process is blind for 38.2 percent of the journals. Enriching our dataset using publicly available information, we find for a sample of 44 journals with available data that they have an average circulation of 4,561 copies and charge an average price of 3,309 euros for one page of advertisement.

[17] *EconBiz* is a search portal for economics funded by the German Research Foundation (DFG) and commissioned and organized by the German National Library of Economics (ZBW). *Google Scholar* is a web search engine that provides a bibliographical database for academic publications. *WISO* is the biggest German-speaking compilation of bibliographical references and full texts for economic literature. Research assistants hand-collected the information, and one of the authors verified it. Further, the independent compilation of information from three databases enabled us to cross-check most of the information, further ensuring the reliability of our APA measure.

[18] The APAs published in 55 journals. Out of these journals, five journals are no longer active. We conducted the email survey in October 2016 and sent out a reminder one week after the original request (see Appendix 2-B for the survey). We achieved a high response rate by keeping the survey very short (three to five minutes for completion). The 34 journals with replies cover 89.2 percent of the articles published by the APAs in our sample.

Panel B presents the distribution of APAs by the audit firm.[19] Out of the 985 lead auditors of our sample, 144 (14.1 percent) are APAs with at least one publication. The mean number of publications per APA is 8.2 (median = 2.0). The proportion of APAs is higher at non-Big 4 audit firms (18.9 percent) compared to Big 4 audit firms (12.8 percent), a statistically significant difference (*t*-stat = 2.83). Panel C shows that APAs are present across all industries with the highest proportion in the retail industry (22.0 percent) and the lowest proportion in utilities (8.3 percent).[20] Panel D tabulates APA publications by five-year periods. Panel E shows that APAs composed 971 journal articles, 136 books, and 73 book chapters. Panel F provides an overview of the content of APA publications. A total of 67.2 percent of the publications deal with financial reporting issues such as IFRS or local GAAP interpretations, 13.3 percent cover auditing issues, 11.9 percent are about advisory issues like mergers and acquisitions or IPOs, and 5.7 percent of publications deal with corporate governance issues.

Panel G presents the distribution of APA publications in journals by their ranking. We use the JOURQUAL3 ranking of the German Association for Business Research (VHB), a highly influential journal ranking in German-speaking countries.[21] We observe that APAs have no A+- or A-publication, four B-publications, 141 C-publications, 492 D-publications, and 334 publications in the "other academic journals" category. One participant of our interview

[19] Panel B-Panel G are based on the full sample (see Table 2, Panel A).

[20] The industry classification is based on Frankel, Johnson, and Nelson (2002).

[21] The JOURQUAL3 ranking is based on a non-anonymous survey of its roughly 1,100 members (mainly professors). It covers 934 academic business journals and journals from related fields. Ranking categories are as follows: A+, outstanding and leading international academic business research journals (3.4 percent of all ranked journals); A, leading academic business research journals (11.1 percent); B, important and renowned business research journals (33.3 percent); C, recognized academic business research journals (41.9 percent); D, academic business research journals (9.1 percent); and other academic journals that primarily target practitioners besides academics. The remaining 1.2 percent represent journals that cannot be clearly assigned to one rank. To illustrate, the three journals ranked A+ in the field of accounting are JAE, JAR, and TAR. The ranking is comparable to the British Academic Journal Quality Guide (correlation 0.9) and the impact factor gauge Scimago Journal Rank (correlation 0.7).

study provides an explanation as to why it is more attractive for APAs to publish in C- and D-ranked journals or in non-ranked "other academic journals" compared to A- and B-ranked journals:

> A- and B-ranked journals are, of course, very theory-based and the audience is very restricted. In C- and D-ranked journals, by contrast, the audience is much broader, making it worth to publish there. […] There are also colleagues who publish in the journal *Betriebs-Berater*, which is not ranked, and that is because that journal is well known in Germany and can reach out to the target audience. (R8, Big 4)

We conduct (untabulated) tests on whether the publications of APAs differ from public relationship materials of audit firms used in client newsletters. As a sample, we use all 47 articles published by APAs in 2015 and the newsletters of the eight largest audit firms in Germany published in 2015 (Luenendonk 2016). We find that the articles in academic journals are, on average, longer than the articles in newsletters (6.5 pages vs. 3.4 pages) and include more footnotes (29.0 footnotes vs. 0.5 footnotes). Further, APAs cite in their academic articles prior academic literature (8.6 references, thereof, 5.7 unique academic publications), whereas newsletters never cite prior academic articles. These findings suggest that the publication of APAs differ substantially from public relations materials.

## Table 2-3: Descriptive Statistics on Academic Practitioner Auditors and Publications

**Panel A: Survey among Editors of Journals in which APAs Publish**

| | n | Yes | No |
|---|---|---|---|
| ***1. The main focus of your journal is (multiple answers are possible):*** | | | |
| a. Academic research articles (Y/N): | 34 | 58.8% | 41.2% |
| b. Practice-oriented articles with a high academic standard (Y/N): | 34 | 94.1% | 5.9% |
| c. Practice-oriented articles without a high academic standard (Y/N): | 34 | 32.4% | 67.6% |
| d. Articles with advertising character (Y/N): | 34 | 0.0% | 100.0% |
| ***2. The readers of your journal are (multiple answers are possible):*** | | | |
| a. Academics (e.g., professors, scientists) (Y/N): | 34 | 91.2% | 8.8% |
| b. Auditors and employees of audit firms (Y/N): | 34 | 76.5% | 23.5% |
| c. Decision-makers of companies (e.g., CEO, CFO, supervisory board) (Y/N): | 34 | 67.6% | 32.4% |
| d. Employees working in the accounting department (e.g., head of accounting) (Y/N): | 34 | 64.7% | 35.3% |
| e. Employees working in accounting-related departments (e.g., head of internal auditing, head of management accounting department) (Y/N): | 34 | 64.7% | 35.3% |
| ***3. The review procedure in your journal is conducted (multiple answers are possible):*** | | | |
| a. by academics as reviewers (Y/N): | 34 | 58.8% | 41.2% |
| b. by practitioners as reviewers (Y/N): | 34 | 52.9% | 47.1% |
| c. by the editorial board of your journal (Y/N): | 34 | 85.3% | 14.7% |
| d. in anonymous form (the author is not disclosed to the reviewer) (Y/N): | 34 | 38.2% | 61.8% |

**Panel B: APAs by Audit Firm**

| Audit Firm | APAs | Non-APAs | Total |
|---|---|---|---|
| Deloitte | 10 (15.9%) | 53 (84.1%) | 63 |
| EY | 24 (11.3%) | 189 (88.7%) | 213 |
| KPMG | 25 (13.7%) | 158 (86.3%) | 183 |
| PwC | 19 (10.7%) | 158 (89.3%) | 177 |
| Non-Big 4 | 66 (18.9%) | 283 (81.1%) | 349 |
| **Total** | **144 (14.1%)** | **841 (85.9%)** | **985** |

**Panel C: APAs by Industry**

| Industry | APAs | Non-APAs | Total |
|---|---|---|---|
| Mining and Contruction | 5 (18.5%) | 22 (81.5%) | 27 |
| Consumer Manufactures | 12 (14.8%) | 69 (85.2%) | 81 |
| Chemicals, Pharma, and Refining | 7 (9.9%) | 64 (90.1 %) | 71 |
| Durable Manufacturers | 53 (16.1%) | 277 (83.9%) | 330 |
| Transportation | 6 (17.6%) | 28 (82.4%) | 34 |
| Utilities | 2 (8.3%) | 22 (91.7%) | 24 |
| Retail | 13 (22.0%) | 46 (78.9%) | 59 |
| Services | 19 (14.7%) | 110 (85.3%) | 129 |
| Computers | 27 (11.7%) | 203 (88.3%) | 230 |

**Panel D: APA Publications by Five-Year Periods**

| Year | n |
|---|---|
| 2000 and before | 123 |
| 2001-2005 | 139 |
| 2006-2010 | 514 |
| 2011-2015 | 404 |
| **Total** | **1,180** |

*(continued on next page)*

**Table 2-3 (continued)**

**Panel E: APA Publications by Type**

| Type | n | Avg. Number of Pages | Avg. Number of Authors | Avg. Number of Citations | Avg. Citations per Year |
|---|---|---|---|---|---|
| Journal articles | 971 | 6.6 | 2.1 | 3.4 | 0.3 |
| Books | 136 | 314.7 | 2.5 | 5.1 | 0.7 |
| Book chapters | 73 | 22.5 | 1.9 | 4.2 | 0.6 |
| **Total** | **1,180** | | | | |

**Panel F: APA Publications by Topics**

| Topic | n | Proportion |
|---|---|---|
| Financial reporting | 793 | 67.2% |
| Auditing | 157 | 13.3% |
| Advisory issues | 141 | 11.9% |
| Corporate governance, risk management, and compliance | 67 | 5.7% |
| Tax | 22 | 1.9% |

**Panel G: APA Publications by Journal Ranking**

| Journal Ranking | n | Proportion |
|---|---|---|
| B-journal articles (important and considered academic journal) | 4 | 0.4% |
| C-journal articles (recognized academic journal) | 141 | 14.5% |
| D-journal articles (academic journal) | 492 | 50.7% |
| Other academic journals | 334 | 34.4% |
| **Total** | **971** | |

**Note:** This table provides detailed statistics on APA publications. Panel A presents survey results of the journals in which APAs publish. Panel B-Panel G are based on the full sample (see Table 2-2, Panel A). Panel E uses Google Scholar (as of August 2016) to retrieve the number of citations. Panel G uses the classification of JOURQUAL3, a journal ranking provided by the German Academic Association for Business Research (GAABR - VHB).

## 2.5 Regression Analysis

### 2.5.1 Test of Abnormal Accruals

#### *Empirical Model*

We use abnormal accruals as our first measure of audit quality (e.g., Ashbaugh, LaFond, and Mayhew 2003; Myers, Myers, and Omer 2003; Reichelt and Wang 2010). Prior research shows that discretionary accruals are associated with aggressive reporting and low earnings quality (Becker, DeFond, Jiambalvo, and Subramanyam 1998; Francis and Krishnan 1999). As auditors and clients jointly produce financial statements, a high level of abnormal accruals indicates a failure of the auditor to curb aggressive reporting (Antle and Nalebuff 1991;

Francis 2011, DeFond and Zhang 2014). We follow Reichelt and Wang (2010) and use the absolute value of the clients' performance-adjusted abnormal accruals (*PAAA*).[22] In line with prior literature (Reichelt and Wang 2010; Aobdia, Lin, and Petacchi 2015), we estimate abnormal accruals using a cross-sectional performance-adjusted modified Jones model (Kothari et al. 2005). More specifically, we estimate the following equation for all available firm-year observations from German listed firms and mandate a minimum of 10 observations for all industry-year-accounting regime groups:

$$TA_{it} = \beta_0(1/A_{it-1}) + \beta_1(\Delta REV_{it} - \Delta REC_{it}) + \beta_2 PPE_{it} + \beta_3 ROA_{it-1} + \varepsilon_{it}, \qquad (1)$$

where *i* denotes the firm and *t* the fiscal year, $TA_{it}$ equals total accruals (net income before extraordinary items minus operating cash flow), $A_{it-1}$ equals total assets, $\Delta REV_{it}$ equals change in revenue from prior year, $\Delta REC_{it}$ equals change in accounts receivable from prior year, $PPE_{it}$ equals net property, plant, and equipment, $ROA_{it-t}$ equals return on assets, measured by earnings before interest and taxes divided by average total assets for year *t-1*, and ε equals the error term assumed to have normal OLS regression properties. We scale all variables by total assets at the end of year *t-1*. *PAAA* is the absolute value of the residual from the model estimated in Equation (1).

We regress our abnormal accruals measure *PAAA* on our variable of interest and established control variables at the firm- and the individual auditor-level (Reynolds and Francis 2001; Francis and Yu 2009; Reichelt and Wang 2010; Zerni 2012) using the following model:

[22] In alternative tests, we use the modified Jones model (Dechow, Sloan, and Sweeney 1995) and the accrual quality (Dechow and Dichev 2002), finding similar results. In further analyses, we plot curves for APA and non-APA by ranking firms into *SIZE*, *GROWTH*, *ROA*, and *LEVERAGE* deciles on the x-axis and the raw accruals on the y-axis to control for the self-selection of APAs to specific firm profiles (Collins, Pungaliya, and Vijh 2017). As we do not observe differences between the APA and non-APA curves, we do not adjust the accrual calculation for the nonlinear relationship between accruals and other firm characteristics as proposed by Collins et al. (2017).

$$PAAA = \beta_0 + \beta_1 PUB\_COUNT + \beta_2 PUB\_DISTRACTION + \beta_3 EXP\_GENERAL + \beta_4 TENURE + \beta_5 PF\_SIZE + \beta_6 SPEC\_INDUSTRY + \beta_7 SPEC\_PUBLIC + \beta_8 BIG4 + {}_9 SWITCH + \beta_{10} SIZE + \beta_{11} CFO + \beta_{12} CFO\_VOLA + \beta_{13} LOSS + \beta_{14} LEVERAGE + \beta_{15} FIRM\_AGE + \beta_{16} ROA + \beta_{17} TURNOVER + \beta_{18} GROWTH + \beta_{19} MB + \beta_{20} IFRS + year\ fixed\ effects + industry\ fixed\ effects + audit\ office\ fixed\ effects + \varepsilon, \quad (2)$$

where all variables are defined in Appendix 2-C.[23] *PUB_COUNT* is our variable of interest, defined as the natural logarithm of the cumulative number of publications until the preceding fiscal year.[24]

Table 2-4, Panel A presents the descriptive statistics of all variables used in the abnormal accruals model. The mean value of *PAAA* is 0.069, which is in line with the prior literature (e.g., Aobdia et al. 2015). Table 2-5, Panel A presents the correlation matrix for all variables used in the abnormal accruals model (Equation (2)). We observe a statistically significant and negative correlation of *PUB_COUNT* and *PAAA*, providing a first indication that publications of APAs are positively associated with audit quality.

[23] In all regression models, we omit subscripts for year and firm for the sake of brevity. The industry classification is based on Frankel et al. (2002). In all regression models, we winsorize all continuous variables at the 1 and 99 percent level to reduce the undue impact of outliers. We control for year-, industry-, and office-wide varying effects by including year, industry, and audit office fixed effects. The Big 4 audit firms have on average 21.3 audit offices in Germany. The ten largest non-Big 4 audit firms have on average 15.5 audit offices in Germany. We employ robust standard errors clustered at the client-level to control for time-series correlation of residuals (Rogers 1993).

[24] We use the preceding fiscal year to separate this variable from the potential distraction effect of publications in the current fiscal year. We measure the distraction effect separately by *PUB_DISTRACTION*.

## Table 2-4: Descriptive Statistics

| **Panel A: Abnormal Accruals Model** | | | | | | |
|---|---|---|---|---|---|---|
| **Variable** | **n** | **Mean** | **Std. Dev.** | **p25** | **Median** | **p75** |
| Dependent Variable | | | | | | |
| *PAAA* | 3,461 | 0.069 | 0.074 | 0.021 | 0.046 | 0.090 |
| | | | | | | |
| Lead Auditor Controls | | | | | | |
| *PUB_COUNT* | 3,461 | 0.167 | 0.440 | 0.000 | 0.000 | 0.000 |
| *PUB_DISTRACTION* | 3,461 | 0.031 | 0.175 | 0.000 | 0.000 | 0.000 |
| *EXP_GENERAL* | 3,461 | 1.839 | 0.807 | 1.386 | 1.946 | 2.485 |
| *TENURE* | 3,461 | 2.661 | 1.652 | 1.000 | 2.000 | 4.000 |
| *PF_SIZE* | 3,461 | 7.166 | 3.706 | 4.476 | 6.177 | 8.991 |
| *SPEC_INDUSTRY* | 3,461 | 0.021 | 0.144 | 0.000 | 0.000 | 0.000 |
| *SPEC_PUBLIC* | 3,461 | 0.256 | 0.437 | 0.000 | 0.000 | 1.000 |
| | | | | | | |
| Audit Firm Controls | | | | | | |
| *BIG4* | 3,461 | 0.658 | 0.475 | 0.000 | 1.000 | 1.000 |
| *SWITCH* | 3,461 | 0.090 | 0.286 | 0.000 | 0.000 | 0.000 |
| | | | | | | |
| Firm Controls | | | | | | |
| *SIZE* | 3,461 | 5.624 | 2.177 | 4.057 | 5.244 | 6.955 |
| *CFO* | 3,461 | 0.071 | 0.131 | 0.025 | 0.077 | 0.127 |
| *CFO_VOLA* | 3,461 | 0.058 | 0.073 | 0.018 | 0.036 | 0.067 |
| *LOSS* | 3,461 | 0.266 | 0.442 | 0.000 | 0.000 | 1.000 |
| *LEVERAGE* | 3,461 | 0.586 | 0.281 | 0.410 | 0.582 | 0.728 |
| *FIRM_AGE* | 3,461 | 3.552 | 1.033 | 2.708 | 3.466 | 4.543 |
| *ROA* | 3,461 | 0.033 | 0.181 | 0.016 | 0.063 | 0.104 |
| *TURNOVER* | 3,461 | 1.287 | 0.719 | 0.826 | 1.156 | 1.578 |
| *GROWTH* | 3,461 | 0.060 | 0.290 | -0.055 | 0.032 | 0.121 |
| *MB* | 3,461 | 1.633 | 1.248 | 0.967 | 1.426 | 2.111 |
| *IFRS* | 3,461 | 0.818 | 0.386 | 1.000 | 1.000 | 1.000 |

| **Panel B: Restatement Model** | | | | | | |
|---|---|---|---|---|---|---|
| **Variable** | **n** | **Mean** | **Std. Dev.** | **p25** | **Median** | **p75** |
| Dependent Variable | | | | | | |
| *RESTATE* | 2,439 | 0.028 | 0.165 | 0.000 | 0.000 | 0.000 |
| | | | | | | |
| Lead Auditor Controls | | | | | | |
| *PUB_COUNT* | 2,439 | 0.162 | 0.423 | 0.000 | 0.000 | 0.000 |
| *PUB_DISTRACTION* | 2,439 | 0.037 | 0.190 | 0.000 | 0.000 | 0.000 |
| *EXP_GENERAL* | 2,439 | 1.848 | 0.778 | 1.386 | 1.946 | 2.398 |
| *TENURE* | 2,439 | 2.712 | 1.664 | 1.000 | 2.000 | 4.000 |
| *PF_SIZE* | 2,439 | 6.923 | 3.599 | 4.335 | 5.934 | 8.618 |
| *SPEC_INDUSTRY* | 2,439 | 0.014 | 0.116 | 0.000 | 0.000 | 0.000 |
| *SPEC_PUBLIC* | 2,439 | 0.242 | 0.429 | 0.000 | 0.000 | 0.000 |
| | | | | | | |
| Audit Firm Controls | | | | | | |
| *BIG4* | 2,439 | 0.635 | 0.482 | 0.000 | 1.000 | 1.000 |
| *SWITCH* | 2,439 | 0.088 | 0.284 | 0.000 | 0.000 | 0.000 |
| | | | | | | |
| Firm Controls | | | | | | |
| *SIZE* | 2,439 | 5.510 | 2.149 | 3.982 | 5.157 | 6.780 |
| *CFO* | 2,439 | 0.073 | 0.132 | 0.026 | 0.077 | 0.130 |
| *CFO_VOLA* | 2,439 | 0.054 | 0.060 | 0.019 | 0.036 | 0.066 |
| *LOSS* | 2,439 | 0.251 | 0.433 | 0.000 | 0.000 | 1.000 |
| *LEVERAGE* | 2,439 | 0.584 | 0.286 | 0.404 | 0.579 | 0.731 |
| *FIRM_AGE* | 2,439 | 3.525 | 1.009 | 2.639 | 3.401 | 4.500 |
| *ROA* | 2,439 | 0.041 | 0.170 | 0.021 | 0.066 | 0.107 |
| *TURNOVER* | 2,439 | 1.296 | 0.733 | 0.826 | 1.161 | 1.588 |
| *GROWTH* | 2,439 | 0.072 | 0.290 | -0.044 | 0.040 | 0.131 |
| *MB* | 2,439 | 1.612 | 1.213 | 0.981 | 1.418 | 2.063 |
| *IFRS* | 2,439 | 0.920 | 0.271 | 1.000 | 1.000 | 1.000 |

*(continued on next page)*

**Table 2-4 (continued)**

| **Panel C: Audit Fee Model** | | | | | | |
|---|---|---|---|---|---|---|
| **Variable** | **n** | **Mean** | **Std. Dev.** | **p25** | **Median** | **p75** |
| Dependent Variable | | | | | | |
| *AUDIT_FEES* | 2,590 | 5.604 | 1.275 | 4.700 | 5.384 | 6.205 |
| | | | | | | |
| Lead Auditor Controls | | | | | | |
| *PUB_COUNT* | 2,590 | 0.183 | 0.455 | 0.000 | 0.000 | 0.000 |
| *PUB_DISTRACTION* | 2,590 | 0.038 | 0.191 | 0.000 | 0.000 | 0.000 |
| *EXP_GENERAL* | 2,590 | 1.927 | 0.769 | 1.386 | 2.079 | 2.485 |
| *TENURE* | 2,590 | 2.788 | 1.722 | 1.000 | 2.000 | 4.000 |
| *PF_SIZE* | 2,590 | 7.073 | 3.567 | 4.439 | 6.167 | 8.743 |
| *SPEC_INDUSTRY* | 2,590 | 0.015 | 0.122 | 0.000 | 0.000 | 0.000 |
| *SPEC_PUBLIC* | 2,590 | 0.233 | 0.423 | 0.000 | 0.000 | 0.000 |
| | | | | | | |
| Audit Firm Controls | | | | | | |
| *BIG4* | 2,590 | 0.658 | 0.475 | 0.000 | 1.000 | 1.000 |
| *SWITCH* | 2,590 | 0.085 | 0.279 | 0.000 | 0.000 | 0.000 |
| | | | | | | |
| Firm Controls | | | | | | |
| *SIZE* | 2,590 | 5.730 | 2.251 | 4.063 | 5.317 | 7.173 |
| *CATA* | 2,590 | 0.550 | 0.200 | 0.403 | 0.572 | 0.692 |
| *QUICK* | 2,590 | 1.503 | 1.663 | 0.735 | 1.062 | 1.680 |
| *DE* | 2,590 | 0.206 | 0.172 | 0.059 | 0.184 | 0.321 |
| *LOSS_LAG* | 2,590 | 0.401 | 0.490 | 0.000 | 0.000 | 1.000 |
| *AGE_LOG* | 2,590 | 3.602 | 0.981 | 2.773 | 3.497 | 4.543 |
| *ROA* | 2,590 | 0.046 | 0.160 | 0.026 | 0.066 | 0.105 |
| *GC_OPINION* | 2,590 | 0.059 | 0.235 | 0.000 | 0.000 | 0.000 |
| *CROSSLIST* | 2,590 | 0.068 | 0.252 | 0.000 | 0.000 | 0.000 |
| *SUBS_TOTAL* | 2,590 | 3.095 | 1.351 | 2.197 | 2.890 | 3.892 |
| *SUBS_INT* | 2,590 | 0.572 | 0.301 | 0.348 | 0.649 | 0.800 |
| *SEGMENTS* | 2,590 | 2.694 | 1.349 | 2.000 | 2.000 | 3.000 |
| *IFRS* | 2,590 | 0.989 | 0.103 | 1.000 | 1.000 | 1.000 |

**Notes:** This table provides descriptive statistics for all three models.

## Table 2-5: Correlation Matrices

**Panel A: Abnormal Accruals Model**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) *PAAA* | | **-0.081** | 0.016 | **-0.118** | **-0.067** | **-0.225** | **-0.041** | -0.016 | **-0.105** | **0.076** | **-0.301** | **-0.132** | **0.332** | **0.190** | **-0.030** | **-0.247** | **-0.121** | **0.036** | **-0.043** | **-0.031** | **-0.053** |
| (2) *PUB_COUNT* | **-0.074** | | **0.254** | **0.139** | **0.054** | **0.097** | **0.041** | 0.023 | **-0.034** | 0.008 | **0.125** | 0.001 | **-0.091** | -0.015 | **0.040** | **0.111** | 0.015 | **-0.068** | 0.007 | **0.038** | **0.055** |
| (3) *PUB_DISTRACTION* | 0.010 | **0.318** | | 0.008 | **0.042** | **0.028** | 0.020 | 0.021 | **-0.065** | -0.009 | 0.014 | -0.010 | **-0.037** | 0.017 | 0.007 | 0.024 | -0.010 | 0.002 | -0.005 | 0.002 | **0.050** |
| (4) *EXP_GENERAL* | **-0.083** | **0.100** | 0.011 | | **0.304** | **0.144** | **0.043** | **-0.083** | **-0.085** | -0.019 | **0.270** | 0.025 | **-0.189** | **-0.104** | **0.123** | **0.198** | **0.041** | **-0.073** | **0.055** | **0.043** | **0.147** |
| (5) *TENURE* | **-0.062** | **0.062** | **0.051** | **0.342** | | **0.068** | 0.026 | -0.015 | **-0.035** | **-0.364** | **0.118** | **0.037** | **-0.107** | **-0.075** | **0.053** | **0.097** | **0.062** | -0.002 | **0.076** | **0.033** | **0.119** |
| (6) *PF_SIZE* | **-0.191** | **0.133** | **0.043** | **0.129** | **0.055** | | **0.154** | **0.574** | **0.327** | **-0.062** | **0.677** | **0.096** | **-0.321** | **-0.174** | **0.239** | **0.273** | **0.120** | **-0.099** | **0.101** | **0.067** | -0.007 |
| (7) *SPEC_INDUSTRY* | **-0.045** | **0.033** | 0.020 | **0.030** | **0.031** | **0.157** | | **0.176** | **0.059** | 0.010 | **0.092** | 0.027 | **-0.044** | **-0.034** | 0.023 | **0.058** | **0.047** | 0.003 | -0.011 | **0.062** | **-0.056** |
| (8) *SPEC_PUBLIC* | -0.017 | **0.032** | 0.021 | **-0.078** | -0.019 | **0.603** | **0.176** | | **0.032** | **0.034** | **-0.057** | -0.002 | 0.027 | 0.026 | -0.019 | **-0.068** | -0.009 | **-0.031** | -0.023 | -0.002 | **-0.044** |
| (9) *BIG4* | **-0.127** | -0.011 | **-0.065** | **-0.096** | **-0.043** | **0.291** | **0.059** | **0.032** | | **-0.055** | **0.391** | **0.067** | **-0.142** | **-0.057** | **0.088** | **0.168** | **0.019** | **-0.047** | 0.026 | **0.054** | -0.015 |
| (10) *SWITCH* | **0.090** | -0.004 | -0.009 | -0.018 | **-0.302** | **-0.041** | 0.010 | **0.034** | **-0.055** | | **-0.114** | **-0.075** | **0.072** | **0.098** | **-0.032** | **-0.095** | **-0.072** | **-0.031** | **-0.079** | **-0.048** | **-0.028** |
| (11) *SIZE* | **-0.284** | **0.159** | 0.017 | **0.295** | **0.121** | **0.574** | **0.111** | **-0.067** | **0.387** | **-0.117** | | **0.150** | **-0.456** | **-0.287** | **0.344** | **0.478** | **0.197** | **-0.070** | **0.165** | **0.092** | **0.058** |
| (12) *CFO* | **-0.160** | 0.015 | -0.005 | **0.037** | 0.024 | **0.098** | **0.031** | -0.005 | **0.066** | **-0.066** | **0.165** | | **-0.055** | **-0.469** | **-0.042** | **0.061** | **0.592** | **0.250** | **0.345** | **0.266** | **0.062** |
| (13) *CFO_VOLA* | **0.300** | **-0.062** | **-0.042** | **-0.147** | **-0.106** | **-0.178** | **-0.034** | **0.045** | **-0.107** | **0.064** | **-0.346** | **-0.205** | | **0.211** | **-0.136** | **-0.325** | **-0.113** | **0.104** | 0.003 | **0.032** | **-0.095** |
| (14) *LOSS* | **0.217** | -0.011 | 0.017 | **-0.108** | **-0.066** | **-0.145** | **-0.034** | 0.026 | **-0.057** | **0.098** | **-0.273** | **-0.433** | **0.209** | | 0.006 | **-0.185** | **-0.726** | **-0.197** | **-0.442** | **-0.208** | **-0.097** |
| (15) *LEVERAGE* | **0.065** | 0.023 | 0.003 | **0.079** | **0.038** | **0.133** | 0.024 | -0.019 | **0.067** | -0.020 | **0.245** | **-0.051** | 0.023 | 0.017 | | **0.203** | **-0.049** | **0.225** | **0.288** | **0.044** | **-0.034** |
| (16) *FIRM_AGE* | **-0.252** | **0.104** | 0.022 | **0.191** | **0.097** | **0.220** | **0.054** | **-0.071** | **0.166** | **-0.099** | **0.460** | **0.093** | **-0.329** | **-0.184** | **0.143** | | **0.113** | **0.048** | 0.002 | -0.019 | **0.034** |
| (17 *ROA* | **-0.303** | 0.015 | -0.003 | **0.064** | **0.057** | **0.124** | **0.043** | -0.029 | **0.061** | **-0.077** | **0.249** | **0.571** | **-0.237** | **-0.618** | 0.022 | **0.182** | | **0.291** | **0.442** | **0.378** | **0.087** |
| (18) *TURNOVER* | **0.033** | **-0.063** | 0.001 | **-0.050** | -0.018 | **-0.090** | 0.004 | -0.027 | **-0.056** | -0.028 | **-0.112** | **0.184** | **0.062** | **-0.172** | **0.257** | 0.008 | **0.225** | | **0.278** | **0.142** | **-0.049** |
| (19) *GROWTH* | **0.040** | -0.014 | -0.015 | 0.015 | **0.047** | **0.036** | 0.006 | -0.017 | 0.011 | **-0.055** | **0.081** | **0.157** | **0.145** | **-0.283** | **0.461** | **-0.057** | **0.327** | **0.284** | | **0.264** | **0.149** |
| (20) *MB* | **-0.066** | **0.029** | -0.012 | 0.010 | 0.005 | **0.044** | **0.057** | 0.002 | 0.020 | **-0.031** | **0.039** | **0.181** | **0.070** | **-0.151** | **-0.054** | **-0.043** | **0.183** | **0.108** | **0.159** | | **0.086** |
| (21) *IFRS* | **-0.047** | **0.043** | **0.050** | **0.151** | **0.138** | -0.009 | **-0.056** | **-0.044** | -0.015 | **-0.028** | **0.067** | **0.045** | **-0.104** | **-0.097** | -0.019 | **0.041** | **0.083** | **-0.039** | **0.101** | **0.046** | |

**Panel B: Restatement Model**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) *RESTATE* | | **-0.046** | -0.006 | 0.011 | -0.024 | -0.006 | 0.023 | 0.003 | **-0.048** | 0.026 | -0.017 | **-0.074** | **0.051** | **0.052** | **0.049** | **-0.042** | **-0.051** | 0.006 | -0.003 | 0.015 | 0.031 |
| (2) *PUB_COUNT* | **-0.041** | | **0.261** | **0.132** | **0.051** | 0.116 | 0.019 | **0.046** | -0.032 | 0.013 | 0.123 | 0.005 | **-0.063** | 0.010 | **0.057** | **0.106** | 0.008 | **-0.047** | -0.006 | **0.041** | 0.017 |
| (3) *PUB_DISTRACTION* | -0.006 | **0.345** | | -0.000 | **0.040** | 0.021 | -0.023 | 0.023 | **-0.080** | -0.014 | 0.006 | -0.016 | -0.030 | 0.029 | 0.028 | 0.016 | -0.019 | 0.014 | -0.008 | 0.007 | 0.025 |
| (4) *EXP_GENERAL* | 0.010 | **0.090** | 0.005 | | **0.301** | **0.142** | 0.031 | **-0.068** | **-0.078** | -0.020 | **0.232** | 0.000 | **-0.141** | **-0.073** | **0.108** | **0.162** | 0.015 | **-0.061** | 0.009 | -0.024 | **0.064** |
| (5) *TENURE* | -0.026 | **0.054** | **0.047** | **0.341** | | **0.073** | 0.008 | -0.002 | **-0.046** | **-0.360** | **0.107** | **0.042** | **-0.077** | **-0.067** | **0.047** | **0.082** | **0.054** | -0.004 | **0.057** | -0.015 | **0.035** |
| (6) *PF_SIZE* | 0.008 | **0.157** | 0.032 | **0.141** | **0.052** | | **0.120** | **0.556** | **0.329** | **-0.056** | **0.700** | **0.107** | **-0.316** | **-0.190** | **0.247** | **0.277** | **0.138** | **-0.079** | **0.107** | **0.074** | **0.022** |
| (7) *SPEC_INDUSTRY* | 0.023 | 0.020 | -0.023 | 0.023 | 0.008 | **0.129** | | **0.133** | **0.052** | 0.026 | **0.064** | 0.013 | **-0.048** | -0.027 | 0.010 | 0.032 | **0.046** | 0.008 | 0.005 | **0.040** | -0.031 |
| (8) *SPEC_PUBLIC* | 0.003 | **0.053** | 0.023 | **-0.058** | -0.012 | **0.589** | **0.133** | | 0.019 | **0.037** | **-0.059** | 0.011 | 0.003 | 0.002 | -0.032 | **-0.046** | 0.030 | -0.016 | 0.000 | 0.018 | -0.004 |
| (9) *BIG4* | **-0.048** | -0.019 | **-0.080** | **-0.090** | **-0.053** | **0.286** | **0.052** | 0.019 | | **-0.038** | **0.404** | **0.081** | **-0.144** | **-0.061** | **0.101** | **0.165** | 0.019 | **-0.038** | 0.032 | 0.031 | -0.003 |
| (10) *SWITCH* | 0.026 | -0.001 | -0.014 | -0.022 | **-0.303** | -0.026 | 0.026 | **0.037** | **-0.038** | | **-0.105** | **-0.085** | **0.061** | **0.087** | -0.008 | **-0.075** | **-0.071** | -0.009 | -0.057 | -0.033 | 0.006 |
| (11) *SIZE* | -0.016 | **0.142** | 0.007 | **0.265** | **0.106** | **0.597** | **0.068** | **-0.074** | **0.400** | **-0.106** | | **0.136** | **-0.408** | **-0.266** | **0.353** | **0.442** | **0.167** | **-0.069** | **0.142** | **0.075** | **0.045** |
| (12) *CFO* | **-0.076** | 0.011 | -0.011 | 0.011 | 0.033 | **0.129** | 0.007 | 0.024 | **0.085** | **-0.076** | **0.155** | | -0.021 | **-0.446** | **-0.063** | 0.042 | 0.593 | 0.236 | **0.330** | **0.263** | 0.023 |
| (13) *CFO_VOLA* | **0.082** | **-0.053** | **-0.035** | **-0.078** | **-0.082** | **-0.225** | **-0.038** | -0.002 | **-0.155** | **0.074** | **-0.335** | **-0.162** | | **0.173** | **-0.128** | **-0.267** | **-0.067** | **0.117** | **0.042** | **0.077** | 0.010 |
| (14) *LOSS* | **0.052** | 0.020 | 0.029 | **-0.078** | **-0.063** | **-0.163** | -0.027 | 0.002 | **-0.061** | **0.087** | **-0.255** | **-0.430** | **0.165** | | **0.035** | **-0.135** | **-0.705** | **-0.172** | **-0.423** | **-0.170** | **-0.036** |
| (15) *LEVERAGE* | **0.062** | **0.036** | 0.020 | **0.072** | 0.030 | **0.137** | 0.009 | **-0.035** | **0.077** | -0.002 | **0.255** | **-0.086** | **0.058** | **0.047** | | **0.186** | **-0.064** | **0.208** | **0.260** | **0.062** | **-0.035** |
| (16) *FIRM_AGE* | **-0.045** | **0.100** | 0.013 | **0.163** | **0.083** | **0.235** | 0.033 | **-0.047** | **0.168** | **-0.076** | **0.442** | **0.070** | **-0.272** | **-0.131** | **0.132** | | **0.069** | 0.022 | -0.031 | **-0.046** | 0.013 |
| (17 *ROA* | **-0.035** | 0.002 | -0.016 | 0.027 | **0.046** | **0.156** | **0.035** | 0.018 | **0.070** | **-0.060** | **0.219** | **0.591** | **-0.139** | **-0.612** | -0.021 | **0.120** | | **0.289** | **0.429** | **0.359** | **0.037** |
| (18) *TURNOVER* | 0.013 | **-0.053** | 0.011 | -0.026 | -0.020 | **-0.072** | 0.012 | -0.008 | **-0.059** | -0.009 | **-0.111** | **0.169** | **0.108** | **-0.149** | **0.226** | -0.013 | **0.207** | | **0.281** | **0.135** | **-0.048** |
| (19) *GROWTH* | 0.019 | -0.021 | -0.017 | -0.007 | 0.030 | **0.042** | 0.003 | -0.012 | 0.017 | -0.026 | **0.072** | **0.128** | **0.187** | **-0.261** | **0.439** | **-0.086** | **0.296** | **0.257** | | **0.258** | **0.083** |
| (20) *MB* | -0.002 | **0.040** | -0.013 | **-0.040** | -0.023 | **0.050** | 0.026 | 0.012 | -0.011 | -0.014 | 0.027 | **0.176** | **0.125** | **-0.118** | **-0.047** | **-0.056** | **0.172** | **0.107** | **0.154** | | 0.020 |
| (21) *IFRS* | 0.031 | 0.001 | 0.025 | **0.062** | **0.050** | 0.015 | -0.031 | -0.004 | -0.003 | 0.006 | **0.041** | 0.012 | 0.012 | **-0.036** | -0.017 | 0.008 | 0.009 | **-0.043** | **0.059** | **0.037** | |

*(continued on next page)*

**Table 2-5 (continued)**

**Panel C: Audit Fee Model**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) | (21) | (22) | (23) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) *AUDIT_FEES* | | **0.151** | -0.003 | **0.256** | **0.083** | **0.634** | **0.069** | **-0.088** | **0.429** | **-0.104** | **0.896** | **-0.348** | **-0.320** | **0.457** | **-0.232** | **0.415** | **0.060** | **-0.096** | **0.312** | **0.811** | **0.169** | **0.376** | -0.032 |
| (2) *PUB_COUNT* | **0.184** | | **0.271** | **0.144** | **0.064** | **0.143** | **0.045** | **0.058** | -0.024 | 0.005 | **0.143** | **-0.070** | **-0.039** | **0.072** | 0.000 | **0.113** | -0.003 | **-0.041** | **0.060** | **0.110** | **0.044** | **0.093** | 0.000 |
| (3) *PUB_DISTRACTION* | -0.001 | **0.338** | | -0.020 | **0.057** | 0.023 | 0.009 | 0.023 | **-0.082** | -0.023 | 0.000 | -0.032 | -0.016 | 0.017 | **0.044** | 0.023 | -0.029 | 0.029 | **-0.037** | -0.028 | -0.009 | 0.013 | -0.019 |
| (4) *EXP_GENERAL* | **0.281** | **0.106** | -0.013 | | **0.288** | **0.184** | **0.068** | **-0.059** | **-0.061** | -0.028 | **0.276** | **-0.139** | **-0.094** | **0.167** | **-0.077** | **0.183** | 0.008 | **-0.039** | **0.179** | **0.258** | **0.046** | **0.180** | -0.005 |
| (5) *TENURE* | **0.082** | **0.073** | **0.065** | **0.328** | | **0.066** | **0.041** | 0.017 | **-0.055** | **-0.357** | **0.082** | **-0.041** | 0.006 | **0.069** | -0.028 | **0.061** | **0.036** | **-0.045** | 0.049 | 0.089 | 0.024 | 0.061 | -0.006 |
| (6) *PF_SIZE* | **0.560** | **0.190** | **0.047** | **0.178** | **0.067** | | **0.113** | **0.520** | **0.334** | **-0.046** | **0.716** | **-0.218** | **-0.165** | **0.307** | **-0.246** | **0.276** | **0.098** | **-0.167** | 0.242 | 0.593 | 0.189 | 0.233 | -0.041 |
| (7) *SPEC_INDUSTRY* | **0.100** | **0.049** | 0.009 | **0.058** | **0.052** | **0.103** | | **0.127** | 0.029 | **0.042** | **0.076** | -0.024 | -0.007 | **0.044** | 0.015 | **0.039** | -0.003 | -0.017 | **0.080** | **0.066** | **0.041** | **0.063** | 0.013 |
| (8) *SPEC_PUBLIC* | **-0.090** | **0.072** | 0.023 | **-0.051** | 0.017 | **0.555** | **0.127** | | 0.005 | 0.029 | **-0.075** | **0.066** | **0.054** | **-0.063** | 0.026 | **-0.064** | 0.009 | -0.029 | -0.008 | **-0.050** | 0.018 | **-0.092** | -0.004 |
| (9) *BIG4* | **0.413** | 0.003 | **-0.082** | **-0.077** | **-0.065** | **0.291** | 0.029 | 0.005 | | -0.028 | **0.409** | **-0.097** | **-0.072** | **0.134** | **-0.065** | **0.174** | 0.012 | **-0.076** | **0.160** | **0.323** | **0.189** | **0.210** | 0.011 |
| (10) *SWITCH* | **-0.108** | -0.012 | -0.023 | -0.026 | **-0.300** | -0.030 | **0.042** | 0.029 | -0.028 | | **-0.083** | 0.025 | -0.028 | **-0.045** | **0.064** | **-0.056** | **-0.077** | **0.071** | **-0.039** | **-0.081** | **-0.051** | -0.019 | 0.032 |
| (11) *SIZE* | **0.914** | **0.171** | 0.004 | **0.298** | **0.088** | **0.623** | **0.100** | **-0.083** | **0.405** | **-0.090** | | **-0.336** | **-0.262** | **0.465** | **-0.333** | **0.449** | **0.115** | **-0.186** | **0.309** | **0.813** | **0.210** | **0.360** | -0.026 |
| (12) *CATA* | **-0.350** | **-0.073** | **-0.034** | **-0.119** | **-0.040** | **-0.189** | -0.019 | **0.071** | **-0.093** | 0.019 | **-0.347** | | **0.453** | **-0.519** | 0.030 | **-0.113** | **0.095** | -0.004 | **-0.127** | **-0.301** | **0.170** | **-0.170** | -0.003 |
| (13) *QUICK* | **-0.282** | **-0.044** | -0.024 | **-0.093** | **-0.033** | **-0.095** | 0.006 | **0.044** | **-0.035** | -0.017 | **-0.220** | **0.342** | | **-0.373** | **-0.123** | **-0.189** | **0.226** | **-0.211** | -0.008 | **-0.289** | **0.123** | **-0.170** | -0.021 |
| (14) *DE* | **0.368** | **0.071** | 0.014 | **0.131** | **0.060** | **0.188** | **0.038** | **-0.062** | **0.080** | -0.026 | **0.362** | **-0.491** | **-0.285** | | -0.009 | **0.326** | **-0.117** | **0.103** | **0.099** | **0.402** | **-0.048** | **0.200** | -0.007 |
| (15) *LOSS_LAG* | **-0.225** | 0.005 | **0.044** | **-0.065** | **-0.034** | **-0.207** | 0.015 | 0.026 | **-0.065** | **0.064** | **-0.311** | 0.029 | -0.006 | **0.045** | | **-0.145** | **-0.352** | **0.268** | **-0.097** | **-0.269** | **-0.114** | **-0.091** | -0.006 |
| (16) *FIRM_AGE* | **0.397** | **0.109** | 0.021 | **0.177** | **0.061** | **0.232** | **0.036** | **-0.066** | **0.175** | **-0.058** | **0.444** | **-0.122** | **-0.179** | **0.265** | **-0.141** | | **0.050** | **-0.072** | **0.124** | **0.362** | **0.186** | **0.236** | 0.007 |
| (17 *ROA* | **0.119** | 0.000 | -0.022 | 0.024 | 0.016 | **0.151** | 0.014 | 0.013 | **0.057** | **-0.059** | **0.189** | **0.033** | **0.056** | **-0.126** | **-0.310** | **0.110** | | **-0.283** | **0.038** | **0.095** | **0.161** | **-0.036** | 0.010 |
| (18) *GC_OPINION* | **-0.102** | **-0.041** | 0.029 | **-0.034** | **-0.033** | **-0.146** | -0.017 | -0.029 | **-0.076** | **0.071** | **-0.180** | -0.012 | **-0.107** | **0.156** | 0.268 | -0.070 | **-0.367** | | **-0.068** | **-0.104** | **-0.089** | -0.020 | -0.006 |
| (19) *CROSSLIST* | **0.411** | **0.100** | **-0.037** | **0.162** | **0.052** | **0.238** | **0.080** | -0.008 | **0.160** | **-0.039** | **0.396** | **-0.114** | 0.001 | **0.079** | **-0.097** | **0.123** | **0.045** | **-0.068** | | **0.280** | **0.199** | **0.225** | **-0.149** |
| (20) *SUBS_TOTAL* | **0.850** | **0.134** | -0.026 | **0.276** | **0.098** | **0.537** | **0.080** | **-0.060** | **0.323** | **-0.087** | **0.842** | **-0.314** | **-0.295** | **0.321** | **-0.256** | **0.372** | **0.154** | **-0.109** | **0.353** | | **0.229** | **0.396** | -0.027 |
| (21) *SUBS_INT* | **0.195** | **0.037** | -0.015 | **0.050** | 0.021 | **0.187** | **0.044** | 0.020 | **0.197** | **-0.052** | **0.236** | **0.201** | **0.061** | **-0.110** | **-0.119** | **0.177** | **0.145** | **-0.094** | **0.180** | **0.246** | | **0.049** | **-0.072** |
| (22) *SEGEMENTS* | **0.439** | **0.098** | 0.013 | **0.197** | **0.054** | **0.232** | **0.063** | **-0.085** | **0.214** | -0.013 | **0.421** | **-0.181** | **-0.165** | **0.178** | **-0.079** | **0.266** | 0.021 | -0.002 | **0.231** | **0.432** | **0.057** | | -0.012 |
| (23) *IFRS* | **-0.069** | 0.007 | -0.019 | -0.008 | -0.013 | **-0.050** | 0.013 | -0.004 | 0.011 | 0.032 | **-0.045** | -0.002 | -0.029 | -0.005 | -0.006 | 0.007 | 0.009 | -0.006 | **-0.149** | **-0.045** | **-0.059** | -0.021 | |

**Notes:** This table presents Pearson (below) as well as Spearman (above the diagonal) correlation coefficients. All variables are defined as described in Appendix 2-C. Statistical significance of correlation coefficients based on two-tailed tests. Statistical significance at the 0.1 level is denoted in bold print. All continuous variables are winsorized at the 1st and 99th percentiles.

***Results***

Table 2-6, Panel A, Column 1 presents the results of estimating the abnormal accruals model. The coefficient at *PUB_COUNT* is statistically significant at the 0.05 level, and negative (-0.009, *t*-stat = -2.409).[25] This finding supports H1, suggesting that a lead auditor's engagement in research is associated with higher audit quality. We observe that our control variable capturing the distraction effect of publications in the current year (*PUB_DISTRACTION*) is statistically significant and positive.[26] The result is consistent with the distraction effect for CEOs writing books (Malendier and Tate 2009). Further, we observe that *SPEC_PUBLIC* is statistically significant and negative, indicating that public specialists provide higher audit quality. We do not observe a statistically significant effect for *SPEC_INDUSTRY*.[27] For our firm controls, we find that *SIZE*, *FIRM_AGE*, *ROA*, *MB,* and *BIG4* are statistically negatively associated with *PAAA*. Further, we find that *CFO_VOLA*, *TURNOVER*, and *SWITCH* are statistically positively associated with *PAAA.* The results for our control variables are largely in line with Reichelt and Wang (2010). The adjusted R-squared is 0.31, indicating a reasonably high explanatory power of our regression model.

[25] We do not observe significant effects for signed abnormal accruals (untabulated). Our finding of significant and negative effects for absolute values of abnormal accruals but not signed abnormal accruals suggests that APAs are better than non-APAs in correcting both income-increasing and income-decreasing earnings management (e.g., Lennox, Wu, and Zhang 2016).

[26] In all three models, our results remain stable when using a continuous variable for *PUB_DISTRACTION*, capturing the number of publications in the current fiscal year. We learnt from practitioners and journal editors that the time between writing the article and getting it published is often only a few weeks and usually less than half a year. Therefore, we use the year of the publication for measuring *PUB_DISTRACTION*.

[27] We observe a significant and negative effect for *SPEC_INDUSTRY* when excluding audit office effects. Please note that Aobdia et al. (2016) does not observe a relation between *SPEC_INDUSTRY* and audit quality measures for the U.S. audit market.

## Table 2-6: Main Results

**Panel A: Abnormal Accruals Model and Restatement Model using Unmatched and Matched Samples**

| | Unmatched Samples | | Matched Samples | |
|---|---|---|---|---|
| | (1) | (2) | (3) | (4) |
| **Dependent Variable** | ***PAAA*** | ***RESTATE*** | ***PAAA*** | ***RESTATE*** |
| Variable of Interest | | | | |
| *PUB_COUNT* | -0.009 ** | -1.181 ** | -0.007 * | -1.114 ** |
| | (-2.409) | (-2.161) | (-1.863) | (-2.152) |
| Lead Auditor Controls | | | | |
| *PUB_DISTRACTION* | 0.022 ** | -0.013 | 0.019 * | 0.044 |
| | (2.067) | (-0.018) | (1.863) | (0.056) |
| *EXP_GENERAL* | 0.007 ** | 0.114 | -0.001 | -0.231 |
| | (2.238) | (0.569) | (-0.126) | (-0.711) |
| *TENURE* | -0.001 | -0.088 | 0.001 | -0.084 |
| | (-0.529) | (-0.996) | (0.409) | (-0.767) |
| *PF_SIZE* | -0.000 | 0.136 *** | 0.000 | 0.176 ** |
| | (-0.323) | (2.708) | (0.262) | (2.544) |
| *SPEC_INDUSTRY* | -0.008 | 0.687 | -0.003 | 1.279 |
| | (-0.790) | (0.942) | (-0.337) | (1.477) |
| *SPEC_PUBLIC* | 0.002 | -0.662 * | -0.004 | -0.589 |
| | (0.339) | (-1.710) | (-0.513) | (-1.061) |
| Audit Firm Controls | | | | |
| *BIG4* | 0.015 | -0.593 ** | -0.009 | -0.609 |
| | (1.560) | (-1.964) | (-0.594) | (-1.297) |
| *SWITCH* | 0.006 | -0.047 | 0.007 | -0.625 |
| | (0.684) | (-0.108) | (0.749) | (-0.909) |
| Firm Controls | | | | |
| *SIZE* | -0.002 | 0.008 | -0.002 | 0.144 |
| | (-0.921) | (0.077) | (-1.267) | (1.078) |
| *CFO* | 0.125 ** | -1.960 ** | 0.141 *** | -1.776 |
| | (2.334) | (-2.298) | (2.818) | (-1.058) |
| *CFO_VOLA* | 0.165 *** | 3.142 * | 0.151 *** | 6.809 ** |
| | (3.056) | (1.800) | (2.942) | (2.407) |
| *LOSS* | 0.008 | 0.449 | 0.011 | 1.114 ** |
| | (1.100) | (1.233) | (1.337) | (2.259) |
| *LEVERAGE* | 0.013 | 1.065 ** | 0.028 * | -0.039 |
| | (0.969) | (2.485) | (1.938) | (-0.058) |
| *FIRM_AGE* | -0.006 ** | -0.144 | -0.007 ** | -0.258 |
| | (-2.203) | (-0.954) | (-2.210) | (-1.342) |
| *ROA* | -0.132 *** | 1.074 | -0.087 * | 1.263 |
| | (-3.084) | (1.470) | (-1.821) | (1.320) |
| *TURNOVER* | 0.005 | 0.095 | 0.004 | 0.394 ** |
| | (1.090) | (0.583) | (0.887) | (2.024) |
| *GROWTH* | 0.002 | -0.710 | -0.005 | -1.042 |
| | (0.114) | (-1.482) | (-0.269) | (-1.367) |
| *MB* | -0.000 | 0.024 | -0.008 ** | -0.242 |
| | (-0.209) | (0.233) | (-2.475) | (-1.322) |
| *IFRS* | 0.019 * | 0.595 | 0.013 | 0.700 |
| | (1.683) | (0.644) | (0.866) | (0.564) |
| Intercept | 0.037 | -4.834 *** | 0.059 * | -5.355 *** |
| | (1.365) | (-3.854) | (1.773) | (-2.895) |
| Observations | 3,460 | 2,439 | 1,126 | 1,392 |
| Adjusted/Pseudo R-squared | 0.311 | 0.116 | 0.506 | 0.190 |
| Year FE | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES |
| Audit Office FE | YES | NO | YES | NO |

*(continued on next page)*

**Table 2-6 (continued)**

**Panel B: Audit Fee Model using Unmatched and Matched Samples**

| | Unmatched Sample | Matched Sample |
|---|---|---|
| | (1) | (2) |
| **Dependent Variable** | ***AUDIT_FEES*** | ***AUDIT_FEES*** |
| Variable of Interest | | |
| *PUB_COUNT* | 0.110 *** | 0.099 *** |
| | (2.822) | (2.597) |
| Lead Auditor Controls | | |
| *PUB_DISTRACTION* | -0.046 | -0.054 |
| | (-0.970) | (-1.071) |
| *EXP_GENERAL* | 0.033 | 0.043 |
| | (1.324) | (1.086) |
| *TENURE* | -0.007 | -0.013 |
| | (-1.073) | (-1.151) |
| *PF_SIZE* | -0.004 | 0.007 |
| | (-0.556) | (0.970) |
| *SPEC_INDUSTRY* | 0.086 | 0.091 |
| | (1.246) | (1.096) |
| *SPEC_PUBLIC* | -0.016 | -0.108 * |
| | (-0.350) | (-1.803) |
| Audit Firm Controls | | |
| *BIG4* | -0.545 | -0.198 |
| | (-1.204) | (-0.671) |
| *SWITCH* | -0.150 *** | -0.123 * |
| | (-4.760) | (-1.893) |
| Firm Controls | | |
| *SIZE* | 0.323 *** | 0.339 *** |
| | (13.283) | (10.361) |
| *CATA* | 0.151 | 0.214 |
| | (1.240) | (1.241) |
| *QUICK* | -0.031 ** | -0.047 ** |
| | (-2.473) | (-2.406) |
| *DE* | 0.115 | -0.027 |
| | (0.948) | (-0.168) |
| *LOSS_LAG* | 0.078 *** | 0.088 ** |
| | (2.796) | (2.021) |
| *FIRM_AGE* | -0.019 | -0.043 |
| | (-0.663) | (-1.321) |
| *ROA* | -0.189 ** | -0.275 |
| | (-2.307) | (-1.604) |
| *GC_OPINION* | 0.104 * | -0.055 |
| | (1.671) | (-0.561) |
| *CROSSLIST* | 0.202 ** | 0.211 ** |
| | (2.319) | (1.981) |
| *SUBS_TOTAL* | 0.299 *** | 0.285 *** |
| | (8.021) | (5.935) |
| *SUBS_INT* | -0.278 *** | -0.406 *** |
| | (-3.084) | (-3.209) |
| *SEGEMENTS* | 0.030 * | 0.011 |
| | (1.904) | (0.590) |
| *IFRS* | -0.374 *** | -0.501 *** |
| | (-2.969) | (-3.132) |
| Intercept | 4.016 *** | 4.134 *** |
| | (11.949) | (10.214) |
| Observations | 2,590 | 888 |
| Adjusted R-squared | 0.926 | 0.948 |
| Year FE | YES | YES |
| Industry FE | YES | YES |
| Audit Office FE | YES | YES |

*(continued on next page)*

**Table 2-6 (continued)**

**Notes:** This table presents the estimated coefficients and *t*-statistics for Equations (2), (3), and (4). All variables are defined as described in Appendix 2-C. Dependent variables are *PAAA* and *RESTATE* in Panel A, and *AUDIT_FEES* in Panel B. In Panel A, Column 1, 2 and Panel B, Column 1, we use unmatched samples. In Panel A, Column 3, 4 and Panel B, Column 2, we use matched samples in line with Lawrence et al. (2011). Robust standard errors are clustered at the client-level. Statistical significance based on two-tailed tests at the 1 percent 5 percent, and 10 percent level is denoted by ***, **, *, respectively. All variance inflation factors are less than 3.

### 2.5.2 Test of Restatements

***Empirical Model***

We use restatements triggered by the FREP as our second measure of audit quality (Ecker et al. 2013). These restatements relate to material misstatements in the firm's financial statements. As auditors are responsible for ensuring that financial statements are free from material misstatements, restatements are an indicator for low audit quality. DeFond and Zhang (2014) argue that restatements provide strong evidence for weak audit quality, as the individual auditor issued an audit opinion for a client's financial statement that is materially misstated (Lennox and Pittman 2010).

To further test H1, we estimate the following logit regression using an indicator variable for restatements (*RESTATE*) as dependent variable, *PUB_COUNT* as main independent variable, and control variables at the lead auditor, audit firm, and client firm level identified as being related to audit quality (Reynolds and Francis 2001; Francis and Yu 2009; Reichelt and Wang 2010; Gul et al. 2013; Zerni 2012):

$$\begin{aligned} RESTATE = {} & \beta_0 + \beta_1 PUB\_COUNT + \beta_2 PUB\_DISTRACTION + \beta_3 EXP\_GENERAL \\ & + \beta_4 TENURE + \beta_5 PF\_SIZE + \beta_6 SPEC\_INDUSTRY + \beta_7 SPEC\_PUBLIC \\ & + \beta_8 BIG4 + \beta_9 SWITCH + \beta_{10} SIZE + \beta_{11} CFO + \beta_{12} CFO\_VOLA + \beta_{13} LOSS \\ & + \beta_{14} LEVERAGE + \beta_{15} FIRM\_AGE + \beta_{16} ROA + \beta_{17} TURNOVER \\ & + \beta_{18} GROWTH + \beta_{19} MB + \beta_{20} IFRS + year\ fixed\ effects \\ & + industry\ fixed\ effects + audit\ office\ fixed\ effects + \varepsilon, \end{aligned} \quad (3)$$

where all variables are defined in Appendix 2-C. Again, *PUB_COUNT* is our variable of interest.

Table 2-4, Panel B presents the descriptive statistics of all variables used in the restatement model (Equation (3)). Our sample comprises 67 (2.8 percent) restatement firm-year observations. Table 2-5, Panel B presents the correlation matrix including all variables of Equation (3). Our variable of interest *PUB_COUNT* is significantly negatively correlated with *RESTATE*, providing evidence that firms audited by APAs are less likely to have materially misstated financial statements.

***Results***

Table 2-6, Panel A, Column 2 presents the results of estimating the restatement model. We find that the estimated coefficient on *PUB_COUNT* is negative and statistically significant at the 0.05 level supporting H1 and indicating that auditors engaging in research are less likely to be associated with a restatement (-1.181, *t*-stat = -2.161).[28] For our control variables, we observe that *SPEC_PUBLIC*, *CFO*, and *BIG4* are significantly negatively associated with *RESTATE* indicating lower probabilities for materially misstated financial statements. We find statistically significant and positive associations of *RESTATE* with *PF_SIZE*, *CFO_VOLA*, and *LEVERAGE*.

### 2.5.3 Test of Audit Fees

***Empirical Model***

We base our audit fee regression model for testing H2 on prior literature (Simunic 1980; Ferguson et al. 2003; Zerni 2012). We regress the natural logarithm of audit fees

[28] We find comparable results for the estimated coefficient of *PUB_COUNT* using a probit model (-0.542, *t*-stat = -2.618) (untabulated).

(*AUDIT_FEES*) on *PUB_COUNT* and include control variables at the level of the lead auditor, audit firm, and client using the following model:

$$\begin{aligned} AUDIT\_FEES = {} & \beta_0 + \beta_1 PUB\_COUNT + \beta_2 PUB\_DISTRACTION + \beta_3 EXP\_GENERAL \\ & + \beta_4 TENURE + \beta_5 PF\_SIZE + \beta_6 SPEC\_INDUSTRY + \beta_7 SPEC\_PUBLIC \\ & + \beta_8 BIG4 + \beta_9 SWITCH + \beta_{10} SIZE + \beta_{11} CATA + \beta_{12} QUICK + \beta_{13} DE \\ & + \beta_{14} LOSS\_LAG + \beta_{15} FIRM\_AGE + \beta_{16} ROA + \beta_{17} GC\_OPINION \\ & + \beta_{18}\ CROSSLIST + \beta_{19} SUBS\_TOTAL + \beta_{20} SUBS\_INT \\ & + \beta_{21} SEGMENTS + \beta_{22} IFRS + year\ fixed\ effects + industry\ fixed\ effects \\ & + audit\ office\ fixed\ effects + \varepsilon, \end{aligned} \qquad (4)$$

where all variables are defined in Appendix 2-C. Again, *PUB_COUNT* is the variable of interest.

Table 2-4, Panel C presents the descriptive statistics of all variables used in the audit fee model (Equation (4)). Table 2-5, Panel C presents the correlation matrix. *PUB_COUNT* is statistically positively correlated with *AUDIT_FEES,* providing a first indication that publications of APAs are positively associated with audit fees.

***Results***

Table 2-6, Panel B, Column 1 presents the results of estimating the audit fee model. We find that the estimated coefficient on *PUB_COUNT* is positive and statistically significant at the 0.01 level (0.110, *t*-stat = 2.822). Our results show that engagement in practitioner research is associated with higher audit fees, supporting H2. With respect to our control variables, we find that *AUDIT_FEES* is significantly positively associated with *SIZE*, *LOSS_LAG*, *GC_OPINION*, *CROSSLIST*, *SUBS_TOTAL*, *SUBS_INT*, and *SEGMENTS* and negatively associated with *QUICK*, *ROA*, *IFRS*, and *SWITCH*, which is in line with prior literature

(Ferguson et al. 2003; Kealey, Lee, and Stein 2007; Desir, Casterella, and Kokina 2014). The adjusted R-squared of the regression model is 0.93, indicating a high explanatory power of our model comparable to prior literature (e.g., Ferguson et al. 2003).

## 2.6 Identification of the APA Publication Effect

### 2.6.1 Instrumental Variable

Our regression analyses provide evidence that auditors engaging in research are associated with higher audit quality and higher audit fees. However, both the choice of the lead auditor to engage in research and the match between the lead auditor and the client might to some degree be endogenous. To overcome potential endogeneity concerns, we employ an instrumental variable approach. Our first instrument is the proportion of APAs (excluding the respective APA) in an audit office (*APA_OFFICE_PROP*). The instrument is relevant because having colleagues in the same office with experience in the publication process can provide the "peer encouragement" needed for engagement in research (Clapton 2010; Klobas and Clyde 2010). The instrument is exogenous because it is based on other colleagues not involved in the respective audit. In addition, we follow prior literature and use lead auditor's age (*AGE*) and the number of clients audited by the lead auditor in prior years (*CLIENTS_COUNT*) as instruments (Chi et al. 2017). The idea is that older lead auditors with a broader exposure to clients had more opportunities for developing research ideas and composing publications.

We use a two-stage least squares (2SLS) estimation (Table 2-7). For the first stage (Panel A), we observe that, as expected, all three instruments have a positive and significant effect on *PUB_COUNT*. The Cragg-Donald (1993) F-statistics show that the instruments are relevant, exceeding the thresholds of Stock and Yogo (2005, 101). The results of the Sargan-

Hansen test for overidentification do not refute the assumption that the instruments are exogenous for any of the empirical models it is conducted on. Finally, we find that the Durbin-Wu-Hausman test rejects the null hypothesis that the endogenous regressor can be treated as exogenous in the abnormal accruals model but not in the restatement model and the audit fee model.[29]

Table 2-7, Panel B presents the results of the second stage. For the abnormal accruals model, we find a negative and significant effect of *PRED_PUB_COUNT* on *PAAA*, indicating that engagement in research enhances audit quality. For the audit fee model, we find a positive and marginally significant effect of *PRED_PUB_COUNT* on *AUDIT_FEES*, indicating that engagement in research leads to higher audit fees. We do not find significant effects in the restatement sample, probably due to the lower statistical power for the binary variable.

[29] The finding that *PUB_COUNT* can be treated as exogenous in the abnormal accruals model is consistent with the results of a determinant model for explaining the choice of APAs by client characteristics. Using *PUB_COUNT* as the dependent variable and all client characteristics used in our abnormal accruals model as independent variables, we find that all effects are insignificant except for *SIZE*, showing a significant positive effect.

## Table 2-7: Two-Stage Least Squares Regressions

*First Stage:*

$$PRED\_PUB\_COUNT = \beta_0 + \beta_1 AGE + \beta_2 CLIENT\_COUNT + \beta_3 APA\_OFFICE\_PROP + CONTROLS + year\ fixed\ effects + industry\ fixed\ effects + \varepsilon$$

*Second Stage:*

$$DEPENDENT\_VARIABLE = \beta_0 + \beta_1 PRED\_PUB\_COUNT + CONTROLS + year\ fixed\ effects + industry\ fixed\ effects + \varepsilon$$

**Panel A: First Stage Regressions**

| | (1) | (2) | (3) |
|---|---|---|---|
| **Dependent Variable** | ***PRED_PUB_COUNT*** | ***PRED_PUB_COUNT*** | ***PRED_PUB_COUNT*** |
| Instrumental Variables | | | |
| *APA_OFFICE_PROP* | 0.336 *** | 0.341 *** | 0.315 *** |
| | (3.979) | (3.838) | (3.680) |
| *AGE* | 0.009 ** | 0.007 ** | 0.008 ** |
| | (2.607) | (2.203) | (2.154) |
| *CLIENTS_COUNT* | 0.012 ** | 0.009 * | 0.009 * |
| | (2.221) | (1.767) | (1.721) |
| Control Variables | Included | Included | Included |
| Observations | 3,461 | 2,439 | 2,590 |
| Cragg-Donald F-Statistic | 41.86 | 35.54 | 27.53 |
| Year FE | YES | YES | YES |
| Industry FE | YES | YES | YES |

**Panel B: Second Stage Regressions**

| | (1) | (2) | (3) |
|---|---|---|---|
| **Dependent Variable** | ***PAAA*** | ***RESTATE*** | ***AUDIT_FEES*** |
| Instrumented Variable | | | |
| *PRED_PUB_COUNT* | -0.035 ** | -0.645 | 0.382 * |
| | (-2.225) | (-0.042) | (1.814) |
| Control Variables | Included | Included | Included |
| Observations | 3,461 | 2,439 | 2,590 |
| Adjusted R-squared | 0.191 | - | 0.882 |
| Sargan-Hansen Test | 2.589 | 1.044 | 0.949 |
| | (0.274) | (0.593) | (0.622) |
| Durbin-Wu-Hausman Test | 4.403 ** | 0.221 | 1.924 |
| | (0.037) | (0.634) | (0.166) |
| Year FE | YES | YES | YES |
| Industry FE | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our instrumental variable analysis. Estimating a two-stage least squares approach, we use three instrumental variables: (1) *APA_OFFICE_PROP*, i.e., the proportion of APAs (excluding the respective APA) in an audit office, (2) *AGE*, i.e., the lead auditor's age, (3) *CLIENTS_COUNT*, i.e., the number of clients audited by the auditor before the current client. For the sake of brevity, we do not tabulate the estimated coefficients and *t*-statistics of the control variables. All variables are defined as described in Appendix 2-C. Robust standard errors are clustered at the client-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively. All variance inflation factors are less than 3.

### 2.6.2 Matched Samples

We use matched samples to control for the sorting of clients and APAs. We construct our samples by matching APAs and non-APAs following the matching procedure proposed by Chaney, Jeter, and Shivakumar (2004) and Lawrence, Minutti-Meza and Zhang (2011) and estimate the propensity scores as follows:

$$APA = \beta_0 + \beta_1 SIZE + \beta_2 TURNOVER + \beta_3 CURRENT + \beta_4 LEVERAGE + \beta_5 ROA + \beta_6 CONTROLS + year\ fixed\ effects + industry\ fixed\ effects + \varepsilon, \quad (5)$$

where all variables are defined in the Appendix 2-C.

In the audit quality and the audit fee sample, we match without replacement an APA and a non-APA that has the closest predicted propensity-score value from our Equation (5) using a maximum caliper distance of three percent. For the restatement model, we conduct a one-to-five matching using the same caliper distance to ensure a sufficient number of observations.[30] As our matching variable *APA*, we use an indicator variable that is equal to 1 if the auditor has published at least one academic publication; 0 otherwise. Table 2-6 presents the results of estimating the abnormal accruals model (Panel A, Column 4), the restatement model (Panel A, Column 5), and the audit fee model (Panel B, Column 2) using matched samples.[31] In all three

[30] In the restatement model sample, we have to loosen our restrictions and conduct a one-to-five matching because our dependent variable *RESTATE* has only little variation, and because we could not run our prediction model satisfactorily without losing to many observations with due to a perfect prediction.

[31] To assess the quality of matching, we look into the difference in mean of our matching variables *SIZE TURNOVER, CURRENT, LEVERAGE,* and *ROA* between the group of APA and non-APA observations. Prior to the matching, *SIZE, TURNOVER,* and *CURRENT* are significantly different between APA and non-APA in the samples used in the abnormal accruals and audit fee model. In the sample used for the restatement model, we find statistically significant differences in *SIZE*, *TURNOVER*, *CURRENT*, and *LEVERAGE*. After the matching, we no longer find significant differences in our matching variables, except for *SIZE* and *CURRENT* in the matched sample used for the restatement model with differences that are marginally significant (difference: -0.368, *t*-stat = -2.859; difference: 0.020, *t*-stat = 1.919) (untabulated).

models, we find that our inferences about the association between APA publications and our dependent variables are consistent with those using unmatched samples. Our findings mitigate concerns of a bias resulting from a potential endogenous matching of APAs and client firms.[32]

### 2.6.3 Change Analysis

We further analyze changes of lead auditors in which an APA replaces a non-APA. Change analysis is a valid strategy for addressing potential concerns that stem from auditor-client matching and for controlling for unobservable client characteristics. We use an indicator variable for switches from a non-APA to an APA (*APA_IN*). In addition, we indicate those switches that are attributable to mandatory rotation of signing auditors and, therefore, less likely to be endogenous (*MANDATORY*). Finally, we include the interaction term *APA_IN x MANDATORY* as our variable of interest.[33]

Table 2-8 presents the results of estimating the change models for abnormal accruals and audit fees. The implementation of a change model is not feasible for the restatement sample because the regression omits the interaction effect due to perfect predictions. In Column 1, we show the results of estimating our change model using the change in abnormal accruals (*ΔPAAA*) as a dependent variable. We find insignificant effects for *APA_IN* and *MANDATORY* but a negative and marginally significant effect for the interaction effect. Column 2 shows the results of estimating our audit fee model using the change of audit fees *ΔAUDIT_FEE* as a

[32] Following Collins et al. (2017), we check for self-selection when calculating abnormal discretionary accruals. We rank firms into *SIZE*, *GROWTH*, *ROA*, and *LEVERAGE* deciles, and looked into the nonlinear relation to the raw accruals for APAs and non-APAs. This finding increases our confidence that APAs are not subject to endogenous auditor-client matching since we do not observe differences between APAs and non-APAs, indicating that APAs do not self-select to clients with specific profiles.

[33] Including an indicator variable for switches from APA to non-APA (*APA_OUT*) and its interaction (*APA_OUT x MANDATORY*) yields insignificant effects in both models. Including these two variables into the abnormal accruals and audit fee model does not change the results for *APA_IN* and *APA_IN x MANDATORY*.

dependent variable. Again, we find insignificant effects for *APA_IN* and *MANDATORY* but a positive and marginally significant effect for the interaction effect. Our results reveal that a mandatory replacement of a non-APA by an APA has an incremental positive effect on both audit quality and audit fees.

**Table 2-8: Change Analysis**

$\Delta DEPENDENT\_VARIABLE = \beta_0 + \beta_1 VARIABLE\_OF\_INTEREST + \Delta CONTROLS + \varepsilon$

| | (1) | (2) | (3) |
|---|---|---|---|
| **Dependent Variable** | ***ΔPAAA*** | ***ΔRESTATE*** | ***ΔAUDIT_FEES*** |
| Variables of Interest | | | |
| *APA_IN* | 0.025 | -0.007 | -0.062 |
| | (1.478) | (-0.012) | (-1.631) |
| *MANDATORY* | 0.013 | 0.699 | 0.040 |
| | (0.595) | (0.873) | (0.809) |
| *APA_IN x MANDATORY* | -0.109 * | † | 0.124 * |
| | (-1.874) | | (1.665) |
| Control Variables | Included | Included | Included |
| Observations | 515 | 580 | 565 |
| Adjusted/Pseudo R-squared | 0.109 | 0.185 | 0.162 |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our change models. All variables are defined as described in Appendix 2-C. Robust standard errors are clustered at the client-level. For the sake of brevity, we do not tabulate the estimated coefficients and *t*-statistics of the control variables. The sample includes only observations where the lead auditor changes. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively. † indicates perfect predictions.

### 2.6.4 Publication versus Trait Effect

According to prior research, scientists differ from non-scientists by exhibiting, with consistency and over time, a specific set of personality traits that results from genetically determined brain properties (Eysenck and Eysenck 1985; Feist 1998; Feist 2006a; Feist 2006b; Lounsbury et al. 2012). These traits are: being *careful, cautious, orderly, reliable, self-controlled, conventional, rigid, reserved, skeptical,* and *introverted* (Feist 1998; Feist 2006a; Feist 2006b). As our sample population is comprised of audit practitioners and not scientists, it is unclear whether these findings also apply to our setting.

To address this issue, we test whether audit quality and audit fees change with an additional publication. If publications indicate a stable trait, an additional publication should not matter. However, if publications contribute to the formation of expertise, each publication might be helpful (see Table 2-9). We construct a sample that includes all lead auditors who publish during our sample period. Using a maximum caliper distance of three percent, we conduct a one-to-five matching procedure. We use control variables at the lead auditor level for matching, and add lead auditors who never publish as a control group using the closest predicted propensity-score value to the sample. Our variable of interest is *ΔPUB_COUNT*, which indicates an increase in the number of publications, and *PUB_FIRST*, which indicates the first publication of an auditor. We observe significant effects of *ΔPUB_COUNT* on abnormal accruals and of *PUB_FIRST* on audit fees, with the other specifications being insignificant. These findings suggest that each additional publication beyond the first one is helpful for enhancing audit quality, but that the first publication matters most for generating higher audit fees. Further, the findings imply that publications do not indicate a trait effect but indicate a development of expertise.

As a further test, we construct a treatment group consisting only of those auditors who published their first publication during our sample period. Further, we restrict that sample to those firm-year observations *before* their first publication. We create a control group that includes observations only of auditors who never become APAs, using the matching approach of Lawrence et al. (2011) (Equation (5)). We define a variable that indicates the maximum number of *future* publications. If we found an impact of the number of *future* publications on audit quality *before* the first publication, we would considered this to be a time-invariant trait effect. However, we find, consistent with a publication effect, that the number of future publications is not significantly associated with accruals or audit fees for the period *before* their first publication (untabulated). Moreover, using the same approach for the treatment sample

auditors for the period *after* the first publication, we find significant effects for the abnormal accruals model and insignificant effects in the audit fee model (untabulated). These findings imply that publications are associated with a development of expertise and that they do not capture trait effects.

**Table 2-9: Analysis for Changes in Publications**

$\Delta DEPENDENT\_VARIABLE = \beta_0 + \beta_1 VARIABLE\_OF\_INTEREST + \Delta CONTROLS + \varepsilon$

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| **Dependent Variable** | ***ΔPAAA*** | ***ΔRESTATE*** | ***ΔAUDIT_FEES*** | ***ΔPAAA*** | ***ΔRESTATE*** | ***ΔAUDIT_FEES*** |
| Variables of Interest | | | | | | |
| *ΔPUB_COUNT* | -0.003 ** | -0.075 | 0.001 | | | |
| | (-2.233) | (-0.682) | (0.340) | | | |
| *PUB_FIRST* | | | | -0.040 | -0.386 | 0.093 ** |
| | | | | (-1.448) | (-0.403) | (2.157) |
| Control Variables | Included | Included | Included | Included | Included | Included |
| Observations | 1,449 | 1,387 | 1,176 | 1,449 | 1,387 | 1,176 |
| Adjusted/Pseudo R-squared | 0.058 | 0.034 | 0.076 | 0.047 | 0.034 | 0.078 |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our change models. All variables are defined as described in Appendix 2-C. Robust standard errors are clustered at the client-level. For the sake of brevity, we do not tabulate the estimated coefficients and *t*-statistics of the control variables. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

### 2.6.5 Coherent Pattern: Type of Publication

We argue that publications have a causal effect on audit quality and audit fees as they help auditors to acquire and to demonstrate their expertise. If this assumption on the mechanism underlying our effect was valid, one could expect that some types of publications are more relevant than others are. In the following, we test for differential effects depending on characteristics of the publication and, if applicable, the characteristics of the journal.

One main distinction is whether publications are journal articles or books. Books are much longer than journal articles but usually have a smaller circulation. Accordingly, we expect that the more intense endeavor of writing a book should have a bigger impact on expertise acquisition than journal articles. In contrast, journal articles might have a bigger effect on reputation formation given their larger circulation. To test this conjecture, we split our variable

of interest *PUB_COUNT* into three count variables, one for each type of publication: *ARTICLE_COUNT*, *BOOK_COUNT*, and *CHAPTER_COUNT* (Table 2-10, Panel A, Columns 1-3). Consistent with our reasoning, we find that publishing books has significantly negative effects on abnormal accruals whereas the effects of publishing journal articles is insignificant.[34] Further, we find that publishing articles has significantly positive effects on audit fees whereas the effect of publishing books is insignificant.

Taking a closer look at the content of publications, we distinguish between publications on topics that are already effective and topics that are not yet effective. For example, we classify a topic as not yet effective if it is about a proposed accounting standard that was to become effective in the (imminent) future. Performing our main regression analyses, we do not observe a significant effect for publications that are not yet effective. However, we observe that the effect becomes negative and significant in change regressions on abnormal accruals calibrated around the year when the respective accounting standard eventually becomes effective (Table 2-10, Panel A, Columns 4-6). We do not find significant effects in the other models, probably attributable to the lower power of our test. Nevertheless, these findings suggest that publications need to be on topics that are already relevant to be associated with audit quality.

Further, we test for differential effects of journal articles based on the characteristics of the journals. First, we distinguish between ranked academic journals (mostly C- and D-ranked) and non-ranked academic journals, creating separate counts for both categories (Table 2-10, Panel B, Columns 1-3). We find that ranked journal articles are significantly negatively associated with *PAAA* and *RESTATE*, whereas non-ranked journal articles are significantly

[34] Further, we find that publishing articles (*ARTICLE_COUNT*) is statistically significant and negatively associated with restatements, while the variable on publishing books (*BOOK_COUNT*) is omitted due to perfect predictions. Using a linear probability model, we find significant and negative effects for both variables.

positively associated with *AUDIT_FEES*. These results indicate that publishing in higher-ranked journals is associated with the acquisition of additional expertise while publishing in non-ranked journals might still be of value for signaling expertise.[35] Second, we hand-collect data on journal circulation from the journals' homepages, constructing separate counts for articles in journals with high and low circulation based on a median split (Table 2-10, Panel B, Columns 4-6). The results provide evidence that publications in journals with high circulation have a stronger effect on audit fees than those in journals with low circulation. Further, we find a significantly negative effect of high circulation journal publications on restatements indicating an audit quality effect for these publications but not for others. We do not observe significant effects of the two variables of interest for the abnormal accruals model.[36]

In summary, the results reveal coherent patterns, providing support for a causal effect. In addition, they reveal differential effects on audit quality and audit fees. For example, we find that books matter most for audit quality and that journal articles matter most for audit fees. These findings suggest that audit quality and audit fees are not merely mechanically related, for example, with audit fees influencing audit quality through higher audit effort. [37]

[35] Please note that we were unable to test for differential effects of peer-review because all journals in our sample have a peer-review mechanism in place.

[36] In additional tests, we split up the publications by content category (accounting, auditing, advisory, corporate governance, tax). We do not find a clear pattern of differential effects. This finding is consistent with our impression that the vast majority of auditor publications deal with topics that have some relevance for auditing even if they are not part of the "auditing" category. For example, the following types of articles have some relevance for auditing: accounting articles on the interpretation of accounting standards, advisory articles on the implementation of new accounting standards, corporate governance articles on risk management or internal controls, and tax articles on tax accounting.

[37] One further explanation for our findings could be that audit quality increases because of an increase in audit effort, as discussed in Lobo and Zhao (2013). Thus, we examine the impact of APAs' publications on the audit reporting lag, which has been documented to capture auditor's effort (Knechel and Payne 2001; Blankley, Hurtt, and MacGregor 2014). We use an empirical model in line with Blankley et al. (2014), regressing the reporting lag on *PUB_COUNT*, individual auditor controls, and firm controls. We document (untabulated) that the coefficient on *PUB_COUNT* is statistically insignificant (-0.058, *t*-stat = -0.171). Hence, we do not find evidence for the notion that APAs differ from non-APAs in their level of audit effort.

## Table 2-10: Coherent Pattern: Type of Publications

**Panel A: Type of Publication and Effectiveness Analysis**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| **Dependent Variable** | ***PAAA*** | ***RESTATE*** | ***AUDIT_FEES*** | ***ΔPAAA*** | ***ΔRESTATE*** | ***ΔAUDIT_FEES*** |
| Variables of Interest | | | | | | |
| *ARTICLE_COUNT* | -0.002 | -0.458 ** | 0.120 *** | | | |
| | (-0.626) | (-2.136) | (3.502) | | | |
| *BOOK_COUNT* | -0.023 * | † | 0.234 | | | |
| | (-1.814) | | (1.429) | | | |
| *CHAPTER_COUNT* | -0.017 * | † | -0.177 | | | |
| | (-1.700) | | (-1.121) | | | |
| *ΔEFFECTIVE_COUNT* | | | | -0.003 ** | -0.048 | 0.001 |
| | | | | (-2.266) | (-0.950) | (0.359) |
| *ΔINEFFECTIVE_COUNT* | | | | -0.002 | † | -0.042 |
| | | | | (-0.057) | | (-1.484) |
| Control Variables | Included | Included | Included | Included | Included | Included |
| Observations | 3,461 | 2,342 | 2,590 | 1,449 | 1,381 | 1,176 |
| Adjusted/Pseudo R-squared | 0.311 | 0.125 | 0.926 | 0.046 | 0.031 | 0.076 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |
| Audit Office FE | YES | NO | YES | YES | NO | YES |

**Panel B: Ranking and Circulation Analysis**

| | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| **Dependent Variable** | ***PAAA*** | ***RESTATE*** | ***AUDIT_FEES*** | ***PAAA*** | ***RESTATE*** | ***AUDIT_FEES*** |
| Variables of Interest | | | | | | |
| *RANKED_JOURNALS* | -0.009 ** | -1.061 * | 0.061 | | | |
| | (-2.450) | (-1.887) | (1.541) | | | |
| *NON_RANKED_JOURNALS* | 0.003 | † | 0.222 ** | | | |
| | (0.494) | | (2.150) | | | |
| *HIGH_CIRCULATION* | | | | -0.004 | -1.617 * | 0.120 ** |
| | | | | (-0.976) | (-1.869) | (2.187) |
| *LOW_CIRCULATION* | | | | 0.005 | -0.329 | 0.105 |
| | | | | (0.645) | (-0.318) | (1.286) |
| Control Variables | Included | Included | Included | Included | Included | Included |
| Observations | 3,461 | 2,368 | 2,590 | 3,461 | 2,342 | 2,590 |
| Adjusted/Pseudo R-squared | 0.400 | 0.112 | 0.926 | 0.401 | 0.113 | 0.926 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |
| Audit Office FE | YES | NO | YES | YES | NO | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics of analyzing the association of the type and relevance of publications on audit quality and audit fees. All variables are defined as described in Appendix 2-C. Robust standard errors are clustered at the client-level. For the sake of brevity, we do not tabulate the estimated coefficients and *t*-statistics of the control variables. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively. † indicates perfect predictions.

## 2.7 Additional Analysis

### 2.7.1 Dependent Variable

#### *Going-Concern Analysis*

We use going-concern modifications as another important measure for audit quality. We restrict our sample to financially distressed firms characterized by a negative net income or negative operating cash flows, resulting in a sample of 986 firm-year observations with a 21.3 percent proportion of going-concern modifications. We find that our variable of interest *PUB_COUNT* is statistically significant and negative, indicating that firms audited by APAs are less likely to receive a going-concern opinion (see Table 2-11). Looking at going-concern reporting accuracy (e.g., Geiger and Rama 2006; Sundgren and Svanström 2014; Knechel et al. 2015), we find that *PUB_COUNT* is significantly negatively associated with Type I errors but not with Type II errors. These findings indicate that the lower propensity of APAs to issue going-concern opinions reflects a lower rate of Type I errors in terms of issuing going-concern modifications for firms that do not become insolvent, implying a higher audit quality.[38]

[38] For classifying going-concern accuracy, we consider whether a company receiving a going-concern modification does not become insolvent within a year after fiscal year end (Type I error) and whether a company not receiving a going-concern modification becomes insolvent within a year after fiscal year end (Type II error). The results are stronger when considering insolvencies within two years after fiscal year end.

## Table 2-11: Going-Concern Model

| Dependent Variable | (1) *GC_OPINION* | (2) *ERROR_I* | (3) *ERROR_II* |
|---|---|---|---|
| Variable of Interest | | | |
| *PUB_COUNT* | -0.750 ** | -0.887 ** | -0.249 |
| | (-1.946) | (-2.416) | (-0.405) |
| Lead Auditor Controls | | | |
| *PUB_DISTRACTION* | 1.124 * | 1.425 ** | -0.085 ** |
| | (1.868) | (2.410) | (-0.097) |
| *EXP_GENERAL* | -0.079 | -0.109 | -0.737 |
| | (-0.516) | (-0.732) | (-0.889) |
| *TENURE* | -0.094 | -0.069 | 0.773 *** |
| | (-1.397) | (-0.984) | (4.466) |
| *PF_SIZE* | 0.122 ** | 0.126 ** | -0.177 |
| | (2.053) | (2.095) | (-0.604) |
| *SPEC_INDUSTRY* | -0.205 | -0.091 | † |
| | (-0.171) | (-0.076) | |
| *SPEC_PUBLIC* | -0.773 * | -0.748 * | 0.684 |
| | (-1.861) | (-1.846) | (0.520) |
| Audit Firm Controls | | | |
| *BIG4* | -0.094 | -0.108 | -1.056 |
| | (-0.356) | (-0.399) | (-0.815) |
| *AUDIT_LAG* | 1.201 *** | 1.154 *** | -2.278 |
| | (3.961) | (3.791) | (-1.026) |
| Firm Controls | | | |
| *SIZE* | -0.311 *** | -0.375 *** | -0.057 |
| | (-2.840) | (-3.220) | (-0.087) |
| *CFO_VOLA* | 0.983 | 1.018 | 1.361 |
| | (0.874) | (0.879) | (0.199) |
| *LEVERAGE* | 1.809 *** | 1.815 *** | -2.156 |
| | (4.146) | (4.292) | (-0.860) |
| *LOSS* | 0.888 ** | 0.757 * | † |
| | (2.053) | (1.778) | |
| *MB* | 0.059 | 0.056 | -0.935 ** |
| | (0.765) | (0.749) | (-2.491) |
| *BANKRUPTCY* | 0.001 | -0.000 | 0.106 |
| | (0.479) | (-0.131) | (0.847) |
| *ROA* | -2.873 *** | -2.470 *** | 4.506 |
| | (-3.823) | (-3.415) | (1.095) |
| *DE* | 1.386 ** | 0.953 | 3.046 * |
| | (2.110) | (1.443) | (1.922) |
| *TOTAL_ACCRUALS* | 0.660 | 0.589 | -1.969 |
| | (0.657) | (0.594) | (-0.310) |
| *IFRS* | -0.553 | -0.699 | † |
| | (-1.012) | (-1.269) | |
| Intercept | -6.298 *** | -5.151 ** | 7.919 |
| | (-3.008) | (-2.404) | (0.893) |
| Observations | 986 | 986 | 257 |
| Pseudo R-squared | 0.289 | 0.287 | 0.358 |
| Year FE | YES | YES | YES |
| Industry FE | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our going-concern analysis. Column 3 (*ERROR_II*) has a smaller sample size due to excluded observations from perfect predictions. All variables are defined as described in Appendix 2-C. Robust standard errors are clustered at the client-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively. † indicates perfect predictions.

***Publication Recognition, Client Tenure, and Client Portfolio Growth***

We argue that clients recognize APA publications, enabling APAs to develop a personal reputation. To provide further evidence beyond the insights from our interviews with APAs and our survey of journal editors, we obtain proprietary data from one non-Big 4 audit firm on download statistics for academic articles. This audit firm regularly secures the copyright from the journals in order to post the full-text version of the academic articles written by its auditors on its homepage. We observe a high level of interest in these academic articles, with up to 50,000 annual downloads. In particular, we study the download pattern for one article on a proposed accounting regulation that became effective for annual reports issued after December 31, 2015. We observe that the number of downloads steeply increases in the months before the regulation went into effect, indicating that clients recognize journal articles of APAs (see Appendix 2-D).[39]

The positive effects of publications might help auditors to keep current clients or to win new clients. First, we test whether publications increase the total length of the individual auditor-client relationship (*TENURE*). We estimate a Tobit model to explain lead auditor tenure (*TENURE),* censored from one to seven years due to internal rotation requirements. The independent variables are our variable of interest *PUB_COUNT* and additional auditor controls. We find that *PUB_COUNT* is statistically significant and positive, indicating that APAs have a longer individual audit tenure (see Table 2-12, Column 1). Second, we test whether becoming an APA has an effect on the future growth of the client portfolio. We match APAs who have their first publication during the sample period to non-APAs based on individual auditor

[39] Unfortunately, we were not able to retrieve the IP addresses of the downloads, which would have allowed us to identify the article's readers.

characteristics, and test whether *PUB_FIRST* has an effect on client portfolio growth. We find that *PUB_FIRST* is positive but statistically insignificant (see Table 2-12, Column 2). Overall, these findings suggest that publications help to retain current clients but are not a strong determinant for winning new clients.

**Table 2-12: Portfolio Analysis**

| | (1) | (2) |
|---|---|---|
| **Dependent Variable** | ***TENURE*** | ***PF_GROWTH*** |
| Variables of Interest | | |
| *PUB_COUNT* | 0.137 *** | |
| | (3.982) | |
| *PUB_FIRST* | | 0.116 |
| | | (1.347) |
| Lead Auditor Controls | | |
| *EXP_GENERAL* | -0.158 *** | -0.016 |
| | (-8.170) | (-0.560) |
| *PF_SIZE* | -0.018 *** | |
| | (-3.616) | |
| *TENURE* | | -0.034 ** |
| | | (-2.460) |
| *SPEC_INDUSTRY* | 0.844 *** | -0.343 *** |
| | (9.814) | (-2.796) |
| *SPEC_PUBLIC* | 0.174 *** | 0.348 *** |
| | (4.080) | (6.857) |
| Observations | 946 | 602 |
| Adjusted/Pseudo R-squared | 0.247 | 0.131 |
| Year FE | YES | YES |
| Industry FE | YES | YES |
| Audit Office FE | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our portfolio analysis. All variables are defined as described in Appendix 2-C. Robust standard errors are clustered at the client-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

### 2.7.2 Additional Independent Variables

#### *Variations of the Publication Measure*

To ascertain the robustness of our results, we test alternative specifications of our variable of interest. First, we define *PUB_COUNT_PAGES* as the natural logarithm of the cumulative number of pages which the individual auditor published, taking into account the length of the publications, finding results similar to these of our main analyses (untabulated). Second, we use

an indicator variable for APA that is equal to 1 starting with the first publication of an auditor and 0 otherwise, again finding robust results (untabulated). Third, we take into account that publications are often co-authored (average number of authors: 2.1 for journal articles, 2.5 for books, 1.9 for a book chapter) by dividing *PUB_COUNT* by the number of authors (*PUB_COUNT_AUTHOR*). Again, our results do not change (untabulated). Fourth, we consider that the knowledge gained from engagement in research might suffer over time or might become obsolete (Arthur, Bennett, Stanush, and McNelly 1998) by redefining our independent variable *PUB_COUNT* as a rolling cumulative total that captures the number of publications within the last five or ten years. We continue to find significant effects on audit quality but insignificant effects on audit fees (untabulated).

***Variations of the Publication Measure***

We use holding a PhD degree as an alternative measure of engagement in research. In Germany, 81 percent of PhD students move into practice instead of staying in academia (Destatis 2011). In our sample, about 7.6 percent of the lead auditors hold a PhD degree. In untabulated results, we find that holding a PhD degree is significantly negatively associated with the level of abnormal accruals.[40] The effects of holding a PhD are statistically insignificant for restatements and audit fees. Considering only PhDs obtained within a ten-year period before the audit engagement, we find statistically significant and negative association for abnormal accruals and restatements, but insignificant effects for audit fees.

Further, we examine the effects of engagement in teaching. We collected data about lead auditors teaching as adjunct faculty at universities and universities of applied science from the

[40] In additional tests we use both variables *APA* and *PHD* in our regression models. Our results for APA remain unaltered. With respect to *PHD*, we find a statistically significant association with the level of abnormal accruals. Interaction effects for being an APA and holding a PhD are statistically insignificant.

annual study guide issued by the German Chamber of Public Accountants. The number of auditors who engage in teaching (1.9 percent) is much lower than the number of auditors engaging in research (14.1 percent), reducing the power of the test. We do not find any statistically significant result for engagement in teaching for any of the three models.

### 2.7.3 Subsample Analyses and Interaction Effects

***Big 4 vs. non-Big 4 Academic Practitioner Auditors***

We test whether our results hold for Big 4 and non-Big 4 auditors. We find that the effects of engagement in research are significant for Big 4 auditors but not for non-Big 4 auditors (untabulated). The insignificant effects for non-Big 4 auditors might be due to the higher heterogeneity of small auditors, reducing statistical power. As an alternative explanation, the publications of Big 4 auditors might be of a higher quality given a higher number of citations for publications of Big 4 auditors (average number of citations: Big 4 = 5.3; non-Big 4 = 2.7). However, the results of the subsample analysis should be interpreted cautiously as the interaction effect between our publication measure and a Big 4 dummy is insignificant in all empirical models.

***Auditor Experience, Auditor Prominence, and Client Complexity***

We test whether our findings are sensitive to the auditor's client-specific experience (*TENURE*), general experience (*EXP_GENERAL*), and specific experience (*SPEC_PUBLIC*; *SPEC_INDUSTRY*). We interact each of these measures with our variable of interest, *PUB_COUNT*, and find no significant interaction effects in untabulated analysis with the exception of one: The interaction with *SPEC_PUBLIC* is positively significant for the accruals and restatement model, suggesting that an engagement in research enhances the audit quality of auditors not specialized in the audit of public clients.

Further, we examine whether the prominence of the auditor could influence our results. The professional register enables us to identify the head of each audit office. Controlling for auditor prominence by including this information as an indicator variable into our model, we find insignificant effects for this variable, and observe that our results for publications remain unchanged across all empirical models. Further, we test for differential effects by interacting a dummy variable for being the head of an audit office with our publication measure. We find insignificant interaction effects for the abnormal accruals model, omitted interaction effects for the restatement model, and negative and significant interaction effects for the audit fee model. These findings imply that the heads of audit offices experience a similar positive effect on audit quality from publications but benefit less from them in terms of audit fees.

Finally, we investigate the role of firm complexity. Using the industry complexity measure of Francis and Gunn (2015), we find that APAs are more common in non-complex industries. Further, we find that the interaction of *PUB_COUNT* with industry complexity yields negative and significant effects in the abnormal accruals model and positive and significant effects in the audit fee model, indicating that engagement in research matters more in the audit of non-complex clients.

## 2.8 Conclusion

We examine whether auditors' engagement in research influences their work. Specifically, we analyze audit quality and audit fees of APAs that bridge research and practice by producing practice-oriented research. We document that the phenomenon of APAs is most common in Germany but not restricted to this country. Interviews with APAs provide initial evidence that publications help auditors to acquire new expertise and to increase their personal reputation.

Consistent with this evidence, our archival findings indicate that academic publications of APAs are associated with higher audit quality (abnormal accruals and restatements) and audit fees. We provide evidence that these effects are causal using several identification strategies, including an instrumental variable approach, propensity-score matching, change analyses, and coherent pattern analyses. Additional tests reveal that our results are robust in various specifications.

Our finding that practitioners can benefit from an engagement in practice-oriented research in their daily work suggests a new avenue for bridging research and practice. Our findings indicate that practitioners might not only benefit from being consumers from academic accounting research (Pathways Commission 2012) but also from producing it. Further, practitioners as authors might help to "focus academic research on relevant practice issues" (Pathways Commission 2012, 27). Another insight of our study is that practitioners can acquire knowledge and skills through engagement in practice-oriented research. Our study builds on prior audit partner research by examining how experiences outside of auditing shape expertise in auditing. For example, prior audit partner research focused on the performance of auditors designated as industry experts based on their current level of activity within auditing. Our study, then, provides insights on how auditors can enhance their expertise. As our study is the first archival study on the consequences of practitioners as authors, it has implications beyond auditing. The question of bridging academia and research and motivating practitioners to contribute to research is widely discussed across many disciplines (e.g., Rynes, Bartunek, and Daft 2001; Bartunek and Rynes 2014). However, prior studies have not investigated whether practitioners can benefit from an engagement in research in their daily work.

We emphasize that our study is subject to caveats. Without having the possibility to observe the process of transferring research-oriented knowledge into practice, we could only deduce this effect from interviews and from analyzing academic publications. Furthermore, in the case of multiple authors, we could control for the number of authors but not for a potentially heterogeneous participation during the publication process. In addition, we use a setting with low litigation risk, which may threaten the external validity of our findings for settings with high litigation risk. However, we are confident that our findings can be generalized to other settings, as they are based on general theories of constructivist learning and evidence-based management.

## 2.9 References

Albrecht, W. S., and R. J. Sack. 2001. The perilous future of accounting education. *The CPA Journal* 71 (3): 17-23.

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

Aobdia, D., C. J. Lin, and R. Petacchi. 2015. Capital market consequences of audit partner quality. *The Accounting Review* 90 (6): 2143-2176.

Arthur Jr., W, W. Bennett Jr., P. L. Stanush, T. L. McNelly. 1998. Factors that influence skill decay and retention: A quantitative review and analysis. *Human Performance* 11 (1): 57-101.

Ashbaugh, H., R. LaFond, and B. W. Mayhew. 2003. Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review* 78 (3): 611-639.

Bartunek, J. M., and S. L. Rynes, 2014. Academics and practitioners are alike and unlike: The paradoxes of academic–practitioner relationships. *Journal of Management* 40 (5): 1181-1201.

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

Blankley, A. I., D. N. Hurtt, and J. E. MacGregor. 2014. The relationship between audit report lags and future restatements. *Auditing: A Journal of Practice & Theory* 33 (2): 27-57.

Causholli, M., and W. R. Knechel. 2012. An examination of the credence attributes of an audit. *Accounting Horizons* 26 (4): 631-656.

Chaney, P., D. Jeter, and L. Shivakumar. 2004. Self-selection of auditors and audit pricing in private firms. *The Accounting Review* 79 (1): 51-72.

Chi, H.-Y., and C.-L. Chin. 2011. Firm versus partner measures of auditor industry expertise and effects on audit quality. *Auditing: A Journal of Practice & Theory* 30 (2): 201-229.

Chi, W., L. A. Myers, T. C. Omer, and H. Xie. 2016. The effects of audit partner pre-client and client-specific experience on audit quality and on perceptions of audit quality. *Review of Accounting Studies* 22 (1): 361-391.

Chin, C.-L., and H.-Y. Chi. 2009. Reducing restatements with increased industry expertise. *Contemporary Accounting Research* 26 (3): 729-765.

Choi, J.-H., J.-B. Kim, X. Liu, and D. A. Simunic. 2008. Audit pricing, legal liability regimes, and big 4 premiums: Theory and cross-country evidence. *Contemporary Accounting Research* 25 (1): 55-99.

Clapton, J. 2010. Library and information science practitioners writing for publication: motivations, barriers, and supports. *Library and Information Research* 34 (106): 7-21.

Collins, D., R. Pungaliya, and A. Vijh. 2014. The effects of firm growth and model specification choices on tests of earnings management in quarterly settings. *The Accounting Review* 92 (2): 69-100.

Craswell, A. T., J. R. Francis, and S. L. Taylor. 1995. Auditor brand name reputation and industry specialization. *Journal of Accounting and Economic*s 20 (3): 297-322.

Creswell, J. W. 2013. Research design: Qualitative, quantitative, and mixed methods approaches. London: SAGE Publications Ltd.

Dadds, M. 2006. Perspectives on practitioners. Available at: https://palava.wikispaces.com/file/view/Teacher+Researchers+PDF.pdf (last accessed April 4, 2017).

Dechow, P. M., R. G. Sloan, and A. P. Sweeney. 1995. Detecting earnings management. *The Accounting Review* 70 (2): 193-225.

Dechow, P. M., and P. Dichev. 2002. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review* 77 (Supplement): 35-59.

DeFond, M. L., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58 (2-3): 275-326.

Desir, R., J. Casterella, and J. Kokina. 2014. A reexamination of audit fees for initial audit engagements in the post-SOX period. *Auditing: A Journal of Practice & Theory* 33 (2): 59–78.

Destatis. 2011. Hochqualifizierte in Deutschland! Available at: https://www.destatis.de/DE/Publikationen/Thematisch/BildungForschungKultur/Hochschulen/HochqualifizierteDeutschland5217205139004.pdf?__blob=publicationFile (last accessed April 4, 2017).

Ecker, F., J. Francis, P. Olsson, and K. Schipper. 2013. Estimation sample selection for discretionary accruals models. *Journal of Accounting and Economics* 56 (2-3): 190-211.

Ernstberger J., J. M. Hitz, and M. Stich. 2012. Enforcement of accounting standards in Europe: Empirical evidence for the two-tier mechanism in Germany. *European Accounting Review* 21 (2): 253-281.

Evans, E., R. Burritt, and J. Guthrie 2011. In: Bridging the gap between academic accounting research and professional practice, e.d. E. Evans, R. Burritt, and J. Guthrie, 9-20. Sydney: The Institute of Chartered Accountants in Australia.

Eysenck, S. B. G., and H. J. Eysenck. 1985. A revised version of the psychoticism scale. *Personality and Individual Differences* 6 (1): 21-29.

Facione, P. 2000. The disposition towards critical thinking: Its character, measurement, and relationship to critical thinking skills. *Informal Logic* 20 (1): 61-84.

Feist, G. J. 1998. A meta-analysis of the impact of personality on scientific and artistic creativity. *Personality and Social Psychological Review* 2 (4): 290-309.

Feist, G. J. 2006a. How development and personality influence scientific thought, interest, and achievement. *Review of General Psychology* 10 (2): 163-182.

Feist, G. J. 2006b. The psychology of science and the origins of the scientific mind. New Haven: Yale University Press.

Ferguson, A., J. R. Francis, and D. J. Stokes. 2003. The effects of firm-wide and office-level industry expertise on audit pricing. *The Accounting Review* 78 (2): 429-448.

Finlay, S. C., C. Ni, A. Tsou, and C. R. Sugimoto. 2013. Publish or Practice? An examination of librarians' contributions to research. *Libraries and the Academy* 13 (4): 403-421.

Fiolleau, K., K. Hoang, K. Jamal, and S. Sunder. 2013. How do regulatory reforms to enhance auditor independence work in practice? *Contemporary Accounting Research* 30 (3): 864-890.

Fox, M. F. 1983. Publication productivity among scientists: A critical review. *Social Studies of Science* 13 (2): 285-305.

Fox, M., P. Martin, and G. Green. 2007. Doing practitioner research. London: SAGE Publications.

Francis, J. R., and J. Krishnan. 1999. Accounting accruals and auditor reporting conservatism. *Contemporary Accounting Research* 16 (1): 135-165.

Francis, J. R. K. Reichelt, and D. Wang. 2005. The pricing of national and city-specific reputations for industry expertise in the U.S. audit market. *The Accounting Review* 80 (1): 113-136.

Francis, J. R., and M. D. Yu. 2009. Big 4 office size and audit quality. *The Accounting Review* 84 (5): 1521-1552.

Francis, J. R. 2011. A framework for understanding and researching audit quality. *Auditing: A Journal of Practice & Theory* 30 (2): 125-152.

Francis, J. R., and J. L. Gunn. 2015. Industry accounting complexity and earnings properties: Does auditor industry expertise matter? Working Paper. Available at: https://www.uts.edu.au/sites/default/files/AccDG_Francis%20Gunn__WP%202015.pdf (last accessed April 4, 2017).

Frankel, R. M., M. F. Johnson, and K. K. Nelson. 2002. The relation between auditors' fees for nonaudit services and earnings management. *The Accounting Review* 77 (Supplement): 71-105.

Fülbier, R. U., and M. Weller. 2011. A glance at German financial accounting research between 1950 and 2005: A publication and citation analysis. *Schmalenbach Business Review* 63 (1): 2-33.

Goodwin, J., and D. Wu. 2016. What is the relationship between audit partner busyness and audit quality? *Contemporary Accounting Research*. 33 (1): 341-377.

Gul, F. A., D. W. Wu, and Z. Yang. 2013. Do individual auditors affect audit quality? Evidence from archival data. *The Accounting Review* 88 (6): 1993-2023.

He, X., S. P. Kothari, T. Xiao, and L. Zuo. 2016. Long-term impact of economic conditions on auditors' judgment. Working paper. Available at: https://ssrn.com/abstract=2892107 (last accessed April 4, 2017).

Hopwood, A. G. 2007. Whither accounting research? *The Accounting Review* 82 (5): 1365-1374.

Inanga, E. L., and W. B. Schneider 2005. The failure of accounting research to improve accounting practice: A problem of theory and lack of communication. *Critical Perspectives on Accounting* 16 (3): 227-248.

Kaplan, R. 2011. Accounting scholarship that advances professional knowledge and practice. *The Accounting Review* 86 (2): 367-383.

Kealey, B. T., H. Y. Lee, and M. T. Stein. 2007. The association between audit-firm tenure and audit fees paid to successor auditors: Evidence from Arthur Andersen. *Auditing: A Journal of Practice and Theory* 26 (2): 95-116.

Klobas, J. E., and L. A. Clyde. 2010. Beliefs, attitudes, and perceptions about research and practice in a professional field. *Library & Information Science Research* 32 (4): 237-245.

Knechel, W. R., and J. L. Payne. 2001. Additional evidence on audit report Lag. *Auditing: A Journal of Practice & Theory* 20 (1): 137-146.

Knechel, W. R., A. Vanstraelen, and M. Zerni. 2015. Does identity of engagement partners matter to the market. *Contemporary Accounting Research* 32 (4): 1443-1478.

Kothari, S. P., A. J. Leone, and C. E. Wasley. 2005. Performance matched discretionary accrual measures. *Journal of Accounting and Economics* 39 (3): 163-197.

Küpper, H.-U., and R. Matteessich. 2005. Twentieth century accounting research in the German language area. *Accounting, Business and Financial History* 15 (3): 345-409.

Lawrence, A., M. Minutti-Meza, and P. Zhang. 2011. Can Big 4 versus non-Big 4 differences in audit-quality proxies be attributed to client characteristics? *The Accounting Review* 86 (1): 259-286.

Lennox, C. and J. A. Pittman 2010. Big five audits and accounting fraud. *Contemporary Accounting Research* 27 (1): 209-247.

Lennox, C. and X. Wu. 2017. A Review of the literature on audit partners. Working paper. Available at: https://papers.ssrn.com/sol3/Papers.cfm?abstract_id=2876174 (last accessed April 4, 2017).

Lennox, C., X. Wu, and T. Zhang. 2016. The effects of audit adjustments on earnings quality: Evidence from China. *Journal of Accounting and Economics* 61 (2-3): 545-562.

Leung, O. and M. Bartunek. 2012. Enabling evidence-based management: Bridging the gap between academics and practitioners. In: Rousseau, D. M. 2012. The Oxford Handbook of evidence-based management. Oxford: Oxford University Press.

Luenendonk. 2016. Leading audit and tax firms in Germany. Available at: http://luenendonk-shop.de/out/pictures/0/lue_liste_wp_f260816_fl.pdf (last accessed April 4, 2017).

Lounsbury, J. W., N. Foster, H. Patel, P. Carmody, L. W. Gibson, and D. R. Stairs. 2012. An investigation of the personality traits of scientists versus nonscientists and their relationship with career satisfaction. *R&D Management* 42 (1): 47-49.

Malmendier, U., and G. Tate. 2009. Superstar CEOs. *The Quarterly Journal of Economics* 124 (4): 1593-1638.

Merton, R. K. 1968. The Matthew effect in science. *Science* 159 (3810): 56-63.

Moser, D. V. 2012. Is accounting research stagnant? *Accounting Horizons* 26 (4): 845-850.

Myers, J. N., L. A. Myers, and T. C. Omer. 2003. Exploring the term of the auditor-client relationship and the quality of earnings: A case for mandatory auditor rotation? *The Accounting Review* 78 (3): 779-799.

Nearon, B. H. 2002. A radical proposal accounting education. *The CPA Journal* 72 (10): 28-33.

Oester, J. 2016. Wissenschaftliche Veröffentlichungen von Wirtschaftsprüfern. *Master thesis.* Technical University of Munich. Submitted: September 2016.

Pathways Commission. 2012. Charting a national strategy for the next generation of accountants. Available at: http://commons.aaahq.org/files/0b14318188/Pathways_Commission_Final_Report_Complete (last accessed April 4, 2017).

Perkins, D., E. Jay, and S. Tishman. 1993. Beyond abilities: A dispositional theory of thinking. *Merrill-Palmer Quarterly* 39 (1): 1-21.

Powell, R. R., L. M. Baker, J. J. Mika. 2002. Library and information science practitioners and research. *Library & Information Science Research* 24 (1): 49-72.

Prott, M. 2014. Scientific Auditors. *Master Thesis*. Ruhr University Bochum. Submitted: May 2014.

Piaget, J. 1967. Biologie et connaissance. Paris: Gallimard.

Ratzinger-Sakel, N., and G. L. Gray. 2015. Moving toward a learned profession and purposeful integration: Quantifying the gap between the academic and practice communities in auditing and identifying new research opportunities. *Journal of Accounting Literature* 35 (October): 77-103.

Reichelt, K. J., and D. Wang. 2010. National and office-specific measures of auditor industry expertise and effects on audit quality. *Journal of Accounting Research* 48 (3): 647-686.

Reynolds, J. K., and J. R. Francis. 2001. Does size matter? The influence of large clients on office-level auditor reporting decisions. *Journal of Accounting and Economics* 30 (3): 375-400.

Rogers, W. H. 1993. Regression standard errors in clustered samples. *Stata Technical Bulletin* 13: 19-23.

Rousseau, D. M., and S. McCarthy. 2007. Evidence-based management: Educating managers from an evidence-based perspective. *Academy of Management Learning and Education* 6 (1): 94-101.

Rynes, S. L., J. M. Bartunek, and R. L. Daft. 2001. Across the great divide: Knowledge creation and transfer between practitioners and academics. *Academy of Management Journal* 44 (2): 340-355.

Schlackman, E. 2009. An exploration of the motivations and barriers for UK academic librarians to conduct research. MSc (ILM) dissertation, University of the West of England.

Schlögl, C., and W. Stock. 2008. Practitioners and academics as authors and readers: The case of LIS journals. *Journal of Documentation* 64 (5): 643-666.

Spence, M. 1973. Job market signaling. *The Quarterly Journal of Economics* 87 (3): 355-374.

Simunic, D. A. 1980. The pricing of audit services: Theory and evidence. *Journal of Accounting Research* 18 (1): 161-190.

Staudt, M. M., C. Dulmus, and G. A. Bennett. 2003. Facilitating writing by practitioners: Survey of practitioners who have published. *Social Work* 48 (1): 75-83.

Sundgren, S., and T. Svanström. 2014. Auditor-in-charge characteristics and going-concern reporting. *Contemporary Accounting Research* 31 (2): 531-550.

Trompeter, G., and A. Wright. 2010. The world has changed: Have analytical procedure practices? *Contemporary Accounting Research* 27 (2): 1-32.

Stock, J. H. and M. Yogo. 2005. Testing for weak instruments in linear IV regression. In D.W. K. Andrews & J. H. Stock (Eds.), Identification and Inference for Econometric

Models: Essays in Honor of Thomas J. Rothenberg (Ch. 5). Cambridge University Press.

Zerni, M. 2012. Audit partner specialization and audit fees: Some evidence. *Contemporary Accounting Research* 29 (1): 312-340.

# Appendix 2-A: Interview Guidelines

**Interview Guidelines "Academic Practitioner Auditors," October 2016**

*Introduction*

Good morning / good afternoon <<X>>:

Thank you very much for taking part in this interview and for supporting our research project!

The interview is a part of a joint research project conducted by the Full Professorship Financial Accounting, Technical University of Munich and the Chair of Corporate Governance and Auditing, Johannes Gutenberg-University of Mainz. We interview auditors who have published journal articles, books or book chapters.

To ensure that we accurately capture your responses and to prevent errors of misquoting, we would like to audiotape this interview. Since we adhere to high standards of confidentiality, none of your comments could be traced back to individual auditors or audit firms. Do you agree with the interview being audiotaped? <Yes/No>

<If not, is it all right if we take handwritten notes?>

The interview is expected to take about 15 to 30 minutes. We are interested in your personal experience and opinions on interview topics. For that reason, there are no right or wrong answers.

The interview covers four main topics:

1. We would like to know about the **nature of the publications** you have published.
2. We would like to obtain insight into your **motivation** to publish.
3. We are interested in whether your publications and/or the publication process **helps you in your daily practice**.
4. Lastly, we would like to know whether your publications have an **impact on reputation**.

Let's start with our first main topic.

**The nature of your publications:** How would you characterize your publications? Pure academic research publications, practice-oriented publications with a high academic standard or practice-oriented publications without any academic standard?

1. Are your publications comparable to the type of public relations material that is published on the audit firm's website?

2. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: My publications are pure practice-oriented publications with no academic research standard.

**Motivation to publish:** What are your incentives to publish?

1. Does your audit firm like it that you publish?
2. Does your audit firm support you in the publication process?
3. Does the audit firm relieve you from other tasks and responsibilities when you are engaged in the publication process?
4. Do you have any ideas of why your colleagues do not publish?
5. Does the audit firm incentivize only certain auditors to publish? If so, which are the criteria?
6. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: The audit firm provides me with financial incentives to publish.
7. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: Only exceptionally good auditors are provided with incentives to publish.
8. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: Only exceptionally good auditors have publications.

**Impact on the daily audit practice:** Do your publications or the activities connected with the publication process help you in your day-to-day business as an auditor?

1. If yes, to what extent?
2. Are any of the skills you develop when researching for your publications also useful for your auditing activities?
3. What about the skills you develop in the writing process?
4. Are any of the skills you develop when doing academic research also useful for your audit activities?
5. Are there certain steps in the audit that might benefit from the skills you gained from the publication process?
6. Do your publications deal with topics that are relevant for auditing?
7. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: Due to my publication activity, I gain knowledge and skills, which are relevant for my practical work.

**Impact of publications on reputation:** What audience do you address with your publications?

1. Do you think your publications can improve your personal reputation as perceived by your clients?

2. Do you send your publications to existing or potential clients? Do you think that existing or potential clients take note of your publications?
3. Do you think your publications could potentially improve the reputation of your audit firm?
4. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: My publications improve my personal reputation as an auditor.
5. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: My publications help me to win new clients.
6. On a scale from 1 to 5, to what extent do you agree or disagree with the following statement, with 1 being “strongly disagree” and 5 “fully agree”: Due to my publications I have advantages in negotiating auditing fees.

We are approaching the end of this interview. Our final question is: Are there any issues on the topic of auditors who publish journal articles, books or book chapters that we have missed in this interview and on which you would like to share your views with us?

We are very thankful that you were willing to participate.

We will transcribe the interview so that we can use your answers for further analyses. In the case that we think of additional questions to ask you by the time we are done with all our interviews, may we contact you?

We thank you for your time.

Sincerely,

Jürgen Ernstberger, Christopher Koch, and Martin Prott

## Appendix 2-B: Survey Sent to the Editors of Journals by Email

Dear Mr. /Ms. <<X>>:

This survey is part of a joint research project of the Full Professorship Financial Accounting, Technical University of Munich and the Chair of Corporate Governance and Auditing, Johannes Gutenberg-University of Mainz. We would appreciate it if you could support our study and answer the following questions about your journal <<Y>>. As a thank you for completing the survey, we offer to send you the results of our research work.

Please respond with **either Yes or No** by writing the letters Y or N behind each of the following statements:

1. The main focus of your journal is (multiple answers are possible):
   a. Academic research articles (Y/N):
   b. Practice-oriented articles with a high academic standard (Y/N):
   c. Practice-oriented articles without a high academic standard (Y/N):
   d. Articles with advertising character (Y/N):
   e. Other core content areas: _____

2. The readers of your journal are (multiple answers are possible):
   a. Academics (e.g., professors, scientists) (Y/N):
   b. Auditors and employees of audit firms (Y/N):
   c. Decision-makers of companies (e.g., CEO, CFO, supervisory board) (Y/N):
   d. Employees working in the accounting department (e.g., head of accounting) (Y/N):
   e. Employees working in accounting-related departments (e.g., head of internal auditing, head of management accounting department) (Y/N)
   f. Other readers:_____

3. The review procedure in your journal is conducted (multiple answers are possible):
   a. by academics as reviewers (Y/N):
   b. by practitioners as reviewers (Y/N):
   c. by the editorial board of your journal (Y/N):
   d. in anonymous form (the author is not disclosed to the reviewer) (Y/N):

Thank you for your participation.

Sincerely,

Jürgen Ernstberger, Christopher Koch, and Martin Prott

## Appendix 2-C: Variable Definitions

| Variables | Descriptions |
|---|---|
| ***Dependent Variables*** | |
| *PAAA* | The absolute value of performance-adjusted abnormal accruals derived from Equation (1). The accruals are calculated based on the cross-sectional performance-adjusted modified Jones model (Kothari, Leone, and Wasley 2005). |
| *RESTATE* | Indicator variable that is equal to 1 if the firm's financial report received a FREP enforcement error announcement in the fiscal year. |
| *AUDIT_FEES* | Natural logarithm of audit fees, in thousand euro. |
| *ΔPAAA* | Change in the absolute value of performance-adjusted abnormal accruals (*PAAA*) since the lagged fiscal year. |
| *ΔRESTATE* | Change in the indicator variable that is equal to 1 if the firm's financial report received a FREP enforcement error announcement in the fiscal year (*RESTATE*) since the lagged fiscal year. |
| *ΔAUDIT_FEES* | Change in the natural logarithm of audit fees, in thousand euro (*AUDIT_FEES*) since the lagged fiscal year. |
| *GC_OPINION* | Indicator variable that is equal to 1 if a firm received a going-concern opinion; 0 otherwise. |
| *ERROR_I* | Indicator that is equal to one if the auditor makes a Type I error, i.e., issuing a going-concern opinion and the firm does not become insolvent in the following year; 0 otherwise. |
| *ERROR_II* | Indicator that is equal to 1 if the auditor makes a Type II error, i.e., not issuing a going-concern opinion in the year prior to insolvency; 0 otherwise. |
| *TENURE* | Lead auditor tenure in years. |

*(continued on next page)*

| Variables | Descriptions |
|---|---|
| *PF_GROWTH* | Growth rate of the natural logarithm of audited total assets of the lead auditor (*PF_SIZE*) since the lagged fiscal year. |
| ***Variables of Interest*** | |
| *PUB_COUNT* | Natural logarithm of the cumulative number of publication until the lagged fiscal year. |
| *APA_IN* | Indicator variable that is equal to 1 if there is a switch from a non-APA to an APA; 0 otherwise. |
| *MANDATORY* | Indicator variable that is equal to 1 if the tenure of the previous auditor indicates a mandatory internal rotation; 0 otherwise. |
| *APA_IN x MANDATORY* | Interaction of *APA_IN* and *MANDATORY*. |
| *ΔPUB_COUNT* | Change in *PUB_COUNT* since the lagged fiscal year. |
| *PUB_FIRST* | Indicator variable that is equal to 1 if the auditor publishes the first publication; 0 otherwise. |
| *ARTICLE_COUNT* | Natural logarithm of the cumulative number of journal articles published until the lagged fiscal year. |
| *BOOK_COUNT* | Natural logarithm of the cumulative number of books published until the lagged fiscal year. |
| *CHAPTER_COUNT* | Natural logarithm of the cumulative number of book chapters published until the lagged fiscal year. |
| *ΔEFFECTIVE_COUNT* | Change in the number of publications which topics are already effective. |
| *ΔINEFFECTIVE_COUNT* | Change in the number of publications which topics are not yet effective. |
| *RANKED_JOURNALS* | Number of journal articles which are ranked according to the JOURQUAL3 ranking. |
| *NON_RANKED_JOURNALS* | Number of journal articles which are not ranked according to the JOURQUAL3 ranking. |
| *HIGH_CIRCULATION* | Number of journal articles with a circulation that is higher or equal than the median circulation. |

*(continued on next page)*

| Variables | Descriptions |
|---|---|
| *LOW_CIRCULATION* | Number of journal articles with a circulation that is lower than the median circulation. |
| ***Lead Auditor Controls*** | |
| *PUB_DISTRACTION* | Indicator variable taking the value 1 if the auditor does have a publication in the current fiscal year; 0 otherwise. |
| *EXP_GENERAL* | Natural logarithm of the years since the CPA exam. |
| *PF_SIZE* | Natural logarithm of audited total assets of the lead auditor. |
| *SPEC_INDUSTRY* | Indicator variable that is equal to 1 if the lead auditor is ranked among the top two auditors in an industry in a fiscal year based on the amount of audited total assets; 0 otherwise. |
| *SPEC_PUBLIC* | Indicator variable is equal to 1 if the lead auditor audited at least two publicly listed companies in a fiscal year; 0 otherwise. |
| ***Audit Firm Controls*** | |
| *BIG4* | Indicator variable that is equal to 1 if the audit firm is a Big 4 audit firm; 0 otherwise. |
| *SWITCH* | Indicator variable that is equal to 1 if the auditor switched in the current fiscal year; 0 otherwise. |
| ***Firm Controls*** | |
| *SIZE* | Natural logarithm of the client's total assets, in million euro. |
| *CFO* | Operating cash flows divided by total assets. |
| *CFO_VOLA* | Standard deviation of *CFO* for the fiscal years t = 0, -1, -2 and -3. |
| *LOSS* | Indicator variable that is equal to 1 if a company reports a negative net income; 0 otherwise. |
| *LEVERAGE* | Liabilities divided by lagged total assets. |

*(continued on next page)*

| Variables | Descriptions |
|---|---|
| *ROA* | Net income before interest and taxation divided by lagged total assets. |
| *FIRM_AGE* | Natural logarithm of the firm age since foundation. |
| *TURNOVER* | Sales divided by lagged total assets. |
| *GROWTH* | Sales divided by lagged sales. |
| *MB* | Market values of shares divided by book value of equity. |
| *IFRS* | Indicator variable that is equal to 1 if the firm applies IFRS and 0 if the firm applies local GAAP. |
| *CATA* | Ratio of current assets to total assets. |
| *QUICK* | Ratio of current assets (less inventories) to current liabilities. |
| *DE* | Ratio of long-term debt to total assets. |
| *LOSS_LAG* | Indicator variable that is equal to 1 if a company reports a negative net income in the lagged three fiscal years; 0 otherwise. |
| *CROSSLIST* | Indicator variable that is equal to 1 if the firm is cross-listed in a foreign stock exchange; 0 otherwise. |
| *SUBS_TOTAL* | Natural logarithm of the number of subsidiaries. |
| *SUBS_INT* | Ratio of foreign subsidiaries to total subsidiaries. |
| *SEGMENTS* | Number of business segments. |
| *EARNINGS_VOLA* | Standard deviation of the net income for the fiscal years t = 0, -1, -2 and -3. |
| *BANKRUPTCY* | Altman Z-Score (1983). |
| *AUDIT_LAG* | Number of days between the fiscal year-end and the earnings announcement date. |

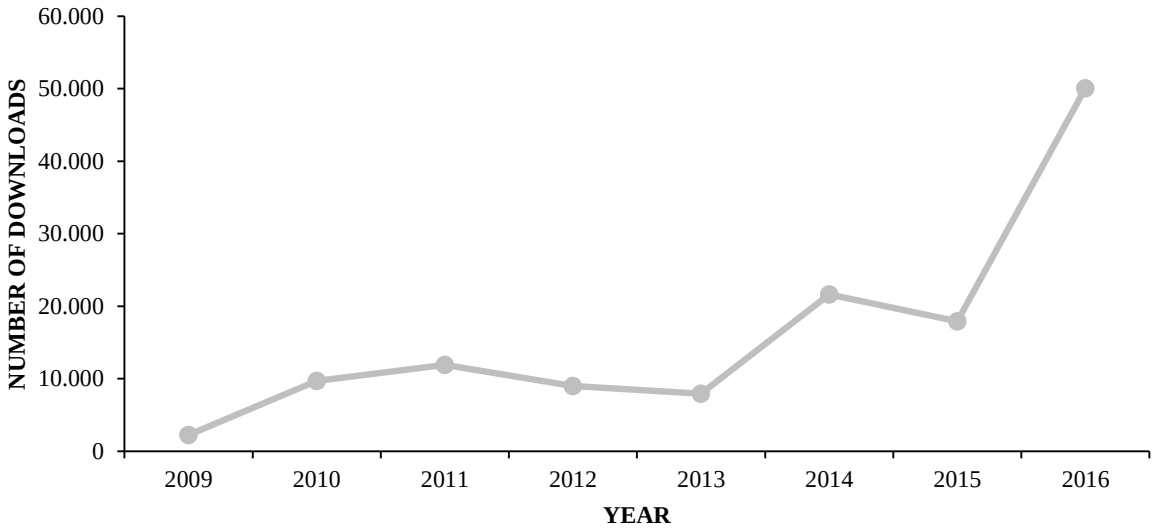
*(continued on next page)*

| Variables | Descriptions |
|---|---|
| ***Instrumental Variables*** | |
| *APA_OFFICE_PROP* | Proportion of APAs (excluding the respective APA) in an audit office. |
| *AGE* | Lead auditor's age. |
| *CLIENTS_COUNT* | Number of client's audited by the lead auditor in prior years. |

**Notes:** This appendix provides descriptions of all tables we use in our models.

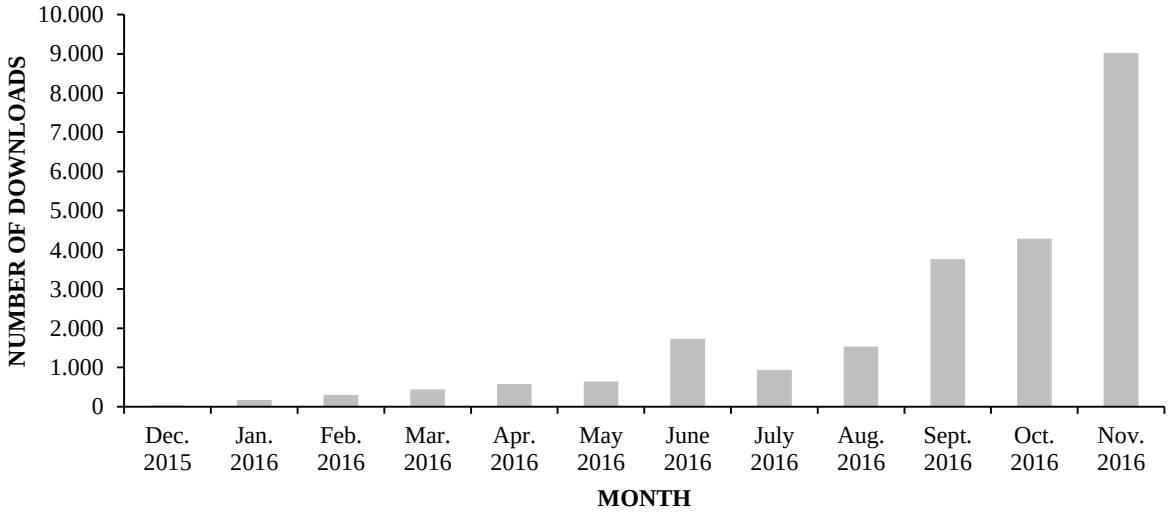
# Appendix 2-D: Download Statistics

## Figure 2-1: Annual Downloads of Academic Publications of one non-Big 4 Audit Firm




**Notes:** This figure shows the annual number of downloads of academic publications where copyright agreements allow for a provision on the audit firm's website in addition to the publication in a journal. The data is provided by a non-Big 4 audit firm.

## Figure 2-2: Monthly Downloads of an Article about an Accounting Reform




**Notes:** This figure shows the monthly number of downloads of an article that deals with an accounting reform that is applicable to financial statements issued after December 31, 2015. The data is provided by a non-Big 4 audit firm.

# 3 Accounting Information and Corporate Risk-Taking

**Abstract**

We examine how accounting information influences corporate risk-taking. We predict that transparent accounting disclosure can influence corporate risk-taking by enabling managers to better evaluate risks and by enabling investors to better monitor managers' risk appetite. We test this prediction by orchestrating the mandatory adoption of IFRS around the world, enforcement reforms around the world, and the introduction of quarterly reporting in the European Union as exogenous shocks to firms' accounting information environment, which made disclosure more relevant and comparable, reliable as well as more timely. Our findings provide evidence that these changes in the accounting information environment are associated with a decline in corporate risk-taking. For firms subject to enforcement reforms this effect is unconditional. For firms' adoption of IFRS or quarterly reporting, this effect is conditional upon whether these reforms are strongly enforced. We also document that the decline in risk-taking after the changes in the accounting information environment is associated with an increase in total shareholder return.

**Keywords:** accounting information; corporate risk-taking; information shocks; mandatory IFRS adoption; enforcement reforms; quarterly reporting

**JEL Classification Code:** M41

**Co-authors:** Jürgen Ernstberger

**Current status:** Working paper, preparation for submission to an international journal

**Paper presentations:** 2016 European Accounting Association, 39th Annual Congress, Maastricht, NL

2016 American Accounting Association, Annual Meeting, New York, USA

**Acknowledgements:** We gratefully thank the following people for their insightful comments and suggestions: Holger Daske, Benedikt Downar, Christopher Koch, Christian Leuz, Panos Patatoukas, Eddie Riedl, Amy Sheneman, Daniel Urban, and Yue Zheng (discussant).

*"Risk is like fire: If controlled it will help you; if uncontrolled it will rise up and destroy you."*
Theodore Roosevelt

## 3.1 Introduction

This study examines how accounting information influences corporate risk-taking. Corporate risk-taking depends on a firm's risk appetite as well as risk management and can significantly influence shareholder value (Nocco and Stulz 2006; Low 2009). On the one hand, risk-taking is an important prerequisite for innovation (Bromiley 1991), on the other hand, excessive risk-taking can lead to unexpected and severe losses, as the recent financial crisis has shown (Laeven and Levine 2009). Prior studies investigate how managerial compensation structures, firms' ownership structure, investor protection, and Sarbanes-Oxley Act (SOX) influence corporate risk-taking (Rajgopal and Shevlin 2002; Coles, Daniel, and Naveen 2006; Bargeron, Lehn, and Zutter 2010; Faccio, Marchica, and Mura 2011). Our study focuses on the role of a firm's information environment and, in particular, the transparency and frequency of its accounting information on risk-taking.

Accounting information can influence corporate risk-taking through two channels. First, managers use financial accounting information internally for their decision-making (Biddle and Hilary 2006; Ewert and Wagenhofer 2006; McNichols and Stubben 2008). Thus, higher quality accounting information enables managers to better identify and evaluate risks and thus improve risk management. Second, agency theory predicts that managers make suboptimal investments regarding risk to personally benefit from their decisions (Jensen and Meckling 1976). Managers might pursue excessive firm growth that is associated with higher corporate risk-taking (Jensen 1986; John, Litov, and Yeung 2008). Transparent accounting information enables

investors to better monitor managers (Kanodia and Lee 1998) and thus influence their risk-taking behavior.

To test the impact of accounting information on corporate risk-taking, we focus on the following three exogenous shocks to the accounting information environment. First, we examine changes in corporate risk-taking around the mandatory adoption of International Financial Reporting Standards (IFRS), which is shown to improve the relevance and comparability of accounting information (Ball 2006; Pope and McLeay 2011; Hail, Tahoun, and Wang 2014). Second, we examine changes in corporate risk-taking around the adoption of enforcement reforms, which are shown to enhance the reliability of accounting information (Hope, Thomas, and Kolk 2011). Third, we examine changes in corporate risk-taking around the adoption of quarterly reporting in the European Union (EU), which is shown to enhance the timeliness of accounting information (Butler, Kraft, and Weiss 2007; Fu, Kraft, and Zhang 2012). We note that these exogenous shocks to the accounting information environment might also affect other properties of accounting disclosure, but we use these changes as proxies for making accounting information primarily more relevant and comparable, reliable as well as more timely.

We measure corporate risk-taking by the volatility of firm-level earnings (John et al. 2008). This measure is widely used in finance literature (Paligorova 2010; Boubakri, Cosset, and Saffar 2013; Chan, Lin, Chang, and Liao 2013; Turk 2015) as a proxy for corporate risk-taking. It is defined as the standard deviation of the firm's EBITDA.[41] The intuition of this measure is that high risk-taking firms conduct riskier operations, which is associated with more

[41] John et al. (2008) propose to use the EBITDA as it is generally less subject to earnings smoothing compared to EBIT.

volatile earnings over time (John et al. 2008). As a second measure for risk-taking, we use the yearly country average of the volatility of firm-level earnings. This measure mitigates the potential drawback of the first measure that countries with more firm observations are weighted more heavily (John et al. 2008). In additional analyses, we also use stock-price-based volatility measures for corporate risk-taking and find similar results.

For our empirical analyses, we use a difference-in-differences approach to isolate the effect of our exogenous shocks to the accounting information environment on corporate risk-taking. As a treatment group, we use (1) firms that mandatorily adopted IFRS, (2) firms that were subject to substantial changes in the enforcement system, and (3) firms that mandatorily adopted quarterly reporting because they had to issue Interim Management Statements (IMS) due to the EU's Transparency Directive (TPD).[42] As control groups, we use other firms that are not subject to these changes in the accounting information environment. We also control for other factors shown to affect corporate risk-taking, and we control for year- and industry-wide effects by including the respective fixed effects.

In our main tests, we find that corporate risk-taking declines for firms subject to enforcement reforms. The results of the adoption of IFRS and the adoption of quarterly reporting are not significant. In further tests, we examine whether these findings are conditional upon the institutional setting. Prior research shows that the consequences of the IFRS adoption depend on a strong regulatory environment (Christensen, Hail, and Leuz 2013). Hence, we investigate cross-country variations of our results at the level of enforcement quality. We use countries' regulatory quality and their strength of accounting enforcement as two proxies for enforcement

[42] The TPD requires all firms listed on a regulated stock market to disclose IMS, which include information on the financial position and performance for the first and third quarter. The information included in IMS varies between firms, however, we concentrate on the higher reporting frequency, which provides a timelier disclosure of important developments (Ernstberger, Link, Stich, and Vogler 2017).

quality (Kaufmann, Kraay, and Mastruzzi 2009; Brown, Preiato, and Tarca 2014). We find that all three changes in the accounting information environment are associated with a decline in corporate risk-taking for countries with a high level of enforcement quality. For countries with a low level of enforcement quality, we do not find significant results. Thus, the impact of the changes in the accounting environment appears to be conditional upon whether a country successfully implements these changes.

We also examine the mandatory IFRS adoption in more detail, as prior research shows that it is important to differentiate between the adoption of the new accounting regime and (concurring) enforcement reforms (Daske, Hail, Leuz, and Verdi 2008; Christensen et al. 2013). For that reason, we separately investigate countries that adopted IFRS bundled with substantial changes in the enforcement of accounting standards and a country (Japan) that made substantial changes in the enforcement of accounting standards without adopting IFRS. We document that changes in corporate risk-taking appear to be influenced by the bundled effect of mandatorily adopting IFRS and concurring enforcement reforms, but not by the mandatory adoption of IFRS as a stand-alone accounting information event.

In additional tests, we examine whether the change in corporate risk-taking is attributable to the internal use of better accounting information and/or rather to the better monitoring of investors. Specifically, we investigate whether managers are better able to identify risks after the changes in the accounting information environment. Assuming identified risks are also reported in firms' risk reports, we test whether treatment firms report more categories of risks in their annual reports after changes in the accounting information environment relative to control firms. Our findings indicate that this is not the case. Thus, our findings of lower risk-taking seem to be driven by improved monitoring of external investors.

Finally, we examine how the accounting-information-driven decline in corporate risk-taking is associated with shareholder returns. We regress changes in shareholder returns on the magnitude of the decline in corporate risk-taking following the changes in the accounting information environment. We find that firms' adjustments to lower levels of risk-taking are associated with an increase in total shareholder returns. This finding is in line with the notion that the accounting-information-driven decline in corporate risk-taking has positive consequences for investors.

We contribute to the literature in at least three ways: First, we add to the literature on the real effects of accounting information and disclosure. Prior studies find that the SOX, seasoned equity offerings or changes in reporting frequency influence firms' level of real activity manipulation (Cohen, Dey, and Lys 2008; Cohen and Zarowin 2010; Gigler, Kanodia, Sapra, and Venugopalan 2014; Ernstberger, Link, Stich, and Vogler 2017). Other studies find that the quality of accounting information influences firms' investment efficiency (McNichols and Stubben 2008). We add to this literature by demonstrating that accounting information also influences corporate risk-taking behavior.[43] Second, we contribute to the literature on the economic consequences of information shocks in terms of adopting IFRS or enacting enforcement reforms (Daske et al. 2008; Cohen et al. 2008; McNichols and Stubben 2008; Horton and Serafeim 2010; Horton, Serafeim, and Serafeim 2013; Christensen et al. 2013; Daske, Hail, Leuz, and Verdi 2013; Hail et al. 2014; Gigler et al. 2014). We provide evidence that the IFRS adoption also influences corporate risk-taking. Third, we add to the literature on corporate risk-taking by exploring an additional determining factor. Extant literature studies investor protection as well as a country's legal tradition (John et al. 2008; Wright, Kroll, Krug,

[43] We do not examine the impact of risk reporting on risk-taking because in our view the entire financial reporting provides information on a firm's risk-taking.

and Pettus 2007). We contribute to this literature by introducing the notion that the quality of accounting information, in terms of its relevance and comparability, reliability as well as timeliness, can also affect corporate risk-taking.

The remainder of this paper is organized as follows: Section 3.2 provides the hypothesis development. Section 3.3 presents our setting and research design. Section 3.4 provides the sample selection. Section 3.5 provides descriptive statistics. Section 3.6 provides our main results. Section 3.7 provides additional analysis and robustness checks. Section 3.8 concludes this study.

## 3.2 Hypothesis Development

In this study, we examine how accounting information influences corporate risk-taking. We propose that high-quality accounting information can affect risk-taking and base our assumption on two channels provided by Bushman and Smith (2001): (1) Managers use accounting information to better identify and evaluate the risk of projects and (2) investors and other corporate control mechanisms use accounting information to better monitor and discipline managers.

The first channel assumes that managers act in the best interest of investors. We argue that managers base their internal decisions regarding project selection on their assessment of the risk and return of (potential) projects. Managers also use financial accounting information for internal decision-making, which is empirically shown by McNichols and Stubben (2008). Thus, when an accounting regime requires managers to disseminate high-quality disclosure, it shapes their risk appetite and their internal risk management mechanisms, such as the Enterprise Risk Management (ERM). According to Stulz (2003), ERM serves as a supportive system for

managers to assess and understand the uncertainties associated with the outcomes of investment decisions. ERM considers information from all available sources including accounting information that managers use for risk identification and risk assessment (Nocco and Stulz 2006; IMA 2007). In the risk identification phase, managers conduct risk brainstorming, risk questionnaires, and SWOT analyses as well as scenario analyses that are at least partly based on accounting information. In the risk assessment phase, managers apply techniques based on accounting information like risk-corrected revenues, gain/loss curves, tornado charts, scenario analysis, benchmarking, net present values, or accounting-based probabilistic techniques such as cash flow/earnings at risk, earnings/EPS distributions (IMA 2007). Therefore, high-quality accounting information facilitates ERM and, hence, can influence corporate risk-taking.

The second channel draws on agency theory and assumes that information asymmetries allow managers to use their discretion to benefit their private interests (Shleifer and Vishny 1997). For example, managers are prone to pursue firm growth beyond the optimal size as they strive to increase their power by having more resources under control. The timely disclosure of high-quality accounting information alleviates information asymmetries between managers and investors and, therefore, facilitates a better monitoring of managers by investors. On average, investors are risk-averse rather than risk-seeking (Sharpe 1964; Beatty and Zajac 1994) and might use the more transparent information to better link managerial decisions to their preferences (Verdi 2006; Hope and Thomas 2008). Dou, Hope, Thomas, and Zou (2016) suggest two mechanisms through which investors could influence managerial behavior. The mechanism "voice" assumes that investors use (class action) lawsuits, public criticism of management or shareholder proposals, and the mechanism "(threat of) exit" assumes that investors dispose of their stocks or at least threaten to do so,

which would lead to negative stock market reactions and thus to a decline in managers' compensation and reputation. Managers anticipate the negative consequences of both mechanisms and are thus more likely to act in the interest of shareholders (Eisenhardt 1989; Kanodia and Lee 1998). Overall, more transparent information can increase shareholder monitoring and, in turn, reduce their risk-taking behavior.

Following these arguments, we state the following hypothesis:

**H1**: *Changes in the accounting information environment are associated with a decline in corporate risk-taking.*

## 3.3 Research Design

### 3.3.1 Setting and Identification of Changes in Accounting Information

In this study, we use changes in the accounting information environment to identify the impact of accounting information on corporate risk-taking. High-quality accounting information has to be relevant, reliable as well as disclosed in a timely manner (Healy and Palepu 2001; Bushman and Smith 2001; Frankel and Li 2004). We orchestrate the following events as exogenous shocks to firms' accounting information environment, which made disclosure more relevant and comparable, reliable as well as timely: (1) the mandatory adoption of IFRS, (2) enforcement reforms, and (3) the adoption of quarterly reporting requirements.

As a first exogenous shock to the accounting information environment, we use the mandatory adoption of IFRS in several countries around the world. IFRS provide, for example, more disclosure as well as more information on intangible assets and on fair values of assets in comparison to most national GAAPs (Ball 2006; Cairns 2006) and enhances the cross-country

comparability of financial statements between countries (Pope and McLeay 2011). A large stream of literature investigates the effects of the mandatory IFRS adoption (Brüggemann, Hitz, and Sellhorn 2013). These studies find some indications that accounting quality increases after the application of IFRS (e.g., Burgstahler, Hail, and Leuz 2006; Barth, Landsman, and Lang 2008) and that the accounting figures from firms having adopted IFRS become more comparable across countries (Yip and Young 2012; Brochet, Jagolinzer, and Riedl 2013). Moreover, this literature provides evidence that mandatory IFRS adoption increases market liquidity and decreases the cost of capital due to enhanced transparency (Daske et al. 2008 and 2013; Li 2010; Florou and Kosi 2015). Landsman, Maydew, and Thornock (2012) document that the information content of earnings increases around the mandatory IFRS adoption, and several studies find lower analyst forecast errors after the mandatory IFRS adoption (Byard, Li, and Yu 2011; Tan, Wang, and Welker 2011; Horton et al. 2013). Taken together, the mandatory IFRS adoption results in more relevant accounting information for investors and allows for a better cross-country comparability. In our analyses, we use IFRS adoption dates for countries around the world from Christensen et al. (2013).

As a second exogenous shock to the accounting information environment, we use the adoption of reforms that increase the enforcement of accounting standard. La Porta, Lopez-de-Silanes, and Shleifer (2006) look into cross-country differences in securities regulation and provide evidence that stronger enforced security regulations have a positive impact on the development of financial markets. In line with this notion, Hail and Leuz (2006) extend La Porta et al. (2006) by documenting a lower cost of capital under strong enforcement systems. The reasons for these findings are that regulators' enforcement activities advance firms' compliance with accounting standards (e.g., IFRS), which is expected to result in more reliable financial disclosure (e.g., Christensen et al. 2013; Brown et al. 2014; Preiato, Brown,

and Tarca 2014). In our analyses, we use the dates of accounting enforcement reforms for countries around the world from Christensen et al. (2013).

As a third exogenous shock to the accounting information environment, we use the adoption of quarterly reporting in the EU. The extant literature documents several capital-market effects of an increased reporting frequency, as it enriches the firm's information environment (Bhushan 1989). More specifically, the prior literature shows that the cost of capital decreases (Fu et al. 2012) and shareholders are provided with better opportunities to assess firm performance, which is assumed to reduce the shareholder's uncertainty on the firms' expected performance (Barry and Brown 1985). Overall, we assume that the adoption of quarterly reporting primarily increases the timeliness of accounting information in the adoption countries. In our analyses, we use the staggered adoption of IMS in the EU following the TPD. The TPD required countries to implement national laws that require the adoption of IMS unless a country already has mandatory quarterly reporting requirements in place. With respect to the content, IMS include (at least) information about the financial position as well as the performance of the first and third quarter (Ernstberger, Link, Stich, and Vogler 2017). We use IMS adoption dates for EU countries from Christensen, Hail, and Leuz (2016) and data on the cross-country application of mandatory quarterly reporting from Ernstberger et al. (2017).

### 3.3.2 Measure for Corporate Risk-Taking

In our analyses, we use the volatility of firm-level earnings as a measure for corporate risk-taking. This measure is widely used in the finance literature (Paligorova 2010; Boubakri et al. 2013; Chan et al. 2013; Turk 2015). The intuition of these proxies is that if firms

conduct riskier corporate operations, their earnings are expected to be more volatile (John et al. 2008).[44]

Following John et al. (2008), we specifically use two measures of corporate risk-taking.[45] First, we use *RISK_TAKING1*, which is defined as the market-adjusted volatility of firm-level earnings. In a first step, we adjust the firm's EBITDA, scaled by total assets by the country mean of the firm's EBITDA scaled by total assets (Equation (2)). In a second step, we compute *RISK_TAKING1* as the rolling volatility of market-adjusted EBITDA, mandating three subsequent years and at least 10 observations per country-year (Equation (1)). We use the EBITDA as it is less subject to earnings smoothing compared to EBIT (John et al. 2008). We construct *RISK_TAKING1* as follows:

$$RISK\_TAKING1 = \sqrt{\frac{1}{T-1}\sum_{t=1}^{T}\left(E_{i,c,t} - \frac{1}{T}\sum_{t=1}^{T}E_{i,c,t}\right)^2} \quad T=3, \qquad (1)$$

where

$$E_{i,c,t} = \frac{EBITDA_{i,c,t}}{A_{i,c,t}} - \frac{1}{N}\sum_{k=1}^{N_{c,t}}\frac{EBITDA_{k,c,t}}{A_{k,c,t}}, \qquad (2)$$

where i denotes the firm, c the country, t the year, and T the number of years. *EBITDA* is the firm's earnings before interest, taxes, depreciation and amortization. A is the firm's total assets.

As a second measure, we use the country average of the market-adjusted volatility of firm-level earnings. Running pooled, firm-level, cross-country regression, we face the problem that

[44] We note that, in some countries, earnings volatility could also be introduced by increased fair value accounting, due to the mandatory adoption of IFRS. However, this would speak against our hypothesis that changes in accounting information should be associated with a decline in corporate risk-taking and thus in earnings volatility.

[45] John et al. (2008) provide an imputed risk score as a third proxy for corporate risk-taking. We do not use this score, as it would be calculated over the whole sample period 2002-2010. As a consequence, we do not find any variation over the sample period, and the score includes many confounding events like the financial crisis or concurrent changes in enforcement.

countries with more firm observations are given more weight. To address this issue, we use this second measure for which each country only has one observation per year (John et al. 2008). *RISK_TAKING2* is defined as the yearly country average of *RISK_TAKING1*. We compute *RISK_TAKING2* as follows:

$$RISK\_TAKING2 = \frac{1}{N_c}\sum_{i=1}^{N_c}\sigma_{i,c} \quad N_c \geq 2, \quad (3)$$

where i denotes the firm, c the country, N the number of observations, and σ the standard deviation, i.e. *RISK_TAKING1*.

### 3.3.3 Empirical Model

In our empirical tests, we use a difference-in-differences approach. We compare changes in the corporate risk-taking of treatment group firms, i.e. firms that are subject to the aforementioned exogenous shocks to the accounting information environment, with the respective changes in the corporate risk-taking of the control group firms, i.e. firms that are not subject to these shocks. For each information shock, we separately estimate the following regression model:

$$\begin{aligned} RISK\_TAKING = {} & \beta_0 + \beta_1 TREAT + \beta_2 POST + \beta_3 TREAT{*}POST + \beta_4 SIZE \\ & + \beta_5 EARNINGS + \beta_6 GROWTH + \beta_7 LEVERAGE + \beta_8 ES \\ & + \beta_9 OWNERSHIP + \beta_{10} LAW + \beta_{11} RISK\_EXP + \beta_{12} ANTIDIR \\ & + \beta_{13} POLCON + \beta_{14} GDP + \beta_{15} MARKET\_CAP + year\ fixed\ effects \\ & + industry\ fixed\ effects + \varepsilon \end{aligned} \quad (4)[46]$$

[46] Industry-fixed effects are based on Fama and French (2008) 12-industries classification.

Our dependent variables, *RISK_TAKING1* and *RISK_TAKING2*, are defined as described in the previous section. *TREAT* is an indicator variable that is equal to one if the company is subject to an information shock (mandatory adoption of IFRS ($TREAT_{IFRS}$), of enforcement reforms ($TREAT_{ENF}$) or of quarterly reporting ($TREAT_{QR}$)); zero otherwise. *POST* is an indicator variable that is equal to 1 for all firm-year combinations in the years following the accounting information event ($POST_{IFRS}$, $POST_{ENF}$, $POST_{QR}$); zero otherwise. The difference-in-differences estimator *TREAT*POST* is the primary variable of interest. The variable calculates as the multiplication of *TREAT* and *POST* and thus is equal to one for all firm-year observations subject to changes in accounting information; zero otherwise. Following H1, we expect this interaction term to be negative, indicating a decrease in corporate risk-taking.

In line with prior literature, we add the following set of control variables that are shown to explain cross-sectional variation in earnings volatility (John et al. 2008). We control for firm size (*SIZE*) using the logarithm of the firm's total assets. To control for firm performance (*EARNINGS*), we use the firm's *EBITDA*, scaled by total assets. Using the total assets growth rate (*GROWTH*), we control for firm growth. To control for the firm's leverage, we add the control variable *LEVERAGE*, which is the debt to total assets ratio. We control for earnings smoothing using a measure provided in Leuz, Nanda, and Wysocki (2003). John et al. (2008) suggest that earnings smoothing incentives, besides the fundamental volatility stemming from corporate operations, possibly influence the risk-taking measure. We control for large shareholder ownership by including *OWNERSHIP*, as large shareholders are supposed to influence firms` investment decisions into a more conservative or risk-seeking direction (John et al. 2008; Tufano 1996; Paligorova 2010). To control for country-specific characteristics, we include the real GDP per capita (*GDP*) and political constraints (*POLCON*),

capturing the ability to support reliable policy commitments (Henisz 2000). We further control for the size of the stock market to capture pressure on firms regarding investment decisions (Levine and Zervos 1996). To control for investor protection, we add control variables for the rule of law (*LAW*), the risk of expropriation (*RISK_EXP*), and the antidirector rights (*ANTIDIR*). Countries with lower investor protection are documented to have more intervention-prone governments, whereby powerful governments are assumed to influence firms' investments in a more conservative direction (John et al. 2008). Furthermore, we control for year- and industry-wide effects by including year and industry fixed effects. All variable definitions are described in the Appendix 3-A.

To reduce the undue impact of outliers, we winsorize continuous variables at the 1$^{st}$ and 99$^{th}$ percentiles. Robust standard errors are clustered at the country-level.

## 3.4 Sample Description

We start with a sample comprising all firm-year observations between 2001 and 2014 with data available in Thomson Reuters Datastream/Worldscope. We merge this sample with data on the ownership structure of Bureau Van Dijk Osiris database, data on investor protection from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) and La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998). This yields a sample of 403,625 firm-year observations. We require three subsequent observations of the firm's EBITDA to calculate our main dependent

variables *RISK_TAKING1* and *RISK_TAKING2*.[47] We eliminate firm-year observations that are classified as financial institutions (SIC codes between 6000 and 6999) or with missing industry classification codes. To mitigate the impact of self-selection, we exclude firm-year observations of voluntary IFRS adopters. We eliminate firms that are cross-listed in the U.S. as these firms are subject to several disclosure requirements at the same time. Finally, we exclude firms with total assets of less than 10 Mio. U.S. $ and require at least 10 observations per country-year to ensure representativeness of our sample.

We apply a cross-country matching of firms in the treatment group and in the control group to control for firm-specific differences. Our matching procedure is based on a firm-level propensity score approach and matches firms within the same industry based on the attributes size (*SIZE*) and the performance measure return on assets (*ROA*). We match on firm size (*SIZE*), to control for several fundamental firm characteristics such as public visibility, and *ROA*, which controls for firm performance. The matching allows us to make the firms of the treatment and control group more comparable and also to assign the event year to the control firms.[48] The matched pairs of treatment and control firms stay together for the whole sample period to observe the changes in risk-taking for both groups of firms after the information shocks. We construct these matched samples for each shock to the accounting information environment separately, which yields three different samples. Our final sample for the mandatory adoption

[47] Thus, the value for the first year 2001 requires *EBITDA* for the years 1999-2001. To mitigate an overlap between the pre and post period of the events, we delete the event year and the two years after the event for all treated firms. As an example, if the accounting information event took place in 2005, we delete the fiscal years 2005, 2006, and 2007. Hence, our first observation for the treated firms will be 2008, with dependent variables *RISK_TAKING1* and *RISK_TAKING2* being calculated based on the fiscal years 2006, 2007, and 2008.

[48] After the matching procedure, we observe that differences in size and performance between firms that are treated (treatment firms) and firms that are untreated (control firms) by an accounting information event are considerably reduced. Moreover, the difference-in-differences approach in our setting with staggered adoptions of accounting reforms requires a matching procedure to assign pre- and post-event periods to the control firms. We also use the treatment firm`s event date as the event data for its control firms, i.e. each pair of treatment and control firms has the same event date.

of IFRS includes 54,436 observations (Sample (1)), the final sample for enforcement reforms 53,140 observations (Sample (2)), and the final sample for the adoption of quarterly reporting 26,564 observations (Sample (3)).

Table 3-1, Panel A presents our sample countries and the event dates of the respective shocks to the accounting information environment. The table shows that these shocks occur on a staggered basis, which allows us to mitigate the undue impact of confounding events. In Panel B, we provide a breakdown of the industry distribution around our three shocks to the accounting information environment. The industry distribution documents that most firms are in the manufacturing industry.

## Table 3-1: Event Dates and Sample Composition

**Panel A: Event Dates**

| | Mandatory Adoption of IFRS | Adoption of Enforcement Reforms | Adoption of Quarterly Reporting |
|---|---|---|---|
| Argentina | n.a. | No | No |
| Australia | 2005 | No | 2007 |
| Austria | 2005 | No | No |
| Belgium | 2005 | No | 2008 |
| Brazil | n.a. | No | No |
| Canada | n.a. | No | No |
| Chile | n.a. | 2009 | No |
| Colombia | n.a. | No | No |
| Denmark | 2005 | No | 2007 |
| Egypt | n.a. | No | No |
| Finland | 2005 | 2005 | 2007 |
| France | 2005 | No | 2007 |
| Germany | 2005 | 2005 | 2007 |
| Greece | 2005 | No | 2007 |
| Hong Kong | 2005 | 2008 | No |
| India | n.a. | No | No |
| Indonesia | n.a. | No | No |
| Ireland | 2005 | 2007 | 2007 |
| Israel | 2008 | n.a. | No |
| Italy | 2005 | No | 2009 |
| Japan | n.a. | 2005 | No |
| (South) Korea | n.a. | n.a. | No |
| Malaysia | n.a. | n.a. | No |
| Mexico | n.a. | No | No |
| The Netherlands | 2005 | 2005 | 2009 |
| New Zealand | 2007 | No | No |
| Norway | 2005 | 2005 | 2008 |
| Peru | n.a. | n.a | No |
| Pakistan | 2007 | No | No |
| Philippines | 2005 | n.a. | No |
| Portugal | 2005 | No | 2007 |
| South Africa | 2005 | No | No |
| Spain | 2005 | No | 2007 |
| Sri Lanka | n.a. | No | No |
| Sweden | 2005 | 2007 | 2007 |
| Switzerland | 2005 | No | No |
| Thailand | n.a. | No | No |
| Turkey | 2006 | 2008 | No |
| The United Kingdom | 2005 | 2005 | 2007 |
| United States | n.a. | n.a. | No |

*(continued on next page)*

**Table 3-1 (continued)**

**Panel B: Sample Composition by Industry**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | ***TREAT*=1** | ***TREAT*=0** | ***TREAT*=1** | ***TREAT*=0** | ***TREAT*=1** | ***TREAT*=0** |
| Consumer Non-Durables | 3,634 | 3,634 | 3,206 | 3,206 | 1,595 | 1,595 |
| Consumer Durables | 1,159 | 1,159 | 1,505 | 1,505 | 542 | 542 |
| Manufacturing | 5,116 | 5,116 | 4,697 | 4,697 | 2,359 | 2,359 |
| Oil, Gas, and Coal | 832 | 832 | 331 | 331 | 337 | 337 |
| Chemicals | 1,226 | 1,226 | 1,170 | 1,170 | 408 | 408 |
| Business Equipment | 3,181 | 3,181 | 3,553 | 3,553 | 2,123 | 2,123 |
| Telephone and Television | 570 | 570 | 243 | 243 | 252 | 252 |
| Utilities | 618 | 618 | 441 | 441 | 281 | 281 |
| Wholesale, Retail, and Some Services | 3,061 | 3,061 | 3,806 | 3,806 | 1,497 | 1,497 |
| Healthcare | 1,250 | 1,250 | 966 | 966 | 655 | 655 |
| Other | 6,571 | 6,571 | 6,652 | 6,652 | 3,233 | 3,233 |
| **Total** | **27,218** | **27,218** | **26,570** | **26,570** | **13,282** | **13,282** |

**Notes:** This table presents the countries of our Samples (1), (2), and (3) as well as the sample distributions with respect to the industry classification based on Fama and French (2008). In Panel A, we provide information about the event dates. We obtain information about the date of our accounting information events from Christensen et al. (2013) and Ernstberger et al. (2017). In Panel B, we present the sample composition by industry for all three accounting information events.

## 3.5 Descriptive Statistics

Table 3-2 provides descriptive statistics on our three samples for all variables used in our regression model (Equation (4)). Panel A presents summary statistics on our Sample (1), Panel B on Sample (2), and Panel C on Sample (3). In Panel D, E, and F, we present the correlation matrices for our three samples.

In Panels A, B, and C, the mean values of our dependent variable *RISK_TAKING1* range from 0.597 and 0.942. The mean values of *RISK_TAKING2* range between 1.239 and 1.791. These variables provide evidence of the volatility of firms' earnings. Higher values indicate higher earnings volatility, which respectively reveals higher corporate risk-taking. In Panels D, E, and F, we find that *RISK_TAKING1* and *RISK_TAKING2* do not equally correlate with all of our variables used in the regression models over Samples (1)-(3). In all samples, we find that *SIZE*, *RISK_EXP*, *ANTIDIR*, and *GDP* are statistically significant and positively correlated with *RISK_TAKING1* and *RISK_TAKING2*. Positive correlations provide evidence about the factors that increase corporate risk-taking. In all three samples, we find that *ES* and *LAW* are

statistically significantly and negatively correlated with *RISK_TAKING1* and *RISK_TAKING2*. Negative correlations provide an indication about factors that reduce corporate risk-taking and are in line with John et al. (2008). Overall, we do not find evidence of extremely high correlations between our control variables, providing evidence that our setting is not subject to severe multicollinearity concerns.

## Table 3-2: Descriptive Statistics and Correlation Matrices

**Panel A: Descriptive Statistics Matched Sample (1)**

| | n | Mean | Std. Dev. | p25 | Median | p75 |
|---|---|---|---|---|---|---|
| *RISK_TAKING1* | 54,436 | 0.942 | 2.069 | 0.029 | 0.080 | 0.721 |
| *RISK_TAKING2* | 54,436 | 1.791 | 3.405 | 0.065 | 0.147 | 2.059 |
| *SIZE* | 54,436 | 12.522 | 1.670 | 11.313 | 12.313 | 13.559 |
| *EARNINGS* | 54,436 | 0.084 | 0.135 | 0.044 | 0.092 | 0.146 |
| *GROWTH* | 54,436 | 0.102 | 0.352 | -0.053 | 0.052 | 0.171 |
| *LEVERAGE* | 54,436 | 0.255 | 0.233 | 0.066 | 0.216 | 0.377 |
| *ES* | 54,436 | -0.032 | 1.327 | -0.185 | 0.332 | 0.649 |
| *OWNERSHIP* | 54,436 | 0.329 | 0.470 | 0.000 | 0.000 | 1.000 |
| *LAW* | 54,436 | 0.489 | 0.500 | 0.000 | 0.000 | 1.000 |
| *RISK_EXP* | 54,436 | 9.082 | 1.012 | 8.310 | 9.670 | 9.710 |
| *ANTIDIR* | 54,436 | 3.816 | 1.251 | 3.000 | 4.000 | 5.000 |
| *POLCON* | 54,436 | 0.406 | 0.144 | 0.387 | 0.414 | 0.493 |
| *GDP* | 54,436 | 32,458 | 16,496 | 20,917 | 36,441 | 43,810 |
| *MARKET_CAP* | 54,436 | 114.240 | 122.041 | 66.413 | 92.741 | 123.939 |

**Panel B: Descriptive Statistics Matched Sample (2)**

| | n | Mean | Std. Dev. | p25 | Median | p75 |
|---|---|---|---|---|---|---|
| *RISK_TAKING1* | 53,140 | 0.866 | 1.931 | 0.027 | 0.071 | 0.565 |
| *RISK_TAKING2* | 53,140 | 1.652 | 3.157 | 0.053 | 0.123 | 1.391 |
| *SIZE* | 53,140 | 12.697 | 1.707 | 11.460 | 12.578 | 13.798 |
| *EARNINGS* | 53,140 | 0.080 | 0.126 | 0.043 | 0.087 | 0.138 |
| *GROWTH* | 53,140 | 0.095 | 0.350 | -0.056 | 0.048 | 0.161 |
| *LEVERAGE* | 53,140 | 0.250 | 0.229 | 0.063 | 0.210 | 0.373 |
| *ES* | 53,140 | -0.022 | 1.331 | -0.167 | 0.344 | 0.658 |
| *OWNERSHIP* | 53,140 | 0.288 | 0.453 | 0.000 | 0.000 | 1.000 |
| *LAW* | 53,140 | 0.514 | 0.500 | 0.000 | 1.000 | 1.000 |
| *RISK_EXP* | 53,140 | 9.208 | 0.949 | 8.310 | 9.670 | 9.710 |
| *ANTIDIR* | 53,140 | 3.968 | 1.125 | 4.000 | 4.000 | 5.000 |
| *POLCON* | 53,140 | 0.421 | 0.153 | 0.393 | 0.433 | 0.499 |
| *GDP* | 53,140 | 34,454 | 15,510 | 26,969 | 37,865 | 45,167 |
| *MARKET_CAP* | 53,140 | 118.373 | 132.940 | 66.413 | 85.988 | 123.939 |

**Panel C: Descriptive Statistics Matched Sample (3)**

| | n | Mean | Std. Dev. | p25 | Median | p75 |
|---|---|---|---|---|---|---|
| *RISK_TAKING1* | 26,564 | 0.597 | 1.393 | 0.032 | 0.089 | 0.516 |
| *RISK_TAKING2* | 26,564 | 1.239 | 2.406 | 0.068 | 0.178 | 1.082 |
| *SIZE* | 26,564 | 12.515 | 1.758 | 11.199 | 12.330 | 13.636 |
| *EARNINGS* | 26,564 | 0.094 | 0.134 | 0.054 | 0.103 | 0.156 |
| *GROWTH* | 26,564 | 0.133 | 0.409 | -0.040 | 0.061 | 0.186 |
| *LEVERAGE* | 26,564 | 0.245 | 0.234 | 0.054 | 0.202 | 0.361 |
| *ES* | 26,564 | -0.063 | 1.329 | -0.218 | 0.311 | 0.633 |
| *OWNERSHIP* | 26,564 | 0.398 | 0.489 | 0.000 | 0.000 | 1.000 |
| *LAW* | 26,564 | 0.555 | 0.497 | 0.000 | 1.000 | 1.000 |
| *RISK_EXP* | 26,564 | 9.340 | 0.876 | 9.400 | 9.670 | 9.880 |
| *ANTIDIR* | 26,564 | 3.573 | 1.424 | 3.000 | 4.000 | 5.000 |
| *POLCON* | 26,564 | 0.425 | 0.131 | 0.393 | 0.427 | 0.500 |
| *GDP* | 26,564 | 36,748 | 15,602 | 31,973 | 38,633 | 45,603 |
| *MARKET_CAP* | 26,564 | 102.717 | 88.940 | 61.816 | 95.144 | 123.939 |

*(continued on next page)*

**Table 3-2 (continued)**

**Panel D: Correlation Matrice Matched Sample (1)**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) *RISK_TAKING1* | 1.000 | | | | | | | | | | | | | |
| (2) *RISK_TAKING2* | **0.950** | 1.000 | | | | | | | | | | | | |
| (3) *SIZE* | **0.067** | **0.072** | 1.000 | | | | | | | | | | | |
| (4) *EARNINGS* | 0.001 | **0.011** | **0.173** | 1.000 | | | | | | | | | | |
| (5) *GROWTH* | 0.001 | 0.009 | **0.079** | **0.247** | 1.000 | | | | | | | | | |
| (6) *LEVERAGE* | 0.002 | -0.004 | **0.179** | **-0.030** | **0.292** | 1.000 | | | | | | | | |
| (7) *ES* | **-0.029** | **-0.031** | **0.035** | **0.072** | **0.033** | **-0.015** | 1.000 | | | | | | | |
| (8) *OWNERSHIP* | -0.007 | **-0.021** | **0.095** | **0.025** | **-0.015** | **-0.005** | **-0.002** | 1.000 | | | | | | |
| (9) *LAW* | **-0.281** | **-0.340** | **0.072** | -0.002 | **-0.072** | **0.040** | **0.053** | **0.141** | 1.000 | | | | | |
| (10) *RISK_EXP* | **0.106** | **0.138** | **0.123** | **-0.069** | **-0.065** | **-0.046** | **-0.002** | **-0.060** | **0.121** | 1.000 | | | | |
| (11) *ANTIDIR* | **0.183** | **0.238** | **0.014** | **-0.043** | **0.019** | **-0.065** | **-0.007** | **-0.245** | **-0.610** | **0.092** | 1.000 | | | |
| (12) *POLCON* | **0.010** | 0.004 | **0.012** | **0.038** | **-0.066** | **0.020** | **0.011** | **-0.062** | **0.459** | **0.372** | **-0.330** | 1.000 | | |
| (13) *GDP* | **0.169** | **0.189** | **0.188** | **-0.075** | **-0.087** | **-0.066** | **-0.007** | **0.059** | **0.119** | **0.798** | **0.101** | **0.154** | 1.000 | |
| (14) *MARKET_CAP* | -0.006 | -0.002 | **0.014** | **-0.089** | **0.053** | **-0.044** | **0.009** | **0.049** | **-0.349** | **-0.143** | **0.332** | **-0.593** | **0.035** | 1.000 |

**Panel E: Correlation Matrice Matched Sample (2)**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) *RISK_TAKING1* | 1.000 | | | | | | | | | | | | | |
| (2) *RISK_TAKING2* | **0.949** | 1.000 | | | | | | | | | | | | |
| (3) *SIZE* | **0.094** | **0.100** | 1.000 | | | | | | | | | | | |
| (4) *EARNINGS* | **-0.015** | **0.008** | **0.163** | 1.000 | | | | | | | | | | |
| (5) *GROWTH* | **-0.012** | **-0.011** | 0.003 | **0.144** | 1.000 | | | | | | | | | |
| (6) *LEVERAGE* | **0.008** | 0.003 | **0.151** | **-0.060** | **0.290** | 1.000 | | | | | | | | |
| (7) *ES* | **-0.041** | **-0.044** | **0.047** | **0.062** | 0.001 | **-0.014** | 1.000 | | | | | | | |
| (8) *OWNERSHIP* | **-0.022** | **-0.032** | -0.006 | **0.026** | **-0.015** | **-0.008** | **-0.010** | 1.000 | | | | | | |
| (9) *LAW* | **-0.394** | **-0.466** | **0.078** | **-0.017** | **-0.080** | 0.004 | **0.075** | **0.053** | 1.000 | | | | | |
| (10) *RISK_EXP* | **0.201** | **0.235** | **0.192** | **-0.027** | **-0.048** | **-0.061** | **0.008** | **-0.118** | **0.061** | 1.000 | | | | |
| (11) *ANTIDIR* | **0.280** | **0.336** | **0.078** | **-0.009** | **0.037** | **-0.059** | **-0.023** | **-0.210** | **-0.603** | **0.265** | 1.000 | | | |
| (12) *POLCON* | **-0.053** | **-0.073** | **0.091** | **0.016** | **-0.082** | 0.005 | **0.042** | **-0.109** | **0.523** | **0.385** | **-0.275** | 1.000 | | |
| (13) *GDP* | **0.277** | **0.300** | **0.214** | **-0.033** | **-0.051** | **-0.076** | **-0.011** | -0.001 | **0.034** | **0.819** | **0.257** | **0.166** | 1.000 | |
| (14) *MARKET_CAP* | -0.001 | 0.007 | **-0.034** | **-0.040** | **0.105** | **-0.018** | **-0.014** | **0.053** | **-0.377** | **-0.185** | **0.327** | **-0.637** | 0.001 | 1.000 |

*(continued on next page)*

**Table 3-2 (continued)**

**Panel F: Correlation Matrice Matched Sample (3)**

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) *RISK_TAKING1* | 1.000 | | | | | | | | | | | | | |
| (2) *RISK_TAKING2* | **0.921** | 1.000 | | | | | | | | | | | | |
| (3) *SIZE* | **0.052** | **0.063** | 1.000 | | | | | | | | | | | |
| (4) *EARNINGS* | **-0.013** | 0.004 | **0.163** | 1.000 | | | | | | | | | | |
| (5) *GROWTH* | **-0.012** | **-0.015** | **-0.040** | **0.072** | 1.000 | | | | | | | | | |
| (6) *LEVERAGE* | -0.004 | **-0.017** | **0.191** | **-0.046** | **0.299** | 1.000 | | | | | | | | |
| (7) *ES* | **-0.026** | **-0.024** | **0.051** | **0.051** | **-0.017** | **-0.017** | 1.000 | | | | | | | |
| (8) *OWNERSHIP* | **-0.019** | **-0.051** | **0.072** | **0.038** | **-0.014** | **0.039** | -0.005 | 1.000 | | | | | | |
| (9) *LAW* | **-0.256** | **-0.349** | **0.102** | 0.007 | **-0.062** | **0.067** | **0.035** | **0.270** | 1.000 | | | | | |
| (10) *RISK_EXP* | **0.098** | **0.149** | **0.127** | **-0.046** | 0.003 | **-0.046** | **-0.020** | 0.000 | **0.045** | 1.000 | | | | |
| (11) *ANTIDIR* | **0.146** | **0.245** | **-0.046** | **-0.023** | **0.033** | **-0.078** | -0.009 | **-0.355** | **-0.725** | **0.096** | 1.000 | | | |
| (12) *POLCON* | **0.041** | 0.005 | **0.075** | **0.010** | **-0.032** | 0.006 | **0.012** | **0.062** | **0.436** | **0.379** | **-0.280** | 1.000 | | |
| (13) *GDP* | **0.163** | **0.195** | **0.140** | **-0.057** | -0.006 | **-0.040** | **-0.029** | **0.076** | **0.080** | **0.748** | **0.087** | **0.227** | 1.000 | |
| (14) *MARKET_CAP* | **0.061** | **0.085** | **-0.049** | **-0.036** | **0.062** | **-0.049** | -0.010 | **-0.096** | **-0.400** | **-0.094** | **0.393** | **-0.458** | 0.007 | 1.000 |

**Notes:** This table presents descriptive statistics in Panel A-C and correlation matrices in Panel D-F for our respective Samples (1)-(3). The sample period is 2001-2014 in all three samples. All variables are defined in the Appendix 3-A. In Panel D-F, statistical significance is based on two-tailed tests. Statistical significance at the 0.1 level is denoted in bold print.

## 3.6 Main Results

### 3.6.1 Main Results for Changes in the Accounting Information Environment

Table 3-3 presents the results of our main tests. Columns 1 and 2 present the results for firms that are subject to the mandatory adoption of IFRS relative to firms of the control group. Column 1 presents our results of estimating Equation (4) using *RISK_TAKING1* as the dependent variable. The main coefficient of interest is the difference-in-differences estimator $TREAT_{IFRS}*POST_{IFRS}$. We find that $TREAT_{IFRS}*POST_{IFRS}$ is insignificant and negative (-0.937, *t*-stat = -1.148). Column 2 presents the results of estimating Equation (4) using *RISK_TAKING2* as the dependent variable. We observe that $TREAT_{IFRS}*POST_{IFRS}$ is also insignificantly negative (-1.012, *t*-stat = -1.021). These results indicate that, relative to control firms, corporate risk-taking does not significantly change around the mandatory adoption of IFRS.

Columns 3 and 4 present the results for firms that are subject to enforcement reforms relative to firms of the control group using. Column 3 presents the results of estimating Equation (4) using *RISK_TAKING1* as the dependent variable. We find that the difference-in-differences estimator $TREAT_{ENF}*POST_{ENF}$ is significant and negative (-1.616, *t*-stat = -2.325). Column 4 presents the results of estimating Equation (4) using *RISK_TAKING2* as the dependent variable. We observe that $TREAT_{ENF}*POST_{ENF}$ is also significantly negative (-1.996, *t*-stat = -2.957). These results indicate that, relative to control firms, corporate risk-taking decreases after substantial changes in the enforcement of accounting standards.

Columns 5 and 6 present the results for firms that are subject to adopting quarterly reporting. Column 5 presents the results of estimating Equation (4) using *RISK_TAKING1* as the dependent variable. We find that the difference-in-differences estimator $TREAT_{QR}*POST_{QR}$ is

insignificant and negative (-0.368, *t*-stat = -0.770). Column 6 shows the results of estimating Equation (4) using *RISK_TAKING2* as the dependent variable. We observe that $TREAT_{QR}$*$POST_{QR}$ is also insignificantly negative (-0.238, *t*-stat = -0.336). These results indicate that, relative to control firms, corporate risk-taking does not significantly change around the adoption of quarterly reporting. Again, these results might depend on the regulatory environment.

Taken together, we find supporting evidence for H1 with regard to the adoption of enforcement reforms. The mandatory adoption of IFRS and quarterly reporting does not seem to be associated with corporate risk-taking per se. However, the impact of these two shocks to the accounting information environment might depend on the regulatory environment, as suggested by the findings of Christensen et al. (2013). The authors only document the capital-market effects (market liquidity) of the mandatory adoption of IFRS for countries that concurrently made substantive changes in reporting enforcement. We analyze this conjecture in the next section.[49]

[49] In our additional section, we provide evidence with respect to the bundling effect of the IFRS adoption and concurrent enforcement reforms. We find a significant and negative effect for countries in which the IFRS adoption is concurrent to enforcement reforms.

## Table 3-3: Main Results

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporing | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | ***RISK_TAKING1*** | ***RISK_TAKING2*** | ***RISK_TAKING1*** | ***RISK_TAKING2*** | ***RISK_TAKING1*** | ***RISK_TAKING2*** |
| $TREAT_{IFRS}$ | -0.385 | -0.869 | | | | |
| | (-0.942) | (-1.074) | | | | |
| $POST_{IFRS}$ | 0.015 | -0.430 | | | | |
| | (0.041) | (-0.963) | | | | |
| $\boldsymbol{TREAT_{IFRS}*POST_{IFRS}}$ | **-0.937** | **-1.012** | | | | |
| | **(-1.148)** | **(-1.021)** | | | | |
| $TREAT_{ENF}$ | | | -0.480 * | -1.579 *** | | |
| | | | (-1.745) | (-3.075) | | |
| $POST_{ENF}$ | | | 0.258 | -0.056 | | |
| | | | (0.403) | (-0.069) | | |
| $\boldsymbol{TREAT_{ENF}*POST_{ENF}}$ | | | **-1.616 ** ** | **-1.996 *** ** | | |
| | | | **(-2.325)** | **(-2.957)** | | |
| $TREAT_{QR}$ | | | | | -0.460 * | -1.355 ** |
| | | | | | (-1.920) | (-2.023) |
| $POST_{QR}$ | | | | | 0.475 | 0.263 |
| | | | | | (0.775) | (0.314) |
| $\boldsymbol{TREAT_{QR}*POST_{QR}}$ | | | | | **-0.368** | **-0.238** |
| | | | | | **(-0.770)** | **(-0.336)** |
| *SIZE* | 0.050 *** | 0.095 *** | 0.041 ** | 0.083 ** | 0.024 | 0.065 ** |
| | (3.006) | (3.603) | (2.240) | (2.612) | (1.549) | (2.206) |
| *EARNINGS* | -0.243 | -0.120 | -0.300 * | -0.085 | -0.022 | 0.275 * |
| | (-1.417) | (-0.464) | (-1.796) | (-0.321) | (-0.276) | (1.843) |
| *GROWTH* | 0.034 | -0.016 | 0.032 | -0.144 | 0.004 | -0.094 |
| | (0.430) | (-0.143) | (0.526) | (-1.541) | (0.134) | (-1.396) |
| *LEVERAGE* | 0.154 * | 0.190 | 0.078 | 0.087 | 0.127 | 0.184 |
| | (1.947) | (1.360) | (1.184) | (0.734) | (1.444) | (1.188) |
| *ES* | -0.012 | -0.017 | 0.002 | 0.011 | -0.013 *** | -0.016 ** |
| | (-1.510) | (-1.146) | (0.288) | (0.769) | (-3.283) | (-2.464) |
| *OWNERSHIP* | 0.196 * | 0.344 | -0.127 | -0.201 | 0.198 ** | 0.447 ** |
| | (1.817) | (1.745) | (-1.588) | (-1.484) | (2.238) | (2.304) |
| *LAW* | -2.016 *** | -3.674 *** | -0.834 ** | -1.485 ** | -1.297 *** | -2.52 ** |
| | (-2.737) | (-2.885) | (-2.209) | (-2.179) | (-2.753) | (-2.490) |
| *RISK_EXP* | -0.560 | -0.814 | 0.030 | 0.217 | -0.017 | 0.184 |
| | (-1.658) | (-1.425) | (0.125) | (0.493) | (-0.088) | (0.450) |
| *ANTIDIR* | -0.140 | -0.207 | 0.229 | 0.465 * | -0.190 | -0.283 |
| | (-0.717) | (-0.603) | (1.548) | (1.698) | (-1.303) | (-1.072) |
| *POLCON* | 1.698 ** | 2.431 ** | 1.180 * | 1.629 | 1.937 ** | 2.618 ** |
| | (2.424) | (2.198) | (1.989) | (1.602) | (2.302) | (2.120) |

*(continued on next page)*

**Table 3-3 (continued)**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporing | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | ***RISK_TAKING1*** | ***RISK_TAKING2*** | ***RISK_TAKING1*** | ***RISK_TAKING2*** | ***RISK_TAKING1*** | ***RISK_TAKING2*** |
| *GDP* | 0.000 ** | 0.000 ** | 0.000 * | 0.000 | 0.000 | 0.000 |
| | (2.051) | (2.042) | (1.734) | (1.629) | (1.510) | (1.343) |
| *MARKET_CAP* | -0.001 | -0.002 | -0.000 | -0.001 | -0.000 | -0.001 |
| | (-1.447) | (-1.601) | (-0.625) | (-0.738) | (-0.234) | (-0.652) |
| Intercept | 4.214 | 6.111 | -2.020 | -4.806 | 0.449 | -0.953 |
| | (1.485) | (1.209) | (-0.968) | (-1.266) | (0.248) | (-0.246) |
| Observations | 54,436 | 54,436 | 53,140 | 53,140 | 26,564 | 26,564 |
| Adjusted R-squared | 0.354 | 0.395 | 0.468 | 0.531 | 0.227 | 0.296 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for testing H1. In Columns 1 and 2, we test firms that are subject to the mandatory adoption of IFRS against untreated control firms using the matched Sample (1). In Column 1, we use *RISK_TAKING1*, and in Column 2, we use *RISK_TAKING2* as the dependent variable. In Columns 3 and 4, we test firms that are subject to the adoption of enforcement reforms against untreated control firms using the matched Sample (2). In Column 3, we use *RISK_TAKING1*, and in Column 4, we use *RISK_TAKING2* as a dependent variable. In Columns 5 and 6, we test firms that are subject to the adoption of quarterly reporting against untreated control firms using the matched Sample (2). In Column 5, we use *RISK_TAKING1*, and in Column 6, we use *RISK_TAKING2* as the dependent variable. All variables are defined in the Appendix 3-A. Robust standard errors are clustered at the country-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

### 3.6.2 High versus Low Enforcement Quality

We further analyze how the effect of exogenous shocks to the accounting information environment on corporate risk-taking depends on the regulatory environment. Specifically, we examine whether this effect is conditional upon whether the reforms underlying the shocks to the accounting information environments are strongly enforced. Hope (2003) emphasizes the importance of the enforcement of national accounting principles by investigating the association between analysts' forecast accuracy and the level of financial disclosure. He provides evidence that the analysts' earnings forecast accuracy is higher under a strong enforcement environment. Daske et al. (2008) document that capital-market benefits of the mandatory IFRS adoption are only present in countries where legal enforcement is strong. Christensen et al. (2013) provide evidence that capital-market benefits around the IFRS

adoption are limited to the countries with strong institutions and legal systems, as the implementation of regulations is stronger enforced.

To measure enforcement quality, we use two enforcement indices. First, we use the regulatory quality index provided by Kaufmann et al. (2009), which captures the general ability of countries to implement regulations and government policies. Second, we use the more specific index on the quality of accounting enforcement provided by Brown et al. (2014), which captures the extent of a country's accounting enforcement activities to ensure compliance with a rule or regulation. To test the impact of the enforcement quality on the results of the last section, we construct four subsamples using the median of the regulatory index (Kaufmann et al. 2009) and the enforcement quality index (Brown et al. 2014) as split variables.

Table 3-4 provides the results of splitting the sample into high and low regulatory quality as well as high and low enforcement quality. In Panels A and B, we split Samples (1), (2), and (3) based on the median of the regulatory quality index provided by Kaufmann et al. (2009). We use *RISK_TAKING1* as the dependent variable in Panel A and *RISK_TAKING2* as the dependent variable in Panel B. In Panel A, Columns 1 and 2 we present the results for the mandatory adoption of IFRS. We find that the interaction term $TREAT_{IFRS}$*$POST_{IFRS}$ is significantly negative in Column 1 (-2.367, *t*-stat = -4.881) and insignificant and positive in Column 2 (0.652, *t*-stat = 1.198). Columns 3 and 4 present the results of enforcement reforms. We find that $TREAT_{ENF}$*$POST_{ENF}$ is significantly negative in Column 3 (-2.532, *t*-stat = -4.248) and is insignificant and negative in Column 4 (-0.211, *t*-stat = -0.696). Columns 5 and 6 present the results for the adoption of quarterly reporting. We find that $TREAT_{QR}$*$POST_{QR}$ is significantly negative in Column 5 (-1.648, *t*-stat = -4.944) and is significant and positive in Column 6 (1.105, *t*-stat = 2.026). In Panel B, we find comparable results using *RISK_TAKING2* as the dependent variable.

In Table 3-5, we split the Samples (1), (2), and (3) based on the median of the enforcement quality index provided by Brown et al. (2014). We use *RISK_TAKING1* as the dependent variable in Panel A and *RISK_TAKING2* as the dependent variable in Panel B. In Panel A, we find that for the mandatory adoption of IFRS the variable of interest $TREAT_{IFRS}$*$POST_{IFRS}$ is significantly negative in Column 1 (-1.543, *t*-stat = -2.457) and insignificant and negative in Column 2 (-0.401, *t*-stat = -0.707). For enforcement reforms, we find that $TREAT_{ENF}$*$POST_{ENF}$ is significantly negative in Column 3 (-2.757, *t*-stat = -3.274) and is insignificant and negative in Column 4 (0.098, *t*-stat = 0.379). For the mandatory adoption of quarterly reporting, we find that the interaction of $TREAT_{QR}$*$POST_{QR}$ is significantly negative in Column 5 (-1.425, *t*-stat = -2.845) and significant and negative in Column 6 (-0.033, *t*-stat = -0.233). In Panel B, we find comparable results, using *RISK_TAKING2* as the dependent variable.

Overall, we find that the mandatory adoption of IFRS, the adoption of enforcement reforms and the adoption of quarterly reporting significantly affect corporate risk-taking only in countries with a high level of enforcement quality. Enforcement quality appears to moderate the effect of shocks to the accounting information environment on corporate risk-taking. We observe that the impact of accounting information on corporate risk-taking is conditional upon whether these reforms are strongly enforced. Thus, we find supporting evidence for H1 only in high-enforcement-quality countries.

## Table 3-4: High versus Low Regulatory Quality

**Panel A: Dependent Variable I**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* |
| $TREAT_{IFRS}$ | -2.118 *** | 0.649 | | | | |
| | (-4.745) | (1.291) | | | | |
| $POST_{IFRS}$ | 0.702 | -0.373 | | | | |
| | (0.900) | (-1.148) | | | | |
| $\mathbf{TREAT_{IFRS} * POST_{IFRS}}$ | **-2.367 *** ** | **0.652** | | | | |
| | **(-4.881)** | **(1.198)** | | | | |
| $TREAT_{ENF}$ | | | -0.191 | -0.309 | | |
| | | | (-0.532) | (-0.785) | | |
| $POST_{ENF}$ | | | 1.072 | -0.139 | | |
| | | | (0.852) | (-0.542) | | |
| $\mathbf{TREAT_{ENF} * POST_{ENF}}$ | | | **-2.532 *** ** | **-0.211** | | |
| | | | **(-4.248)** | **(-0.696)** | | |
| $TREAT_{QR}$ | | | | | -0.624 *** | -0.161 |
| | | | | | (-3.594) | (-0.451) |
| $POST_{QR}$ | | | | | 2.188 ** | -0.003 |
| | | | | | (2.628) | (-0.006) |
| $\mathbf{TREAT_{QR} * POST_{QR}}$ | | | | | **-1.648 *** ** | **1.105 ** * |
| | | | | | **(-4.944)** | **(2.026)** |
| *SIZE* | -0.007 | 0.008 | 0.038 ** | 0.003 | 0.009 | -0.009 |
| | (-0.770) | (0.651) | (2.592) | (0.197) | (1.026) | (-0.902) |
| *EARNINGS* | -0.246 ** | 0.095 | -0.388 *** | -0.038 | -0.170 * | 0.317 |
| | (-2.516) | (0.444) | (-2.889) | (-0.265) | (-1.939) | (1.529) |
| *GROWTH* | 0.043 | 0.127 | 0.030 | 0.096 | 0.037 | 0.044 |
| | (0.637) | (1.402) | (0.405) | (0.979) | (1.047) | (0.490) |
| *LEVERAGE* | 0.073 | 0.140 | 0.177 ** | 0.014 | 0.159 * | -0.063 |
| | (1.221) | (1.455) | (2.745) | (0.265) | (2.079) | (-0.715) |
| *ES* | -0.004 | -0.007 | 0.012 | -0.014 * | -0.005 | -0.006 |
| | (-0.536) | (-0.657) | (1.573) | (-2.041) | (-0.769) | (-0.856) |
| *OWNERSHIP* | 0.136 *** | -0.029 | -0.187 *** | 0.005 | -0.005 | 0.156 ** |
| | (2.922) | (-0.385) | (-3.092) | (0.100) | (-0.161) | (2.082) |
| *LAW* | -1.427 * | -0.590 | -0.505 | -0.419 | 0.490 | -0.760 |
| | (-1.776) | (-0.933) | (-0.814) | (-0.733) | (1.227) | (-1.595) |
| *RISK_EXP* | -0.677 | -0.013 | 0.982 * | -0.476 * | 0.901 *** | -0.097 |
| | (-1.369) | (-0.057) | (2.079) | (-1.839) | (3.054) | (-0.778) |

*(continued on next page)*

**Table 3-4 (continued)**

**Panel A: Dependent Variable I**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* |
| *ANTIDIR* | -0.496 * | 0.178 | 0.262 | 0.061 | 0.279 ** | -0.260 |
| | (-2.086) | (0.831) | (1.072) | (0.537) | (2.167) | (-1.645) |
| *POLCON* | 0.734 | 2.838 * | -0.721 | 1.968 * | -0.530 | 2.780 ** |
| | (0.573) | (1.780) | (-0.540) | (1.976) | (-1.072) | (2.810) |
| *GDP* | 0.000 | -0.000 | -0.000 | 0.000 | -0.000 | 0.000 |
| | (0.604) | (-0.275) | (-0.790) | (1.129) | (-0.745) | (0.112) |
| *MARKET_CAP* | -0.001 | -0.001 | 0.000 | 0.002 | -0.002 ** | 0.006 |
| | (-1.718) | (-0.188) | (0.115) | (0.436) | (-2.321) | (1.224) |
| Intercept | 10.422 * | -1.123 | -9.728 ** | 2.987 | -8.615 *** | 0.921 |
| | (1.999) | (-0.379) | (-2.198) | (1.506) | (-3.183) | (1.044) |
| Observations | 27,972 | 26,464 | 26,816 | 26,324 | 14,653 | 11,911 |
| Adjusted R-squared | 0.653 | 0.189 | 0.580 | 0.143 | 0.526 | 0.252 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Panel B: Dependent Variable II**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING2 (high regulatory quality)* | *RISK_TAKING2 (low regulatory quality)* | *RISK_TAKING2 (high regulatory quality)* | *RISK_TAKING2 (low regulatory quality)* | *RISK_TAKING2 (high regulatory quality)* | *RISK_TAKING2 (low regulatory quality)* |
| $TREAT_{IFRS}$ | -4.369 *** | 1.169 | | | | |
| | (-8.845) | (1.292) | | | | |
| $POST_{IFRS}$ | 0.284 | -0.669 | | | | |
| | (0.529) | (-1.142) | | | | |
| $\mathbf{TREAT_{IFRS} * POST_{IFRS}}$ | **-2.304 *** ** | **1.233** | | | | |
| | **(-3.049)** | **(1.260)** | | | | |
| $TREAT_{ENF}$ | | | -1.315 * | -0.386 | | |
| | | | (-1.755) | (-0.523) | | |
| $POST_{ENF}$ | | | 0.776 | -0.158 | | |
| | | | (0.429) | (-0.365) | | |
| $\mathbf{TREAT_{ENF} * POST_{ENF}}$ | | | **-3.049 *** ** | **-0.545** | | |
| | | | **(-4.775)** | **(-0.916)** | | |
| $TREAT_{QR}$ | | | | | -2.235 *** | -0.078 |
| | | | | | (-4.588) | (-0.159) |
| $POST_{QR}$ | | | | | 3.100 ** | -0.180 |
| | | | | | (2.537) | (-0.250) |
| $\mathbf{TREAT_{QR} * POST_{QR}}$ | | | | | **-1.993 *** ** | **1.953 ** ** |
| | | | | | **(-4.988)** | **(2.411)** |

*(continued on next page)*

**Table 3-4 (continued)**

**Panel B: Dependent Variable II**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* | *RISK_TAKING1 (high regulatory quality)* | *RISK_TAKING1 (low regulatory quality)* |
| *SIZE* | -0.002 | 0.032 | 0.078 ** | 0.022 | 0.035 ** | -0.009 |
| | (-0.127) | (1.343) | (2.629) | (0.791) | (2.355) | (-0.482) |
| *EARNINGS* | -0.178 | 0.511 | -0.241 | 0.336 | 0.008 | 0.644 * |
| | (-1.196) | (1.540) | (-1.109) | (1.511) | (0.031) | (2.055) |
| *GROWTH* | -0.049 | 0.153 | -0.212 ** | 0.098 | -0.091 | 0.076 |
| | (-0.652) | (0.910) | (-2.545) | (0.511) | (-1.440) | (0.577) |
| *LEVERAGE* | 0.107 | 0.185 | 0.279 ** | -0.043 | 0.198 | -0.228 * |
| | (0.983) | (1.165) | (2.373) | (-0.442) | (1.356) | (-1.860) |
| *ES* | -0.007 | -0.001 | 0.032 *** | -0.023 | 0.009 | -0.004 |
| | (-0.880) | (-0.046) | (3.076) | (-1.541) | (1.313) | (-0.291) |
| *OWNERSHIP* | 0.203 ** | -0.064 | -0.319 *** | 0.004 | 0.002 | 0.300 ** |
| | (2.474) | (-0.458) | (-3.374) | (0.041) | (0.035) | (2.148) |
| *LAW* | -2.392 | -1.104 | -0.888 | -0.793 | 1.220 | -0.970 |
| | (-1.624) | (-0.934) | (-0.845) | (-0.682) | (1.508) | (-1.271) |
| *RISK_EXP* | -0.809 | -0.023 | 1.909 ** | -0.897 * | 2.160 *** | -0.121 |
| | (-0.899) | (-0.052) | (2.355) | (-1.786) | (3.292) | (-0.559) |
| *ANTIDIR* | -0.665 | 0.297 | 0.576 | 0.072 | 0.664 ** | -0.304 |
| | (-1.610) | (0.761) | (1.319) | (0.324) | (2.561) | (-1.679) |
| *POLCON* | 1.058 | 4.971 * | -1.362 | 2.935 | -1.317 | 3.995 ** |
| | (0.502) | (1.787) | (-0.700) | (1.626) | (-1.209) | (2.489) |
| *GDP* | 0.000 | -0.000 | -0.000 | 0.000 | -0.000 | -0.000 |
| | (0.350) | (-0.253) | (-0.872) | (1.102) | (-0.814) | (-0.393) |
| *MARKET_CAP* | -0.002 | -0.002 | 0.000 | 0.005 | -0.003 * | 0.010 |
| | (-1.522) | (-0.183) | (0.186) | (0.458) | (-1.988) | (1.150) |
| Intercept | 14.261 | -2.537 | -18.872 ** | 5.440 | -20.869 *** | 0.695 |
| | (1.510) | (-0.468) | (-2.493) | (1.477) | (-3.352) | (0.499) |
| Observations | 27,972 | 26,464 | 26,816 | 26,324 | 14,653 | 11,911 |
| Adjusted R-squared | 0.722 | 0.198 | 0.625 | 0.144 | 0.674 | 0.272 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our additional analyses on cross-country variation in enforcement quality. For our Samples (1), (2), and (3), we use the median of the regulatory quality index provided by Kaufmann et al. (2009) as a split variable to create subsamples comprising observations from countries with higher and equal or lower regulatory quality than the median. Higher values of the regulatory quality index indicate a higher general ability of countries to implement regulation and government policies (Kaufmann et al. 2009). In Columns 1 and 2, we test the effects of the mandatory adoption of IFRS, in Columns 3 and 4, of the adoption of enforcement reforms, and in Columns 5 and 6, of the adoption of quarterly reporting. In Panel A, we use *RISK_TAKING1* as dependent variables, and in Panel B, we use *RISK_TAKING2* as the dependent variable. All variables are defined as described in the Appendix 3-A. Robust standard errors are clustered at the country-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

## Table 3-5: High versus Low Enforcement Quality

**Panel A: Dependent Variable I**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING1 (high enforcement quality)* | *RISK_TAKING1 (low enforcement quality)* | *RISK_TAKING1 (high enforcement quality)* | *RISK_TAKING1 (low enforcement quality)* | *RISK_TAKING1 (high enforcement quality)* | *RISK_TAKING1 (low enforcement quality)* |
| $TREAT_{IFRS}$ | -1.424 *** | 0.973 | | | | |
| | (-3.843) | (1.215) | | | | |
| $POST_{IFRS}$ | 0.99 * | -0.421 | | | | |
| | (1.810) | (-0.837) | | | | |
| $\mathbf{TREAT_{IFRS}*POST_{IFRS}}$ | **-1.543 ** ** | **-0.401** | | | | |
| | **(-2.457)** | **(-0.707)** | | | | |
| $TREAT_{ENF}$ | | | -0.138 | -0.375 ** | | |
| | | | (-0.323) | (-2.821) | | |
| $POST_{ENF}$ | | | -0.195 | -0.108 | | |
| | | | (-0.702) | (-0.425) | | |
| $\mathbf{TREAT_{ENF}*POST_{ENF}}$ | | | **-2.757 *** ** | **0.098** | | |
| | | | **(-3.274)** | **(0.379)** | | |
| $TREAT_{QR}$ | | | | | -0.736 ** | 0.198 |
| | | | | | (-2.412) | (1.214) |
| $POST_{QR}$ | | | | | 2.312 *** | 0.043 |
| | | | | | (3.428) | (0.129) |
| $\mathbf{TREAT_{QR}*POST_{QR}}$ | | | | | **-1.425 ** ** | **-0.033** |
| | | | | | **(-2.845)** | **(-0.233)** |
| *SIZE* | 0.042 ** | -0.005 | 0.042 ** | -0.013 | 0.014 | -0.009 |
| | (2.808) | (-0.249) | (2.732) | (-1.510) | (1.685) | (-1.031) |
| *EARNINGS* | -0.425 *** | -0.151 | -0.196 | -0.273 *** | -0.082 | -0.131 |
| | (-4.450) | (-1.499) | (-1.314) | (-6.614) | (-0.832) | (-1.574) |
| *GROWTH* | 0.000 | 0.171 *** | -0.042 | 0.152 *** | -0.013 | 0.100 |
| | (0.003) | (3.004) | (-0.587) | (3.367) | (-0.366) | (1.660) |
| *LEVERAGE* | -0.031 | 0.050 | 0.083 | 0.009 | 0.124 | -0.016 |
| | (-0.370) | (0.644) | (1.010) | (0.275) | (1.494) | (-0.180) |
| *ES* | -0.005 | -0.005 | 0.004 | -0.006 | -0.001 | -0.009 |
| | (-0.624) | (-1.389) | (0.412) | (-1.102) | (-0.074) | (-1.559) |
| *OWNERSHIP* | 0.213 *** | -0.063 | -0.091 | -0.020 | 0.034 | 0.034 |
| | (2.906) | (-0.931) | (-1.016) | (-0.536) | (0.707) | (0.995) |
| *LAW* | -0.393 | -0.019 | -1.174 ** | 0.118 | -0.226 | -0.283 * |
| | (-0.442) | (-0.069) | (-2.385) | (0.436) | (-0.306) | (-2.021) |
| *RISK_EXP* | -0.167 | 0.138 | 0.341 | -0.085 | 0.559 | -0.215 * |
| | (-0.503) | (0.817) | (1.100) | (-0.946) | (1.413) | (-1.787) |

*(continued on next page)*

**Table 3-5 (continued)**

**Panel A: Dependent Variable I**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING1 (high enforcement quality)* | *RISK_TAKING1 (low enforcement quality)* | *RISK_TAKING1 (high enforcement quality)* | *RISK_TAKING1 (low enforcement quality)* | *RISK_TAKING1 (high enforcement quality)* | *RISK_TAKING1 (low enforcement quality)* |
| *ANTIDIR* | 0.284 | -0.081 | 0.257 | 0.008 | -0.031 | 0.057 |
| | (1.003) | (-0.533) | (1.044) | (0.189) | (-0.126) | (0.675) |
| *POLCON* | 3.129 | 1.187 | 2.539 | 0.105 | 3.790 | 1.150 * |
| | (1.234) | (1.135) | (1.328) | (0.436) | (1.688) | (1.794) |
| *GDP* | 0.000 | -0.000 | 0.000 | 0.000 | -0.000 | 0.000 |
| | (1.043) | (-1.145) | (0.666) | (0.737) | (-1.043) | (0.226) |
| *MARKET_CAP* | -0.002 | 0.001 | -0.002 | 0.000 | 0.004 | 0.000 |
| | (-0.203) | (1.298) | (-0.323) | (0.847) | (0.449) | (0.844) |
| Intercept | -0.680 | -0.865 | -5.159 | 1.276 | -6.240 | 1.573 ** |
| | (-0.219) | (-0.447) | (-1.694) | (1.597) | (-1.614) | (2.378) |
| Observations | 32,652 | 21,784 | 26,697 | 26,443 | 15,685 | 10,879 |
| Adjusted R-squared | 0.494 | 0.176 | 0.525 | 0.069 | 0.362 | 0.095 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Panel B: Dependent Variable II**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | *RISK_TAKING2 (high enforcement quality)* | *RISK_TAKING2 (low enforcement quality)* | *RISK_TAKING2 (high enforcement quality)* | *RISK_TAKING2 (low enforcement quality)* | *RISK_TAKING2 (high enforcement quality)* | *RISK_TAKING2 (low enforcement quality)* |
| $TREAT_{IFRS}$ | -3.215 *** | 1.811 | | | | |
| | (-5.027) | (1.281) | | | | |
| $POST_{IFRS}$ | 0.460 | -0.687 | | | | |
| | (0.729) | (-0.774) | | | | |
| $\boldsymbol{TREAT_{IFRS}*POST_{IFRS}}$ | **-1.133** | **-0.668** | | | | |
| | **(-1.230)** | **(-0.693)** | | | | |
| $TREAT_{ENF}$ | | | -1.166 | -0.607 ** | | |
| | | | (-1.579) | (-2.204) | | |
| $POST_{ENF}$ | | | -0.303 | -0.199 | | |
| | | | (-0.699) | (-0.392) | | |
| $\boldsymbol{TREAT_{ENF}*POST_{ENF}}$ | | | **-3.596 ***** | **-0.021** | | |
| | | | **(-4.126)** | **(-0.040)** | | |
| $TREAT_{QR}$ | | | | | -2.657 *** | 0.362 |
| | | | | | (-3.384) | (1.251) |
| $POST_{QR}$ | | | | | 3.192 *** | 0.199 |
| | | | | | (3.113) | (0.415) |
| $\boldsymbol{TREAT_{QR}*POST_{QR}}$ | | | | | **-1.442** | **-0.239** |
| | | | | | **(-1.512)** | **(-0.915)** |

*(continued on next page)*

**TABLE 3-5 (continued)**

**Panel B: Dependent Variable II**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | ***RISK_TAKING2 (high enforcement quality)*** | ***RISK_TAKING2 (low enforcement quality)*** | ***RISK_TAKING2 (high enforcement quality)*** | ***RISK_TAKING2 (low enforcement quality)*** | ***RISK_TAKING2 (high enforcement quality)*** | ***RISK_TAKING2 (low enforcement quality)*** |
| *SIZE* | 0.071 ** | 0.017 | 0.075 ** | 0.001 | 0.046 ** | -0.000 |
| | (2.509) | (0.580) | (2.554) | (0.164) | (2.624) | (-0.028) |
| *EARNINGS* | -0.468 *** | -0.010 | 0.043 | -0.104 | 0.179 | -0.052 |
| | (-3.314) | (-0.063) | (0.167) | (-1.171) | (0.682) | (-0.390) |
| *GROWTH* | -0.052 | 0.149 * | -0.264 ** | 0.091 | -0.149 * | 0.090 |
| | (-0.431) | (1.759) | (-2.293) | (1.112) | (-1.893) | (1.284) |
| *LEVERAGE* | -0.087 | 0.020 | 0.162 | -0.072 | 0.160 | -0.168 |
| | (-0.645) | (0.148) | (1.151) | (-1.204) | (1.084) | (-1.323) |
| *ES* | -0.002 | 0.002 | 0.015 | 0.000 | 0.018 | -0.004 |
| | (-0.130) | (0.350) | (0.787) | (0.146) | (1.891) | (-0.561) |
| *OWNERSHIP* | 0.305 ** | -0.125 | -0.125 | -0.041 | 0.053 | 0.052 |
| | (2.114) | (-1.060) | (-0.804) | (-0.691) | (0.579) | (0.848) |
| *LAW* | -0.533 | 0.054 | -2.134 ** | 0.381 | 0.266 | -0.479 |
| | (-0.352) | (0.102) | (-2.478) | (0.580) | (0.210) | (-1.495) |
| *RISK_EXP* | -0.139 | 0.334 | 0.695 | -0.054 | 1.563 * | -0.358 |
| | (-0.232) | (1.022) | (1.283) | (-0.327) | (2.018) | (-1.624) |
| *ANTIDIR* | 0.618 | -0.128 | 0.524 | -0.001 | 0.306 | 0.059 |
| | (1.315) | (-0.457) | (1.196) | (-0.014) | (0.756) | (0.373) |
| *POLCON* | 5.044 | 1.685 | 3.918 | -0.507 | 5.222 | 1.529 |
| | (1.270) | (0.943) | (1.350) | (-0.806) | (1.394) | (1.299) |
| *GDP* | 0.000 | -0.000 | 0.000 | 0.000 | -0.000 | 0.000 |
| | (0.777) | (-1.220) | (0.494) | (0.196) | (-1.669) | (0.259) |
| *MARKET_CAP* | -0.001 | 0.002 | -0.003 | 0.001 | -0.000 | 0.001 |
| | (-0.114) | (1.404) | (-0.274) | (0.891) | (-0.012) | (0.906) |
| Intercept | -2.320 | -2.919 | -9.584 * | 1.151 | -15.908 ** | 2.606 ** |
| | (-0.408) | (-0.824) | (-1.894) | (0.837) | (-2.145) | (2.189) |
| Observations | 32,652 | 21,784 | 26,697 | 26,443 | 15,685 | 10,879 |
| Adjusted R-squared | 0.537 | 0.198 | 0.562 | 0.081 | 0.463 | 0.097 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our additional analyses on cross-country variation in enforcement quality. For our Samples (1), (2), and (3), we use the median of the enforcement quality index provided by Brown et al. (2014) as a split variable to create subsamples comprising observations from countries with higher or equal and lower enforcement quality than the median. Higher values of the enforcement quality index indicate a greater extent of a country's accounting enforcement activities to ensure compliance with a rule or regulation (Brown et al. 2014). In Columns 1 and 2, we test the effects of the mandatory adoption of IFRS, in Columns 3 and 4 of the adoption of enforcement reforms, and in Columns 5 and 6 of the adoption of quarterly reporting. In Panel A, we use *RISK_TAKING1* as dependent variables, and in Panel B, we use *RISK_TAKING2* as the dependent variable. All variables are defined as described in the Appendix 3-A. Robust standard errors are clustered at the country-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

### 3.6.3 Bundling Effects of Mandatory IFRS Adoption and Concurrent Enforcement Changes

Prior research on the mandatory IFRS adoption documents that capital-market effects around the IFRS adoption are limited to firms from countries with concurrent and substantive changes in the accounting standard enforcement. Christensen et al. (2013) report that liquidity effects around IFRS adoption only occur for five European Union (EU) countries that made substantial changes in their accounting standard enforcement concurrent to the mandatory IFRS adoption in 2005 (Finland, Germany, the Netherlands, Norway, and the United Kingdom). For that reason, we further disentangle the effect of changes in the accounting information environment around the mandatory adoption of IFRS or enforcement reforms on corporate risk-taking.

In detail, we conduct the following additional analyses using Sample (1): First, we split our treatment group into countries with concurrent substantial changes in enforcement upon the mandatory IFRS adoption (Finland, Germany, the Netherlands, Norway, and the United Kingdom) and countries without concurrent substantial changes in enforcement. To these two treatment group subsamples, we match firms of control countries that are not subject to an accounting information event. Second, we test the substantial changes in the enforcement of accounting standards in Japan, which is the only country with enforcement reforms but no adoption of IFRS. Again, we match our control group, which comprises all countries that do not mandatorily adopt IFRS and do not have substantial changes in enforcement. Consequently, we have three matched samples that include (1) countries that are subject to the sole mandatory adoption of IFRS, (2) countries that are subject to substantial changes in the enforcement of accounting standards upon the mandatory adoption of IFRS as well as (3) one country that is subject to changes in the enforcement of accounting standards only. Thus, we can further

examine which changes in accounting information really influence corporate risk-taking, i.e. either the mandatory adoption of IFRS only, *enforced* mandatory adoption of IFRS or substantial changes in the enforcement of accounting standards only.[50]

Table 3-6 presents the results of these additional analyses. The table has six columns, as we focus on the three different samples described in the section before using two different dependent variables for each (*RISK_TAKING1* in Columns 1, 3, and 5 and *RISK_TAKING2* in Columns 2, 4, and 6). Columns 1 and 2 show the results for firms that are subject to the mandatory IFRS adoption only (without concurring enforcement reforms) relative to control firms. In both columns, the coefficient on the interaction term $TREAT_{IFRS}$*$POST_{IFRS}$ is insignificantly negative (-0.360, *t*-stat = -0.501; -0.021, *t*-stat = -0.025). Columns 3 and 4 show the results for firms subject to the *enforced* mandatory IFRS adoption (IFRS adoption and concurrent enforcement reforms). The coefficient on the interaction term $TREAT_{IFRS}$*$POST_{IFRS}$ is significantly negative in Column 3 (-2.486, *t*-stat = -1.981) and Column 4 (-3.053, *t*-stat = -2.050). Columns 5 and 6 show the results for firms subject to enforcement reforms (without the concurring adoption of IFRS) relative to control firms. Again, in both columns, the coefficient on $TREAT_{IFRS}$*$POST_{IFRS}$ is insignificant and positive (0.558, *t*-stat = 1.581; 0.919, *t*-stat = 1.694).

Overall, the difference-in-differences estimator $TREAT_{IFRS}$*$POST_{IFRS}$ is statistically significant and negative for firms subject to the *enforced* mandatory IFRS adoption, i.e. the mandatory IFRS adoption bundled with concurrent changes in enforcement. Thus, we observe a decline in corporate risk-taking only for an *enforced* mandatory IFRS adoption.

[50] Chile is another country that adopted enforcement reforms before the adoption of IFRS. Enforcement changes occurred in Quarter 2 2009, however, they were closely tied to the mandatory adoption of IFRS in 2010 (Christensen et al. 2013). For that reason, we do not include Chilean firms.

**Table 3-6: Concurrent Enforcement Events**

| | Sole Mandatory Adoption of IFRS | | Mandatory Adoption of IFRS with Concurrent Enforcement Reform | | Sole Adoption of Enforcement Reforms | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | ***RISK_TAKING1*** | ***RISK_TAKING2*** | ***RISK_TAKING1*** | ***RISK_TAKING2*** | ***RISK_TAKING1*** | ***RISK_TAKING2*** |
| $TREAT_{IFRS}$ | -0.259 | -0.474 | -0.507 | -1.833 *** | 0.078 | 0.594 |
| | (-0.455) | (-0.462) | (-0.945) | (-3.324) | (0.189) | (0.871) |
| $POST_{IFRS}$ | -0.003 | -0.425 | 1.207 | 1.252 | -0.013 | -0.157 |
| | (-0.008) | (-0.860) | (1.097) | (0.878) | (-0.065) | (-0.418) |
| $TREAT_{IFRS}*POST_{IFRS}$ | **-0.360** | **-0.021** | **-2.486 *** | **-3.053 *** | **0.558** | **0.919** |
| | **(-0.501)** | **(-0.025)** | **(-1.981)** | **(-2.050)** | **(1.581)** | **(1.694)** |
| Controls | Included | Included | Included | Included | Included | Included |
| Observations | 42,868 | 42,868 | 11,568 | 11,568 | 17,592 | 17,592 |
| Adjusted R-squared | 0.362 | 0.407 | 0.577 | 0.703 | 0.215 | 0.259 |
| Year FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our additional analyses on concurrent enforcement events. For parsimony, we only present the difference-in-differences estimators. In Columns 1 and 2, we show the results of testing countries that mandatorily adopt IFRS but are not subject to concurrent enforcement events against the control group of countries that are not subject to the mandatory adoption of IFRS and/or changes in the enforcement. In Column 1, we use *RISK_TAKING1,* and in Column 2, we use *RISK_TAKING2* as the dependent variable. In Columns 3 and 4, we show the results of testing countries that are subject to the mandatory adoption of IFRS and concurrent enforcement reforms against the control group of countries that are not subject to the mandatory adoption of IFRS and/or substantial changes in the enforcement. In Column 3, we use *RISK_TAKING1*, and in Column 4, we use *RISK_TAKING2* as the dependent variable. In Columns 5 and 6, we test Japan against the control group of countries that are not subject to the mandatory adoption of IFRS and/or substantial changes in the enforcement. Japan adopted enforcement reforms in 2005 but did not adopt IFRS. For the sake of brevity, we omit estimated coefficients of the control variables in the tables. All variables are defined as described in the Appendix 3-A. Robust standard errors are clustered at the country-level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

## 3.7 Additional Analyses and Robustness Checks

### 3.7.1 Impact of Shocks to the Accounting Information Environment on Managerial Risk Identification

We test how shocks to the accounting information environment influence the risk identification of managers. In line with the first channel through which accounting information can influence corporate risk-taking, we argue that improved accounting information could enable managers to better identify risks. To more closely test this channel, we assume that managers who identify more risks also disclose them in risk reports.

To test this presumption, we compare the number of disclosed financial risks categories in the annual reports before and after changes in the accounting information environment and relative to a control group of untreated firms. Following Dobler, Lajili, and Zéghal (2011), we examine disclosure for the following financial risk categories: credit, currency, interest rate, liquidity, and valuation uncertainties. Due to the large effort of hand-collecting the data, we restrict our analyses to one industry. In line with Dobler et al. (2011), we focus on the manufacturing industry, as this sector manages a large number of risks. We hand-collect annual reports of 35 randomly selected firms in this industry for each of the following countries: Canada, Germany, and the United Kingdom.[51] These countries are included in the sample for our main tests and represent large economies. They have large capital markets and highly advanced regulations on risk disclosure. Moreover, they did not change the disclosure

[51] We end up with 35 observations as the lowest common number of available reports within the manufacturing industry for all four countries.

requirements for financial risks in the risk reports in 2005, which could bias our results because this change would interfere with the adoption of IFRS.

We examine the impact of the *enforced* mandatory IFRS adoption in Germany and the UK in 2005 on firms' number of identified financial risks relative to those of firms in Canada that adopted IFRS later on. We hand-collect the number of disclosed financial risk categories for two years before and after the mandatory IFRS adoption in 2005. Our final sample for this analysis includes 410 observations.[52] We find that firms disclose on average 2.75 (median = 3.00) financial risk categories per year.

For our analysis, we estimate the following difference-in-differences regression:

$$FIN\_RISK = \beta_0 + \beta_1 TREAT + \beta_2 POST + \beta_3 TREAT*POST + CONTROLS + year\ fixed\ effects + country\ fixed\ effects + \varepsilon, \quad (5)$$

where all variables are described in the Appendix 3-A and control variables are in line with Equation (4). Our dependent variable is the number of financial risk categories identified in the annual report in line with Dobler et al. (2011). The difference-in-differences estimator *TREAT*POST* is the primary variable of interest.

Table 3-7 presents the results of this additional analysis. We find that the interaction of *TREAT*POST* is positive but statistically insignificant (3.579, *t*-stat = 1.159). This finding indicates that the mandatory IFRS adoption in 2005 is unlikely to increase the number of disclosed risk categories. Thus, we are not able to provide evidence that this accounting

[52] The mean logarithm of firms' total assets (*SIZE*) is 12.52, which is representative for our samples used in Table 3-2.

information event enhances the internal identification of risks by managers.[53] These findings suggest that the effect of changes in the accounting information environment on corporate risk-taking might be rather attributable to the second channel via an increased monitoring of investors.[54]

**Table 3-7: Impact of Shocks to the Accounting Information Environment on Managerial Risk Identification**

| **Variables** | ***RISK_FIN*** |
|---|---|
| *TREAT* | -1.985 |
| | (-1.248) |
| *POST* | -0.325 |
| | (-0.153) |
| ***TREAT*POST*** | **3.579** |
| | **(1.159)** |
| *SIZE* | 0.036 |
| | (0.559) |
| *EARNINGS* | -0.528 |
| | (-0.754) |
| *GROWTH* | -0.318 |
| | (-0.892) |
| *LEVERAGE* | 0.545 |
| | (0.937) |
| *ES* | -0.075 |
| | (-0.901) |
| *OWNERSHIP* | 0.030 |
| | (0.184) |
| *LAW* | 1.096 |
| | (0.726) |
| *POLCON* | -22.794 |
| | (-1.078) |
| *GDP* | -0.000 |
| | (-0.714) |
| *MARKET_CAP* | 0.002 |
| | (0.335) |
| Intercept | 13.101 |
| | (1.258) |
| Observations | 410 |
| Adjusted R-squared | 0.268 |
| Year FE | YES |
| Country FE | YES |

*(continued on next page)*

[53] We note that we can only cautiously interpret our results, as the mandatory adoption of IFRS in 2005 is the only event that is free from concurrent reforms to the risk disclosure of financial risk categories. Hence, our findings may not be adaptable to other information events.

[54] Extant literature shows that the mandatory adoption of IFRS (Chen, Young, and Zhuang 2013; Hong 2013; Shroff, Verdi, and Yu 2014) and the adoption of quarterly reporting (Ernstberger et al. 2017) lead to better monitoring by investors.

**Table 3-7 (continued)**

**Notes:** This table presents the estimated coefficients and *t*-statistics for our additional analysis on the number of identified financial risk categories in the annual statement. The dependent variable is *RISK_FIN* and is the number of financial risk categories collected from the annual reports. With respect to the time-invariant character of *RISK_EXP* and *ANTIDIR*, we had to exclude the variables due to collinearity issues. All variables are defined as described in the Appendix 3-A. Robust standard errors are clustered at the firm level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

### 3.7.2 Changes in Corporate Risk-Taking and Total Shareholder Return

We examine whether the decline in corporate risk-taking after the changes in the accounting information environment are associated with an increase in shareholders' returns. We study this influence of accounting information environment-induced changes in corporate risk-taking on shareholder returns because it captures the capital-market consequences of the effects documented in our main analyses (Sanders and Hambrick 2007). We assume that this decrease in corporate risk-taking can lead to a lower cost of capital and thus to a higher shareholder return.

To test the impact on shareholder returns, we apply change specifications for our three events that change the accounting information environment. We document changes in Total Shareholder Return (TSR) between the pre-event year and the first post-event year. We separately estimate the following change regression for treated firms for each accounting information event, i.e. the mandatory adoption of IFRS, the adoption of enforcement reforms, and the adoption of quarterly reporting:

$$\begin{aligned} TSR\_INDEX = {} & \beta_0 + \beta_1 \Delta RISK\_TAKING + \beta_2 \Delta SIZE + \beta_3 \Delta EARNINGS \\ & + \beta_4 \Delta LEVERAGE + \beta_5 \Delta GROWTH + \beta_6 \Delta ES + country\ fixed\ effects \\ & + industry\ fixed\ effects + \varepsilon, \end{aligned} \tag{6}$$

where *TSR_INDEX* is defined as the difference between TSR in the pre-event year and TSR in the post-event year, divided by the total TSR in the post-event year.[55] Our variable of interest *ΔRISK_TAKING* is defined as either a change in *RISK_TAKING1* or *RISK_TAKING2*. Our control variables are changes in firm size (*SIZE*), in earnings (*EARNINGS*), in growth (*GROWTH*), and earnings smoothing (*ES*).

Table 3-8 presents the results. Columns 1 and 2 show the results for the TSR effects of a change in corporate risk-taking due to the mandatory adoption of IFRS. We find that *ΔRISK_TAKING1* and *ΔRISK_TAKING2* are statistically significant and negative (-0.081, *t*-stat = -6.139; -0.057, *t*-stat = -6.319). Columns 3 and 4 present the results for enforcement reforms. We find that *ΔRISK_TAKING1* and *ΔRISK_TAKING2* are statistically significant and negative (-0.015, *t*-stat = -2.687; -0.010, *t*-stat = -2.611). In Columns 5 and 6 we document the results for adopting quarterly reporting. We do not find statistically significant coefficients for *ΔRISK_TAKING1* and *ΔRISK_TAKING2* (0.005, *t*-stat = 0.204; -0.004, *t*-stat = -0.188). Our findings indicate a negative association between changes in corporate risk-taking and changes in TSR for the mandatory IFRS adoption as well as for substantial changes in the enforcement of accounting standards. This means that the decreases in corporate risk-taking after the accounting information events appear to increase total shareholder returns and are, hence, beneficial to shareholders.

[55] TSR considers that returns to shareholder can be divided into dividends and capital gains through changes in share prices. TSR is defined as: $TSR = \frac{D_{i,t}+(P_{i,t}-P_{i,t-1})}{P_{i,t-1}}$, where, *i* denotes the firm and *t* the year. D is defined as dividends paid and P is the share price (see, e.g., Bacidore, Boquist, Milbourn, and Thakor 1997, p. 14).

**Table 3-8: Changes in Total Shareholder Return due to changes in the Accounting Information Environment and Corporate Risk-Taking**

| | Mandatory Adoption of IFRS | | Adoption of Enforcement Reforms | | Adoption of Quarterly Reporting | |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| **Variables** | ***TSR_INDEX*** | ***TSR_INDEX*** | ***TSR_INDEX*** | ***TSR_INDEX*** | ***TSR_INDEX*** | ***TSR_INDEX*** |
| ***ΔRISK_TAKING1*** | **-0.081 ***** | | **-0.015 ***** | | **0.005** | |
| | **(-6.139)** | | **(-2.687)** | | **(0.204)** | |
| ***ΔRISK_TAKING2*** | | **-0.057 ***** | | **-0.010 ***** | | **-0.004** |
| | | **(-6.319)** | | **(-2.611)** | | **(-0.188)** |
| *ΔSIZE* | 0.440 *** | 0.440 *** | 0.204 *** | 0.205 *** | 0.621 *** | 0.621 *** |
| | (10.708) | (10.716) | (8.046) | (8.076) | (10.625) | (10.548) |
| *ΔEARNINGS* | 0.549 *** | 0.561 *** | 0.442 *** | 0.444 *** | 0.257 | 0.256 |
| | (4.045) | (4.163) | (4.584) | (4.601) | (1.346) | (1.342) |
| *ΔLEVERAGE* | -0.464 *** | -0.471 *** | -0.251 *** | -0.251 *** | -0.480 ** | -0.480 ** |
| | (-3.329) | (-3.378) | (-3.157) | (-3.159) | (-2.368) | (-2.369) |
| *ΔGROWTH* | 0.222 *** | 0.222 *** | 0.147 *** | 0.145 *** | 0.180 *** | 0.179 *** |
| | (3.099) | (3.098) | (3.893) | (3.845) | (2.927) | (2.929) |
| *ΔES* | -0.004 | -0.003 | -0.006 | -0.006 | -0.003 | -0.003 |
| | (-0.320) | (-0.269) | (-1.010) | (-1.006) | (-0.277) | (-0.254) |
| Intercept | 0.404 *** | 0.674 *** | -0.483 ** | -0.483 ** | 2.282 *** | 2.283 *** |
| | (3.167) | (4.337) | (-2.334) | (-2.330) | (3.233) | (3.233) |
| Observations | 2,860 | 2,860 | 5,848 | 5,848 | 3,164 | 3,164 |
| Adjusted R-squared | 0.148 | 0.150 | 0.131 | 0.131 | 0.236 | 0.236 |
| Country FE | YES | YES | YES | YES | YES | YES |
| Industry FE | YES | YES | YES | YES | YES | YES |

**Notes:** This table presents the estimated coefficients and *t*-statistics for our additional analysis on changes in the level of corporate risk-taking and changes in total shareholder return. In Columns 1 and 2, we test the effects of the mandatory adoption of IFRS, in Columns 3 and 4, of the adoption of enforcement reforms, and in Columns 5 and 6, of the adoption of quarterly reporting. All variables are defined as described in the Appendix 3-A. Robust standard errors are clustered at the firm level. Statistical significance based on two-tailed tests at the 1 percent, 5 percent, and 10 percent level is denoted by ***, **, *, respectively.

### 3.7.3 Alternative Measures

In our main analysis, we calculate the dependent variables *RISK_TAKING1* and *RISK_TAKING2* based on a retrospective rolling period of three years (i.e. t; t-1; t-2). This definition requires us to not start the post-event sample until two years after the event year in order to ensure that all observations for calculating the dependent variables are determined under the new regime of accounting standards, enforcement or reporting frequency. We conduct the following sensitivity analyses: (1) we calculate our dependent variables based on a prospective rolling period of three years (i.e. t; t+1; t+2), which requires us to end our pre-event

sample two years prior to the event year in order to ensure that all observations for calculating the dependent variables are determined under the old regime. (2) We calculate our dependent variables based on a centralized rolling period of three years (i.e. t-1; t; t+1), which requires us to end our pre-event sample one year before the event and not to start our after-event sample until one year after the event year. (3) We calculate our dependent variables separately for the pre as well as for the post period of an event and use all available observations. Thus, we collapse the sample to one observation before and one observation after the event. For all additional definitions of *RISK_TAKING1* and *RISK_TAKING2*, we find results comparable to our original calculation of our dependent variables.

We also calculate an alternative variable for corporate risk-taking in line with Wright et al. (2007). We define *RISK_TSR* as the country, mean-adjusted yearly volatility of the monthly total return to shareholders. Our results remain unaltered using *RISK_TSR* as the dependent variable. Moreover, we calculate *RISK_TAKING1* and *RISK_TAKING2* using the return on assets (*ROA*) instead of EBITDA in line with Wright et al. (2007). Our results remain stable when conducting our analyses based on this alternative definition. In line with Biddle et al. (2015), we use the capital expenditure scaled by total assets (*CAPEX*) at the beginning of the total year as an additional measure for corporate risk-taking. When firms have a high level of *CAPEX*, they are reported to be unable to quickly react to changes in the firm's environment, as a large proportion of capital is fixed (Coles et al. 2006). Hence, a low level of *CAPEX* is seen as a low level of corporate risk-taking. Using *CAPEX* as the dependent variable, our results remain unaltered.

### 3.7.4 Impact of Changes in the Accounting Standards on our Results

One could argue that our results for the (enforced) IFRS adoption are biased because the volatility of EBITDA is calculated under different accounting standards. However, we provide

the following arguments against this objection. First, we would expect an increase in the volatility of EBITDA as an automatic effect due to IFRS adoption, as this accounting regime requires fair-value accounting for more items, which increases earnings volatility (see, e.g., Ball 2006). In contrast, we find a decline in corporate risk-taking. Second, we control for changes in income-smoothing that might occur as a result of applying different accounting regimes. Third, we use alternative shocks to the accounting information environment which do not involve changes in accounting standards and also alternative dependent variables and find corroborating results.

### 3.7.5 Other Sensitivity Analyses

We conduct several additional sensitivity analyses (untabulated) to substantiate our inferences. First, we run "placebo regressions" to ensure that the difference-in-differences approach conducted in previous analyses correctly identifies changes in the accounting information environment. First, we randomly assign firm-year observations to the treatment group that (1) mandatorily adopt IFRS, (2) adopt enforcement reforms, or (3) adopt quarterly reporting, and we conduct our analyses by 1,000 bootstrapping replications. In untabulated results, we find that the interaction *TREAT*POST* is statistically insignificant. This result is in line with our expectation, as we use a randomly composed sample of firms that are either treated by the respective accounting information event or not. Hence, our treatment group includes firms of the control group and vice versa. Moreover, we use randomly assigned adoption years instead of the correct adoption years for both of our treatment groups. Similarly, we conduct our analyses with 1,000 bootstrapping replications of these random dates. In untabulated results, we find that, in line with our expectations, the interaction *TREAT*POST* is statistically insignificant. Overall, these results assure us that the results documented in our regressions are very unlikely to be driven by our research design.

Second, we additionally conduct our analyses to test whether our results hold true, requiring a balanced sample for the pre- and post-period, as changes in the composition of the treatment and control group could influence our results. The (untabulated) results show that the results of our main regressions hold.

Third, we additionally include voluntary adopters of IFRS before 2005 in the treatment group. These voluntary adopters are excluded in our main analyses to mitigate the undue impact of a self-selection bias. The results (untabulated) remain unaltered if we include voluntary adopters in the treatment group.

## 3.8 Conclusion

We examine whether changes in accounting information affect corporate risk-taking. Specifically, we focus on the mandatory adoption of IFRS, the adoption of enforcement reforms and the adoption of quarterly reporting. These changes represent exogenous shocks to firms' accounting information environment and allow managers to identify risks better and investors to better monitor managerial risk-taking.

In our empirical tests, we find that the changes in the accounting information environment are associated with a decline in risk-taking. This effect is present for all firms subject to enforcement reforms. For firms that adopt IFRS or quarterly reporting, it is conditional upon whether these reforms are strongly enforced. These findings provide evidence that a strong enforcement of accounting standards moderates the effects of a change in corporate risk-taking. We further examine the mandatory IFRS adoption because the capital-market effects of this adoption are reported to be restricted to countries that concurrently adopt substantial changes in the enforcement of accounting standards. In line with these studies, we also only find a

significant decline in corporate risk-taking for an *enforced* adoption of IFRS. In further tests, we provide evidence that the effects are rather due to an increased monitoring of investors than to an improved identification of risks by managers. Moreover, we find that adjustments to a lower level of risk-taking, due to the changes in the accounting environment, seem to be associated with increases in total shareholder return.

We note that our study is subject to caveats. Using a difference-in-differences approach relies on the assumption that the information events can properly identify changes in the accounting information environment of accounting standards. We orchestrate the mandatory adoption of IFRS, the adoption of enforcement reforms, and the adoption of quarterly reporting as exogenous shocks to the accounting information environment, however, knowing that all three events are adopted in different manners across countries. Furthermore, our study focuses on three accounting information events (mandatory adoption of IFRS, changes in enforcement of accounting standards, and adoption of quarterly reporting) that lead to a reduction in information asymmetry. There are also other potential channels, such as an increase in financial analyst coverage or forecast accuracy that could arguably influence corporate risk-taking. However, our additional analyses increase our confidence that changes in accounting information can affect corporate risk-taking.

## 3.9 References

Bacidore, J. M., J. A. Boquist, T. T. Milbourn, and A. V. Thakor. 1997. The search for the best financial performance measure. *Financial Analysts Journal* 53 (3): 11-20.

Ball, R. 2006. International Financial Reporting Standards (IFRS): Pros and cons for investors. *Accounting and Business Research* 36 (Supplement): 5-27.

Bargeron, L. L., K. M. Lehn, and C. J. Zutter. 2010. Sarbanes-Oxley and corporate risk-taking. *Journal of Accounting and Economics* 49 (1-2): 34-52.

Barry, C. B., and S. J. Brown. 1985. Differential information and security market equilibrium. *The Journal of Financial and Quantitative Analysis* 20 (4): 407-422.

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

Beatty, R. P., and E. J. Zajac. 1994. Managerial incentives, monitoring, and risk bearing: A study of executive compensation, ownership, and board structure in initial public offerings. *Administrative Science Quarterly* 39 (2): 313-335.

Bhushan, R. 1989. Collection of information about publicly traded firms. *Journal of Accounting and Economics* 11 (2-3): 183-206.

Biddle, G. C., and G. Hilary. 2006. Accounting quality and firm-level capital investment. *The Accounting Review* 81 (5): 963-982.

Boubakri, N., J.-C. Cosset, and W. Saffar. 2013. The role of state and foreign owners in corporate risk-taking: Evidence from privatization. *Journal of Financial Economics* 108 (3): 641-658.

Brochet, F., A. D. Jagolinzer, and E. J. Riedl. 2013. Mandatory IFRS adoption and financial statement comparability. *Contemporary Accounting Research* 30 (4): 1373-1400.

Bromiley, P. 1991. Testing a causal model of corporate risk taking and performance. *Academy of Management Journal* 34 (1): 37-59.

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

Brüggemann, U., J.-M. Hitz, and T. Sellhorn. 2013. Intended and unintended consequences of mandatory IFRS adoption: A review of extant evidence and suggestions for future research. *European Accounting Review* 22 (1): 1-37.

Burgstahler, D. C., L. Hail, and C. Leuz. 2006. The importance of reporting incentives. Earnings management in European private and public firms. *The Accounting Review* 81 (5): 983-1016.

Bushman, R. M., and A. J. Smith. 2001. Financial accounting information and corporate governance. *Journal of Accounting and Economics* 32 (1-3): 237-333.

Butler, M., A. Kraft, and I. S. Weiss. 2007. The effect of reporting frequency on the timeliness of earnings. The cases of voluntary and mandatory interim reports. *Journal of Accounting and Economics* 43 (2-3): 181-217.

Byard, D., Y. Li, and Y. Yu. 2011. The effect of mandatory IFRS adoption on financial analysts' information environment. *Journal of Accounting Research* 49 (1): 69-96.

Cairns, D. 2006. The use of fair value in IFRS. *Accounting in Europe* 3 (1): 5-22.

Chan, C.-C., B.-H. Lin, Y.-H. Chang, and W.-C. Liao. 2013. Does bank relationship matter for corporate risk-taking? Evidence from listed firms in Taiwan. *The North American Journal of Economics and Finance* 26 (December): 323-338.

Chen, C., D. Young, and Z. Zhuang. 2013. Externalities of mandatory IFRS adoption. Evidence from cross-border spillover effects of financial information on investment efficiency. *The Accounting Review* 88 (3): 881-914.

Christensen, H. B., L. Hail, and C. Leuz. 2013. Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics* 56 (2-3): 147-177.

Christensen, H. B., L. Hail, and C. Leuz. 2016. Capital-market effects of securities regulation: Hysteresis, implementation, and enforcement. *Review of Financial Studies* 29 (11): 2885-2914.

Cohen, D. A., A. Dey, and T. Z. Lys. 2008. Real and accrual-based earnings management in the pre- and post-Sarbanes-Oxley periods. *The Accounting Review* 83 (3): 757-787.

Cohen, D. A., and P. Zarowin. 2010. Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics* 50 (1): 2-19.

Coles, J., N. Daniel, and L. Naveen. 2006. Managerial incentives and risk-taking. *Journal of Financial Economics* 79 (2): 431-468.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research* 46 (5): 1085-1142.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2013. Adopting a label: Heterogeneity in the economic consequences around IAS/IFRS adoptions. *Journal of Accounting Research* 51 (3): 495-547.

Djankov, S., R. La Porta, F. Lopez-de-Silanes, and A. Shleifer. 2008. The law and economics of self-dealing. *Journal of Financial Economics* 88 (3): 430-465.

Dobler, M., K. Lajili, and D. Zéghal. 2011. Attributes of corporate risk disclosure. An international investigation in the manufacturing sector. *Journal of International Accounting Research* 10 (2): 1-22.

Dou, Y., O.-K. Hope, W. B. Thomas, and Y. Zou. 2016. Individual large shareholders, earnings management, and capital-market consequences. *Journal of Business Finance & Accounting* 43 (7-8): 872-902.

Eisenhardt, K. M. 1989. Agency Theory: An assessment and review. *Academy of Management Review* 14 (1): 57-74.

Ernstberger, J., B. Link, M. Stich, and O. Vogler. 2017. The real effects of mandatory quarterly reporting. *The Accounting Review* (forthcoming).

Ewert, R., and A. Wagenhofer. 2006. Management accounting theory and practice in German-speaking countries. In: Bd. 2: Elsevier (Handbooks of Management Accounting Research): 1035-1069.

Faccio, M., M.-T. Marchica, and R. Mura. 2011. Large shareholder diversification and corporate risk-taking. *Review of Financial Studies* 24 (11): 3601-3641.

Fama, E. F., and K. R. French. 2008. Industry classification. Available at: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html (last accessed April 4, 2017).

Florou, A., and U. Kosi. 2015. Does mandatory IFRS adoption facilitate debt financing? *Review of Accounting Studies* 20 (4): 1407-1456.

Frankel, R., and X. Li. 2004. Characteristics of a firm's information environment and the information asymmetry between insiders and outsiders. *Journal of Accounting and Economics* 37 (2): 229-259.

Fu, R., A. Kraft, and H. Zhang. 2012. Financial reporting frequency, information asymmetry, and the cost of equity. *Journal of Accounting and Economics* 54 (2-3): 132-149.

Gigler, F., C. Kanodia, H. Sapra, and R. Venugopalan. 2014. How frequent financial reporting can cause managerial short-termism: An analysis of the costs and benefits of increasing reporting frequency. *Journal of Accounting Research* 52 (2): 357-387.

Hail, L., and C. Leuz. 2006. International differences in the cost of equity capital. Do legal institutions and securities regulation matter? *Journal of Accounting Research* 44 (3): 485-531.

Hail, L., A. Tahoun, and C. Wang. 2014. Dividend payouts and information shocks. *Journal of Accounting Research* 52 (2): 403-456.

Healy, P. M., and K. G. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31 (1-3): 405-440.

Henisz, W. J. 2000. The Institutional Environment for economic growth. *Economics and Politics* 12 (1): 1-31.

Hong, H. A. 2013. Does mandatory adoption of International Financial Reporting Standards decrease the voting premium for dual-class shares? *The Accounting Review* 88 (4): 1289-1325.

Hope, O.-K. 2003. Disclosure practices, enforcement of accounting standards, and analysts' forecast accuracy: An international study. *Journal of Accounting Research* 41 (2): 235-272.

Hope, O.-K., W. Thomas, and A. Kolk. 2011. Financial credibility, ownership, and financing constraints in private firms. *Journal of International Business Studies* 42 (7): 935-957.

Hope, O.-K., and W. B. Thomas. 2008. Managerial empire building and firm disclosure. *Journal of Accounting Research* 46 (3): 591-626.

Horton, J., and G. Serafeim. 2010. Market reaction to and valuation of IFRS reconciliation adjustments: First evidence from the UK. *Review of Accounting Studies* 15 (4): 725-751.

Horton, J., G. Serafeim, and I. Serafeim. 2013. Does mandatory IFRS adoption improve the information environment? *Contemporary Accounting Research* 30 (1): 388-423.

IMA. 2007. Enterprise Risk Management: Tools and techniques for effective implementation. Available at: http://bit.ly/2oc00OF (last accessed April 4, 2017).

Jensen, M. C. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review* 76 (2): 323-329.

Jensen, M. C., and W. H. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3 (4): 305-360.

John, K., L. Litov, and B. Yeung. 2008. Corporate governance and risk-taking. *The Journal of Finance* 63 (4): 1679-1728.

Kanodia, C., and D. Lee. 1998. Investment and disclosure. The disciplinary role of periodic performance reports. *Journal of Accounting Research* 36 (1): 33-55.

Kaufmann, D., A. Kraay, and M. Mastruzzi. 2009. Governance matters VIII: governance indicators for 1996-2008.

La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 2006. What works in securities laws? *The Journal of Finance* 61 (1): 1-32.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. W. Vishny. 1998. Law and finance. *Journal of Political Economy* 106 (6): 1113-1155.

Laeven, L., and R. Levine. 2009. Bank governance, regulation and risk taking. *Journal of Financial Economics* 93 (2): 259-275.

Landsman, W. R., E. L. Maydew, and J. R. Thornock. 2012. The information content of annual earnings announcements and mandatory adoption of IFRS. *Journal of Accounting and Economics* 53 (1-2): 34-54.

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

Levine, R., and S. Zervos. 1996. Stock market development and long-run growth. *The World Bank Economic Review* 10 (2): 323-339.

Li, S. 2010. Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital? *The Accounting Review* 85 (2): 607-636.

Low, A. 2009. Managerial risk-taking behavior and equity-based compensation. *Journal of Financial Economics* 92 (3): 470-490.

McNichols, M. F., and S. R. Stubben. 2008. Does earnings management affect firms' investment decisions? *The Accounting Review* 83 (6): 1571-1603.

Nocco, B. W., and R. M. Stulz. 2006. Enterprise Risk Management: Theory and practice. *Journal of Applied Corporate Finance* 18 (4): 8-20.

Paligorova, T. 2010. Corporate risk taking and ownership structure. Working paper. Available at: http://bit.ly/2nkYHPQ (last accessed April 4, 2017).

Pope, P. F., and S. J. McLeay. 2011. The European IFRS experiment: Objectives, research challenges and some early evidence. *Accounting and Business Research* 41 (3): 233-266.

Preiato, J., P. Brown, and A. Tarca. 2014. A comparison of between-country measures of legal setting and enforcement of accounting standards. *Journal of Business Finance & Accounting* 42 (1-2): 1-50.

Rajgopal, S., and T. Shevlin. 2002. Empirical evidence on the relation between stock option compensation and risk taking. *Journal of Accounting and Economics* 33 (2): 145-171.

Sanders, W. G., and D. C. Hambrick. 2007. Swinging for the fences. The effects of CEO stock options on company risk taking and performance. *Academy of Management Journal* 50 (5): 1055-1078.

Sharpe, W. F. 1964. Capital asset prices: A theory of market equilibrium under conditions of risk. *The Journal of Finance* 19 (3): 425-442.

Shleifer, A., and R. W. Vishny. 1997. A survey of corporate governance. *The Journal of Finance* 52 (2): 737-783.

Shroff, N., R. S. Verdi, and G. Yu. 2014. Information environment and the investment decisions of multinational corporations. *The Accounting Review* 89 (2): 759-790.

Stulz, R. M. 2003. Risk Management Failures- What are they and when do they happen? *Cornerstone Research*: 1-16.

Tan, H., S. Wang, and M. Welker. 2011. Analyst following and forecast accuracy after mandated IFRS adoptions. *Journal of Accounting Research* 49 (5): 1307-1357.

Tufano, P. 1996. Who manages risk? An empirical examination of risk management practices in the gold mining industry. *The Journal of Finance* 51 (4): 1097-1137.

Turk, R. 2015. Financial decisions and investment outcomes in developing countries: The Role of Institutions. IMF Working paper. Available at: https://www.imf.org/external/pubs/ft/wp/2015/wp1538.pdf (last accessed April 4, 2017).

Verdi, R. 2006. Financial reporting quality and investment efficiency. Working paper. Available at: https://papers.ssrn.com/sol3/Delivery.cfm?abstractid=930922 (last accessed April 4, 2017).

Wright, P., M. Kroll, J. A. Krug, and M. Pettus. 2007. Influences of top management team incentives on firm risk taking. *Strategic Management Journal* 28 (1): 81-89.

Yip, R. W., and D. Young. 2012. Does mandatory IFRS adoption improve information comparability? *The Accounting Review* 87 (5): 1767-1789.

## Appendix 3-A: Variable Definitions

| Variables | Descriptions | Source |
|---|---|---|
| ***Dependent Variables*** | | |
| *RISK_TAKING1* | Measure for corporate risk-taking provided by John et al. (2008). Construction of this measure is provided in Section 3. | Worldscope/ Datastream |
| *RISK_TAKING2* | Measure for corporate risk-taking provided by John et al. (2008). Construction of this measure is provided in Section 3. | Worldscope/ Datastream |
| *TSR_INDEX* | $TSR\_INDEX = \frac{TSR_{i,post} - TSR_{i,pre}}{TSR_{i,pre}}$, where $TSR = \frac{D_{i,t} + (P_{i,t} - P_{i,t-1})}{P_{i,t-1}}$, *i* denotes the firm, *pre* the pre-event year, *post* the post-event year, and *t* the year. | Worldscope/ Datastream |
| *FIN_RISK* | Number of financial risk categories identified in firms' annual reports. In line with Dobler et al. (2011), we classify financial risks as credit, currency, interest rate, liquidity, valuation uncertainties identified in the annual reports. | Annual Reports (hand-collected) |
| ***Variables of Interest*** | | |
| $POST_{IFRS/ENF/QR}$ | Indicator variables that equal to 1 for the years subsequent to the respective accounting information event, i.e. the mandatory adoption of IFRS, the adoption of enforcement reforms or the adoption of quarterly reporting; 0 otherwise. | |
| $TREAT_{IFRS/ENF/QR}$ | Indicator variable that is equal to 1 if the firm is subject to an accounting information event. This can be either the mandatory adoption of IFRS, the adoption of enforcement reforms or the adoption of quarterly reporting; 0 otherwise. | |
| $TREAT_{IFRS/ENF/QR} * POST_{IFRS/ENF/QR}$ | Interaction of *TREAT* and *POST* for each respective accounting information event. | |

*(continued on next page)*

| Variables | Descriptions | Source |
|---|---|---|
| ***Independent Variables*** | | |
| *ANTIDIR* | An index aggregating the shareholder rights we label as "antidirector company law or commercial rights." The index is formed by adding 1 when (1) the country allows civil code shareholders to mail their proxy vote to the firm, (2) shareholders are not required to deposit their shares prior to the general shareholders' meeting, (3) cumulative voting or proportional representation of minorities on the board of directors is allowed, (4) an oppressed minorities mechanism is in place, (5) the minimum percentage of share capital that entitles a shareholder to call for an extraordinary shareholders' meeting is less than or equal to 10 percent (the sample median), or (6) shareholders have preemptive rights that can be waived only by shareholders' vote. The index ranges from zero to six (LaPorta et al. 1998). | LaPorta et al. (1998) |
| *EARNINGS* | Ratio of EBITDA to total assets. | Worldscope/ Datastream |
| *ES* | Earnings smoothing measure based on Leuz, Nanda, and Wysocki (2003). We compute ES as the firm-level standard deviation of the operating income scaled by lagged total assets and the operation cash flow scaled by lagged total assets. To facilitate the interpretation, we modify *ES* by calculating *ES*=1-*ES*. Hence, higher values indicate a higher level of earnings smoothing. | Worldscope/ Datastream |
| *GDP* | Gross domestic product per capital in U.S. dollars. | World Bank |
| *GROWTH* | Total assets divided by one-period lagged total assets. | Worldscope/ Datastream |
| *LAW* | Indicator variable that is equal to 1 if the country has a civil law system; 0 otherwise. | LaPorta et al. (1998) |

*(continued on next page)*

| Variables | Descriptions | Source |
|---|---|---|
| ***Independent Variables*** | | |
| *LEVERAGE* | Ratio of debt to total assets. | Worldscope/ Datastream |
| *MARKET_CAP* | Stock market capitalization as a share of GDP. | World Bank |
| *OWNERSHIP* | Indicator that is equal to 1 if the largest shareholder holds more than 20%; 0 otherwise. | Bureau van Dijk Osiris |
| *POLCON* | Index of political constraints that ranges from zero to one, whereby 0 indicates being a dictatorship and one being a democracy. As data are not available for the years 2013 and 2014, we use the data from 2012 for these years. | Henisz (2000) |
| *RISK_EXP* | Index for the risk of expropriation that ranges from zero to ten, whereby lower scores indicate higher risks. | LaPorta et al. (1998) |
| *SIZE* | The natural logarithm of total assets measured in million U.S. dollars. | Worldscope/ Datastream |

# 4 Lobbyismus im IASB-Standardsetzungsverfahren - Eine empirische Analyse der Diversität in Stellungnahmen (Comment Letters)

**Abstract**

During the standard-setting process, the Internationals Accounting Standard Board (IASB) aims at developing International Financial Reporting Standards (IFRS) that adequately incorporate different opinions and interests of various stakeholders in order to develop accounting standards, which are broadly accepted, less likely to be subject to criticism, consistently applicable, and compliant. We asses over 11,000 comment letters, which are submitted to the IASB in the period 2009-2015. This enables us to analyze which stakeholder and countries primarily participate in the standard-setting process. We show that preparers send the most comment letters to the IASB. Within the stakeholder groups, we find high concentrations as only very few organizations regularly comment on new standards. Looking into the geographic distribution, we find that 47 percent of all submissions are sent from only five countries. Based on our findings it might be questionable whether the IASB reaches its aim to develop standards, which are accepted and legitimized by the participation of as many organizations of diverse stakeholder groups as possible.

**Keywords:** IASB standard-setting process, IFRS, lobbyism

**JEL Classification Code:** M40, D72

**Co-author:** Veronika Bouley

**Current status:** Published in *Zeitschrift für internationale und kapitalmarktorientierte Rechnungslegung* 16 (07-08): 341-451.

## 4.1 Einleitung[56]

Das IASB ist ein supranationaler, privatrechtlicher Standardsetzer für Rechnungslegungsstandards, der sich die Entwicklung und Veröffentlichung von weltweit anerkannten Rechnungslegungsstandards zur Aufgabe gemacht hat.[57] Die Ziele des IASB konzentrieren sich insbesondere darauf, Rechnungslegungsstandards von hoher Qualität zu entwickeln sowie eine weltweite Konvergenz unterschiedlicher Rechnungslegungssysteme zu erreichen.[58] Um die gewünschte Akzeptanz und Legitimität der Standards sicherzustellen, basieren die IFRS auf einem formellen, transparenten und öffentlichen Standardsetzungsverfahren. Hierbei erhofft sich das IASB eine rege Teilnahme in Form von bspw. öffentlichen Anhörungen oder Stellungnahmen (comment letters) von möglichst unterschiedlichen Interessengruppen, wie Bilanzersteller, Bilanznutzer, Wirtschaftsprüfer oder Akademiker, und Herkunftsländern.[59] Dadurch soll sichergestellt werden, dass sowohl die Bedürfnisse und Erwartungen unterschiedlicher Interessengruppen als auch die Rahmenbedingungen verschiedener Länder in gleichem Maße Berücksichtigung finden. Darüber hinaus kann so der Vorwurf eines übermäßigen Einflusses einzelner Interessengruppen und Länder entkräftet werden.[60]

---

[56] Der Artikel basiert in Teilen (Datensammlung, erste Auswertungen, erste Verschriftlichungen) auf der Masterarbeit der Ko-Autorin Veronika Bouley, welche im Oktober 2015 an der Technischen Universität München eingereicht worden ist (Bouley 2015). Nähere Details können dem Appendix dieser Dissertation entnommen werden. Im Vergleich zur veröffentlichten Version des Artikels (Z*eitschrift für internationale und kapitalmarktorientierte Rechnungslegung* 16 (07-08): 341-451) wurden im Text verwendete Abkürzungen weitestgehend entfernt und ausgeschrieben. Des Weiteren wurde die englischen Begriffe Figure für Abbildung und Table für Tabelle verwendet, um eine einheitliche Wortwahl im Abbildungs- und Tabellenverzeichnis der Dissertation zu erreichen.

[57] Vgl. Durocher und Fortin (2011), S. 29; Kosi und Reither (2014), S. 89.

[58] Vgl. Pellens, Füllbier, Gassen und Sellhorn (2014), S. 46-47; Kosi und Reither (2014), S. 89; IFRS Foundation (2013a), S. 5, abrufbar unter: http://hbfm.link/627 (letzter Abruf: 03.03.2017).

[59] Vgl. Kosi und Reither (2014), S. 89; Orens, Jorissen, Lybaert und Van Der Tas (2011), S. 212-214.

[60] Vgl. Larson und Herz (2013), S. 99.

Ziel dieses Beitrags ist es zu untersuchen, ob die vom IASB gewünschte Diversität der am Standardsetzungsprozess Teilnehmenden tatsächlich festzustellen ist. Dabei wird sich ausschließlich auf den direkten, formellen Lobbyismus[61] in Form von Stellungnahmen, die Interessierte an das IASB übermitteln können, konzentriert. Die Stellungnahmen beziehen sich immer auf vom IASB veröffentlichte Dokumente wie bspw. Standardentwürfe oder Diskussionspapiere, die eine Aufforderung zur Kommentierung enthalten.[62] Um eine Aussage über die Zusammensetzung der am Kommentierungsprozess Teilnehmenden hinsichtlich der Zugehörigkeit zu einer Interessengruppe sowie deren Herkunftsländer geben zu können, werden insgesamt 11.094 Stellungnahmen zu Dokumenten, die im Zeitraum 2009-2015 im Rahmen des IFRS-Standardsetzungsverfahrens vom IASB zur Kommentierung veröffentlicht wurden, analysiert.

Der Beitrag ist folgendermaßen aufgebaut: In Abschnitt 4.2 wird ein Überblick über die Entstehung sowie die Ziele des IASB gegeben und kurz der Ablauf des IFRS-Standardsetzungsverfahrens skizziert. In Abschnitt 4.3 erfolgt eine Einordnung dieser Studie in den aktuellen Forschungsstand. In Abschnitt 4.4 werden das Vorgehen bei der Erhebung sowie Aufbereitung der Daten beschrieben und die für die empirische Analyse verwendete Stichprobe dargestellt. Abschnitt 4.5 enthält die Ergebnisse der Untersuchung der am Kommentierungsprozess beteiligten Interessengruppen. Nach einem Zwischenfazit in Abschnitt 4.6 werden in Abschnitt 4.7 die Ergebnisse zur geografischen Herkunft der Stellungnehmenden gezeigt. In Abschnitt 4.8 erfolgt eine abschließende Zusammenfassung der Erkenntnisse.

[61] Der Begriff Lobbyismus wird in diesem Beitrag wertneutral verwendet und bezeichnet allgemein die Teilnahme am Standardsetzungsverfahren des IASB.

[62] Vgl. Georgiou (2010), S. 106; Orens et al. (2011), S. 215; Jorissen, Lybaert, Orens und van der Tas (2012), S. 695.

## 4.2 Institutioneller Hintergrund und IFRS Standardsetzung des IASB

Das im Jahr 2001 gegründete IASB findet seinen Ursprung im International Accounting Standards Committee (IASC). Das IASC selbst entstand im Jahr 1973 durch einen freiwilligen Zusammenschluss der Berufsverbände der Wirtschaftsprüfer aus Australien, Deutschland, Frankreich, Irland, Japan, Kanada, Mexiko, den Niederlanden, den USA und dem Vereinigten Königreich.[63] Von Beginn an verfolgte das IASC die Zielsetzung, internationale Rechnungslegungsstandards zu entwickeln und die Konvergenz zwischen den weltweit unterschiedlichen Rechnungslegungssystemen zu erhöhen.[64] Die gewünschte Anerkennung der vom IASC erlassenen International Accounting Standards (IAS) sowie der stetige Dialog mit wichtigen Parteien, wie z. B. Regulierungsbehörden, Unternehmen und anderen Standardsetzern, konnten jedoch nicht erreicht werden. Zudem machten steigende Anforderungen durch die zunehmende Verbreitung der IAS eine Professionalisierung des IASC erforderlich. Aus diesen Gründen unterzog sich das IASC im Jahr 2001 einer Strukturreform, bei der die IASC Foundation (ab 2010 IFRS Foundation genannt) und das nun unabhängige, für die Entwicklung der IFRS verantwortliche, IASB, entstanden sind.[65] Dadurch sollte es gelingen, die IFRS von zunächst best practice-Standards zu international anerkannten Standards weiterzuentwickeln.[66]

Die Satzung der IFRS Foundation definiert folgende Ziele für die Entwicklung der internationalen Rechnungslegung:

[63] Vgl. Horn (2011), S. 41.

[64] Vgl. Pellens et al. (2014), S. 46.

[65] Vgl. Bieg, Hossfeld, Kußmaul und Waschbusch (2009), S. 32; Kurz (2009), S. 72-73.

[66] Vgl. Horn (2011), S. 38.

a) Im Interesse der Öffentlichkeit sollen weltweit akzeptierte Rechnungslegungsstandards entwickelt werden, die einheitlich, von hoher Qualität, verständlich und durchsetzbar sind. Diese Standards sollen dazu führen, dass Informationen in Jahresabschlüssen von technisch hoher Qualität, transparent und vergleichbar werden, sodass sie Investoren, weiteren Teilnehmern an Kapitalmärkten weltweit und anderen Nutzern der Informationen helfen, ökonomische Entscheidungen treffen zu können.

b) Die Nutzung und strenge Anwendung der Standards sollen gefördert werden.

c) Bei der Erfüllung der in a) und b) genannten Ziele sollen die Bedürfnisse von Unternehmen verschiedener Art, Größe und wirtschaftlichem Umfeld angemessen berücksichtigt werden.

d) Die Anwendung der IFRS soll durch Annäherung der nationalen Rechnungslegungsstandards und der IFRS gefördert und erleichtert werden.[67]

Die Satzung verdeutlicht insb. in Punkt c), dass diese Ziele nur erreicht werden können, wenn die weltweit unterschiedlichen Interessengruppen kontinuierlich am Standardsetzungsverfahren beteiligt werden. Im Rahmen dieses Beitrags wird sich in Anlehnung an vorangegangene Studien darauf beschränkt, die am Kommentierungsprozess Teilnehmenden hinsichtlich ihrer Zugehörigkeit zu einer Interessensgruppe und ihrer Herkunft zu untersuchen. Eine Klassifizierung der Kommentierenden bezüglich Unternehmensgröße und Industriezweig wird nicht vorgenommen. Zudem werden die wirtschaftlichen Merkmale der Länder, aus denen die Stellungnahmen eingereicht wurden, nicht näher untersucht. Zukünftige Forschungsarbeiten könnten jedoch darauf aufbauen und dies in ihre Analyse miteinbeziehen, um ein detailliertes Bild über die kommentierenden Organisationen sowie um einen möglichen

[67] IFRS Foundation (2013a), S. 5, abrufbar unter: http://hbfm.link/627 (letzter Abruf: 04. April 2017).

Zusammenhang zwischen Ländern mit einer hohen Kommentierungsbereitschaft und bspw. deren Wirtschaftskraft zu erhalten.[68]

Um Rechnungslegungsstandards von hoher Qualität und internationaler Akzeptanz zu entwickeln, hat das IASB ein formelles Verfahren eingerichtet, das es allen Interessengruppen weltweit ermöglicht, während des Erstellungsprozesses (due process) ihren Standpunkt zu geplanten Standards darzulegen und dadurch am Standardsetzungsverfahren teilzunehmen.[69] Auf diese Weise sollen folgende drei Anforderungen an das Standardsetzungsverfahren erfüllt werden: (1) Transparenz, d.h. das IASB soll den Standardsetzungsprozess klar und nachvollziehbar durchführen, (2) umfassende und faire Anhörung, d.h. alle Perspektiven der weltweit von IFRS Betroffenen sollen vor und während des Erstellungsprozesses berücksichtigt werden und (3) Rechenschaftspflicht, d.h. das IASB soll alle denkbaren Auswirkungen seiner Vorschläge auf davon betroffene Parteien analysieren und die Gründe für seine Entscheidungen nachvollziehbar erklären können.[70] Vereinfacht wird der IFRS Standardsetzungsprozess in Figure 4-1 dargestellt.[71]

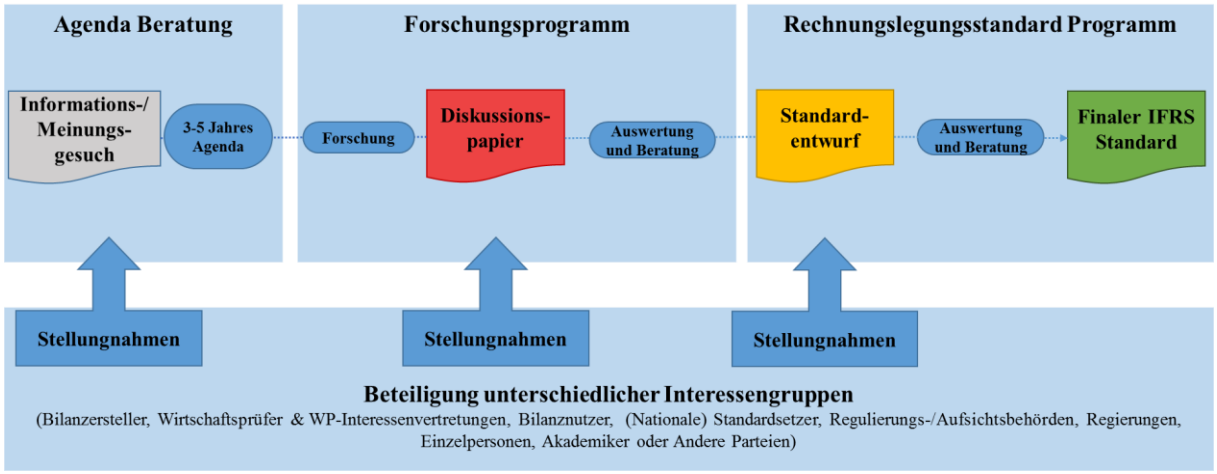
[68] In einer Analyse (nicht tabelliert) wurde der Frage nach der Zusammensetzung der kommentierenden Bilanzersteller aus Deutschland nachgegangen, um einen Eindruck über die Größe dieser Unternehmen zu geben. Die Auswertung der Stellungnahmen aus Deutschland ergab, dass im Durchschnitt pro Jahr drei der fünf Unternehmen aus der Interessengruppe der Bilanzersteller, die die meisten Stellungnahmen beim IASB eingereicht haben, im DAX 30 gelistet sind.

[69] Vgl. Orens et al. (2011), S. 214.

[70] IFRS Foundation (2013a), S. 8, abrufbar unter http://hbfm.link/631 (letzter Abruf: 04. April 2017).

[71] In Anlehnung an IFRS Foundation (2013b), S. 7ff, abrufbar unter http://hbfm.link/631 (letzter Abruf: 04. April 2017); Pellens et al. (2014), S. 61.

**Figure 4-1: IFRS Standardsetzungsprozess und Möglichkeiten der Teilnahme**




**Anmerkung:** Die Tabelle zeigt Möglichkeiten, welche interessierten Gruppen gegeben sind, am IFRS Standardsetzungspozesses teilzunehmen und Einfluss auf die Entwicklung der IFRS Standards zu nehmen.

Figure 4-1 verdeutlicht, dass die Interessengruppen in allen Phasen der Standardentwicklung und somit in mehreren Zeitpunkten Stellungnahmen zu vom IASB veröffentlichten Dokumenten einreichen können und dadurch die Möglichkeit zur aktiven Einflussnahme auf das Standardsetzungsverfahren haben.[72] Daneben ist es den unterschiedlichen Interessengruppen möglich, als Berater oder Spezialisten in Projektgruppen sowie bei öffentlichen Anhörungen und Feldstudien teilzunehmen oder informell Einfluss auf das IASB zu nehmen, indem bspw. an inoffiziellen Gesprächen oder Treffen mit IASB-Mitgliedern, Gremien und Angestellten in den Projektgruppen teilgenommen wird. Diese Arten des Lobbyismus sollen jedoch in diesem Beitrag nicht weiter berücksichtigt werden.

Das IASB sieht in der Teilnahme von unterschiedlichen Interessengruppen, wie z. B. Bilanzersteller, Bilanznutzer, Wirtschaftsprüfer oder Akademiker, einen entscheidenden Faktor für die Legitimität und den Erfolg der IFRS.[73] Eine hohe Partizipation führt zu einer erhöhten

[72] Vgl. Pellens et al. (2014), S. 60.

[73] Vgl. Larson (2007), S. 229; Königsgruber (2009), S. 1310; Richardson und Eberlein (2011), S. 223; Jorissen et al. (2012), S. 694; Larson und Herz (2013), S. 100.

compliance-konformen Akzeptanz mit den finalisierten Standards.[74] Zudem ermöglicht eine hohe Diversität hinsichtlich der Interessengruppen und Herkunft, die möglichen Reaktionen auf einen entwickelten Standard besser einschätzen zu können, unterschiedliche Auffassungen zu beispielsweise Bewertungs- und Bilanzierungsfragen zu identifizieren sowie auszuwerten und Konflikte zwischen den Interessengruppen zu reduzieren.[75] Schlussendlich wird durch eine rege Teilnahme die Qualität der Standards erhöht.[76]

## 4.3 Literaturüberblick

Vorangegangene Arbeiten, die sich mit Lobbyismus in Standardsetzungsverfahren befassen, geben anfangs vorwiegend Erklärungsansätze, warum und aus welcher Motivation einzelne Organisationen überhaupt Lobbyismus betreiben. Nach Sutton (1984)[77] nimmt ein rationaler Lobbyist grundsätzlich nur am Standardsetzungsverfahren teil, wenn sein erwarteter Nutzen, bereinigt um die Wahrscheinlichkeit, dass seine Einflussnahme das Ergebnis des Prozesses ändert, die Kosten übersteigt. Bei gegebenen Kosten werden dadurch nur diejenigen teilnehmen, die einen hohen Nutzen durch ihr Verhalten erwarten. Um einen Überblick zu geben, welche Organisationen sich dadurch überhaupt am Standardsetzungsverfahren des IASB beteiligen, untersuchen eine Vielzahl an Studien mittels unterschiedlicher Forschungsdesigns, die im Standardsetzungsverfahren eingereichten Stellungnahmen. Stellungnahmen werden in der Literatur als geeignetes Mittel angesehen, um direkten Lobbyismus zu untersuchen, da

[74] Vgl. Larson und Herz (2013), S. 100-101.

[75] Vgl. Jorissen et al. (2012), S. 694; Tandy und Wilburn (1992), S. 48; Kwok und Sharp (2005), S. 75.

[76] Vgl. Orens et al. (2011), S. 214; Larson und Herz (2013), S. 103.

[77] Vgl. Sutton (1984), S. 81ff.

Georgiou (2004)[78] in seiner Umfragestudie mit britischen Finanzvorständen herausfindet, dass sich die tatsächliche Meinung der Kommentierenden auch in den Stellungnahmen widerspiegelt. Katselas, Birt und Kang (2011)[79] wählen den Ansatz, Stellungnahmen zu einem Standardentwurf zu analysieren und gehen dabei der Fragestellung nach, ob unternehmensspezifische Merkmale Einfluss auf eine Zustimmung oder Ablehnung von Kommentierungsgesuchen haben. Hierfür analysieren die Autoren die eingereichten Stellungnahmen für den Standardentwurf ED 8 „Operative Segmente". Sie kommen zu dem Ergebnis, dass größere Unternehmen eher eine Stellungnahme einreichen und dem Inhalt des Standardentwurfs zustimmen. Diesem Vorgehen folgen Kosi und Reither (2014)[80] und untersuchen Stellungnahmen, die im Zeitraum 2007-2010 zum im Rahmen des Projekts IFRS 4 „Versicherungsverträge" veröffentlichten Diskussionspapier und Standardentwurf eingereicht wurden. Die Autoren zeigen, dass Versicherungsunternehmen sowie finanziell eingeschränkte Unternehmen mit einer höheren Wahrscheinlichkeit eine Stellungnahme einreichen. Zudem berichten sie, dass Versicherungsunternehmen und Unternehmen mit einem hohen Anteil in Streubesitz häufiger Stellungnahmen einreichen und somit mehr Lobbyismus betreiben. Die Studien von Hansen (2011)[81], Jorissen, Lybaert, Orens, van der Tas (2012)[82] und Larson und Herz (2013)[83] folgen einem Mehr-Perioden- sowie Mehr-Dokumenten-Ansatz und werten Stellungnahmen zu Dokumenten aus, die innerhalb eines längeren Zeitraums vom IASB veröffentlicht wurden. Hansen (2011) analysiert Stellungnahmen zu fünf Standardentwürfen,

[78] Vgl. Georgiou (2004), S. 103ff.

[79] Vgl. Katselas, Birt und Kang (2011), S. 154ff.

[80] Vgl. Kosi und Reither (2014), S. 89ff.

[81] Vgl. Hansen (2011), S. 57ff.

[82] Vgl. Jorissen et al. (2012), S. 693ff.

[83] Vgl. Larson und Herz (2013), S. 99ff.

die im Zeitraum 2002-2004 vom IASB veröffentlicht wurden, mittels einer Inhaltsanalyse. Dabei kommt er zu dem Ergebnis, dass der Erfolg des Lobbyismus abhängig von der Qualität des Inhalts der Stellungnahme ist. Diese Beziehung gilt jedoch nur bei glaubwürdigen Lobbyisten, wobei der Autor Glaubwürdigkeit durch die Spendenbereitschaft sowie die Größe des nationalen Kapitalmarkts misst. Jorissen et al. (2012) untersuchen die Zusammensetzung und die Eigenschaften von Kommentierenden, die Stellungnahmen zu den 33 Dokumenten eingereicht haben, die im Zeitraum 2002-2006 vom IASB veröffentlicht wurden. Sie zeigen, dass Bilanzersteller, gefolgt von Wirtschaftsprüfer und (Nationalen) Standardsetzern, die meisten Kommentare verfassen. Zudem reichen größere und ergebnisstärkere Unternehmen mehr Stellungnahmen beim IASB ein. Larson und Herz (2013) analysieren im Zeitraum 2001-2008 Stellungnahmen zu 57 Dokumenten, die vom IASB zur Kommentierung ausgegeben wurden, hinsichtlich der Herkunft ihrer Verfasser. Die Autoren kommen zu dem Ergebnis, dass Stellungnahmen zu einem hohen Anteil aus den G4+1-Ländern (Australien, Kanada, Neuseeland, USA und Vereinigtes Königreich) sowie aus Ländern mit einer hohen Spendenbereitschaft gegenüber dem IASB stammen.

Der vorliegende Beitrag verbindet die Forschungsarbeiten von Jorissen et al. (2012) und Larson und Herz (2013) und untersucht die Stellungnahmen zu allen 74 Dokumenten, die im Zeitraum 2009-2015 vom IASB veröffentlicht wurden hinsichtlich der Diversität der Interessensgruppen sowie in der Herkunft. Table 4-1 stellt das Forschungsdesign sowie die Ergebnisse der angesprochenen Studien in alphabetischer Reihenfolge zusammenfassend dar.

## Table 4-1: Literaturüberblick

| **AutorInnen, Zeitschrift** | **Forschungsdesgin** | **Stichprobe** | **Inhalt/Ergebnisse** |
|---|---|---|---|
| *Georgiou, ABACUS 2004* | Umfragestudie; britische Finanzvorstände | # Antworten: 171 | Bilanznutzer verfassen häufig selbst keine Stellungnahme, sondern betreiben vielmehr indirekten Lobbyismus über Interessenvertretungen. Zudem spiegelt sich die tatsächliche Meinung der Kommentierenden auch in den Stellungnahmen wider. |
| *Hansen, Journal of Accounting Research 2011* | Mehr-Perioden/Mehr-Dokumenten-Analyse; Inhaltsanalyse | Zeitraum: 2002-2004<br># Dokumente: 5<br># Stellungnahmen: 630 | Der Erfolg des Lobbyismus ist von der Qualität des Inhalts der Stellungnahme abhängig. Zudem beeinflusst die Glaubwürdigkeit eines Kommentierenden den Einfluss auf das IASB. |
| *Jorissen/Lybaert/Orens/ van der Tas, European Accounting Review 2012* | Mehr-Perioden/Mehr-Dokumenten-Analyse; Deskriptive Auswertungen; Regressionsanalysen | Zeitraum: 2002-2006<br># Dokumente: 33<br># Stellungnahmen: 3.234 | Bilanzersteller beteiligen sich gefolgt von Wirtschaftsprüfern und Standardsetzern am meisten am IASB Standardsetzungsverfahren. Zudem reichen größere und ergebnisstärkere Unternehmen mehr Stellungnahmen beim IASB ein. |
| *Katselas/Birt/Kang Australien Accounting Review 2011* | Eine-Periode/Ein-Dokument-Analyse; Fallstudien, Inhaltsanalysen, Deskriptive Auswertungen | Zeitraum: 2006<br># Dokumente: 1<br># Stellungnahmen: 182 | Große Unternehmen reichen mit einer höheren Wahrscheinlichkeit Stellungnahmen beim IASB ein. Unternehmen mit weniger Segmenten lehnen den Inhalt eines Standardentwurfs eher ab. Profitablere Unternehmen stehen dem Inhalt eines Dokumentes positiv gegenüber. |
| *Kosi/Reither, Accounting in Europe 2014* | Mehr-Perioden/Ein-Dokument-Analyse; Deskriptive Auswertungen; Regressionsanalysen | Zeitraum: 2007-2010<br># Dokumente: 2<br># Stellungnahmen: 250 | Versicherungsunternehmen und finanziell eingeschränkte Unternehmen, die ihren Abschluss nach IFRS aufstellen, reichen mit einer höheren Wahrscheinlichkeit Stellungnahme zu Dokumenten des im IFRS 4 Ersetzungsprozess ein. Zudem beteiligen sich Versicherungsunternehmen und Unternehmen mit einem hohen Anteil in Streubesitz häufiger am Standardsetzungsverfahren. |
| *Larson/Herz, Accounting in Europe 2013* | Mehr-Perioden/Mehr-Dokumenten-Analyse; Deskriptive Auswertungen; Regressionsanalysen | Zeitraum: 2001-2008<br># Dokumente: 57<br># Stellungnahmen: 5.921 | Stellungnahmen stammen zu einem hohen Anteil aus den G4+1-Ländern sowie aus Ländern mit einer hohen Spendenbereitschaft gegenüber dem IASB. |
| Dazu auch: | | | |
| *Königsgruber, Zeitschrift für Betriebswirtschaft 2009* | | | Literaturüberblick zu Lobbyismus in Standardsetzungsverfahren. |

**Anmerkung:** Die Tabelle gibt einen kurzen Literaturüberblick über Forschungsarbeiten über Lobbyismus in Standardsetzungsverfahren. Übersicht in Anlehnung an Larson und Herz (2013) S. 146f.

## 4.4 Grundlage der empirischen Analyse der Diversität in Stellungnahmen (Comment Letters)

### 4.4.1 Datenerhebung und Kategorisierung

Um die Interessengruppen und die Herkunftsländer empirisch auswerten zu können, werden im ersten Schritt zunächst auf der Internetseite des IASB alle Dokumente gesucht, die ab dem Jahr 2009 im Rahmen des Standardsetzungsverfahrens für eine Kommentierung veröffentlicht wurden.[84] Zu den Dokumenten gehören Standardentwürfe (exposure drafts), Diskussionspapiere (discussion papers), Informationsgesuche (requests for information) und Meinungsgesuche (requests for views). Anschließend wird innerhalb dieser Dokumente nach den jeweiligen Stellungnahmen gesucht, die die Grundlage für die Auswertung darstellen. In Anlehnung an Larson und Herz (2013) erfolgt die Zuordnung einer Stellungnahme zu einem Jahr über das Datum, an dem das zu kommentierende Dokument publiziert wird.[85]

In einem zweiten Schritt werden die Stellungnahmen der Stichprobe hinsichtlich ihrer Interessengruppen sowie ihrer Herkunftsländer bzw. nach Kontinenten kategorisiert. Diese Kategorisierung der Stellungnahmen ermöglicht es, die Diversität der Interessengruppen sowie der Länder bzw. Kontinente zu untersuchen. Die Internetseite des IASB stellt für sämtliche zur Kommentierung freigegebenen Veröffentlichungen eine Übersicht mit Informationen über die Absender der Stellungnahmen (Datum der Einreichung, Name sowie die zu vertretende Organisation) zur Verfügung, sodass eine Zuordnung zu einer Interessengruppe und einem

[84] Die Stellungnahmen zu den Standardentwürfen ED/2009/1, ED/2009/2, ED/2009/4 und ED/2009/9 sind auf der Internetseite des IASB nicht verfügbar und können somit in die Auswertung nicht miteinbezogen werden.

[85] Vgl. Larson und Herz (2013), S. 137. Da die Kommentierungsperioden der Standardentwürfe ED/2015/9 und ED/2015/10 erst am 17.02. bzw. 16.03.2016 enden, werden diese nicht in die Auswertung miteinbezogen.

Land allein anhand dieser Übersicht in der Regel möglich ist. Lediglich wenn die Angaben in den Übersichten nicht ausreichend sind, wird die entsprechende Stellungnahme im Detail untersucht. Dies war regelmäßig bei Privatpersonen, bei vom IASB verwendeten Abkürzungen der Organisationsbezeichnung und bei unvollständigen Angaben der Fall.

Eine Zuordnung der einzelnen Stellungnahmen zu einer Interessengruppe erfolgt in Anlehnung an Jorissen et al. (2012).[86] Dabei werden folgende Interessengruppen definiert: Bilanzersteller, Wirtschaftsprüfer, Bilanznutzer, Regulierungs-/Aufsichtsbehörden, Regierungen, Einzelpersonen, Akademiker, (Nationale) Standardsetzer, Andere Parteien und Unbekannt. Table 4-2 zeigt die Kategorisierung der Interessengruppen wie auch deren Definition. Ist eine Stellungnahme gemeinschaftlich im Namen mehrerer Verfasser eingereicht worden, wird eine fallbezogene Kategorisierung vorgenommen. Lassen sich die Verfasser einheitlich einer Interessengruppe zuordnen, so stellt diese die entsprechende Gruppe dar. Wird ein Kommentar gemeinschaftlich von unterschiedlichen Interessengruppen eingereicht, werden alle Interessengruppen berücksichtigt. Stellungnahmen von Organisationen, welche die Ansichten mehrerer Interessengruppen vertreten, können nicht eindeutig kategorisiert werden und werden deshalb in die Kategorie Andere Parteien zugeordnet.[87]

Die Zuordnung der Stellungnahmen entsprechend ihrer Herkunft erfolgt in einem zweistufigen Verfahren. Auf der ersten Stufe werden alle Stellungnahmen einem Herkunftsland zugeordnet. Diese Einteilung ist jedoch nicht immer eindeutig, da eine Vielzahl von

[86] Vgl. Jorissen et al. (2012), S. 703.

[87] Vgl. Jorissen et al. (2012), S. 703. Die Verfasser der Stellungnahmen wurden möglichst präzise und frei von Überschneidungen einer Interessensgruppe zugeordnet. Grundsätzlich ist es jedoch möglich, dass ein Bilanzersteller auch als Bilanznutzer und eine Regierung auch als Standardsetzer oder Regulierungs-/Aufsichtsbehörde auftreten kann. Aus diesem Grund wurden insb. die Stellungnahmen von Banken und Regierungen im Detail untersucht, um eine genaue Zuordnung zu einer Interessengruppe zu gewährleisten. Vgl. dazu auch Königsgruber (2009), S. 1316 und Beresford (1993), S. 72, wonach Banken i.d.R. aus Sicht der Bilanzersteller am Standardsetzungsverfahren teilnehmen.

Stellungnahmen nur einer Region (z. B. Europa) zurechenbar ist, oder die Meinung international agierender Verfasser vertritt. In solchen Fällen werden die Stellungnahmen in der zweiten Stufe den Kategorien Afrika, Asien, Australien & Ozeanien, Europa, Nordamerika, Südamerika, International und Unbekannte Herkunft zugeordnet.

Die Zuordnung der Stellungnahmen zu einer Herkunft erfolgt nach folgenden Regeln: Bei den Bilanzerstellern, Bilanznutzern sowie den Wirtschaftsprüfern ist das Land des Hauptsitzes maßgeblich. Vertritt eine Organisation Unternehmen länderübergreifend, wird die entsprechende Region möglichst eng abgegrenzt.[88] Bei Regulierungs-/Aufsichtsbehörden ist entscheidend, für welches geografische Gebiet diese zuständig sind. Akademiker werden dem Land, in dem sich die Hochschule befindet, oder in dem eine Forschungsgruppe tätig ist, zugeordnet. Handelt es sich um eine Einzelperson, ist das Land maßgeblich, das vom Verfasser angegeben wurde. Kann die Herkunft der Stellungnahme nicht identifiziert werden, ist die Kategorie Unbekannte Herkunft zu wählen. Eine Ausnahme von der beschriebenen Vorgehensweise bilden internationale Unternehmen(-snetzwerke) wie z. B. die Big 4-Wirtschaftsprüfungsgesellschaften. Bei diesen ist anzunehmen, dass sie die Interessen von einer Vielzahl an Ländern repräsentieren und eine Zuordnung zu dem Land, in dem sich der Hauptsitz befindet, nicht zielführend wäre. Hierfür wird die Kategorie International gewählt.[89]

[88] Bspw. vertritt Cooperatives Europe die Interessen von 83 Organisationen unterschiedlicher Industrien aus 33 europäischen Ländern. Die Stellungnahme von Cooperatives Europe wird deshalb der Region Europa zugeordnet und nicht Belgien, in dem die Organisation ihren Sitz hat.

[89] Vgl. Giner und Arce (2012), S. 668; Hansen (2011), S. 61.

**Table 4-2: Kategorisierung der Interessengruppen**

| Interessengruppe | Definition |
|---|---|
| **Bilanzersteller** | Unternehmen und Organisationen, die Bilanzen erstellen, sowie deren Vertreter einschließlich Berufsverbände, zudem Aktuare und Treasurer. |
| **Wirtschaftsprüfer** | Berufszweige, die sich mit Rechnungslegung befassen wie Wirtschaftsprüfer, Wirtschaftsprüfungsgesellschaften sowie deren Interessenvertreter. |
| **Bilanznutzer** | Unternehmen und Organisationen sowie deren Vertreter, die Bilanzen nutzen, wie Analysten, Investmentgesellschaften, Investoren, Börsen, Rating-Agenturen sowie Banken, wenn die von ihnen eingereichte Stellungnahme ausdrücklich von ihrer Investmentabteilung verfasst wurde. |
| **(Nationale) Standardsetzer** | Gruppierungen, die die Vorschriften für die Rechnungslegung eines Landes oder einer Region entwickeln und festsetzen. |
| **Regulierungs-/Aufsichtsbehörden** | Gruppierungen, die einen Markt (Kapital-, Finanz-, Energie-, Strommarkt), einen Berufsstand oder eine Unternehmensgruppe regulieren und/oder überwachen. |
| **Regierungen** | Regierungen und deren Ministerien. |
| **Einzelpersonen** | Absender, die explizit verdeutlichen, dass ihre Stellungnahme ihre eigene Meinung und nicht zwingend die ihrer zugehörigen Organisation widerspiegelt, oder wenn aus der eingereichten Stellungnahme klar ersichtlich ist, dass sie keiner Organisation angehören. |
| **Akademiker** | Absender, die an einer Hochschule angestellt sind, Studenten, die im Rahmen eines Studienprojektes Stellungsnahmen einreichen sowie Organisationen, die vorrangig aus Wissenschaftlern bestehen. |
| **Andere Parteien** | Absender, die keiner der anderen Kategorien zugeordnet werden können. |
| **Unbekannt** | Absender ohne Informationen. |

**Anmerkung:** Die Tabelle zeigt die Definitionen nach denen Interessengruppen kategorisiert wurden.

### 4.4.2 Darstellung der Stichprobe

Für den Betrachtungszeitraum 2009-2015 wurden insgesamt 11.094 Stellungnahmen zu 74 für die Kommentierung veröffentlichte Dokumente des IASB hinsichtlich der Interessengruppe sowie der Herkunft analysiert. Table 4-3 zeigt die Anzahl der zu kommentierenden Dokumente wie auch den Durchschnitt, die Standardabweichung, das Minimum und das Maximum der pro Jahr bzw. für den gesamten Zeitraum 2009-2015 eingereichten Stellungnahmen.

**Table 4-3: Übersichtsstatistiken für zu kommentierende Dokumente und eingegangene Stellungnahmen**

| Jahr | Anzahl der Dokumente | Anzahl der eingegangenen Stellungnahmen | | | |
|---|---|---|---|---|---|
| | | Durchschnitt | Standard-abweichung | Minimum | Maximum |
| 2009 | 12 | 142 | 77 | 20 | 319 |
| 2010 | 15 | 230 | 228 | 35 | 829 |
| 2011 | 9 | 164 | 100 | 39 | 372 |
| 2012 | 8 | 93 | 32 | 67 | 172 |
| 2013 | 12 | 161 | 171 | 58 | 687 |
| 2014 | 9 | 99 | 20 | 70 | 129 |
| 2015 | 9 | 99 | 65 | 8 | 233 |
| 2009-2015 | Σ 74 | Ø 141 | Ø 99 | Ø 42 | Ø 392 |

**Anmerkung:** Die Tabelle zeigt deskriptive Statistiken von zur Kommentierung freigegebene Dokumente sowie dafür eingegangenen Stellungnahmen.

Über den gesamten Zeitraum betrachtet werden im Durchschnitt zu jedem Dokument 141 Stellungnahmen an das IASB übermittelt, wobei die Schwankung um den Mittelwert 99 Stellungnahmen beträgt. Wird die durchschnittliche Anzahl an eingereichten Stellungnahmen pro Jahr gesichtet, liegt die höchste Beteiligung bei 230 Stellungnahmen je veröffentlichtem Dokument im Jahr 2010. Die durchschnittlich geringste Beteiligung bei der Kommentierung liegt bei 93 Stellungnahmen im Jahr 2012. Im gesamten Zeitraum liegt das durchschnittliche Minimum der Anzahl an Stellungnahmen bei 42 Stellungnahmen je Dokument; das durchschnittliche Maximum bei 392 Stellungnahmen je Dokument. Das im gesamten Zeitraum mit 829 Stellungnahmen am meisten kommentierte Dokument ist der Standardentwurf ED/2010/9. Dieser wurde im Jahr 2010 im Rahmen des Projekts „Leasing“ veröffentlicht, welches als gemeinschaftliche Arbeit vom IASB und dem US-amerikanischen FASB durchgeführt wurde. Das am wenigste kommentierte Dokument stellt mit 8 Stellungnahmen der Standardentwurf ED/2015/4 „Aktualisierung der Verweise auf das Rahmenkonzept“ aus dem Jahr 2015 dar.

## 4.5 Diversität der Interessengruppen

### 4.5.1 Analyse der Beteiligung von Interessengruppen

Als privates Standardsetzungsgremium ist das IASB an einem möglichst transparenten und öffentlichen Standardsetzungsverfahren interessiert. Durch eine rege Teilnahme von Interessierten mittels Stellungnahmen soll so die Akzeptanz und Legitimität entwickelter Standards erreicht werden.[90] Table 4-4 zeigt die Anteile der Interessengruppen an den Kommentaren im Zeitraum 2009-2015. Basierend auf den Beteiligungsquoten je Dokument wurden der Durchschnitt sowie das Minimum und Maximum der Beteiligungsquoten ermittelt.

**Table 4-4: Diversität zwischen den Interessengruppen im Zeitraum 2009-2015**

| Interessengruppe | Ø | Minimum | Maximum |
|---|---|---|---|
| **Bilanzersteller** | 40% | 0% | 74% |
| **Wirtschaftsprüfer** | 26% | 8% | 59% |
| **Bilanznutzer** | 4% | 0% | 28% |
| **(Nationale) Standardsetzer** | 18% | 3% | 40% |
| **Regulierungs-/Aufsichtsbehörden** | 4% | 0% | 10% |
| **Regierungen** | 1% | 0% | 5% |
| **Einzelpersonen** | 4% | 0% | 22% |
| **Akademiker** | 2% | 0% | 22% |
| **Andere Parteien** | 2% | 0% | 24% |
| **Unbekannt** | 0% | 0% | 1% |

**Anmerkung:** Die Tabelle zeigt die Beteiligungsquoten der einzelnen Interessengruppen im Zeitraum 2009-2015.

Bilanzersteller reichen mit einem durchschnittlichen Anteil von 40% im Zeitraum 2009-2015 die meisten Stellungnahmen beim IASB ein. Zudem geben Bilanzersteller bei 70% der Dokumente die meisten Stellungnahmen ab (nicht tabelliert). Mit Ausnahme des Standardentwurfs ED/2009/13 reichen Bilanzersteller bei jeder Veröffentlichung mindestens eine Stellungnahme ein. Dieser Standardentwurf befasst sich inhaltlich mit der begrenzten

[90] Vgl. Kosi und Reither (2014), S. 89; Orens et al. (2011), S. 212-214.

Befreiung erstmaliger Anwender von Vergleichsangaben nach IFRS 7. Die höchste Beteiligungsquote von Bilanzerstellern liegt mit 74% beim ED/2010/09. Dieser Standardentwurf behandelt die Leasingbilanzierung nach dem späteren IFRS 16.

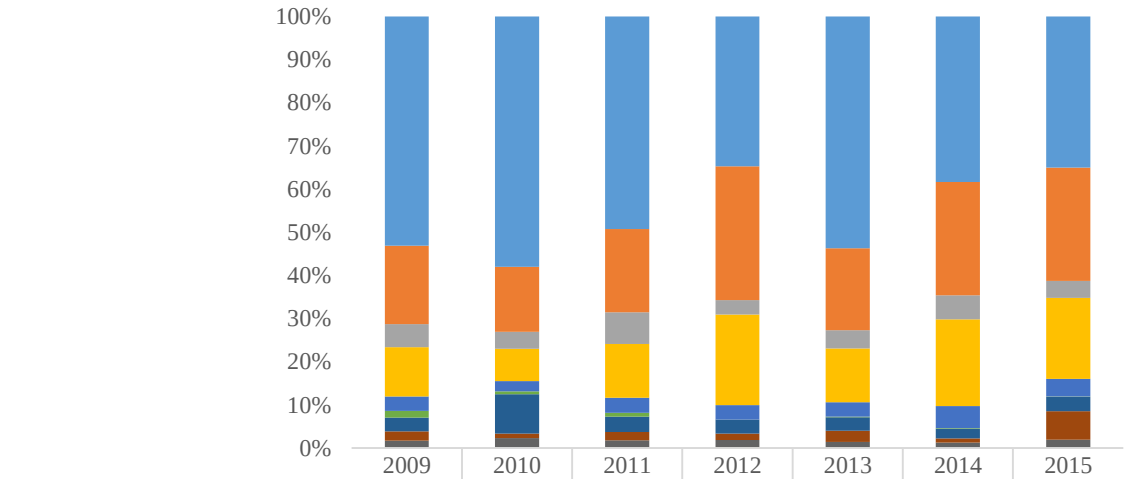
An zweiter Stelle stehen die Wirtschaftsprüfer mit einem durchschnittlichen Anteil von 26%. Bei 30% der Veröffentlichungen übermitteln Wirtschaftsprüfer die meisten Kommentare (nicht tabelliert). Zudem gibt diese Interessengruppe bei jedem Dokument mindestens einen Kommentar ab. Der höchste Anteil findet sich mit 59% beim ED/2013/9. Dieser Standardentwurf behandelt Änderungen des IFRS für kleine und mittelgroße Unternehmen. Die durchschnittlich geringste Beteiligungsquote der Wirtschaftsprüfer liegt bei 8% und findet sich beim bereits oben genannten ED/2010/9.

Die Interessengruppe der (Nationalen) Standardsetzer befindet sich mit einem durchschnittlichen Anteil von 18% an dritter Stelle. Im Zeitraum 2009-2015 beteiligen sich die Standardsetzer an jedem Dokument mit mindestens einer Stellungnahme. Mit einem Anteil von 40% liegt die maximale Beteiligungsquote dieser Interessengruppe beim oben genannten Standardentwurf ED/2009/13, die niedrigste findet sich mit 3% beim oben genannten ED/2010/9. Insgesamt entfallen somit 84% aller Stellungnahmen auf die Bilanzersteller, Wirtschaftsprüfer sowie die (Nationalen) Standardsetzer.

Bilanznutzer, Regulierungs-/Aufsichtsbehörden, Regierungen, Einzelpersonen, Akademiker und Andere Parteien beteiligen sich dagegen mit einem Anteil von jeweils durchschnittlich 1%-4% nur sehr gering am Kommentierungsprozess. Die höchste Beteiligungsquote bei den Bilanznutzern liegt mit 28% beim ED/2011/4 weit über ihrem Durchschnittswert. Dieser Standardentwurf betrifft direkt Investmentgesellschaften und sieht Änderungen bei der Klassifizierung der Gesellschaften als Investmentunternehmen und neue Konsolidierungsvorschriften vor. Daher ist anzunehmen, dass Investmentgesellschaften in

diesem Fall eher aus Sicht der Bilanzersteller als aus Sicht der Bilanznutzer kommentieren. Maximale Beteiligungsquoten finden sich für die Interessengruppen Akademiker, Einzelpersonen und Andere Parteien im Bereich 22-24%. Die höchsten Anteile der Regulierungs-/Aufsichtsbehörden und Regierungen betragen dagegen nur 10% bzw. 5%.

**Figure 4-2: Diversität zwischen den Interessengruppen nach Jahren**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|
| Bilanzersteller | 53% | 58% | 49% | 35% | 54% | 38% | 35% |
| Wirtschaftsprüfer | 18% | 15% | 19% | 31% | 19% | 26% | 26% |
| Bilanznutzer | 5% | 4% | 7% | 3% | 4% | 6% | 4% |
| (Nationale) Standardsetzer | 11% | 8% | 12% | 21% | 12% | 20% | 19% |
| Regulierungs-/Aufsichtsbehörden | 3% | 2% | 4% | 3% | 3% | 5% | 4% |
| Regierungen | 2% | 1% | 1% | 0% | 0% | 0% | 0% |
| Einzelpersonen | 3% | 9% | 4% | 3% | 3% | 2% | 3% |
| Akademiker | 2% | 1% | 2% | 1% | 3% | 1% | 7% |
| Andere Parteien | 2% | 2% | 2% | 2% | 1% | 1% | 2% |
| Unbekannt | 0% | 0% | 0% | 0% | 0% | 0% | 0% |

**Anmerkung:** Die Abbildung zeigt die Beteiligungsquoten der einzelnen Interessengruppen nach Jahren.

Wird die Diversität zwischen den Interessengruppen nach Jahren in Figure 4-2 betrachtet, wird die festgestellte Ungleichverteilung in der Beteiligung der einzelnen Interessengruppen unterstrichen. Die Beteiligung in IASB-Kommentierungsgesuchen wird von den drei Interessengruppen Bilanzersteller, Wirtschaftsprüfer und (Nationale) Standardsetzer dominiert. Diese hohe Teilnahmebereitschaft ist im Betrachtungszeitraum 2009-2015 weitestgehend konstant. Lediglich im Jahr 2015 werden weniger als 80% aller Stellungnahmen von diesen

drei Interessengruppen verfasst. Die durchschnittlich geringen Beteiligungsquoten von Bilanznutzern, Regulierungs-/Aufsichtsbehörden, Regierungen, Akademikern und Anderen Parteien liegen zwischen 0-9% für den gesamten Betrachtungszeitraum. Hierbei befinden sich die Beteiligungsquoten im Zeitverlauf mit Ausnahme weniger Ausreißer im Bereich der durchschnittlichen Beteiligungsquoten in Table 4-4. Im Zeittrend von 2009-2015 lässt sich keine Annäherung der unterschiedlichen Interessengruppen erkennen, sodass im Betrachtungszeitraum keine gleichmäßige Verteilung der Beteiligungsquoten erreicht wird und auch nicht zu erwarten ist.

### 4.5.2 Analyse der Beteiligung innerhalb der Interessengruppen

Um eine Aussage über die Diversität innerhalb der Interessengruppen treffen zu können, wird im nächsten Schritt analysiert, wie viele unterschiedliche Organisationen sich innerhalb einer Interessengruppe am Standardsetzungsverfahren beteiligen. Table 4-5 veranschaulicht die Anzahl der unterschiedlichen Organisationen je Interessengruppe, die im Zeitraum 2009-2015 mindestens eine Stellungnahme beim IASB eingereicht haben. Die Tabelle zeigt, dass sich im Betrachtungszeitraum insgesamt 3.352 unterschiedliche Organisationen am Standardsetzungsverfahren beteiligen. Die höchste Diversität ist mit 2.025 unterschiedlichen Organisationen bei den Bilanzerstellern vorzufinden. An zweiter Stelle verfassen 414 unterschiedliche Einzelpersonen jeweils mindestens eine Stellungnahme, gefolgt von 315 unterschiedlichen Absendern aus der Interessengruppe Wirtschaftsprüfer. Grundsätzlich entsprechen die Werte in Table 4-5 den Erwartungen der Verfasser, da z. B. die Anzahl aller (Nationalen) Standardsetzer bedeutend geringer ist, als die Anzahl aller Bilanzersteller weltweit, die ein potenzielles Interesse am Kommentierungsprozess des IASB haben. Somit erfüllt die geringe Anzahl unterschiedlicher Organisationen bei den Regierungen

(25 unterschiedliche Organisationen) und den (Nationalen) Standardsetzern (65) ebenfalls die Erwartungen.

**Table 4-5: Anzahl unterschiedlicher Organisationen, die mindestens eine Stellungnahme an das IASB einreichen nach Jahren**

| Interessengruppe | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2009-2016 |
|---|---|---|---|---|---|---|---|---|
| **Bilanzersteller** | 496 | 1.198 | 419 | 154 | 734 | 196 | 152 | 2.025 |
| **Wirtschaftsprüfer** | 86 | 174 | 94 | 61 | 116 | 48 | 68 | 315 |
| **Bilanznutzer** | 52 | 69 | 77 | 17 | 52 | 35 | 24 | 209 |
| **(Nationaler) Standardsetzer** | 29 | 38 | 39 | 32 | 39 | 30 | 34 | 65 |
| **Regulierungs-/Aufsichtsbehörde** | 19 | 27 | 27 | 10 | 27 | 21 | 14 | 78 |
| **Regierungen** | 12 | 12 | 8 | 0 | 4 | 1 | 1 | 25 |
| **Einzelpersonen** | 54 | 266 | 36 | 12 | 46 | 13 | 24 | 414 |
| **Akademiker** | 22 | 22 | 18 | 9 | 40 | 8 | 52 | 137 |
| **Andere Parteien** | 15 | 53 | 15 | 4 | 10 | 4 | 10 | 76 |
| **Unbekannt** | 0 | 3 | 1 | 1 | 3 | 0 | 0 | 8 |
| **Summe** | 785 | 1.862 | 734 | 300 | 1.071 | 356 | 379 | 3.352 |

**Anmerkung:** Die Tabelle zeigt die absolute Anzahl an unterschiedlichen Organisationen, die sich im Zeitraum 2009-2015 mit mindestens einer Stellungnahme am IASB Standardsetzungsprozess beteiligt haben.

Um darüber hinaus auch eine Aussage treffen zu können, wie häufig eine Organisation Stellungnahmen beim IASB einreicht, wird zusätzlich die Anzahl der Stellungnahmen untersucht, die jede Organisation im Betrachtungszeitraum verfasst. Table 4-6 zeigt die durchschnittliche Anzahl an Stellungnahmen, die eine kommentierende Organisation pro Jahr beim IASB einreicht. Sie verdeutlicht, dass Organisationen, die den (Nationalen) Standardsetzern zugeordnet sind, mit durchschnittlich sechs Stellungnahmen pro Jahr die meisten Stellungnahmen verfassen. Bei einer durchschnittlichen Anzahl von 10,6 Dokumenten pro Jahr (nicht tabelliert), die zur Kommentierung veröffentlicht werden, bedeutet dies, dass jeder (Nationale) Standardsetzer bei 56,8% aller Dokumente pro Jahr eine Stellungnahme abgibt. An zweiter Stelle verfasst ein Absender aus der Interessengruppe Wirtschaftsprüfer durchschnittlich vier Stellungnahmen pro Jahr und gibt dadurch bei 37,8% aller zu kommentierenden Dokumente eine Kommentierung ab. An dritter Stelle

beteiligt sich jede Regulierungs-/Aufsichtsbehörde mit durchschnittlich drei Stellungnahmen pro Jahr an 28,3% der vom IASB veröffentlichten Dokumente. Die Auswertungen in Table 4-5 und Table 4-6 verdeutlichen, dass Organisationen aus den Interessengruppen, bei denen die Anzahl der unterschiedlichen Organisationen gering ist, häufiger Stellungnahmen beim IASB einreichen.

**Table 4-6: Durchschnittliche Anzahl an Stellungnahmen je Organisation nach Jahren**

| Interessengruppe | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Ø |
|---|---|---|---|---|---|---|---|---|
| **Bilanzersteller** | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 |
| **Wirtschaftsprüfer** | 4 | 3 | 3 | 4 | 3 | 5 | 4 | 4 |
| **Bilanznutzer** | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 |
| **(Nationaler) Standardsetzer** | 7 | 7 | 5 | 5 | 6 | 6 | 5 | 6 |
| **Regulierungs-/Aufsichtsbehörde** | 3 | 3 | 2 | 3 | 2 | 2 | 3 | 3 |
| **Regierungen** | 2 | 2 | 1 | 0 | 1 | 1 | 1 | 1 |
| **Einzelpersonen** | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 |
| **Akademiker** | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| **Andere Parteien** | 2 | 1 | 2 | 3 | 2 | 3 | 2 | 2 |
| **Unbekannt** | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |

**Anmerkung:** Die Tabelle zeigt wie viele Stellungnahmen jede einzelne Organisation im Durchschnitt je Jahr eingereicht hat.

Um eine Vorstellung über die Beteiligungsquoten einzelner Organisationen innerhalb der Interessengruppen zu erhalten, wird in Table 4-7 der Anteil der Stellungnahmen von den fünf Organisationen, die innerhalb einer Interessengruppe die meisten Kommentare einreichen, dargestellt. Nach den Anderen Parteien, bei denen durchschnittlich 74% aller Stellungnahmen von den fünf Organisationen stammen, die die meisten Kommentare einreichen, liegt der höchste Anteil in der Interessengruppe der Regulierung-/Aufsichtsbehörden. Hier verfassen diese fünf Organisationen im Durchschnitt 60% aller Stellungnahmen dieser Interessengruppe. Ursache hierfür könnte die geringe Anzahl an unterschiedlichen Absendern aus dieser Interessengruppe sein.

An dritter Stelle reichen innerhalb der Interessengruppe der Regierungen die fünf kommentierungsstärksten Organisationen durchschnittlich 57% aller Kommentare ein.

Hervorzuheben ist auch die Interessengruppe der Bilanzersteller. Wie oben beschrieben, reichen insgesamt 2.025 Bilanzersteller eine Stellungnahme beim IASB ein. Bei Annahme einer gleich hohen Beteiligungsquote jedes einzelnen Bilanzerstellers, würde jede Organisation 0,036% aller Kommentare dieser Interessengruppe einreichen, das heißt fünf Organisationen würden 0,18% aller Kommentare einreichen. Aus Table 4-7 geht jedoch hervor, dass der Anteil der fünf Bilanzersteller, die die meisten Stellungnahmen verfassen, deutlich höher bei 9% liegt.

Bezogen auf alle Interessengruppen liegt im Durchschnitt der Anteil der fünf Organisationen, die die meisten Stellungnahmen an das IASB übermitteln, bei 40% (nicht tabelliert) der gesamten Stellungnahmen. Die Werte aus Table 4-6 und Table 4-7 verdeutlichen, dass sich die Beteiligungen der Organisationen innerhalb der Interessengruppen stark unterscheiden und ein bedeutender Anteil der Stellungnahmen jeweils nur von einer geringen Anzahl an Organisationen verfasst wird. Die Diversität auf Basis der Anzahl der unterschiedlichen Organisationen innerhalb der Interessengruppen scheint zwar gegeben zu sein (vgl. Table 4-5), allerdings geht die Beteiligung innerhalb der Interessengruppen weitestgehend von wenigen Organisationen aus.

**Table 4-7: Anteil der fünf Organisationen mit den meisten Stellungnahmen innerhalb einer Interessengruppe nach Jahren**

| Interessengruppe | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Ø |
|---|---|---|---|---|---|---|---|---|
| **Bilanzersteller** | 6% | 4% | 6% | 14% | 4% | 13% | 15% | 9% |
| **Wirtschaftsprüfer** | 20% | 15% | 17% | 18% | 17% | 20% | 20% | 18% |
| **Bilanznutzer** | 24% | 40% | 16% | 12% | 92% | 18% | 28% | 33% |
| **(Nationaler) Standardsetzer** | 30% | 29% | 25% | 27% | 26% | 25% | 27% | 27% |
| **Regulierungs-/Aufsichtsbehörde** | 61% | 56% | 46% | 80% | 48% | 63% | 67% | 60% |
| **Regierungen** | 38% | 38% | 38% | - | 25% | 100% | 100% | 57% |
| **Einzelpersonen** | 11% | 12% | 40% | 71% | 32% | 60% | 37% | 38% |
| **Akademiker** | 54% | 54% | 52% | 64% | 30% | 67% | 20% | 49% |
| **Andere Parteien** | 66% | 36% | 60% | 100% | 79% | 100% | 71% | 74% |

**Anmerkung:** Die Tabelle zeigt die den Anteil der fünf Organisationen mit den meisten Stellungnahmen innerhalb einer Interessengruppe nach Jahren.

## 4.6 Zwischenfazit

Die Analyse der Stellungnahmen hinsichtlich der Zuordnung zu Interessengruppen zeigt, dass entgegen der Zielsetzung des IASB eine Diversität sowohl zwischen, als auch innerhalb der Interessengruppen nur bedingt erkennbar ist. Vielmehr stammt der überwiegende Anteil eingereichter Stellungnahmen zu allen Kommentierungsgesuchen von den drei Interessengruppen Bilanzersteller, Wirtschaftsprüfer und (Nationale) Standardsetzer. Zwar besteht innerhalb der Interessengruppen eine Diversität, indem sich eine Vielzahl unterschiedlicher Organisationen mit mindestens einer Stellungnahme am Standardsetzungsverfahren beteiligen, jedoch geht die Beteiligung innerhalb der einzelnen Interessengruppen vorwiegend von wenigen Organisationen aus. Folglich ist fraglich, ob es dem IASB gelungen ist bzw. gelingt, die Bedürfnisse und Erwartungen unterschiedlicher Interessengruppen und Organisationen derselben Interessengruppe gleichermaßen zu berücksichtigen, oder ob die drei dominierenden Interessengruppen sowie wenigen Organisationen mit den meisten Stellungnahmen innerhalb der Interessengruppen, einen höheren Einfluss auf das IASB nehmen können und somit die Entwicklung vermehrt in

Richtung ihrer Perspektiven erfolgt. Das Ungleichgewicht in den Beteiligungsquoten kann unterschiedliche Gründe haben. Eine Ursache könnte darin liegen, dass die Anzahl der potenziell möglichen Kommentierenden für jede Interessengruppe unterschiedlich ist. Bspw. umfasst die Interessengruppe der Bilanzersteller in erster Linie sämtliche Unternehmen weltweit, die Bilanzen nach IFRS erstellen. Dagegen gibt es weniger Regulierungs-/Aufsichtsbehörden weltweit, sodass auch die Anzahl der potenziellen Stellungnahmen geringer ausfällt. Des Weiteren ist anzunehmen, dass Unternehmen ein erhöhtes Interesse haben, Einfluss auf die Standardentwicklung zu nehmen, da IFRS-Abschlüsse als wichtiges Kommunikationsinstrument für den Kapitalmarkt dienen und der Aufwand für die Erstellung der Abschlüsse erheblich ist und bei den Unternehmen selbst liegt.

## 4.7 Diversität der Herkunft

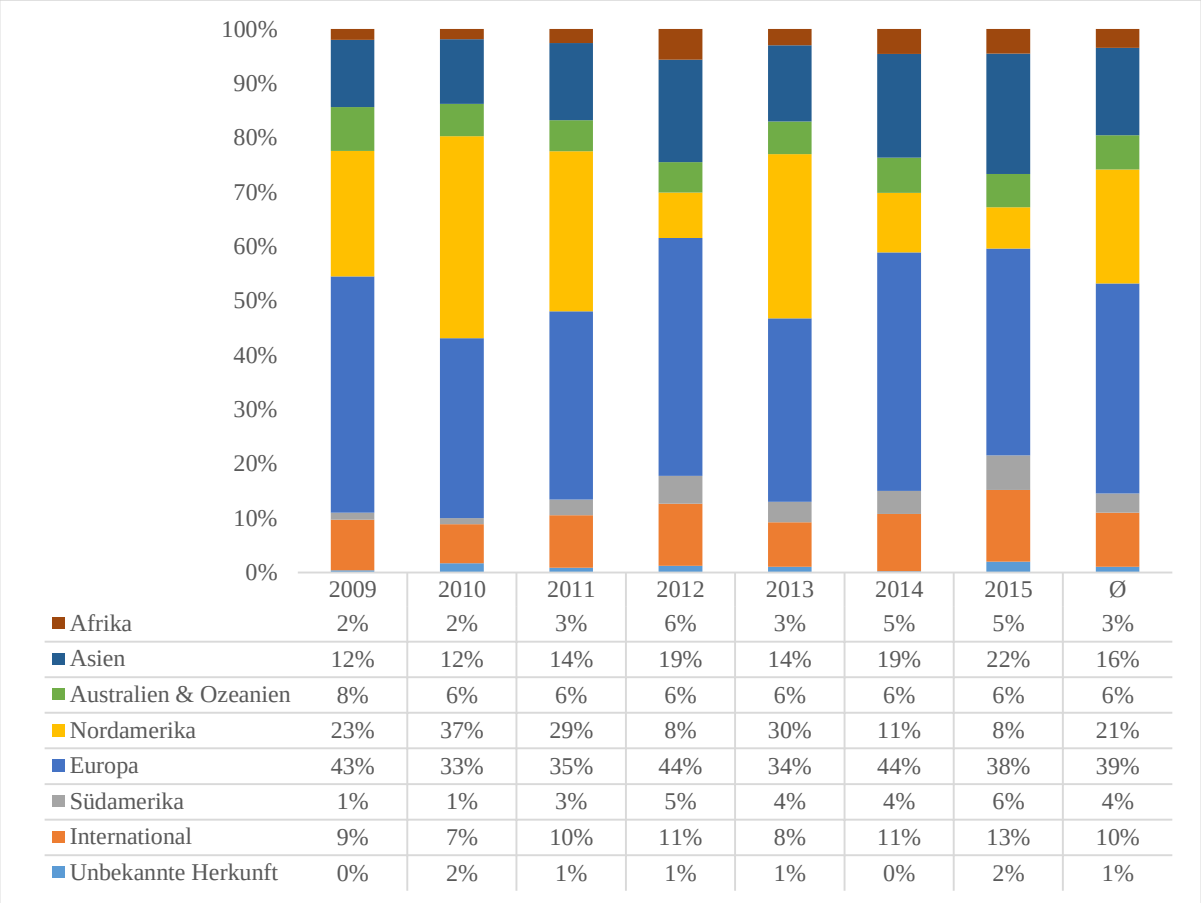
### 4.7.1 Analyse der Stellungnahmen nach Kontinenten

Eine möglichst rege Beteiligung von Kommentierenden aus unterschiedlichen Kontinenten, respektive Ländern, weltweit gilt als Voraussetzung für eine umfassende Konsistenz in der Anwendung der IFRS.[91] Zudem kann der Kritik eines übermäßigen Einflusses einzelner Regionen entgegengewirkt und die Legitimität des IASB erhöht werden.[92] Figure 4-3 zeigt die geografische Verteilung der eingegangenen Stellungnahmen für die Jahre 2009-2015 nach Kontinenten.

[91] Vgl. Larson und Herz (2013), S. 99.

[92] Vgl. Kosi und Reither (2014), S. 89; Larson und Herz (2013), S. 99; Orens et al. (2011), S. 212-214.

**Figure 4-3: Geographische Verteilung der Kontinente nach Jahren**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Ø |
|---|---|---|---|---|---|---|---|---|
| Afrika | 2% | 2% | 3% | 6% | 3% | 5% | 5% | 3% |
| Asien | 12% | 12% | 14% | 19% | 14% | 19% | 22% | 16% |
| Australien & Ozeanien | 8% | 6% | 6% | 6% | 6% | 6% | 6% | 6% |
| Nordamerika | 23% | 37% | 29% | 8% | 30% | 11% | 8% | 21% |
| Europa | 43% | 33% | 35% | 44% | 34% | 44% | 38% | 39% |
| Südamerika | 1% | 1% | 3% | 5% | 4% | 4% | 6% | 4% |
| International | 9% | 7% | 10% | 11% | 8% | 11% | 13% | 10% |
| Unbekannte Herkunft | 0% | 2% | 1% | 1% | 1% | 0% | 2% | 1% |

**Anmerkung:** Die Abbildung zeigt die geographische Verteilung der Kontinente aus denen Stellungnahmen an das IASB versendet wurden.

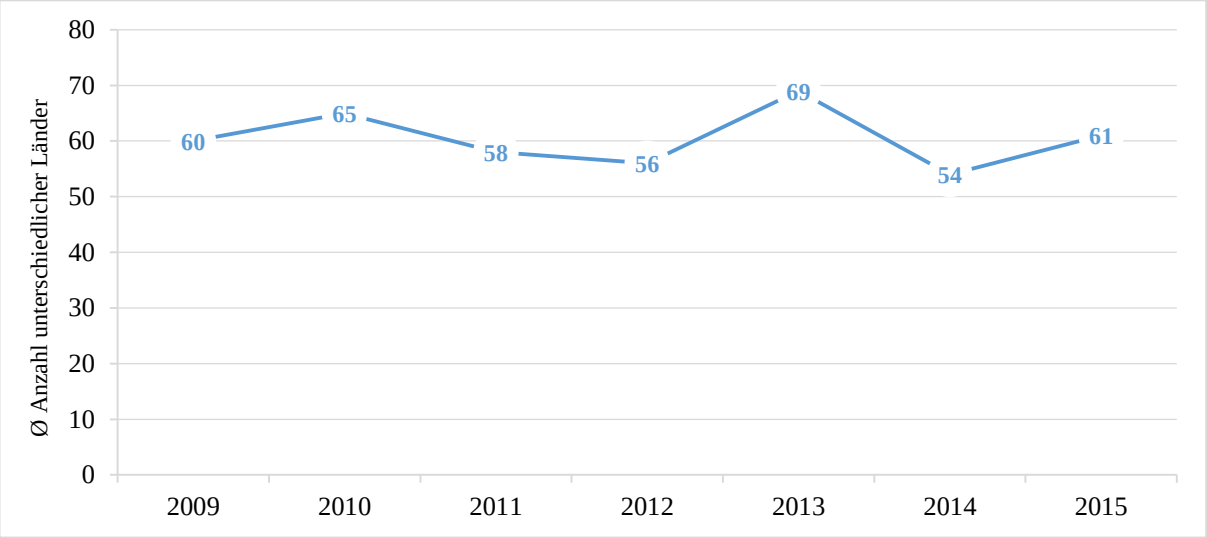
Die meisten Stellungnahmen (39%) werden über den gesamten Zeitraum 2009-2015 von europäischen Ländern eingereicht, gefolgt von Nordamerika (21%) und Asien (16%). Der Anteil dieser drei Kontinente an allen Kommentaren liegt somit bei 76%. Dies zeigt, dass die Beteiligungsquoten zwischen den Kontinenten nicht gleich verteilt sind. Wird der Zeitverlauf zwischen 2009 und 2015 betrachtet, sind die Beteiligungsquoten von Europa und Asien im Gegensatz zu Nordamerika geringeren Schwankungen unterworfen. Ursache hierfür ist die überproportional hohe Beteiligung der USA in den Jahren 2011 und 2013, in denen das IASB und FASB gemeinschaftlich Dokumente zur Kommentierung herausgeben. Die Anteile der Kommentare aus Australien & Ozeanien, Südamerika und Afrika betragen 6%, 4% und 3%.

10% der Stellungnahmen können nicht eindeutig einem Kontinent, respektive Land, zugeordnet werden und sind entsprechend als International kategorisiert. Zusammenfassend zeigt die Analyse, dass ein bedeutender Anteil an Stellungnahmen aus nur drei Kontinenten stammt und dadurch von einer nur eingeschränkten Diversität in der Herkunft der Stellungnahmen ausgegangen werden muss. Dies konnte auch bereits bei der Analyse der Interessengruppen festgestellt werden.

### 4.7.2 Analyse der Stellungnahmen nach Ländern

Um einen genaueren Einblick in die Herkunft der Stellungnehmenden zu erhalten, werden die einzelnen Länder ausgewertet, aus denen Stellungnahmen versendet werden. Figure 4-4 zeigt die durchschnittliche Anzahl unterschiedlicher Länder, aus denen im Betrachtungszeitraum 2009-2015 je mindestens eine Stellungnahme zu einem Kommentierungsgesuch des IASB übermittelt wurde. Zwischen 2009 und 2015 werden durchschnittlich Stellungnahmen aus jeweils 54-69 unterschiedlichen Ländern eingereicht. Bei diesen Ländern sind die IFRS überwiegend verpflichtend anzuwenden oder ihre Anwendung ist zulässig. Insgesamt können über den gesamten Zeitraum 86 unterschiedliche Länder identifiziert werden (nicht tabelliert), aus denen mindestens eine Stellungnahme eingereicht wurde.

**Figure 4-4: Durchschnittliche Anzahl der kommentierenden Länder nach Jahren**




**Anmerkung:** Die Abbildung zeigt die durchschnittliche Anzahl an Ländern, aus denen Stellung nahmen an das IASB übermittelt werden.

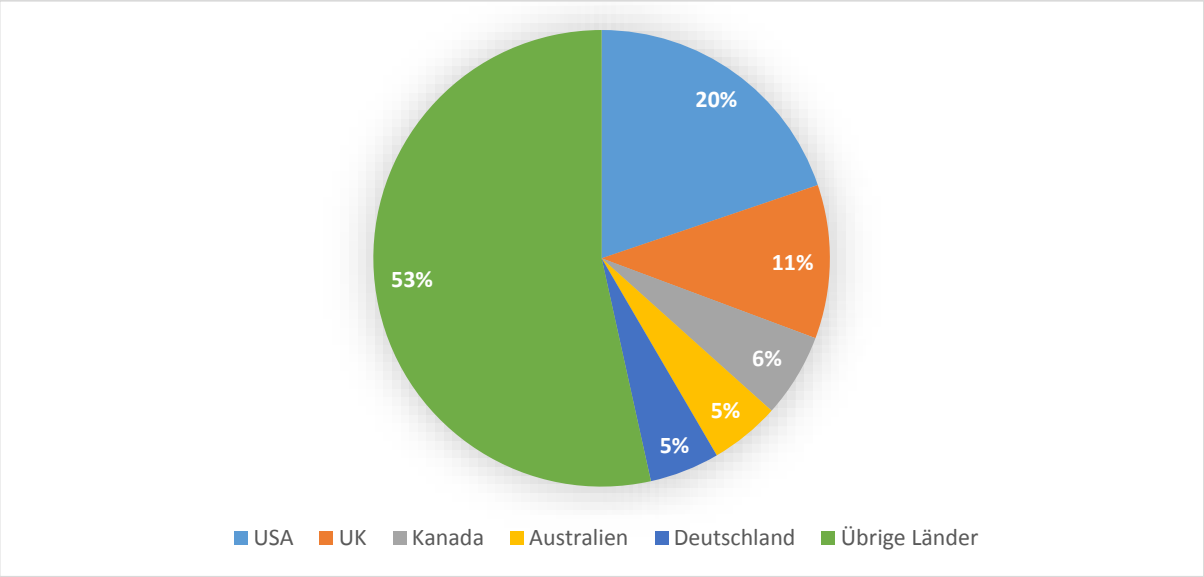
Bei Betrachtung des Zeitverlaufs ist zu erkennen, dass die Anzahl der unterschiedlichen Herkunftsländer, aus denen Stellungnahmen versendet werden, mit nur geringen Schwankungen im Bereich des Mittelwerts von 61 Ländern (nicht tabelliert) liegt. Wird berücksichtigt, dass die IFRS in 131 Ländern angewendet werden,[93] unterstreicht Figure 4-4 den Eindruck, dass sich die Teilnahme am Kommentierungsprozess auf eine Gruppe von weniger als 50% der die IFRS anwendenden Länder beschränkt. Bei jedem der 74 für die Kommentierung veröffentlichten Dokumente stammt mindestens eine Stellungnahme aus Deutschland, dem Vereinigten Königreich (UK), Malaysia und Australien. Neun weitere Länder (Niederlande, Frankreich, Kanada, Brasilien, China, Japan, Korea, Singapur und Südafrika) verfassen bei mindestens 90% der Dokumente einen Kommentar. Damit kommt in über 90% der Dokumente eine Stellungnahme aus gerade einmal 15% der betrachteten Länder

[93] Vgl. IAS Plus (2016), abrufbar unter http://hbfm.link/632 (letzter Abruf: 04. April 2017).

der Stichprobe. Dagegen werden aus 33 Ländern (38%) nur bei maximal drei Dokumenten über den Beobachtungszeitraum Stellungnahmen eingereicht.

Die fünf Länder, aus denen bei den 74 analysierten Dokumenten absolut die meisten Stellungnahmen abgeben wurden, sind die USA (2.196 Stellungnahmen), das UK (1.162), Kanada (616), Australien (528) und Deutschland (527). Figure 4-5 stellt den prozentualen Anteil der eingereichten Stellungnahmen dieser fünf Länder im Vergleich zu den Kommentaren der anderen Länder dar. Sie zeigt, dass 47% aller Kommentare aus nur fünf Ländern stammen.

**Figure 4-5: Anteil der fünf Länder mit den meisten Stellungnahmen**




**Anmerkung:** Die Abbildung zeigt den Anteil der fünf Länder aus denen die meisten Stellungnahmen an der IASB übermittelt wurden.

Weiter verdeutlicht die Abbildung, dass die USA mit einem Anteil von 20% die meisten Stellungnahmen beim IASB einreichen. Obwohl die Anwendung der IFRS in den USA nicht gestattet ist, stammt bei 82% der Dokumente mindestens ein Kommentar aus den USA (nicht tabelliert).[94] Dieses Ergebnis ist insbesondere auf die zehn gemeinsam veröffentlichten

[94] Vgl. IAS Plus (2016), abrufbar unter http://hbfm.link/632 (letzter Abruf: 04. April 2017).

Dokumente des IASB und FASB zurückzuführen. Die Gemeinschaftsprojekte haben das Ziel, die Konvergenz zwischen den beiden Rechnungslegungssystemen IFRS und US-GAAP zu erhöhen.[95] Werden nur Dokumente betrachtet, die vom IASB alleine zur Kommentierung veröffentlicht werden, beträgt der durchschnittliche Anteil an Stellungnahmen aus den USA gerade noch 6% (nicht tabelliert). Zusammenfassend fügen sich die Ergebnisse der Auswertung der Herkunft auf Basis von Ländern in das Bild bisheriger Erkenntnisse, die bei der Analyse der Herkunft der Kommentierenden nach Kontinenten gewonnen wurden. Auf Ebene der Länder verdeutlicht sich, dass der Kommentierungsprozess von nur wenigen einzelnen Ländern dominiert wird. Die vom IASB beabsichtigte Diversität in Stellungnahmen lässt sich auch auf Basis unserer bisherigen Auswertungen der Herkunft nicht erkennen. Somit ist fraglich, ob es dem IASB gelungen ist bzw. gelingt, die in der Satzung manifestierten Ziele zu erreichen.

### 4.7.3 Dominanz der G4+1-Länder

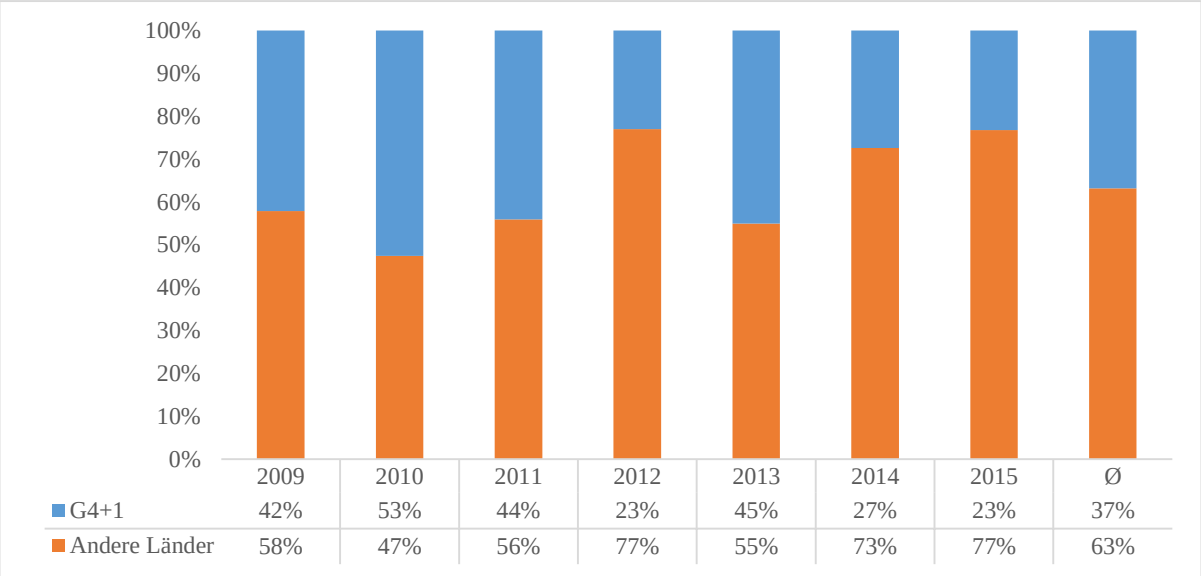
Vorangegangene Literatur kritisiert den dominierenden Einfluss der G4+1-Länder (Australien, Kanada, Neuseeland, UK, USA) beim IFRS-Standardsetzungsverfahren.[96] Dieser soll dazu führen, dass die IFRS Rechnungslegung sich vermehrt in Richtung der angloamerikanischen Rechnungslegung bewegt.[97] Figure 4-6 zeigt die durchschnittlichen Beteiligungsquoten der G4+1-Länder im Zeitverlauf. Über den gesamten Zeitraum 2009-2015 liegt die durchschnittliche Beteiligungsquote der G4+1-Länder bei 37%. Ob hier von einer Dominanz gesprochen werden kann, ist zunächst fraglich. Einzig im Jahr 2010 werden mehr als die Hälfte (53%) der Stellungnahmen aus G4+1-Ländern an das IASB übermittelt.

[95] Vgl. FASB (2002), abrufbar unter: http://hbfm.link/633 (letzter Abruf: 04. April 2017).

[96] Vgl. Larson und Herz (2013), S. 102; Botzem und Quack (2009), S. 991.

[97] Vgl. ebd.

**Figure 4-6: Anteil der G4+1-Länder nach Jahren**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Ø |
|---|---|---|---|---|---|---|---|---|
| G4+1 | 42% | 53% | 44% | 23% | 45% | 27% | 23% | 37% |
| Andere Länder | 58% | 47% | 56% | 77% | 55% | 73% | 77% | 63% |

**Anmerkung:** Die Abbildung zeigt den Anteil der Stellungnahmen, die aus G4+1-Ländern an das IASB versendet wurden.

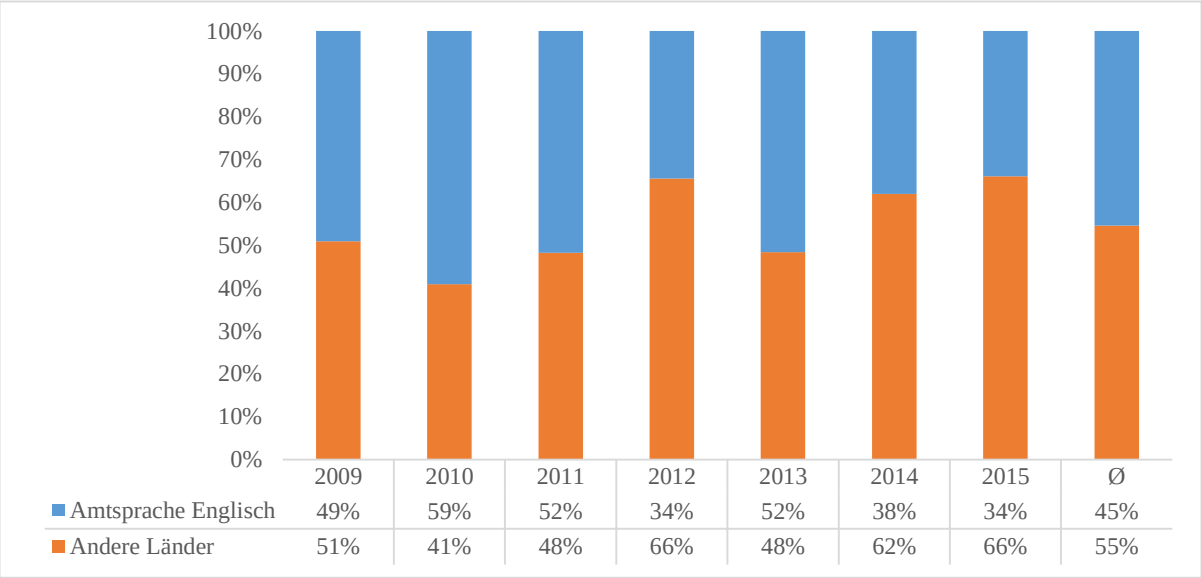
Bezogen auf die einzelnen Dokumente im gesamten Zeitraum liegt die maximale Beteiligungsquote der G4+1-Länder bei 75% und das Minimum bei 15% (nicht tabelliert). Eine Beteiligungsquote von mehr als 50% kann bei lediglich sechs Dokumenten (8%) festgestellt werden (nicht tabelliert). Aus diesem Grund kann im betrachteten Zeitraum nicht eindeutig von einem dominierenden Einfluss der G4+1-Länder gesprochen werden. Wird jedoch berücksichtigt, dass im Durchschnitt Stellungnahmen aus 61 unterschiedlichen Ländern eingereicht werden (vgl. Abschn. 4.7.2), fällt auf, dass gerade einmal aus fünf dieser Länder im Durchschnitt immerhin 37% der Stellungnahmen an das IASB übermittelt werden. Dieses Ergebnis dürfte nicht im Einklang mit der vom IASB beabsichtigten Diversität in der Herkunft stehen.

### 4.7.4 Länder mit Englisch als Amtssprache

Den G4+1-Ländern ist gemein, dass bei allen Englisch die Amtssprache ist. Darüber hinaus ist auch die Kommunikationssprache des Standardsetzungsverfahrens des IASB Englisch. Das IASB veröffentlicht zwar zu kommentierende Dokumente zusätzlich in mehreren Sprachen

(Englisch, Französisch, seit Mitte 2013 ebenfalls Spanisch und teilweise auch Japanisch), die Stellungnahmen müssen jedoch in englischer Sprache eingereicht werden. Es liegt nahe, dass Kommentierende aus englischsprachigen Ländern einen Vorteil haben, da ihr Aufwand im Umgang mit Dokumenten in der Muttersprache geringer ist und sie über einen besseren Wortschatz in den Fachbegriffen verfügen, sodass sie ihre Meinung und Anregungen präziser formulieren können.[98] Dies könnte die Begründung dafür sein, dass Länder, in denen Englisch nicht die Amtssprache ist, eine geringere Beteiligungsquote aufweisen. Figure 4-7 zeigt die durchschnittliche Beteiligungsquote von Ländern mit englischer Amtssprache.

**Figure 4-7: Anteil der Länder mit Englisch als Amtssprache nach Jahren**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Ø |
|---|---|---|---|---|---|---|---|---|
| Amtsprache Englisch | 49% | 59% | 52% | 34% | 52% | 38% | 34% | 45% |
| Andere Länder | 51% | 41% | 48% | 66% | 48% | 62% | 66% | 55% |

**Anmerkung:** Die Abbildung zeigt den Anteil der Stellungnahmen, die aus Ländern versendet wurden, in denen Englisch die Amtssprache ist.

Im Zeitraum 2009-2015 werden durchschnittlich 45% der Stellungnahmen aus Ländern mit Englisch als Amtssprache an das IASB übermittelt. In den Jahren 2010, 2011 und 2013 liegt die Beteiligungsquote dieser Länder bei über 50%. Dieses Ergebnis wird insb. durch eine äußerst hohe Beteiligung aus den USA bei einzelnen vom IASB und FASB gemeinschaftlich

[98] Vgl. Larson und Herz (2013), S. 102; Botzem und Quack (2009), S. 991.

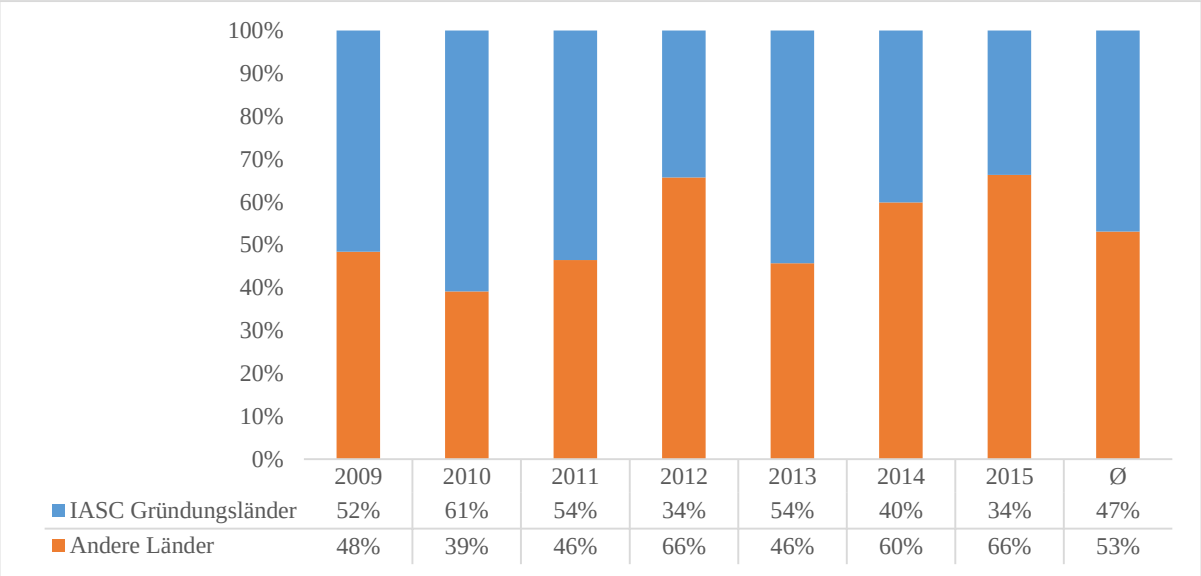
ausgegebenen Dokumenten beeinflusst. Bezogen auf die einzelnen Dokumente liegt die maximale Beteiligungsquote bei 79%, die minimale bei 29% (nicht tabelliert). Allerdings wird bei lediglich 20% aller Dokumente mehr als 50% der Stellungnahmen aus Ländern eingereicht, bei denen Englisch die Amtssprache ist (nicht tabelliert). Insgesamt lassen die Ergebnisse darauf schließen, dass Länder mit Englisch als Amtssprache keine dominierende Stellung im Kommentierungsprozess einnehmen und damit die Sprache keine Barriere für das Einreichen einer Stellungnahme darzustellen scheint.

### 4.7.5 IASC Gründungsländer

Das IASB hat seinen Ursprung im IASC, welches im Jahr 1973 durch den Zusammenschluss der Berufsverbände der Wirtschaftsprüfer aus Australien, Deutschland, Frankreich, Irland, Japan, Kanada, Mexiko, den Niederlanden, den USA und dem Vereinigten Königreich gegründet wurde.[99] Aus diesem Grund liegt die Annahme nahe, dass die Gründungsländer ein besonderes Interesse haben, sich am Kommentierungsprozess zu beteiligen, da sie eine langjährige Erfahrung mit dem Standardsetzungsprozess des IASB bzw. IASC haben. Figure 4-8 zeigt die durchschnittlichen Beteiligungsquoten der IASC-Gründungsländer. Im Durchschnitt werden 47% der Stellungnahmen aus IASC-Gründungsländern an das IASB übermittelt. Eine Beteiligungsquote von über 50% erreichen IASC-Gründungsländer in den Jahren 2009, 2010, 2011 und 2013.

[99] Vgl. Horn (2011), S. 41.

**Figure 4-8: Anteil der IASC Gründungsländer nach Jahren**




| | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | Ø |
|---|---|---|---|---|---|---|---|---|
| IASC Gründungsländer | 52% | 61% | 54% | 34% | 54% | 40% | 34% | 47% |
| Andere Länder | 48% | 39% | 46% | 66% | 46% | 60% | 66% | 53% |

**Anmerkung:** Die Tabelle zeigt den Anteil der Stellungnahmen, die aus IASC Gründungsländern an das IASB versendet wurden.

Bei Betrachtung der einzelnen Dokumente liegt die maximale Beteiligungsquote von IASC Gründungsländern bei 81% und die minimale bei 21%. Bei 42% aller Dokumente lassen sich über 50% der Stellungnahmen IASC-Gründungsländern zuordnen. Wird jedoch berücksichtigt, dass im Durchschnitt Stellungnahmen aus 61 unterschiedlichen Ländern eingereicht werden (vgl. Abschn. 4.7.2), so machen die IASC-Gründungsländer lediglich einen Anteil von 16% aus. Dieses Ergebnis lässt den Schluss zu, dass die IASC-Gründungsländer eine dominierende Gruppe im Kommentierungsprozess darstellen. Auf Basis der eingereichten Stellungnahmen erscheint es nur schwer vorstellbar, dass es dem IASB gelungen ist bzw. gelingt, die Perspektiven unterschiedlicher Herkunft gleichgewichtet zu berücksichtigen.

## 4.8 Zusammenfassung

Aufgrund der privatrechtlichen Struktur des IASB ist ein transparenter und öffentlicher Standardsetzungsprozess für die Akzeptanz und Legitimität der Standards und Interpretationen

unerlässlich. In der Satzung der IFRS Foundation ist deshalb als Ziel manifestiert, dass die Bedürfnisse von Unternehmen verschiedener Art, Größe und wirtschaftlichem Umfeld angemessen einbezogen werden sollen. Eine möglichst hohe Beteiligung unterschiedlicher Interessengruppen aus möglichst vielen unterschiedlichen Ländern und Regionen kann das IASB dabei unterstützen. Auf Basis der im Standardsetzungsverfahren eingereichten Stellungnahmen zu vom IASB veröffentlichten Dokumenten wird der Frage nachgegangen, ob und in welchem Ausmaß Diversität in den Interessengruppen und den Herkunftsländern festzustellen ist.

Im Rahmen dieses Beitrags wurde bei der Analyse von 11.094 Stellungnahmen zu 74 zur Kommentierung veröffentlichten Dokumenten im Zeitraum 2009-2015 festgestellt, dass die Beteiligung hinsichtlich der Interessengruppe und Herkunft nicht divers ist. Vielmehr zeigen die Ergebnisse, dass über 83% der eingereichten Stellungnahmen von Bilanzerstellern, Wirtschaftsprüfer und (Nationalen) Standardsetzern beim IASB eingereicht werden. Die übrigen Interessengruppen beteiligen sich nur gering am Kommentierungsprozess. Innerhalb der jeweiligen Interessengruppen weisen die Untersuchungen darauf hin, dass sich zwar eine bedeutende Anzahl unterschiedlicher Organisationen am Kommentierungsprozess beteiligt, im Durchschnitt allerdings 40% der Stellungnahmen von den jeweils fünf kommentierungsfreudigsten Organisationen verfasst werden.

Mit Blick auf die Herkunft der Stellungnahmen lassen sich wenig überraschend dominierende Beteiligungsquoten für die Kontinente Europa, Nordamerika und Asien feststellen. Auf Basis der Herkunftsländer der Kommentierungsschreiben wird ersichtlich, dass über 47% der Stellungnahmen aus den fünf Ländern Australien, Deutschland, Kanada, UK und USA entstammen. Des Weiteren lässt sich aufgrund ihrer hohen Beteiligungsquoten ein dominierender Einfluss der G4+1-Länder sowie der IASC-Gründungsländer nicht

ausschließen. Sprachliche Barrieren scheinen Interessierte nicht vom Verfassen einer Stellungnahme abzuhalten. Die Ergebnisse der Analysen legen den Schluss nahe, dass die vom IASB gewünschte möglichst diverse Zusammensetzung der Teilnehmer am Standardsetzungsverfahren hinsichtlich Interessengruppe und Herkunft bislang nicht vorliegt. Es ist deshalb kritisch zu hinterfragen, ob es dem IASB gelingt, verschiedene Bedürfnisse angemessen zu berücksichtigen und somit die Ziele der IFRS Foundation in vollem Maße erfüllt werden.

Offen bleibt die Frage, ob und wie es dem IASB gelingt, die Diversität der eingereichten Stellungnahmen hinsichtlich der Interessengruppen und Herkunftsländer nachhaltig zu verbessern.

## 4.9 Literaturverzeichnis

Beresford, D. 1993. Frustration of a standard setter. *Accounting Horizons* 7 (4): 70-76.

Bieg, H., C. Hossfeld, H. Kußmaul, and G. Waschbusch. 2009. Handbuch der Rechnungslegung nach IFRS. Grundlagen und praktische Anwendung. 2., erw. und akt. Aufl. Düsseldorf: IDW-Verl.

Bouley, V. 2015. Möglichkeiten der Einflussnahme auf das IASB. *Master Thesis*. Technische Universität München. Abgabe: Oktober 2015.

Botzem, S., and S. Quack. 2009. (No) limits to anglo-american accounting? Reconstructing the history of the International Accounting Standards Committee: A review article. *Accounting, Organizations and Society* 34 (8): 988-998.

Durocher, S., and A. Fortin. 2011. Practitioners' participation in the accounting standard-setting process. *Accounting and Business Research* 41 (1): 29-50.

FASB. 2002. Convergence with the International Accounting Standards Boards (IASB). Available at: http://hbfm.link/633 (last accessed April 4, 2017).

Georgiou, G. 2004. Corporate lobbying on accounting standards: Methods, timing and perceived effectiveness. *Abacus* 40 (2): 219-237.

Georgiou, G. 2010. The IASB standard-setting process: Participation and perceptions of financial statement users. *The British Accounting Review* 42 (2): 103-118.

Giner, B., and M. Arce. 2012. Lobbying on accounting standards: Evidence from IFRS 2 on share-based payments. *European Accounting Review* 21 (4): 655-691.

Hansen, T. B. 2011. Lobbying of the IASB: An empirical investigation. *Journal of International Accounting Research* 10 (2): 57-75.

Horn, S. 2011. Arbeitsweise des IASB. In: M. Buschhüter und A. Striegel (Hg.): Kommentar Internationale Rechnungslegung IFRS. Wiesbaden: Gabler: 38-57.

IFRS Foundation. 2013a. Constitution- revised and approved by the trustees January 2013. Available at: http://hbfm.link/627 /last accessed April 4, 2017).

IFRS Foundation. 2013b. Handbook due process- revised by the trustees January 2013. Available at: http://hbfm.link/631 (last accessed April 4, 2017).

IAS Plus. 2016. Use of IFRS by jurisdiction. Available at: http://hbfm.link/632 (last accessed April 4, 2017).

Jorissen, A., N. Lybaert, R. Orens, and L. Van Der Tas. 2012. Formal participation in the IASB's due process of standard setting: A multi-issue/multi-period analysis. *European Accounting Review* 21 (4): 693-729.

Katselas, D., J. Birt, and X. H. Kang. 2011. International firm lobbying and ED 8 operating segments. *Australian Accounting Review* 21 (2): 154-166.

Königsgruber, R. 2009. Lobbying bei der Rechnungslegungsstandardsetzung. Ein Literaturüberblick. *Zeitschrift für Betriebswirtschaft* 79 (11): 1309-1329.

Kosi, U., and A. Reither. 2014. Determinants of corporate participation in the IFRS 4 (insurance contracts) replacement process. *Accounting in Europe* 11 (1): 89-112.

Kurz, G. 2009. Das IASB und die Regulierung der Rechnungslegung in der EU. Eine Analyse von Legitimation und Lobbying. 1. Aufl. Frankfurt am Main [u.a.]: Lang (Betriebswirtschaftliche Studien, Rechnungs- und Finanzwesen, Organisation und Institution, 86).

Kwok, W., and D. Sharp. 2005. Power and international accounting standard setting. *Accounting, Auditing & Accountability Journal* 18 (1): 74-99.

Larson, R. K. 2007. Constituent participation and the IASB's international financial reporting interpretations committee. *Accounting in Europe* 4 (2): 207-254.

Larson, R. K., and P. J. Herz. 2013. A multi-issue/multi-period analysis of the geographic diversity of IASB comment letter participation. *Accounting in Europe* 10 (1): 99-151.

Orens, R., A. Jorissen, N. Lybaert, L. Van Der Tas. 2011. Corporate lobbying in private accounting standard setting: Does the IASB have to reckon with national differences? *Accounting in Europe* 8 (2): 211-234.

Pellens, B., R. U. Fülbier,J. Gassen, and T. Sellhorn. 2014. Internationale Rechnungslegung. IFRS 1 bis 8, IAS 1 bis 41, IFRIC-Interpretationen, Standardentwürfe; mit Beispielen, Aufgaben und Fallstudie. 8., überarb. und erw. Aufl. Stuttgart: Schäffer-Poeschel.

Richardson, A. J., and B. Eberlein. 2011. Legitimating transnational standard-setting: The case of the International Accounting Standards Board. *Journal of Business Ethics* 98 (2): 217-245.

Sutton, T. G. 1984. Lobbying of accounting standard-setting bodies in the U.K. and the U.S.A.: A downsian analysis. *Accounting, Organizations and Society* 9 (1): 81-95.

Tandy, P., and N. Wilburn. 1996. The academic community's participation in standard setting: Submission of comment letters on SFAS Nos. 1-117. *Accounting Horizons* 10 (3): 92-111.

# 5 Conclusion

The overall goal of this dissertation is to approach financial accounting information from three different perspectives and to broaden our understanding on the importance of individual auditor characteristics, the real effects of changes in the accounting information environment, and lobbyism in the accounting standard-setting process. In all three essays, we base our hypothesis on a thorough examination of established theories and use hand-collected data, data gathered from databases, and proprietary data to conduct a large number of empirical tests to approach our research questions. In the following section, we summarize our empirical findings and point out implications of each distinct essay. The dissertation concludes with an outlook for promising avenues, which could be followed by future research.

## 5.1 Summary of Results, Contributions, and Implications

The first essay studies individual auditor characteristics. In particular, this essay examines whether auditors benefit from engagement in research by providing higher audit quality and generate higher audit fees. We label those auditors who are engaged in both in audit practice, by acting as lead auditors, and in research, by publishing journal articles, books, and book chapters, as academic practitioner auditors (APAs). We base our analysis on a German setting as APAs are more commonly compared to the U.S. and other countries. Furthermore, the German setting allows us to identify the individual lead auditor from the audit opinion. To approach our research question, we conduct interviews with APAs, a survey among the editors of journals APAs have published in, and a large number of established empirical tests.

The interviews with APAs show that they characterize their publications as practice-oriented research that complies with academic standards. Further, APAs describe that actively

immersing themselves into the topic and the related literature helps them to gain considerable knowledge that is of value in their day-to-day business. Similarly, publications appear likely to be a valuable signal recognized by the client that enables APAs to differentiate themselves from non-APAs. However, interviewed APAs question whether publications help them to generate higher audit fees. Based on our survey with journal editors, we document that all journals APAs have published in conduct a review procedure, whereby many journals have an anonymous peer-review process in place. Further, most editors characterize the articles published in their journals as practice-oriented research that meets academic standards. The journals' readership consists of researchers, top management as well as audit and accounting practitioners revealing the journals' aim of bridging the gap between academia and practice. Taken the results of the interviews and the survey provides us with initial evidence that APA publications meet a certain academic standard and substantially differ from public relations material also published by the audit firms. Moreover, APAs confirm our argumentation that publications and, therefore, engagement in research appears likely to have an effect on their own practice as well as on their clients.

In our empirical tests, we find that clients of APAs have lower levels of absolute abnormal accruals, are less likely to have accounting restatements, and are associated with higher audit fees. We further provide evidence that these effects are suggested to allow for a causal interpretation using several identification strategies such as an instrumental variable approach, using matched samples, consider characteristics of the articles and journals or run change analyses. Overall, we find consistent results that APAs provide higher audit quality and are associated with higher audit fees. Specifically, we find that a mandatory replacement of a non-APA by an APA has an incremental positive effect on both audit quality and audit fees. Change analyses document that additional publications beyond the first publication enhance provided

audit quality, whereas in contrast, the first publication matters for generating additional audit fees. Moreover, we show that the types of publications have a different impact on audit quality and audit fees. Publishing articles has a positive influence on audit fees, whereas publishing books appears likely to enhance provided audit quality. In line with this notion, we find that the audit quality effects of a publication are stronger for articles published in ranked journals versus non-ranked journals and provide evidence that articles with a higher circulation are associated with higher audit fees. In addition, we perform several sensitivity tests. We show that engagement in publications also enhances the accuracy of going-concern modifications and contributes to a longer auditor-client tenure. Our results are robust when restricting the sample to Big 4 auditors and hold when using alternative measures for our dependent and independent variables.

The first essay contributes to the literature by providing evidence that non-practical experiences acquired through engagement in practice-oriented research parallel to the audit engagement might help auditors to enhance their audit quality and negotiate higher audit fees. Thereby, we add to the literature on the impact of individual auditor characteristics on their audit outcomes (e.g., Craswell et al. 1995; Francis et al. 2005; Gul et al. 2013; Zerni 2012; Sundgren and Svanström 2014; Knechel et al. 2015; Goodwin and Wu 2016).[100] In a similar vein, the first essay adds to the current and ongoing debate of the AAA and the AICPA on the gap between research, practice, and education (Pathways Commission 2012 and 2014). The first essay shows that APAs benefit from bridging the gap between research and practice.

Besides contributing to the extant literature, the first essay provides several practical implications on individual auditors. Audit firms frequently raise the natural question about how

[100] See also DeFond and Zhang (2014) and Lennox and Wu (2017) for literature reviews.

to enhance the quality of provided audits and how to improve the skills and expertise of their auditors. For instance, by training their auditors on the job or supporting them to gain specific expertise on, for example, a certain industry. The first essay provides important practical implications by showing that engagement in practice-oriented research besides their day-to-day business might help auditors to enhance their audit quality and to negotiate higher audit fees. Thereby, we show that also non-practical expertise gathered from publishing journal articles, books or book chapters can positively influence their daily work. Consequently, audit firms could support their auditors to more frequently engage in practice-oriented research to gain new knowledge and skills by actively immersing into new topics as well as critically analyzing related literature. Practitioner engagement in research might also help to overcome the gap between research and practice. Several studies discuss that research and practice appear to diverge with the limited integration of academic research skills into practice (e.g., Nearon 2002; Inanga and Schneider 2005; Pathways Commission 2012 and 2014; Ratzinger-Sakel and Grey 2015). The prior literature states that academic research often features complex theoretical or empirical methods and a high level of abstraction that renders it difficult to link it to practical audit problems (Moser 2012; Ratzinger-Sakel and Gray 2015). In showing that auditors can benefit from crossing the border between research and practice, we provide further practical implications on one possible way how to integrate research into practice. The reason for this phenomenon might be that APAs, on the one side, transfer acquired skills and knowledge gathered from research into practice. On the other side, APAs can contribute to research by transferring practical insights into research and incorporate practice-related experiences into their publications. APAs can also focus on topics that are relevant to the whole audit profession and, thereby, meet the demand for more practice-oriented research.

The second essay examines corporate risk-taking with respect to changes in the accounting information environment. Specifically, we look into the mandatory adoption of IFRS, changes in the enforcement of accounting standards, and the adoption of quarterly reporting in the EU. We argue that the three accounting information events change accounting information in three different ways: (1) the mandatory adoption of IFRS enhances the relevance and comparability, (2) changes in the enforcement of accounting standards increase the reliability, and (3) the adoption of quarterly reporting enhances the timeliness of accounting information. In case more relevant and comparable, more reliable as well as timelier accounting information is available, on the one hand, managers can use this information to better identify and evaluate risks and, on the other hand, investors can use this information to monitor managers' decisions more closely. In both cases, accounting information might change corporate risk-taking. We base our analysis on an international setting, which allows us to investigate the staggered implementation of all three accounting information events and helps us to mitigate concerns about the undue impact of confounding events (Leuz and Wysocki 2016).

Essay 2 provides evidence that changes in the accounting information environment are associated with decreases in corporate risk-taking. Specifically, this effect can be shown for all firms subject to enforcement reforms. For the mandatory adoption of IFRS as well as for the adoption of quarterly reporting, we cannot find a statistically significant association with corporate risk-taking per se. Following Christensen et al. (2013), we further take the countries' regulatory quality into consideration as high-quality countries are documented to more successfully implement new regulations. Providing subsample analysis based on Kaufman et al. (2009) regulatory quality index as well as on Brown et al. (2014) enforcement quality index, we find a statistically significant and negative association with corporate risk-taking for all three accounting information events, but only for countries with an already high level of regulatory

quality and enforcement quality. Hence, the effect seems to be conditional upon whether these reforms are strongly enforced. Furthermore, we provide evidence that changes in corporate risk-taking appear to be influenced by the bundled effect of mandatorily adopting IFRS parallel to enforcement reforms, as we observe a decline in corporate risk-taking only for an *enforced* mandatory IFRS adoption. Aiming at identifying the channel through which corporate risk-taking is affected, we cannot find empirical evidence supporting the assumption that managers are provided with better information for their decision-making. Hence, we suggest that the firms' adjustments to lower levels of risk-taking are associated with an increase in total shareholder returns, which indicates positive consequences for shareholders.

The second essay contributes to the literature on real effects of changes in the accounting information (e.g., Cohen et al. 2008; Cohen and Zarowin 2010; Gigler et al. 2014). We add to this stream of literature by showing that corporate risk-taking changes after accounting information becomes more relevant and comparable, more reliable as well as timelier. A possible explanation for this effect might be that information asymmetries between investors and managers could be reduced by the accounting information events and investors potentially have better opportunities to monitor managers. We also contribute to the literature on real effects and economic consequences of accounting information events like the mandatory adoption of IFRS, changes in the enforcement of accounting standards, and the adoption of quarterly reporting (e.g., Christensen et al. 2013; Daske et al. 2013; Hail et al. 2014; Gigler et al. 2014; Ernstberger et al. 2017; see also Leuz and Wysocki 2016 for review). In providing evidence that these events are potential to change corporate risk-taking, we add to this stream of literature that accounting information events have not only capital-market effects but also appear likely to change managerial behavior. Finally, we contribute to the literature on the determinants of corporate risk-taking. Primarily, this stream of literature focuses on investor

protection as well as the countries' legal traditions (e.g., Wright et al. 2007; John et al. 2008). We add to the literature that changes in the financial accounting information can influence corporate risk-taking. This effect can also be treated as a further step towards higher investor protection.

Besides contributing to the extant literature, the second essay provides several practical implications on corporate risk-taking. It appears natural that investors raise the question how to align their interests with managers' interests. Due to information asymmetries between these two groups, investors have only limited insights into the firm to monitor managers (Jensen and Meckling 1976). The second essay provides practical implications that more relevant and comparable, more reliable as well as timelier disclosed accounting information could reduce information asymmetry between investors as well as managers. This phenomenon seems capable of reducing corporate risk-taking and, therefore, influences managerial behavior. Thereby, the second essay shows that accounting information appears likely to serve as an instrument to affect managerial behavior. Moreover, the essay documents that corporate risk-taking declines after managers become more transparent to investors. In a similar vein, Essay 2 appears likely to have practical implications for policy makers. The essay documents that accounting information events can change corporate risk-taking. These effects appear to be the strongest when the accounting information event results in more reliable information disclosed to the capital market. Therefore, policy makers could take into consideration that reforms on accounting information might focus on the enhanced reliability of disclosed accounting information in case it aims at influencing managers' risk appetite. Further, Essay 2 underlines the importance of strong enforcement institutions in the context of introducing new accounting regulations.

The third essay looks into lobbyism in the IASB standard-setting process. The IASB aims at developing IFRS that adequately incorporate different opinions and interests of various stakeholders to develop accounting standards, which are broadly accepted, less likely to be subject to criticism, consistently applicable, and compliant. Due to divergent interests of involved parties, high participation rates of as diverse stakeholder groups as possible are a major component of the standard setters' legitimacy since the acceptance of developed accounting standards increases when constituents are actively involved in the development process (Suchman 1995; Durocher et al. 2007; Jorissen et al. 2012; Larson and Herz 2013). We asses over 11,000 comment letters, which are submitted to the IASB in the period 2009-2015 to analyze, which stakeholder groups and countries primarily participate in the standard-setting process. With regard to the diversity between the stakeholder groups, we find that preparers participate most strongly in the IASB standard-setting process by submitting the highest number of comment letters. Prepares are followed by auditors and (national) standard setters. Except for the year 2015, these three stakeholder groups submit more than 80 percent of the comment letters to the IASB indicating that the participation between all stakeholder groups might be dominated by preparers, auditors, and (national) standard setters. Looking into the diversity within the stakeholder groups, we show that the participation is concentrated on a small number of organizations. More specifically, we document that the five organizations with the highest number of comment letters in a respective stakeholder group submit on average 40 percent of the comment letters of the whole stakeholder group. We further examine the geographical origin from where comment letters have been submitted to the IASB. We find that most comment letters are submitted from European countries, followed by North American countries and Asian countries. On average, we document that 76 percent of all comment letters are sent from these three regions. At a more detailed level, we assess the contribution at the

country-level. We document that 47 percent of all comment letters submitted to the IASB are sent from only five countries (USA, UK, Canada, Australia, and Germany). Conducting further analysis, we provide evidence that organizations from G4+1-countries appear not to dominate other organizations, language barriers might not be a reason for missing participation, and organizations from IASC founding countries noticeably more frequently submit comment letters. Taken together, we cannot find evidence of a high diversity between as well as within the stakeholder groups and the geographical origin from where comment letters are sent to the IASB. Hence, it is questionable whether the IASB can adequately consider the diverse interests of different stakeholder groups and geographical origins to develop standards, which are broadly accepted, less likely to be subject to criticism, consistently applicable, and compliant.

The third essay contributes to the literature on the participation of stakeholder groups from different regions and countries in the IASB standard-setting process (e.g., Georgiou 2004; Jorissen et al. 2012; Larson and Herz 2013; Kosi and Reither 2014). Using large-scale data of more than 11,000 comment letters, we add to this stream of literature by showing that the participation of the various stakeholder groups, as well as regions and countries, is not equally distributed. Hence, we provide evidence that the participation in the IFRS standard-setting process by submitting comment letters to the IASB is dominated by only a few stakeholder groups, respectively organizations, and regions, respectively countries. Shifting the focus on the IASB's target to consider as many interests of various stakeholders as possible, we further add to the literature by documenting that it appears questionable whether the IASB can achieve its aims.

The question of whether and especially how the IASB can adequately consider the interest of as many stakeholders as possible is of particular interest to practitioners. The IFRS standards are applicable in 131 countries worldwide, whereby all countries make different claims to the

IFRS resulting from differences in, for example, the legal tradition, capital-market development, enforcement systems, etc. (IAS Plus 2016). For this reason, it is important to understand whether the IASB can draw on information contributed by various stakeholders or whether the contribution is dominated by only a small number of organizations and countries. A domination of only a few organizations and countries could imply that the IASB appears likely to develop IFRS that primarily focus the interest of a few. The third essay provides practical implications that the IASB might not be able to consider a broad range of diverse interests to develop IFRS, which are widely accepted and consistently applicable. We further show that the IASB should react to this unequal distribution and take steps to motivate a broader number of stakeholder to participate in the IFRS standard-setting process. One possible step could be to more clearly demonstrate non-participants that actively commenting on new standards can have a significant influence on newly developed standards. In a similar vein, the IASB needs to emphasize that it is interested in new standards, which are not exclusively developed for only a small number of organizations or countries. Hence, the third essay reveals that the IASB is in the position to react and should consider that claiming to develop IFRS, which are globally applicable and accepted, implies to motive as many organizations from diverse stakeholder groups and different countries as possible.

## 5.2 Outlook

The dissertation at hand approaches financial accounting information from three different perspectives, i.e. individual auditor quality to ensure reliable accounting information, real effects of changes in the accounting information environment, and lobbyism in the IASB consultative standard-setting process. Providing evidence on enhanced audit quality and higher

audit fees of auditors that engage in practice-oriented research, changes in corporate risk-taking, and the missing diversity in the IASB standard-setting process, the three essays raise various issues for promising avenues of future research.

The first essay follows frequent calls for more research on individual auditor characteristics and provides evidence about the auditor's engagement in practice-oriented research as one potential explanation for variation in the individual audit quality as well as in audit fees (DeFond and Zhang 2014; Lennox and Wu 2017). However, it is difficult to evaluate whether our findings that APAs provide higher audit quality and negotiate higher audit fees are clearly attributable to the auditor's engagement in practice-oriented research or whether our findings pick up unobservable characteristics such as personal traits. To extend our initial inferences, further studies could conduct research that allows for a closer consideration of personality characteristics such as critical thinking skills, writing skills, cognitive skills or skills to transfer known concepts to the day-to-day business. One potential method to overcome these limitations might be to conduct (field) experiments, as these methods provide a broad range of opportunities to more closely look into personal traits and skills. In line with this notion, future research could also extend our initial interviews with auditors that have published articles, books or book chapters. This interview might be an interesting starting point for future research conducting additional interviews with APAs as well as non-APAs, on the one hand, and clients on the other hand. Thus, research could get insights into whether APAs differ from non-APAs and whether these differences are potential to explain variation in audit quality or audit fees. In contrast, it would be interesting to add the client perspective and assess whether clients notice the auditor's engagement in practice-oriented research and are willing to pay for it. In a similar vein, it would be interesting to learn more about the client's perception of engagement in

practice-oriented research, more specifically, whether the client suggests a link between and the engagement in practice-oriented research and the provided audit quality.

With regard to the lack of data availability on the matching between individual auditors and clients as well as the forthcoming disclosure of engagement partner's identification in the USA (PCAOB 2015), it would be interesting to extend our study to additional countries. Thus, future research could examine whether this phenomenon is exclusive only to our German setting where an integration of research and practice is (at least to some degree) achieved in accounting research that "was traditionally strongly rooted in codified law" (Küpper and Mattessich 2005, p. 371). For this reason, the first essay could be extended to countries like Sweden, Taiwan, or the USA where the individual auditor identification is already available or will be shortly available. This extension opens manifold opportunities for future research: (1) Research on whether there are also auditors that engage in practice-oriented research in other countries. (2) Research on whether the individual auditor's engagement in practice-oriented research enhances audit quality and increases audit fees in other countries. (3) Research focusing on U.S.-American auditors and their engagement in practice-oriented research, which could provide valuable insights into the recent debate on the AAA Pathways Commission that argues that "strong linkages between research and practice […] are key to sustaining an intellectually recognized profession" (Pathways Commission 2012, p. 27). Hence, future research could provide evidence to the Pathways Commission on the benefit of a strong linkage between research as well as practice in the field of auditing and provide guidance on how to transfer improvement proposals into concrete measures.

The second essay contributes to the stream of literature that investigates the real effects of changes in the accounting information environment (see Leuz and Wysocki 2016 for review). Providing initial evidence that corporate risk-taking potentially decreases after accounting

information events, this essay gives rise to further questions. It would be interesting to look more deeply into the channels through which publicly disclosed accounting information could affect managerial behavior with regard to corporate risk-taking. We argue that corporate risk-taking might change due to the internal use of better accounting information or the better monitoring of investors. However, we can only provide an initial and strongly simplified test to investigate one channel. Thus, future research could focus on more direct measures that, for example, (1) capture the investor's ability to monitor managers and to use their "voice" to influence managerial behavior and (2) capture the internal use of accounting information when making decisions. Furthermore, the second essay investigates the association between exogenous accounting information shocks and corporate risk-taking. In line with this notion, future research could orchestrate other events such as mergers and acquisitions (M&A) and examine its effects on corporate risk-taking. Noting that M&As are not exogenous and firms consciously decide whether to extend their business or not it could be, however, of interest to look into corporate risk-taking in the post-M&A period. In this setting, it would be particularly interesting to examine whether and how corporate risk-taking changes with regard to different M&A strategies such as horizontal mergers of firms that have related product portfolios or conglomerate mergers of firms, which are completely unrelated to each other (Amihud and Lev 1981; Montgomery 1994). More specifically, future research could address the research question whether corporate risk-taking changes around conglomerate M&As, as these business combinations aim at risk reduction due to diversification effects (Amihud and Lev 1981). Hence, there might be a lower risk appetite after the business combination.

The third essay examines lobbyism in the IASB standard-setting process and documents that the IASB might be dominated by only a few stakeholder groups, respectively organizations, and regions, respectively countries. Taken these findings, future research could further focus

on the motivation of organizations to participate in the standard-setting process. Getting a better understanding of what triggers organization to submit a comment letter, future research could develop specific actions to motivate more organization to participate in the IASB standard-setting process. One explanation for missing participation might be the underlying assumption that submitting a comment letter does not affect the outcomes of the IASB standard-setting process. In line with this explanation, future research could examine the influence of comment letters within the development of an IFRS standard. Moreover, it would be interesting to better understand through which channel (e.g., comment letters, personal/round-table meetings, and fieldwork (IFRS Foundation 2013b)) participation in the standard-setting process can most successfully affect the final IFRS standard. We note that future research on lobbyism in the standard-setting process should not intend to condemn the IASB but rather should help to find solutions on how the IASB can motivate more organizations from different stakeholder groups and countries to participate in the standard-setting process.

# References

**For the Introduction and the Conclusion only**

Advisory Committee on the Auditing Profession. 2008. Final report. Washington, D.C. U.S. Department of the Treasury. Available at: http://www.treasury.gov/about/organizational-structure/offices/Documents/final-report.pdf (last accessed April 4, 2017).

Akerlof, G. 1970. The market for 'lemons': Quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 84 (3): 488-500.

Albrecht, W. S., and R. J. Sack. 2001. The perilous future of accounting education. *The CPA Journal* 71 (3): 17-23.

Amihud, Y., and B. Lev. 1981. Risk reduction as a managerial motive for conglomerate mergers. *The Bell Journal of Economics* 12 (2): 605-617.

Badertscher, B., N. Shroff, and H. D. White. 2013. Externalities of public firm presence: Evidence from private firms' investment decisions. *Journal of Financial Economics* 109 (3): 682-706.

Beasley, M., J. Carcello, and D. Hermanson. 1999. Fraudulent financial reporting: 1987–1999, An analysis of U.S. public companies. New York, NY: Committee of Sponsoring Organizations of the Treadway Commission.

Beasley, M., J. Carcello, and D. Hermanson. 2011. Fraudulent financial reporting: 1998–2007, An analysis of U.S. public companies. New York, NY: Committee of Sponsoring Organizations of the Treadway Commission.

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

Biddle, G. C., and G. Hilary. 2006. Accounting quality and firm-level capital investment. *The Accounting Review* 81 (5): 963-982.

Biddle, G. C., G. Hilary, and R. S. Verdi. 2009. How does financial reporting quality relate to investment efficiency? *Journal of Accounting and Economics* 48 (2–3): 112-131.

Botzem, S., and S. Quack. 2009. (No) Limits to Anglo-American accounting? Reconstructing the history of the International Accounting Standards Committee: A review article. *Accounting, Organizations and Society* 34 (8): 988-998.

Bromiley, P. 1991. Testing a causal model of corporate risk taking and performance. *Academy of Management Journal* 34 (1): 37-59.

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

Brüggemann, U., J.-M. Hitz, and T. Sellhorn. 2013. Intended and unintended consequences of mandatory IFRS adoption: A review of extant evidence and suggestions for future research. *European Accounting Review* 22 (1): 1-37.

Bushman, R., and A. J. Smith. 2001. Financial accounting information and corporate governance. *Journal of Accounting and Economics* 32 (1-3): 237-333.

Chi, W., L. A. Myers, T. C. Omer, and H. Xie. 2017. The effects of audit partner pre-client and client-specific experience on audit quality and on perceptions of audit quality. *Review of Accounting Studies* 22 (1): 361-391.

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

Christensen, H. B., L. Hail, and C. Leuz. 2013. Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics* 56 (2-3): 147-177.

Cohen, D. A., A. Dey, and T. Z. Lys. 2008. Real and accrual-based earnings management in the pre- and post-Sarbanes-Oxley periods. *The Accounting Review* 83 (3): 757-787.

Cohen, D. A., and P. Zarowin. 2010. Accrual-based and real earnings management activities around seasoned equity offerings. *Journal of Accounting and Economics* 50 (1): 2-19.

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

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research* 46 (5): 1085-1142.

Daske, H., L. Hail, C. Leuz, and R. Verdi. 2013. Adopting a label: Heterogeneity in the economic consequences around IAS/IFRS adoptions. *Journal of Accounting Research* 51 (3): 495-547.

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

Dechow, P., A. Hutton, and R. Sloan. 1996. Causes and consequences of earnings manipulation: An analysis of firms' subject to enforcement actions of the SEC. *Contemporary Accounting Research* 13 (1): 1-36.

Dechow, P., W. Ge, and C. Schrand. 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics* 50 (2-3): 344-401.

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

DeFond, M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics* 58 (2-3): 275-326.

Dobler, M., K. Lajili, and D. Zéghal. 2011. Attributes of corporate risk disclosure. An international investigation in the manufacturing sector. *Journal of International Accounting Research* 10 (2): 1-22.

Durocher, S., A. Fortin, and L. Côté. 2007. Users' participation in the accounting standard-setting process: A theory-building study. *Accounting, Organizations and Society* 32 (1-2): 33-63.

Easley, D., and M. O'Hara. 1987. Price, trade size, and information in securities markets. *Journal of Financial Economics* 19 (1): 69-90.

Ernstberger, J., B. Link, M. Stich, and O. Vogler. 2017. The real effects of mandatory quarterly reporting. *The Accounting Review* (forthcoming), 2017.

Evans, E., R. Burritt, and J. Guthrie 2011. In: *Bridging the gap between academic accounting research and professional practice*, e.d. E. Evans, R. Burritt, and J. Guthrie, 9-20. Sydney: The Institute of Chartered Accountants in Australia.

Ferguson, A., J. Francis, and D. Stokes. 2003. The effects of firm-wide and office-level industry expertise on audit pricing. *The Accounting Review* 78 (2): 97-106.

Francis, J. R. 2004. What do we know about audit quality? *The British Accounting Review* 36 (4): 345-368.

Francis, J. R., K. Reichelt, and D. Wang. 2005. The pricing of national and city-specific reputations for industry expertise in the U.S. audit market. *The Accounting Review* 80 (1): 113-136.

Francis, J. R., and M. Yu. 2009. The effect of Big 4 office size on audit quality. *The Accounting Review* 84 (5): 1521-1552.

Francis, J. R. 2011. A framework for understanding and researching audit quality. *Auditing: A Journal of Practice & Theory* 30 (2): 125-152.

Georgiou, G. 2004. Corporate lobbying on accounting standards: methods, timing and perceived effectiveness. *Abacus* 40 (2): 219-237.

Gigler, F., C. Kanodia, H. Sapra, and R. Venugopalan. 2014. How frequent financial reporting can cause managerial short-termism: An analysis of the costs and benefits of increasing reporting frequency. *Journal of Accounting Research* 52 (2): 357-387.

Goodwin, J., and D. Wu. 2016. What is the relationship between audit partner busyness and audit quality? *Contemporary Accounting Review* 33 (1): 341-377.

Graham, J., C. Harvey, and S. Rajgopal. 2005. The economic implications of corporate financial reporting. *Journal of Accounting and Economics* 40 (1-3): 3-73.

Gul, F. A., D. Wu, and Z. Yang. 2013. Do individual auditors affect audit quality? Evidence from archival data. *The Accounting Review* 88 (6): 1993-2023.

Hail, L., A. Tahoun, and C. Wang. 2014. Dividend payouts and information shocks. *Journal of Accounting Research* 52 (2): 403-456.

Healy, P. M., and K. G. Palepu. 1993. The effect of firms' financial disclosure strategies on stock prices. *Accounting Horizons* 7 (1): 1-11.

Healy, P. M., and K. G. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics* 31 (1-3): 405-440.

Holmstrom, B. 1979. Moral hazard and observability. *The Bell Journal of Economics* 10 (1): 74-91.

Hopwood, A. G. 2007. Whither accounting research? *The Accounting Review* 82 (5): 1365-1374.

Horton, J., and G. Serafeim. 2010. Market reaction to and valuation of IFRS reconciliation adjustments: First evidence from the UK. *Review of Accounting Studies* 15 (4): 725-751.

Horton, J., G. Serafeim, and I. Serafeim. 2013. Does mandatory IFRS adoption improve the information environment? *Contemporary Accounting Research* 30 (1): 388-423.

IAS Plus. 2016. Use of IFRS by jurisdiction. Available at: http://hbfm.link/632 (last accessed April 4, 2017).

IFRS Foundation (Ed.). 2013a. Constitution- revised and approved by the trustees January 2013. Available at: http://hbfm.link/627 (last accessed April 4, 2017).

IFRS Foundation. 2013b. Handbook due process- revised by the trustees January 2013. Available at: http://hbfm.link/631 (last accessed April 4, 2017).

IFRS Foundation (Ed.). 2016. Pocket guide to IFRS standards: the global financial reporting language. Available at: http://www.ifrs.org/Use-around-the-world/Documents/2016-pocket-guide.pdf (last accessed April 4, 2017).

Inanga, E. L., and W. B. Schneider 2005. The failure of accounting research to improve accounting practice: A problem of theory and lack of communication. *Critical Perspectives on Accounting* 16: 227-248.

Jensen, M. C., and W. H. Meckling. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3 (4): 305-360.

Jensen, M. C. 1986. Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review* 76 (2): 323-329.

John, K., L. Litov, and B. Yeung. 2008. Corporate governance and risk-taking. *The Journal of Finance* 63 (4): 1679-1728.

Jorissen, A., N. Lybaert, R. Orens, and L. Van Der Tas. 2012. Formal participation in the IASB's due process of standard setting: A multi-issue/multi-period analysis. *European Accounting Review* 21 (4): 693-729.

Kachelmeier, S. 2010. Introduction to a forum on individual differences in accounting behavior. *The Accounting Review* 85 (4): 1127-1128.

Kanodia, C., and H. Sapra. 2016. A real effects perspective to accounting measurement and -disclosure: Implications and insights for future research. *Journal of Accounting Research* 54 (2): 623-676.

Kaplan, R. 2011. Accounting scholarship that advances professional knowledge and practice. *The Accounting Review* 86 (2): 367-383.

Katselas, D., J. Birt, and X. H. Kang. 2011. International firm lobbying and ED 8 operating segments. *Australian Accounting Review* 21 (2): 154-166.

Kaufmann, D., A. Kraay, and M. Mastruzzi. 2009. Governance matters VIII: Governance indicators for 1996-2008. Washington D.C.

Kim J.-B., R. Chung R., and M. Firth. 2003. Audit conservatism, asymmetric monitoring, and earnings management. *Contemporary Accounting Research* 20 (2): 323-359.

Knechel, W. R., A. Vanstraelen, and M. Zerni. 2015. Does the identity of engagement partners matter? An analysis of audit partner reporting decisions. *Contemporary Accounting Research* 32 (4): 1443-1478.

Königsgruber, R. 2009. Lobbying bei der Rechnungslegungsstandardsetzung. Ein Literaturüberblick. *Zeitschrift für Betriebswirtschaft* 79 (11): 1309-1329.

Kosi, U., and A. Reither. 2014. Determinants of corporate participation in the IFRS 4 (insurance contracts) replacement process. *Accounting in Europe* 11 (1): 89-112.

Küpper, H.-U., and R. Matteessich. 2005. Twentieth century accounting research in the German language area. *Accounting, Business and Financial History* 15 (3): 345-409.

Kyle, A. S. 1985. Continuous auctions and insider trading. *Econometrica* 53 (6): 1315-1335.

Larson, R. K. 2007. Constituent participation and the IASB's International Financial Reporting Interpretations Committee. *Accounting in Europe* 4 (2): 207–254.

Larson, R. K., P. J. Herz, and S. Y. Kenny. 2011. Academics and the development of IFRS: An invitation to participate. *Journal of International Accounting Research* 10 (2): 97-103.

Larson, R. K., and P. J. Herz. 2013. A multi-issue/multi-period analysis of the geographic diversity of IASB comment letter participation. *Accounting in Europe* 10 (1): 99-151.

Lawrence, A., M. Minutti-Meza, and P. Zhang. 2011. Can Big 4 versus non-Big 4 differences in audit-quality proxies be attributed to client characteristics? *The Accounting Review* 86 (1): 259-286.

Leaven, L., and R. Levine. 2009. Bank governance, regulation and risk taking. *Journal of Financial Economics* 93 (2): 259-275.

Lennox, C. 1999. Are large auditors more accurate than small auditors? *Accounting and Business Research* 29 (3): 217-227.

Lennox, C., and X. Wu. 2017. A review of the literature on audit partners. Working paper. Available at: https://papers.ssrn.com/sol3/papers2.cfm?abstract_id=2876174 (last accessed April 4, 2017).

Lesage, C., and H. Wechtler. 2012. An inductive typology of auditing research. *Contemporary Accounting Research* 29 (2): 487-504.

Leuz, C., and P. D. Wysocki. 2016. The economics of disclosure and financial reporting regulation: Evidence and suggestions for future research. *Journal of Accounting Research* 54 (2): 525-622.

Li, C. 2009. Does client importance affect auditor independence at the office level? Empirical evidence from going-concern opinions. *Contemporary Accounting Research* 26 (1): 201-230.

Luthardt, U., and J. Zimmermann. 2009. A European view on the legitimacy of accounting procedures: Towards a deliberative-accountability framework for analysis, *Research in Accounting Regulation* 21 (2): 79-88.

McNichols, M. F., and S. R. Stubben. 2008. Does earnings management affect firms' investment decisions? *The Accounting Review* 83 (6): 1571-1603.

Mongomery, C. A. 1994. Corporate diversification. *The Journal of Economic Perspectives* 8 (3): 163-178.

Moser, D. V. 2012. Is accounting research stagnant? *Accounting Horizons* 26 (4): 845-850.

Myers, S. C. 1984. Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics* 13 (2): 187-221.

Nearon, B. H. 2002. A radical proposal accounting education. *The CPA Journal* 72 (10): 28-33.

Pathways Commission. 2012. Charting a national strategy for the next generation of accountants. Available at: http://commons.aaahq.org/files/0b14318188/Pathways_Commission_Final_Report_Complete (last accessed April 4, 2017).

Pathways Commission. 2014. Implementing the recommendations of the pathways commission: Year two. Available at: http://aaahq.org/images/PathwaysAnnualReport.pdf (last accessed April 4, 2017).

Phillips, F. 1999. Auditor attention to judgments of aggressive financial reporting. *Journal of Accounting Research* 37 (1): 167-189.

Public Company Accounting Oversight Board (PCAOB). 2015. Improving the transparency of audits: Rules to require disclosure of certain audit participants on a new PCAOB form and related amendments to auditing standards. *PCAOB Release No. 2015-008* (December 15). Available at: https://pcaobus.org/Rulemaking/Docket029/Release-2015-008.pdf (last accessed April 4, 2017).

Ratzinger-Sakel, N., and G. L. Gray. 2015. Moving toward a learned profession and purposeful integration: Quantifying the gap between the academic and practice communities in auditing and identifying new research opportunities. *Journal of Accounting Literature* 35 (October): 217-240.

Reichelt, J. K., and D. Wang. 2010 The audit review process: A characterization from the persuasion perspective. *Journal of Accounting Research* 48 (3): 647-686.

Rich, J., I. Solomon, and K. Trotman. 1997. Multi-auditor judgment/decision making research: A decade later. *Accounting, Organizations and Society* 22 (5): 481-505.

Shleifer, A., and R. W. Vishny. 1997. A Survey of corporate governance. *The Journal of Finance* 52 (2): 737-783.

Simnett, R., A. Vanstraelen, and W. F. Chua. 2009. Assurance on sustainability reports: An international comparison. *The Accounting Review* 84 (3), 937-967.

Suchman, M. 1995. Managing legitimacy: Strategic and institutional approaches. *The Academy of Management Review* 20 (3): 571-610.

Sundgren, S., and T. Svanström. 2014. Auditor-in-charge characteristics and going-concern reporting. *Contemporary Accounting Research* 31 (2): 531-550.

Sutton, T. G. 1984. Lobbying of accounting standard-setting bodies in the U.K. and the U.S.A.: A Downsian analysis. *Accounting, Organizations and Society* 9 (1): 81–95.

Titman, S., and B. Trueman. 1986. Information quality and the valuation of new issues. *Journal of Accounting and Economics* 8 (2): 159-172.

Trompeter, G. 1994. The effect of partner compensation schemes and generally accepted accounting principles on audit partner judgment. *Auditing: A Journal of Practice & Theory* 13 (2): 56-69.

Verrecchia, R. E. 2001. Essays on disclosure. *Journal of Accounting and Economics* 32 (1-3): 97-190.

Wright, P., M. Kroll, J. A. Krug, and M. Pettus. 2007. Influences of top management team incentives on firm risk taking. *Strategic Management Journal* 28 (1): 81-89

Zerni, M. 2012. Audit partner specialization and audit fees: Some evidence from Sweden. *Contemporary Accounting Research* 29 (1): 312-340.

Zimmermann, J., J. R. Werner, and P. B. Volmer. 2008. Global governance in accounting: Rebalancing public power and private commitment (London: Palgrave Macmillan).

# Appendix

## Appendix A: Contribution to Working Papers and Articles

### Essay 1 (Chapter 2)

I collected the main parts of data to investigate the research question. Financial data and additional auditor information was provided by my co-authors or were retrieved from databases.

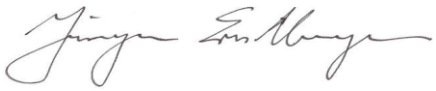
I was responsible for data analysis. The analysis design was an iterative cooperative process. The analyses were cross-checked and adjusted by the co-authors.

I conducted the journal survey, whereby, the development of the survey design was an iterative cooperative process by all three authors.

The development of the interview design as well as conducting the interviews was as an iterative cooperative process by all three authors.

I wrote the initial paper drafts. Writing the revisions was an iterative cooperative process by all three authors.

Martin Prott (lead author)



Jürgen Ernstberger (co-author)

Christopher Koch (co-author)

**Essay 2 (Chapter 3)**

I had the paper idea. The setting, as well as the identification strategy, was developed in an iterative and cooperative process.

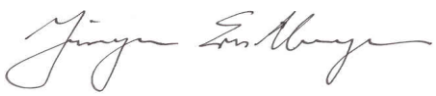
I discussed the paper idea with the co-author to assess whether the proposed paper could make a contribution to the literature.

I collected the data.

I was responsible for data analysis, whereby the analysis design was developed in an iterative and cooperative process.

I wrote the initial paper drafts and the revisions were an iterative cooperative process.

Martin Prott (lead author)



Jürgen Ernstberger (co-author)

**Essay 3 (Chapter 4)**

I developed the paper idea.

The data set was mainly collected and initial data analysis were conducted during the master thesis of my co-author submitted to the Full Professorship Financial Accounting, Technical University of Munich, in October 2015. The paper version is significantly different from the master thesis.

I was responsible for revising and extending the data set as well the data analysis.

I wrote the paper draft and made the revisions suggested by the reviewer and editor.

The final wording was an iterative and cooperative process.

Martin Prott (lead author)

Veronika Bouley (co-author)