Studies on Determinants and Consequences of Financial Reporting Quality

Studies on Determinants and Consequences of Financial Reporting Quality

Studies naar de determinanten en consequenties
van de kwaliteit van financiële verslaggeving

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Chapter 1

General Introduction

The three studies of this dissertation shed light on the determinants and consequences of financial reporting quality. Chapter 2 examines the economic consequences of accounting quality in a setting that is characterized by low demand for high quality financial reporting. Chapters 3 and 4 focus on audit- specific determinants of financial reporting quality. In particular, chapter 3 investigates the association between auditor size and audit quality in a low litigation, reputation, and regulatory scrutiny setting. Chapter 4 explores the interplay between auditor political connections and audit quality.

Accounting research concludes that accounting quality has economic consequences for public firms. Financial reporting quality mitigates information asymmetry between the firm and its capital providers and therefore alleviates adverse selection concerns. Consistent with this argument, prior research has repeatedly documented a strong link between attributes of accounting earnings and public firm's cost of debt and equity. It is not ex- ante certain, however, that this relation would persist in the private firm setting, where the demand for high quality financial reporting is substantially weaker. Private firms typically develop insider communication channels with their stakeholders. They therefore rely less on publicly available financial statements to communicate their true economic performance. Chapter 2 investigates the relation between attributes of accounting earnings and private firms' access to two main sources of financing: bank debt and trade credit capital. To this end, I use a sample of private firms from the European Union' five largest economies (UK, Germany, Italy, France, and Spain) during the period 1997- 2010. Results

indicate that high quality financial reporting is associated with lower cost of debt and lower levels of short to total debt. Furthermore, financial reporting quality is associated with better access to trade credit capital. Consequently, the financial reporting quality of private firms does have economic consequences even in the presence of private communication channels that serve as alternative information asymmetry- mitigating mechanisms.

The quality of financial statement verification is a fundamental determinant of financial reporting quality. In audit research, the size of the auditor has been frequently used as a surrogate measure for audit quality. The positive link between auditor size and audit quality, however, rests on the assumption of strong large- auditor incentives to deliver superior quality as a result of reputation, litigation, and regulatory scrutiny considerations. In the absence of such incentives, the relation between auditor size and audit quality becomes less obvious. This observation gains particular importance in the presence of strong incentives by small auditors to maintain a sufficient level of high audit quality as well in light of arguments suggesting that non- Big 4 auditors have better knowledge of their clients compared to Big 4 auditors. Such small- auditor audit quality advantages might not be able to materialize in the presence of strong Big 4 incentives to retain their audit quality advantage. However, when these incentives become materially weak, the manifestation of a non- Big 4 audit quality advantage becomes more likely. In chapter 3, I investigate the interplay between auditor size and audit quality in the UK private firm setting. Auditor litigation and reputation considerations are significantly weaker in private firm settings. Furthermore, the UK is characterized by low alignment between financial and tax reporting. As a result, auditors are less likely to be scrutinized by

tax authorities. This further reduces auditor incentives to deliver high quality audits. The UK private firm setting therefore qualifies as a setting in which large auditors have reduced incentives to offer high quality audits. Using a sample of UK private firm auditees that spans from 2005 to 2012, I find that clients of non- Big 4 auditors are associated with better audit quality compared to clients of Big 4 auditors. Results are robust to a battery of alternative specifications and indicate that, in the absence of strong large- auditor incentives to deliver high quality audits, the otherwise positive relation between auditor size and audit quality reverses. Chapter 3 contributes to the literature primarily by being the first to document the existence of a negative relation between auditor size and audit quality in the private firm setting when large auditors has materially weak incentives to deliver high quality audits. It additionally contributes to audit research by assessing the importance of auditor incentives over competing explanations in shaping the Big 4 audit quality advantage that typically characterizes public firm settings.

In chapter 4, I investigate a relatively unexplored determinant of audit quality: the level of auditor political connectedness. Accounting research seems to conclude that politically connected firms are associated with lower financial reporting quality as a result of their ability to capture regulators and enforcement agencies. The purpose of chapter 4 is to investigate the relation between auditor political connections and audit quality at the audit office level. Using a sample of long- term Big 4 audit employee PAC contributions to members of committees responsible for auditor regulation and oversight that spans from 2003 to 2012, I find that clients of political connected offices are less likely to restate their earnings. However, in contrast to the firm- specific results, I report no evidence of regulatory capture by auditors. I argue that politically connected auditors have increased

reputation considerations and superior standard setting and audit- relevant knowledge as a result of their network connections and position. Results further indicate that the negative relation between audit office political connectedness and client restatement frequency does not persist for politically connected clients. This finding suggests that politically connected auditors are less likely to deliver high quality audits for those clients for which the likelihood that an audit failure is detected is lower. Chapter 4 contributes to the literature by being the first to investigate the relation between auditor political connections and audit quality at the office level. It demonstrates that the political connections of auditors accrue audit quality benefits to their clients and, as such, auditor- and firm- specific political connections affect accounting quality in opposite directions. It additionally contributes to the audit literature by recognizing audit office political connectedness as a potential threat to auditor independence but only for those clients that are politically connected themselves.

1.2 Declaration of Contribution

In this section, I declare my contribution to the three studies of this dissertation and acknowledge the contribution of other parties where relevant.

Chapter 2: This chapter is based on Elemes and Peek (2015). A significant part of this paper has been completed by the author under the guidance of the co-author.

Chapter 3: This chapter has been completed independently by the author. The feedback of the supervisor has been implemented.

Chapter 4: This chapter has been completed independently by the author. The feedback of the supervisor has been implemented.

Chapter 2*

The Economic Consequences of Private Firms' Financial Reporting Quality

2.1 Introduction

Bank and trade credit financing are the two primary sources of external capital for private firms (Berger and Udell 1998)[1]. Nevertheless, empirical evidence on the association between financial reporting quality and private firms' access to debt and trade credit financing is scarce. Prior research has primarily focused on the financial reporting differences between public and private firms (Ball and Shivakumar 2005; Burgstahler et al. 2006; Peek et al. 2010; Hope et al. 2013), the effect of auditing on private firms' cost of debt and access to external financing (Allee and Yohn 2009; Hope et al. 2011; Minnis 2011; Kim et al. 2011; Karjalainen 2011; Koren et al. 2014) or on the relation between financial reporting quality and the cost of debt for the private debt of publicly listed companies (Bharath et al. 2008; Wittenberg-Moerman 2008; Callahan et al. 2014). There is a recent exception, Vander Bauwhede et al. (2015), who investigate the relation between financial reporting quality and the cost of debt for private firms. However, their study merely focuses on the cost of debt rather than overall access to private firms' most important forms of capital and is additionally restricted to the Belgian private firm setting only.

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* This chapter is based on Elemes and Peek (2015). I thank Urska Kosi, Ann Vanstraelen, workshop participants at Erasmus University Rotterdam, Humboldt University, and the 2014 AAA IAS Midyear Meeting.

[1] Consistent with this argument, I report mean (median) bank debt to total assets and trade payables to total assets ratios of 25.82% (24.22%) and 20.80% (19.86%) respectively using a sample of private firms from the European Union's five largest economies.

The purpose of this paper is to examine the association between attributes of accounting earnings and private firms' access to debt and trade credit capital. To this end, I use a sample of private firms from the European Union's five largest economies, i.e., the United Kingdom, Germany, France, Italy, and Spain, which spans from 1997 to 2010. Because my primary objective is to investigate the impact of accounting choices (rather than economic factors) on the financing decisions of private firms, I focus on accrual-based earnings attributes. The earnings attributes that I consider are accrual quality and accrual informativeness. Accrual quality captures the precision with which accruals map on past, present, and future cash flows, whereas accrual informativeness measures the ability of accruals to predict future cash flow changes. To my knowledge, this is one of the first papers to investigate the relation between the financial reporting choices of private firms and their access to their foremost sources of financing, namely bank debt and trade credit capital.

According to the European Commission more than 99% of all European businesses are private firms. They provide two out of three of the private sector jobs and contribute to more than half of the total value-added created by businesses in the EU. Yet private firms' financial reporting choices have received disproportionally low attention in accounting research. This seems to be partly due to the consensus in accounting research that private firms have weaker incentives for high-quality reporting than public firms. Cloyd et al. (1996), Ball and Shivakumar (2005), and Burgstahler et al. (2006) argue that tax, dividend, and compensation considerations are some of the main drivers of private firms' financial reporting quality. Furthermore, private firms are characterized by different ownership, governance, and financing structures compared to public firms (Ball and Shivakumar

2005; Burgstahler et al. 2006; Chen et al. 2011; Hope et al. 2013). Public firms' creditors are typically at arm's length from the firms to which they provide financing. Instead, private firms' suppliers and capital providers develop private communication channels with their customers and therefore rely less on financial statements to mitigate information asymmetry (Petersen and Rajan 1997; Boot 2000).

Potential capital providers, however, do not enjoy the information acquisition benefits of existing financiers. Instead, they are characterized by severe information asymmetry problems, primarily in the form of adverse selection. This latter observation is important for private firms since they gradually become informationally captured by their relationship lenders. In particular, the relationship lending literature establishes a link between financial reporting opacity and higher-than-competitive interest rates (Sharpe 1990; Boot 2000). Furthermore, the customer base of trade credit suppliers is typically more risky compared to that of banks. Suppliers are therefore severely exposed to default risk (Ng et al. 1999) and often require that buyers take actions to establish creditworthiness prior to the provision of credit (Fisman and Raturi 2004; Ng et al. 1999). I therefore expect accounting quality to play an important role in the customer screening process of both banks and suppliers.

The results of the empirical analysis confirm the existence of a link between the financial reporting quality of private firms and their cost of debt. The regressions of the cost of debt on accrual quality show that, the cost of debt difference between the worst and best accrual quality deciles amounts to up to 37 basis points. The corresponding difference between the worst and best accrual informativeness deciles is roughly 9 basis points. Furthermore, both accrual quality and accrual informativeness are associated with lower

levels of short to total debt. In particular, the difference between the worst and best deciles amount to up to 1.94 and 2.35 percentage points for the corresponding measure. These findings suggest that financial reporting quality is priced by private firms' debt capital providers. Furthermore, high quality financial reporting allows private firms gain better access to long- term financing and therefore rely less on short- term debt, which is relatively more expensive. Financial reporting quality therefore also affects private firms' debt structure decisions.

In a second step, I investigate the link between high quality financial reporting and access to trade credit capital. The respective analysis shows that both earnings attributes are positively associated with access to trade credit. The difference between the worst and best accrual quality deciles amounts to up to 1.5 percentage points, whereas the difference between the worst and best accrual informativeness deciles amounts to up to 1.26 percentage points. Therefore, the accounting choices of private firms determine the financing decision of not merely debt providers, but trade credit providers as well.

This paper contributes to the literature in three ways. First, it offers insight into the financial reporting incentives of private firms. To a large extent, prior research has either investigated the accounting quality of private firms in comparison to that of public firms or has focused on the implications of auditing on private firms' cost of debt. My finding that high quality financial reporting has economic implications for private firms illustrates that private firms have incentives to adopt transparent financial reporting practices.

Second, to my knowledge, this is the first paper to examine the association between financial reporting quality and private firms' access to trade credit capital. Trade credit constitutes the second most importance source of capital for private firms (Berger and

Udell 1998). I show that private firms with high quality financial reporting gain better access to trade credit financing.

Finally, this paper is also relevant in light of the voluntary adoption of IFRS for SMEs in the European Union. In July 2009 the IASB published an International Financial Reporting Standard (IFRS) designed for use by small and medium-sized enterprises (SMEs), the adoption of which is currently voluntary in the EU. By providing evidence of the favorable market outcomes that are associated with high quality financial reporting, this paper is relevant to policymakers who actively seek ways to improve accounting standards and customize them to the financial reporting needs of private firms and their stakeholders.

The remainder of this paper is organized as follows. In section 2, I review the related literature and develop the hypotheses. Section 3 presents the earnings attributes and the empirical models used. In section 4, I describe the sample selection process and offer descriptive statistics, as well as the correlations among the earnings attributes. Empirical tests and results are presented in section 5. Section 6 concludes.

2.2 Background and Hypothesis Development

The consensus in the accounting literature seems to be that private firms exhibit lower levels of financial reporting quality than public firms. This idea has been confirmed in many studies using different properties of accounting earnings. Ball and Shivakumar (2005) and Peek et al. (2010), for example, focus on timely loss recognition and report that private firms exhibit lower levels of conditional conservatism than public firms. Burgstahler et al. (2006) employ various proxies of earnings management, such as earnings

smoothness and the magnitude of total accruals, and conclude that European private firms are more likely to engage in earnings management. More recently, Hope et al. (2013) find that US public firms have higher accrual quality and are more conservative compared to private firms. Ball and Shivakumar (2005) support the view that the financial reporting quality of private firms is primarily driven by tax, dividend and compensation payment policies. In line with this argument, Cloyd et al. (1996) and Burgstahler et al. (2006) find that tax considerations play an important role in determining private firms' financial reporting decisions.

Private firms have weak incentives to communicate their true economic performance through public financial reports due to lower market demand. They typically have more concentrated ownership structures compared to public firms and are characterized by greater shareholder involvement in the management of the firm (Hope et al. 2012). These factors result in lower shareholder- management conflicts (La Porta et al. 1999). Moreover, private firms tend to make more use of relationship lending and trade credit financing. Whereas, public firms' shareholders and creditors are more at arm's length from management, private stakeholders use private communication channels to acquire information about firms' true economic performance. Private communication channels strongly characterize both bank lending and trade credit financing in the private firm setting.

Bank lending in private firms typically takes the form of relationship banking. Boot (2000) argues that relationship banking resolves problems of asymmetric information and provides capital to firms whose informational opacity hinders their ability to obtain financing. However, relationship banking is also associated with significant hold- up costs

as firms gradually become informationally captured by banks (Rajan 1992; Sharpe 1990). Firms' reporting opacity gives relationship banks an informational advantage over outside creditors thus allowing banks to extract rents to the detriment of their borrowers. In other words, financial reporting opacity increases information asymmetry among existing and potential providers of bank capital. As a result, outside lenders are unable to determine potential borrowers' true repayment ability and command high interest rates to compensate themselves for the incurred uncertainty. Existing lenders who have inside information about their clients' creditworthiness are therefore able to charge interest rates that are still higher than what their borrowers' true level of riskiness would justify. This creates incentives for private firms to improve financial reporting quality as a means of mitigating information asymmetry and the associated hold- up problems.

In the current paper, I focus on the following earnings attributes: accrual quality and accrual informativeness. My estimate of accrual quality is the precision with which working capital accruals map into past, present, and future cash flows of operations (Dechow and Dichev 2002; McNichols 2002). Cash flow from operations represent the valuation- relevant construct that earnings are intended to capture. Consequently, intentional and unintentional errors incur uncertainty about the distribution of future cash flows. I therefore expect that low levels of accrual quality impair the ability of lenders to assess borrowers' repayment capacity. Accrual informativeness captures the extent to which accruals predict future cash flow changes. In this context, accrual informativeness is a useful measure for capital providers because it improves their ability to estimate the future cash flows of their customers. Taken together, I consider favorable values of each of

these measures to alleviate the information asymmetry that exists between private firms and their potential lenders.

To the degree that high quality financial reporting shape debt providers' lending decisions, I expect that there is a direct link between the two earnings attributes and private firm's cost of debt. I additionally expect the accounting choices of private firms to determine their debt structure decisions by allowing them to gain more access to long-term debt compared to short- term debt, which is relatively more expensive. Following this analysis, I formulate my first two hypotheses as follows:

H1a: Financial reporting quality is negatively associated with private firms' cost of debt.

H1b: Financial reporting quality is negatively associated with private firms' short to total debt ratios.

Like banks, suppliers also rely heavily on private communication channels to extract information about their customers' creditworthiness. Petersen and Rajan (1997) express the view that suppliers have an information advantage in inferring customer financial strength. They argue that suppliers are able to visit buyers' premises more often than financial institutions. In addition, suppliers use early payment discounts (two- part payment terms) that mitigate information asymmetry problems between the two parties (Smith 1987; Pike et al. 2005; Petersen and Rajan 1997; Ng et al. 1999). Petersen and Rajan (1997) add that early payment discounts serve as trip wires alerting suppliers of a potential deterioration of their clients' creditworthiness. They explain that failure to claim

the generous discount that is implied in the two- part payment terms provides a strong signal that the customer may be facing financial difficulties.

On the other hand, suppliers can have a risky base of customers. This argument is consistent with the price discrimination theory which predicts that trade credit is overpriced for creditworthy customers, yet constitutes an attractive source of financing for less creditworthy customers (Petersen and Rajan 1997; Ng et al. 1999; Pike et al. 2005)[2]. Trade credit therefore exposes the seller to default risk (Ng et al. 1999). This enhances the incentives that suppliers have to use financial statements in order to infer customer creditworthiness. Although providers of trade credit can cut off the supply and seize the products for which credit has been granted if the buyer defaults, they have strong reasons to extend the credit terms and avoid termination of their business relationship. This is especially true when suppliers make non- salvageable investments on customers, such as the development of buyer- specific equipment or investments in salespersons who develop specific knowledge about buyers' operations (Smith 1987). Suppliers therefore have an implicit equity stake in the firm equal to the present value of the margins they make on current and future sales of their products. Petersen and Rajan (1997) argue that this equity stake may far exceed the implicit equity stake of financial institutions because of the potential for future business.

Furthermore, the trade credit literature appears to support the argument that buyers may need to exert effort to establish creditworthiness prior to the provision of trade credit.

[2] Petersen and Rajan (1997) provide three main reasons to explain why suppliers offer trade credit to financially constrained buyers. First, compared to financial institutions, suppliers are better able to force repayment by threatening to cut- off supply. Alternatively, they can repossess and sell the products against which credit has been granted if the buyer is unable to meet his financial obligations. Second, suppliers often invest in relationships with currently unprofitable but growing firms in anticipation of capturing future business. Finally, they are often able to acquire the information they need at low cost from other market participants, e.g., other suppliers.

This may take the form of either industry- specific sunk investments (Ng et al. 1999) or up- front relationship- specific investments (Fisman and Raturi 2004). In particular, Fisman and Raturi (2004) argue that prior to the provision of credit sellers may request that buyers take actions to increase the transparency of their accounts and operations. Examining a potential customer's financial statements helps suppliers evaluate the firm's future cash flows, make inferences about its riskiness and determine whether investing in a long- term relationship is viable. From this perspective, financial reporting transparency would allow sellers to evaluate customer financial strength and accurately estimate the distribution of future cash flows.

Based on these arguments, I formulate the next hypothesis as follows:

H2: Financial reporting quality is positively associated with private firms' access to trade credit capital.

2.3 Methodology

2.3.1 Earnings Attributes

2.3.1.1 Accrual Quality

My proxy of accrual quality is the Dechow and Dichev (2002) measure, as modified by McNichols (2002), which captures the extent to which working capital accruals map on past, present, and future CFO:

$$\boldsymbol{WCA_{i,t} = \alpha_0 + \alpha_1 CFO_{i,t-1} + \alpha_2 CFO_{i,t} + \alpha_3 CFO_{i,t+1} + \alpha_4 \Delta Sales_{i,t} + \alpha_5 PPE_{i,t} + \varepsilon_{i,t}} \ (\mathbf{1}),$$

where:

$\mathbf{WCA_{i,t}}$: The working capital accruals of firm i in year t, calculated as change in current assets less change in current liabilities less change in cash plus change in short- term debt ($WCA_{i,t} = \Delta CA_{i,t} - \Delta CL_{i,t} - \Delta CASH_{i,t} + \Delta STDB_{i,t}$).

$\boldsymbol{CFO_{i,t}}$: The cash flow from operations of firm i in year t calculated as net income before extraordinary items less total accruals, where total accruals equal working capital accruals less depreciation ($CFO_{i,t} = NIBE_{i,t} - TA_{i,t}$ and $TA_{i,t} = WCA_{i,t} - Depr_{i,t}$).

$\boldsymbol{\Delta Sales_{i,t}}$: The change in revenue of firm i in year t relative to year t-1.

$\boldsymbol{PPE_{i,t}}$: The property, plant, and equipment of firm i in year t.

$\boldsymbol{\varepsilon_{i,t}}$: The error term.

I scale all variables by lagged total assets and winsorize them at the 1% and 99% levels. Following Francis et al. (2005), I estimate equation (1) for each of the Fama and French's (1997) 48 industry groups with at least 20 firms in year t. The industry-year estimates from these regressions allow us to calculate firm and year- specific residuals. My firm and year- specific accrual quality measure is the 5-year standard deviation of the residuals estimated in the previous step, multiplied by -1, so that higher values indicate better accrual quality:

Accrual Quality: $\boldsymbol{-std_{t-4,t}\varepsilon_{i,t}}$

2.3.1.2 Accrual Informativeness

My measure of accrual informativeness is the beta coefficient of the regression of cash flow changes on lagged total accruals. The purpose of this measure is to capture the ability of accruals to predict future cash flow changes.

$$\boldsymbol{\Delta CFO_{i,t+1} = \beta_0 + \beta_1 TA_{i,t} + \varepsilon_{\Delta CFO_{i,t+1}}} \quad \mathbf{(2)}$$

where:

$\boldsymbol{\Delta CFO_{i,t+1}}$: The cash flow from operations of firm i in year t+1 minus the cash flow from operations of firm i in year t.

$\boldsymbol{TA_{i,t}}$**:** The total accruals of firm i in year t.

$\boldsymbol{\varepsilon_{\Delta CFO_{i,t+1}}}$**:** The error term.

All variables are scaled by lagged total assets and winsorized at the 1% and 99% levels. Due to the lack of sufficient time- series data to produce unbiased firm- specific OLS estimates, I employ a random coefficient model (RCM) and estimate regression (2) at the firm-year level using 5- year rolling windows. My accrual informativeness measure is the firm- year specific beta coefficients of these regressions:

Accrual Informativeness: $\boldsymbol{\beta_1}$

2.3.2 Empirical Specifications

I now discuss the models used to test the hypotheses and provide definitions for the control variables used. In order to test Hypothesis 1a, I regress the cost of debt on each of the 2 earnings attributes separately. Instead of using the raw values of the earnings attributes, I follow Francis et al. (2004) and rank each attribute in deciles. The use of deciles allows us to better compare coefficient estimates across attributes and control for the existence of outliers and non- linearities. I additionally control for a number of variables that have been identified in prior research to determine the cost of debt (Francis et al. 2005; Minnis 2011; Karjalainen 2011). The controls that I use are firm size, return on assets, leverage, current ratio, earnings volatility, debt maturity, asset tangibility, Altman's Z-score, and firm age:

$$\boldsymbol{Cost\ of\ Debt_{i,t} = \varphi_0 + \varphi_1 Attribute_{i,t} + \varphi_2 Size_{i,t} + \varphi_3 ROA_{i,t} + \varphi_4 Leverage_{i,t} + \varphi_5 Currernt\ Ratio_{i,t} + \varphi_6 Zscore_{i,t} + \varphi_7 Earnings\ Volatility_{i,t} + \varphi_8 Short\ to\ Total\ Debt_{i,t} + \varphi_9 Tangibility_{i,t} + \varphi_{10} Age_{i,t} + \varepsilon_{CostDebt_{i,t}}} \quad (3),$$

where:

$\boldsymbol{Cost\ of\ Debt_{i,t}}$: The ratio of interest expense of firm i in year t to the average interest-bearing debt (short and long- term debt) in years t and t-1.

$\boldsymbol{Attribute_{i,t}}$: The decile rank of the corresponding earnings attribute (accrual quality or accrual informativeness) of firm i in year t. Higher decile ranks correspond to more favorable earnings attribute values.

$\boldsymbol{Size_{i,t}}$: The natural logarithm of total assets (in euros) of firm i in year t.

$\boldsymbol{ROA_{i,t}}$: The ratio of net income before extraordinary items of firm i in year t to total assets in year t-1.

$\boldsymbol{Leverage_{i,t}}$: The ratio of interest- bearing debt (short and long- term debt) of firm i in year t to total assets in year t-1.

$\boldsymbol{Current\ Ratio_{i,t}}$: The ratio of current assets to current liabilities of firm i in year t.

$\boldsymbol{Zscore_{i,t}}$: The Z-score of firm i in year t calculated as 1.2*(Net Working Capital/Total Assets)+ 1.4*(Retained Earnings/Total Assets)+3.3*(EBIT/Total Assets)+ 0.6* (Book Value of Equity/Book Value of Total Liabilities)+ Operating Revenue/Total Assets.

$\boldsymbol{Earnings\ Volatility_{i,t}}$: The 5-year (from year t-4 to year t) standard deviation of net income before extraordinary items of firm i in year t divided by the average total assets during the same period.

$\boldsymbol{Short\ to\ Total\ Debt_{i,t}}$: The ratio of short- term debt to total debt of firm i in year t.

$\boldsymbol{Tangibility_{i,t}}$: The ratio PPE of firm i in year t to total assets in year t-1.

$\boldsymbol{Age_{i,t}}$: The age in years of firm i in year t.

$\boldsymbol{\varepsilon_{CostDebt_{i,t}}}$: The error term.

Furthermore, to test Hypothesis 1b, I regress the level of short to total debt on each earnings attribute after controlling for size, return on assets, leverage, current ratio, Altman's Z- Score, earnings volatility, asset tangibility, and firm age. In particular, I perform the following regression:

$$\begin{aligned}\boldsymbol{Short\ to\ Total\ Debt_{i,t}} &= \boldsymbol{\gamma_0 + \gamma_1 Attribute_{i,t} + \gamma_2 Size_{i,t} + \gamma_3 ROA_{i,t} + \gamma_4 Leverage_{i,t}} \\ &+ \boldsymbol{\gamma_5 Currernt\ Ratio_{i,t} + \gamma_6 Zscore_{i,t} + \gamma_7 Earnings\ Volatility_{i,t}} \\ &+ \boldsymbol{\gamma_8 Tangibility_{i,t} + \gamma_9 Age_{i,t} + \varepsilon_{Short\ to\ Total\ Debt}} \quad \boldsymbol{(4)}\end{aligned}$$

Variables are defined as previously.

Finally, to test Hypothesis 2, I regress trade credit on each of the 2 earnings attributes separately while controlling for firm size, return on assets, leverage, change in sales, earnings volatility, and firm age (Petersen and Rajan 1997). I also control for the degree of asset tangibility because I expect that firms with higher levels of tangible assets are less likely to use trade credit capital. Tangible assets can serve as collateral and they therefore facilitate debt financing. It follows that, in the presence of significant levels of tangible assets, firms are more likely to opt for bank debt instead trade credit capital because bank debt is a cheaper source of financing.

$$\begin{aligned}\boldsymbol{Trade\ Credit_{i,t}} &= \boldsymbol{\theta_0 + \theta_1 Attribute_{i,t} + \theta_2 Size_{i,t} + \theta_3 ROA_{i,t} + \theta_4 Leverage_{i,t}} \\ &+ \boldsymbol{\theta_5 Sales\ Growth_{i,t} + \theta_6 Earnings\ Volatility} \\ &+ \boldsymbol{\theta_7 Tangibility_{i,t} + \theta_8 Age_{i,t} + \varepsilon_{Trade\ Credit_{i,t}}} \boldsymbol{(5)},\end{aligned}$$

where:

$\boldsymbol{Trade\ Credit_{i,t}}$: The ratio of trade payables of firm i in year t to total assets in year t-1.

$\boldsymbol{Sales\ Growth_{i,t}}$: The change in revenue of firm i in year t relative to year t-1 divided by total assets in year t-1.

$\boldsymbol{\varepsilon_{Trade\ Credit_{i,t}}}$: The error term.

I winsorize all non- logarithmic variables of regressions (3), (4), and (5) at the 1% and 99% levels. Moreover, I perform regressions (3), (4), and (5) with and without the inclusion of industry, year, and country fixed effects.

2.4 Data

2.4.1 Sample Selection

My source of financial data is the Amadeus database supplied by Bureau van Dijk. Amadeus provides financial statement data for approximately 19 million public and private companies with audited financial accounts from 34 European countries. Financial data for firms within Amadeus is retained for a rolling period of 10 years. When a new year of data is added, the oldest year is dropped. This means that only the most recent data for each company is available. In order to overcome this restriction and create a longer time- series of data I merge the online version of Amadeus with older offline versions (updates). In particular, I merge twelve (12) past Amadeus updates issued between 1999 and 2010 with the July 2013 online version of the database.

The initial sample consists of all private firms that have their domicile in the European Union's 5 largest economies, namely Germany, the United Kingdom, France,

Italy, and Spain. I subsequently adopt size restrictions consistent with the 4th EU directive. That is, I require that at least 2 of the following criteria are met in at least one year: a) total assets greater than or equal to EUR 2.5 million, b) sales greater than or equal to EUR 5 million, and c) number of employees greater than or equal to 50. By adopting size criteria consistent with the 4th EU directive, I explicitly exclude small private firms for which certain reporting requirement may not fully apply (Burgstahler et al. 2006). I remove financials (one- digit SIC code 6) and public institutions (one- digit SIC code 9), as well as firms with no industry classification in any of the fiscal years for which data is available. I also exclude firms that are subsidiaries of quoted companies because investment, financing, and operating decisions of these subsidiaries could be influenced by parent companies and therefore bias my results (Burgstahler et al. 2006; Peek et al. 2010). Finally, I remove all firm-years in which the fiscal year is not exactly 12 months as well as identification number and fiscal year duplicates requiring that only those observations with the smallest number of missing values in key variables are retained.

In line with the findings of prior literature (Pittman and Fortin 2004; Francis et al. 2005; Minnis 2011), I find that my cost of debt measure contains significant noise. The noise persists even after truncating the variable at the 5th and 95th percentile. I therefore follow Minnis (2011) and further truncate the variable so that the cost of debt falls within 10% of the risk- free rate[3]. My final sample consists of 40,127 firms and 115,652 firm-year observations and covers the period 1997-2010. For every firm that ends up in my final sample, I require at least 8 years of consecutive and complete data[4].

[3] I use the 10-year government bond as my yearly risk- free rate measure. I obtain this data from Datastream.
[4] This requirement allows us to use a balanced sample for my analyses as well as compute all relevant standard deviations using 5 years of data.

Table 2.1, Panel A, presents the distribution of the number of firms per fiscal year for the sample period 1997-2010. The increase in the number of firms over time demonstrates the gradual improvement in the coverage of the database. Panel B shows the allocation of firms and firm- year observations per country. Germany is less represented compared to the other four countries. This is primarily due to the insufficient coverage of large German firms by Amadeus[5].

TABLE 2.1

Panel A: Number of Observations per Fiscal Year

Fiscal Year	Number of Observations
1997	3,715
1998	4,268
1999	3,337
2000	4,935
2001	5,744
2002	6,793
2003	6,978
2004	7,685
2005	8,663
2006	9,174
2007	9,038
2008	13,436
2009	15,792
2010	16,094

Panel B: Number of Firms\ Firm- Year Observations per Country

Country	Number of Firms	Number of Observations
Germany	988	2,061
UK	4,215	12,744
Italy	18,781	52,309
Spain	9,928	34,728
France	6,215	13,810
Sum	**40,127**	**115,652**

Panel A presents the distribution of the final sample per fiscal year. Panel B presents the number of firms per country in the final sample, as well as the number of firm- year observations

[5] In its manual, Amadeus acknowledges that the coverage of German firms is insufficient due to gaps in the reports and the fact that many large German firms do not file their reports.

2.4.2 Descriptive Statistics

Table 2.2 presents the descriptive statistics of the final sample. The mean (median) firm has € 19.31 (€ 8.64) million in total assets and € 23.11 (€ 11.33) million in revenue. I report mean (median) values of debt and trade credit as a percentage of lagged total assets of 25.82% (24.22%) and 20.80% (19.86%) respectively. These figures indicate that bank debt and trade credit constitute significant sources of financing for private firms. Furthermore, the mean (median) cost of debt amount to 6.58% (6.02%). On average, profitability as a percentage of lagged total assets amounts to 2.16% and PPE as a percentage of lagged total assets amount to roughly 25.02%. This latter ratio measures the

TABLE 2.2

Descriptive Statistics

Variables	N	Mean	St. Dev.	25%	Median	75%
Cost of Debt	115,652	6.5820	3.0040	4.3080	6.0180	8.3510
Trade Credit	115,652	20.8000	11.5800	11.8700	19.8600	28.5800
Short to Total Debt	115,652	65.5800	32.3700	40.5000	72.5800	99.4900
Accrual Quality	115,652	-0.0304	0.0182	-0.0389	-0.0263	-0.0174
Accrual Informativeness	115,652	1.1196	0.0980	1.0737	1.1164	1.1603
Leverage	115,652	25.8200	16.9000	11.5900	24.2200	38.0600
Size	115,652	16.1300	0.9910	15.4000	15.9700	16.6700
ROA	115,652	2.1600	4.9080	0.0046	1.4030	4.3560
Current Ratio	115,652	1.5420	0.8720	1.0580	1.2950	1.7290
Z- Score	115,652	2.9370	1.2340	2.0640	2.7400	3.5900
Earnings Volatility	115,652	0.0261	0.0234	0.0105	0.0192	0.0336
Sales Growth	115,652	2.5340	25.0900	-8.5990	2.6740	14.2000
Tangibility	115,652	25.0200	20.1700	8.9540	20.5000	36.0600
Age	115,652	29.3200	15.7700	19.0000	26.0000	36.0000
Total Assets (in million €)	115,652	19.3100	35.8400	4.8650	8.6360	17.3300
Revenue (in million €)	115,652	23.1100	38.9700	6.7090	11.3300	21.6300

This table presents summary statistics for all firm- year observations of the final sample. The cost of debt is restricted so that it ranges within 10% of the risk- free rate. All other non- logarithmic variables have been winsorized at the 1% and 99% levels. Variables Cost of Debt, Trade Credit, Short to Total Debt, Leverage, ROA, Sales Growth, and Tangibility have been multiplied by 100. See Appendix for variable definitions.

degree to which assets can be pledged as security for a debt under the scenario that the borrower reneges on his financial obligations. Finally, the mean (median) firm age is 29 years (26 years).

2.4.3 Correlations

Table 2.3 presents the pairwise Pearson correlations for all variables. The table shows that accrual quality is positively correlated with accrual informativeness. The corresponding correlation coefficient amounts to 0.209 and is statistically significant at the 1% level. Furthermore, accrual quality is negatively associated with the cost of debt (-0.0425) and positively associated with the level of trade credit (0.0627). Both correlation coefficients are statistically significant at the 1% level. These correlations provide some initial evidence that private firm providers of debt financing as well as trade credit view accrual quality as a favorable earnings attribute. Table 2.3 additionally shows that accrual informativeness is positively associated with the level of trade credit (0.0471) but positively associated with the cost of debt as well (0.0503). Again, the corresponding correlation coefficients are significant at the 1% level. The positive correlation between the ability of accruals to predict future cash flow changes and the cost of debt appears to contradict initial expectations. However, this analysis does not take into account the effect of control variables and therefore the use of multivariate specifications is necessary before drawing further inferences.

TABLE 2.3

Correlation Matrix

	Cost of Debt	Trade Credit	Short to Total Debt	Accrual Quality	Accrual Informati-veness	Leverage	Size	ROA	Current Ratio	Z- Score	Earnings Volatility	Sales Growth	Tangi-bility	Age
Cost of Debt	1													
Trade Credit	**0.1558**	1												
Short to Total Debt	**0.1363**	**0.2087**	1											
Accrual Quality	**-0.0425**	**0.0627**	**-0.0117**	1										
Accrual Inform.	**0.0503**	**0.0471**	0.0045	**0.209**	1									
Leverage	**-0.1583**	**-0.156**	**0.031**	-0.0031	**-0.0852**	1								
Size	**-0.1109**	**-0.2389**	**-0.1353**	**0.1373**	**-0.0349**	**0.1192**	1							
ROA	**-0.0121**	**-0.0655**	**-0.0793**	**0.0539**	**0.0554**	**-0.3453**	-0.003	1						
Current Ratio	**-0.0431**	**-0.3428**	**-0.2313**	**-0.019**	**-0.0324**	**-0.3683**	**0.0449**	**0.2352**	1					
Z- Score	**0.0381**	**-0.055**	**0.0446**	**0.0041**	**0.0445**	**-0.4762**	**-0.1998**	**0.481**	**0.4493**	1				
Earnings Volatility	**0.0448**	**-0.1248**	**-0.0361**	**-0.5918**	**-0.0694**	**-0.1448**	**-0.1042**	**0.0415**	**0.1088**	**0.1007**	1			
Sales Growth	**0.0422**	**0.1314**	**0.0126**	**0.0368**	**0.025**	**-0.0619**	**0.0493**	**0.2722**	**-0.0718**	**0.1578**	**-0.026**	1		
Tangibility	**-0.0975**	**-0.3764**	**-0.3379**	**0.046**	**0.035**	**0.102**	**0.2034**	**-0.014**	**-0.1821**	**-0.1514**	**0.0157**	**0.0228**	1	
Age	-0.0029	**-0.1466**	**-0.0222**	**0.0717**	**0.0225**	**-0.0785**	**0.1892**	**-0.032**	**0.0906**	**0.0234**	0.0043	**-0.0125**	**0.092**	1

This table presents pairwise Pearson correlations for all firm- year observations of the final sample. See Appendix A for variable definitions. For both Accrual Quality and Accrual Informativeness larger values indicate better financial reporting quality. Bold indicates significance at the two-tailed 1% level.

2.5 Results

2.5.1 Cost of Debt

Table 2.4 presents the results of the regressions of the cost of debt on each earnings attribute after controlling for a number of known determinants of the cost of debt. For each earnings attribute, two regressions are performed: one without fixed effects and one including industry, year, and country fixed effects.

Consistent with expectations, accrual quality is negatively associated with the cost of debt and statistically significant at the 1% level in both specifications (with and without fixed effects). The average coefficient estimate of the regression that does not include fixed effects (-0.0262) suggests a difference of roughly 24 basis points (9 deciles x 0.0262) in the cost of debt between the worst and the best accrual quality deciles. The effect is stronger in the specification that includes fixed effects (average coefficient estimate: -0.0406) and corresponds to a difference of approximately 37 basis points between the worst and best accrual quality deciles. The coefficient of accrual informativeness on the other hand, is positive and statistically significant at the 1% level in the specification that does not include fixed effects. This finding seems to indicate that there is a positive relation between the ability of accruals to predict future cash flow changes and the cost of debt. However, the respective coefficient turns negative and statistically significant at the 1% level upon the inclusion of industry, year, and country fixed effects. Under this latter specification, the difference between the worst and best earnings informativeness deciles corresponds to a difference of roughly 9 basis points in the cost of debt.

TABLE 2.4

Regressions of Cost of Debt on Earnings Attributes

	Dependent Variable: Cost of Debt			
Variables	Accrual Quality		Accrual Informativeness	
Attribute	-0.0262***	-0.0406***	0.0528***	-0.0102***
	(0.000)	(0.000)	(0.000)	(0.006)
Size	-0.1855***	-0.1994***	-0.1877***	-0.2141***
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.0260***	-0.0365***	-0.0277***	-0.0371***
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0364***	-0.0339***	-0.0351***	-0.0335***
	(0.000)	(0.000)	(0.000)	(0.000)
Current Ratio	-0.2873***	-0.1784***	-0.2734***	-0.1808***
	(0.000)	(0.000)	(0.000)	(0.000)
Z- Score	-0.0673***	-0.1255***	-0.0712***	-0.1234***
	(0.000)	(0.000)	(0.000)	(0.000)
Earnings Volatility	1.8619***	-1.9179***	3.9543***	0.3428
	(0.001)	(0.000)	(0.000)	(0.472)
Short to Total Debt	0.0089***	0.0017***	0.8887***	0.1712***
	(0.000)	(0.000)	(0.000)	(0.000)
Tangibility	-0.0077***	-0.0078***	-0.0082***	-0.0081***
	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.0016*	-0.0010	0.0010	-0.0014
	(0.069)	(0.243)	(0.240)	(0.107)
Constant	10.8672***	14.7558***	10.4036***	14.8015***
	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes
Country FE	No	Yes	No	Yes
Observations	115,652	115,652	115,652	115,652
R-squared	0.0620	0.2258	0.0641	0.2248

This table presents the regressions of the cost of debt on each earnings attribute for the final sample with and without industry, year, and country fixed effects. The regressions are performed using robust standard errors, clustered at the firm level. Earnings attributes are ranked in deciles. Higher decile ranks correspond to better financial reporting quality. The cost of debt is limited to 10% over the risk- free rate. All remaining non- logarithmic variables have been winsorized at the 1% and 99% levels. See Appendix for variable definitions. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

In untabulated tests, I repeat the last two regressions of Table 2.4 using as my measure of accrual informativeness the 5- year standard deviation of the residuals of regression (2). I further multiply this measure by -1, so that greater values correspond to higher levels of accrual informativeness. In both specifications (with and without fixed effects), my alternative proxy of earnings informativeness is negatively associated with the cost of debt. In addition, the difference between the worst and best earnings informativeness deciles amounts to roughly 19 basis points. Overall, the findings of the above analysis indicate that debt providers consider accrual quality and accrual informativeness as favorable earnings attributes and take them into account when pricing debt.

In all specifications, the coefficient estimate on leverage is negative as opposed to the predicted positive sign. Minnis (2011) uses private firm data and also reports negative coefficients on leverage in his cost of debt regressions. In order to investigate whether this is due to possible misclassification of debt components as liabilities or due to the mechanical relation between the cost of debt and leverage (the denominator of the former variable is used as the numerator for the latter variable), I introduce two alternative cost of debt and leverage measures. That is, I measure cost of debt as interest expense divided by average total liabilities and leverage as the ratio of total liabilities to average interest-bearing debt. I subsequently replace either one or both of the original variables with their alternative specifications and perform the regressions of table 2.4. In all regressions leverage has a positive sign, consistent with expectations[6].

[6] These results are robust to the exclusion of trade payables from total liabilities.

2.5.2 Short to Total Debt

Table 2.5 presents the results of regression (4) which investigates Hypothesis 1b for both accrual quality and accrual informativeness. I argue that, to the extent that financial reporting quality has economic consequences for private firms, it should also affect their propensity to use long- term debt in place of short- term debt, since the latter is relatively more expensive. Table 2.5 shows that results are consistent with this hypothesis. In particular, accrual quality is negatively associated with the level of short to total debt in the specification that does not include industry, year, and country fixed effects. The estimated coefficient is equal to -0.1344 and is statistically significant at the 1% level. This value indicates a difference of roughly 1.21 percentage points in the level of short to total debt between the worst and best accrual quality deciles. Furthermore, in the specification that includes industry, year, and country fixed effects, the negative relation between accrual quality and short to total debt persists and remains highly statistically significant (at the 1% level). The estimated coefficient is equal to -0.2106 and corresponds to a difference of roughly 1.9 percentage points between the worst and best accrual quality deciles.

The last two columns of Table 2.5 present the results of the regressions of short to total debt on accrual informativeness and controls. This analysis shows that, in the specification that does not include industry, year, and country fixed effects, the estimated coefficient on accrual informativeness is positive and insignificant. However, upon inclusion of industry, year, and country fixed effects, the related coefficient becomes negative and highly statistically significant (at the 1% level). In particular, the estimated coefficient is equal to -0.2616 and corresponds to a difference of 2.38 percentage points between the worst and best accrual informativeness deciles. In untabulated tests, I repeat

TABLE 2.5

Regressions of Short to Total Debt on Earnings Attributes

	Dependent Variable: Short to Total Debt			
Variables	Accrual Quality		Accrual Informativeness	
Attribute	-0.1344***	-0.2106***	0.0443	-0.2616***
	(0.006)	(0.000)	(0.277)	(0.000)
Size	-0.3486**	-0.5732***	-0.3822**	-0.6747***
	(0.035)	(0.000)	(0.020)	(0.000)
ROA	-0.5905***	-0.5688***	-0.5938***	-0.5692***
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.0053	-0.0054	-0.0030	-0.0067
	(0.567)	(0.556)	(0.749)	(0.471)
Current Ratio	-13.6953***	-12.8429***	-13.6791***	-12.8884***
	(0.000)	(0.000)	(0.000)	(0.000)
Z- Score	5.0651***	6.1826***	5.0555***	6.2016***
	(0.000)	(0.000)	(0.000)	(0.000)
Earnings Volatility	-18.3262***	-15.7870***	-9.8441*	-6.4956
	(0.002)	(0.006)	(0.068)	(0.215)
Tangibility	-0.6063***	-0.5151***	-0.6075***	-0.5154***
	(0.000)	(0.000)	(0.000)	(0.000)
Age	0.0849***	0.0655***	0.0832***	0.0644***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	92.7554***	92.1594***	92.1220***	94.3711***
	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes
Country FE	No	Yes	No	Yes
Observations	115,652	115,652	115,652	115,652
R-squared	0.2298	0.2893	0.2297	0.2896

This table presents the regressions of the short to total debt ratio on each earnings attribute for the final sample with and without industry, year, and country fixed effects. The regressions are performed using robust standard errors, clustered at the firm level. Earnings attributes are ranked in deciles. Higher decile ranks correspond to better financial reporting quality. The cost of debt is limited to 10% over the risk- free rate. All remaining non- logarithmic variables have been winsorized at the 1% and 99% levels. See Appendix for variable definitions. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

the last two regressions of Table 2.5 using the alternative accrual informativeness measure of section 2.5.1, which is based on the negative 5-year standard deviation of the residuals of regression (2). In both specifications (with and without fixed effects), the estimated coefficients are negative and statistically significant at the 1% level indicating a difference between the worst and best accrual informativeness deciles of up to 3.06 percentage points. Overall, these findings suggest that higher values of both accrual quality and accrual informativeness are associated with better access to long- term debt and lower use of short-term debt.

2.5.3 Trade Credit

Table 2.6 presents the results of the regressions of trade credit on each earnings attribute after controlling for known determinants of trade credit. For each earnings attribute I provide again two alternative specifications: one without fixed effects and one including industry, year, and country fixed effects.

The regressions of trade credit on accrual quality show that accrual quality is positively and significantly (at the 1% level) associated with trade credit in both specifications (with and without fixed effects). Its sign is therefore consistent with expectations. The average coefficient estimate on accrual quality amounts to 0.1622 for the regression that does not include fixed effects. This corresponds to a difference of 1.46 percentage points between the worst and best accrual quality deciles. The difference between the worst and best accrual quality deciles for the regression that includes fixed effects is 0.84 percentage points (0.067*9). Furthermore, accrual informativeness is positively associated with trade credit and highly statistically significant (at the 1% level) when no fixed effects are

included. The difference between the worst and best accrual informativeness deciles is 1.26 percentage points. The positive relation between accrual informativeness and trade

TABLE 2.6

Regressions of Trade Credit on Earnings Attributes

	Dependent Variable: Trade Credit			
Variables	Accrual Quality		Accrual Informativeness	
Attribute	0.1622***	0.0670***	0.1399***	0.1137***
	(0.000)	(0.000)	(0.000)	(0.000)
Size	-1.8750***	-1.7598***	-1.8127***	-1.7215***
	(0.000)	(0.000)	(0.000)	(0.000)
ROA	-0.4293***	-0.3643***	-0.4285***	-0.3649***
	(0.000)	(0.000)	(0.000)	(0.000)
Leverage	-0.1255***	-0.1490***	-0.1252***	-0.1483***
	(0.000)	(0.000)	(0.000)	(0.000)
Sales Growth	0.0825***	0.0713***	0.0822***	0.0714***
	(0.000)	(0.000)	(0.000)	(0.000)
Earnings Volatility	-64.7176***	-48.2722***	-72.9694***	-50.8326***
	(0.000)	(0.000)	(0.000)	(0.000)
Tangibility	-0.1850***	-0.1398***	-0.1851***	-0.1401***
	(0.000)	(0.000)	(0.000)	(0.000)
Age	-0.0789***	-0.0724***	-0.0778***	-0.0721***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	62.7373***	58.0108***	62.0339***	56.9930***
	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	No	Yes	No	Yes
Industry FE	No	Yes	No	Yes
Country FE	No	Yes	No	Yes
Observations	115,652	115,652	115,652	115,652
R-squared	0.2577	0.3406	0.2577	0.3412

This table presents the regressions of trade credit on each earnings attribute for the final sample with and without industry, year, and country fixed effects. The regressions are performed using robust standard errors, clustered at the firm level. Earnings attributes are ranked in deciles. Higher decile ranks correspond to better financial reporting quality. All remaining non- logarithmic variables have been winsorized at the 1% and 99% levels. See Appendix for variable definitions. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

credit persists and remains highly statistically significant at the 1% level when industry, year, and country fixed effects are included in the regression. In particular, the estimated coefficient amounts to 0.1137 which indicates a difference of 1.02 percentage points in the level of trade credit between the worst and best accrual informativeness deciles.

2.6 Conclusion

In this paper, I investigate the link between the financial reporting quality of private firms and their financing decisions through two main venues: bank debt and trade credit. Private firms have been traditionally characterized by lower quality financial reporting compared to public firms. The argument is that, private firms have weaker incentives to communicate their true economic performance through the use of publicly available financial statements. To facilitate the exchange of relevant information with their stakeholders, private firms develop private communication channels, which in practice serve as alternative information asymmetry- mitigating mechanisms. In view of this argument, I ask the following questions: Does financial reporting quality matter for private firms? What are the benefits of preparing high quality financial reporting in the presence of private communication channels?

To test this hypothesis, I consider two measures of financial reporting quality. These measures are accrual quality and accrual informativeness, which capture the precision with which accruals map on past, current, and future cash flow from operations, as well as the ability of accruals to predict future cash flow changes. I further examine the association of these earnings attributes with private firms' access to bank debt and trade

credit capital. My sample includes private firms from the five largest economies of the European Union (U.K., Germany, France, Italy, and Spain) and spans from 1997 to 2010.

The results show that both accrual quality and accrual informativeness are negatively associated with the cost of debt. Furthermore, higher levels of accrual quality and accrual informativeness are associated with lower levels of short to total debt. These findings suggest that debt providers consider accrual quality and accrual informativeness as favorable earnings attributes in the private firm market and incorporate them in the financing decisions. They additionally demonstrate that the accounting choices of private firms affect their debt structure decisions by allowing them to make more use of long- term debt relative to short- term debt.

I further show that the accounting decisions of private firms also affect their access to trade credit financing. In particular, I provide evidence that higher levels of accrual quality and accrual informativeness are associated with higher levels of trade credit. Therefore, the financial reporting quality of private firms affects the financing decisions of not merely debt providers but trade credit providers as well.

Based on these findings, I conclude that high quality financial reporting does have economic consequences even in the private firm setting where private communication channels serve as alternative information asymmetry- mitigating mechanisms. By highlighting the importance of financial reporting quality in the private firm market, the results of the current study are therefore directly relevant to the standard setters involved in the formulation of IFRS for SMEs. High quality financial reporting facilitates private firms' access to their foremost means of financing, namely bank debt and trade credit capital. Consequently, accounting standards specifically designed for small and medium-

sized enterprises need to actively promote financial reporting transparency despite the findings of prior literature that effectively downplay its importance in the private firm market.

Appendix A

Panel A: Dependent Variables

Cost of Debt	The ratio of interest expense to the average interest- bearing debt (short and long- term debt) in the current and previous year. Following Minnis (2011), I initially truncate this variable at the 5^{th} and 95^{th} levels. I subsequently require that the cost of debt ranges within 10% of the corresponding 10- year government bond.
Trade Credit	The ratio of trade payables to lagged total assets. I winsorize this variable at the 1% and 99% levels.
Short to Total Debt	The ratio of short- term debt to total debt. I winsorize this variable at the 1% and 99% levels.

Panel B: Test Variables

Accrual Quality	The 5- year standard deviation of the of the modified by McNichols (2002), Dechow and Dichev (2002) accrual quality measure, multiplied by -1.
Accrual Informativeness	The beta coefficient of the regression of the change in cash flow from operations on lagged total accruals.

Attribute	The decile rank of the corresponding earnings attribute (accrual quality or accrual informativeness). For both earnings attributes, higher decile ranks correspond to more favorable earnings attribute values.

Panel C: Control Variables

Size	The natural logarithm of total assets.
ROA	The ratio of net income before extraordinary items to lagged total assets. I winsorize this variable at the 1% and 99% levels.
Leverage	The ratio of interest- bearing debt (short and long- term debt) to lagged total assets. I winsorize this variable at the 1% and 99% levels.
Current Ratio	The ratio of current assets to current liabilities. I winsorize this variable at the 1% and 99% levels.
Growth	The change in sales relative to the previous fiscal year divided by lagged total assets. I winsorize this variable at the 1% and 99% levels.
Z- Score	Altman's Z- Score calculated as 1.2* (Net Working Capital/Total Assets) + 1.4* (Retained Earnings/Total Assets) + 3.3* (EBIT/Total Assets) + 0.6* (Book Value of Equity/Book

	Value of Total Liabilities) + Sales/Total Assets. I winsorize this variable at the 1% and 99% levels.
Earnings Volatility	The 5-year (from year t-4 to year t) standard deviation of net income before extraordinary items divided by the average total assets during the same period. I winsorize this variable at the 1% and 99% levels.
Tangibility	The ratio PPE to lagged total assets. I winsorize this variable at the 1% and 99% levels.
Age	The age of the firm in years. I winsorize this variable at the 1% and 99% levels.

Chapter 3*

Auditor Size and Audit Quality in a Private Firm and Low Book- Tax Conformity Setting: Is there a non- Big 4 Audit Quality Advantage?

3.1 Introduction

Empirical research in auditing has repeatedly provided evidence of a positive relation between auditor size and audit quality using a variety of audit quality proxies (Becker et al. 1998; Francis et al. 1999; Kim et al. 2003; Lennox and Pittman 2010; Chan and Wu 2011). The Big 4 versus non- Big 4 differences in audit quality appear to be partly driven by incentives of large auditors to provide superior audit quality as a result of reputation, litigation, and regulatory scrutiny considerations (DeAngelo 1981; Francis and Wang 2008). Alternative determinants of the Big 4 audit quality advantage include the ability of large auditors to perform audits more efficiently for larger and more complex clients (Chaney et al. 2004), their limited dependence on individual clients (DeAngelo 1981), as well as their ability to attract and retain high quality human capital (Dopuch and Simunic 1982). The positive relation between auditor size and audit quality, however, does not appear to hold under all settings. For example, Van Tendeloo and Vanstraelen (2008) argue that, in low auditor litigation and reputation risk environments, such as the ones that characterize private firms, large auditors constrain aggressive earnings management *only* in settings where financial statements are more likely to be scrutinized by tax authorities. This finding demonstrates the fundamental moderating role of auditor incentives in

* This chapter is based on Elemes (2015a). I thank Erik Peek, Padmakumar Sivadasan, Ann Vanstraelen, Ping Zhang, as well as workshop participants at the 2014 AAA Annual Meeting.

shaping the Big 4 versus non- Big 4 differences in audit quality. Yet, we still know very little regarding the interplay between auditor size and audit quality in the *absence* of strong auditor incentives for high quality audits.

In this paper, I investigate the Big 4 versus non- Big 4 differences in audit quality in a setting where Big 4 auditors have significantly weakened incentives to deliver superior audit quality: the private firm environment of a low book- tax conformity country, i.e., the UK. Litigation and reputation costs are much lower for auditors in private firm settings (Johnstone and Bedard 2004; Van Tendeloo and Vanstraelen 2008; Hope and Langli 2010). This is true even for countries that are characterized by robust legal institutions and strong legal enforcement, such as the UK (Chaney et al. 2004; Van Tendeloo and Vanstraelen 2008). Furthermore, Van Tendeloo and Vanstraelen (2008) find that, in the private firm market, Big 4 auditors deliver superior audit quality only in high book- tax conformity settings where tax authorities are more likely to scrutinize financial statements. By focusing on the private firm client base of auditors in the UK, I provide a "natural laboratory" to test the relation between auditor size and audit quality under the base- case scenario where auditor reputation and litigation considerations are mitigated, while regulatory scrutiny by tax authorities is weak. Prior research focusing on the private firm market has only investigated the relation between auditor size and *earnings management* across Europe (Van Tendeloo and Vanstraelen 2008). To my knowledge, this is the first paper to specifically study the interplay between auditor size and *audit quality* in a setting where large auditors have *materially weak* incentives to deliver superior audit quality and to employ a battery of *distinct* audit quality proxies for that purpose rather than a single aggregated earnings management measure as in Van Tendeloo and Vanstraelen (2008) .

Auditor size has long served as a surrogate measure for audit quality in accounting research. Large auditors have greater reputations to protect (DeAngelo 1981). In addition, the provision of high quality audits by Big 4 auditors appears to be sensitive to the level of litigation risk and regulatory scrutiny. In sharp contrast, non- Big 4 audit engagements remain unaffected by such considerations (Francis and Wang 2008; Van Tendeloo and Vanstraelen 2008). Even though audit research typically considers non- Big 4 audits of lower quality compared to Big 4 audits, there are valid reasons as to why small auditors could, in certain settings, be able to deliver superior audit quality compared to their larger competitors. Such small- auditor audit quality advantages might not be able to materialize in the presence of strong Big 4 auditor incentives to deliver superior audit quality. However, in the absence of such incentives, their manifestation becomes more likely.

Small auditors typically operate as unlimited liability partnerships in which both inside and outside wealth of all partners is exposed to ligation threat. Unlimited liability status therefore incentivizes auditors to deliver high quality audits and encourages partner monitoring (Dye 1993; Dye 1995; Van Lent 1999; Chan and Pae 1998). Furthermore, small accounting firms face difficulties in obtaining affordable insurance coverage (GAO 2008) and have limited ability to acquire high quality legal representation, as well as to sustain the financial consequences of a possible monetary penalty. I therefore expect their litigation considerations to be significantly high.

Incentives by non- Big 4 accounting firms to deliver high quality audits could also be strong due to the lower switching costs of their clients which increase the likelihood of auditor dismissal in the case of audit quality failure (Hennes et al. 2014). Consequently,

non- Big 4 auditors have reasons to deliver a sufficiently high level of audit quality in order to build a reputation for credible financial reporting and better retain their client base.

Moreover, non- Big 4 accounting firms in the private firm market differ from Big 4 accounting firms in that they typically provide services that are not restricted to the external verification of financial statements. Such services pertain to auditor advice and feedback on accounting, internal controls, and general business issues (Herda and Lavelle 2013) and could improve their knowledge about their clients, thus allowing them to deliver improved audits. Such a non- Big 4 information acquisition advantage is potentially even greater in the private firm market where clients are more likely to resolve information asymmetry problems on an "insider basis" (Ball and Shivakumar 2005).

One might argue that Big 4 auditors invest more in information technology and are therefore able to perform audits in a more efficient way. However, private firm clients are typically smaller and less complex than public firm clients and therefore such advantages are less likely to materialize in the private firm setting. Furthermore, information technology has been associated with inefficiencies that could potentially impair audit quality, such as decreased coaching opportunities, reduced face- to- face feedback, and reduced partner presence at client's location (Westermann et al. 2014). These inefficiencies gain particular importance in the light of findings that, in the private firm market, clients prefer a more relational approach in auditing (Fontaine and Pilote 2012).

In line with these predictions, I find that private firm clients of non- Big 4 auditors in the UK are associated with lower levels of total, income increasing, and income decreasing absolute discretionary accruals, lower accrual quality, lower level of absolute total accruals to absolute cash flow from operations (CFO), as well as greater likelihood of

receiving a qualified auditor opinion compared to Big 4 clients. Furthermore, I report no statistically significant differences in the level of earnings smoothness between clients of Big 4 and non- Big 4 auditors. These findings are robust to a number of additional tests, such as using propensity- score matching techniques, examining the relation between auditor size and audit quality in a sample of non- Big 4 auditors only, excluding all firms that eventually go public, and separately testing the original hypothesis before and after the audit partner signature requirement in the UK. Overall, my findings suggest that, in the absence of strong large- auditor incentives to deliver superior audit quality, small auditors seize an audit quality advantage over their larger competitors in the private firm market.

This paper contributes to the literature primarily by being the first to document that, in the absence of strong litigation, reputation, and regulatory scrutiny considerations, the otherwise positive relation between auditor size and audit quality reverses. With the exception of Lawrence et al. (2011), prior research has provided evidence of a positive relation between auditor size and audit quality in high litigation, reputation, and regulatory scrutiny settings (Becker et al. 1998; Francis et al. 1999; Kim et al. 2003; Lennox and Pittman 2010; Chan and Wu 2011). The current study extends Van Tendeloo and Vanstraelen (2008) in that it provides further insights into the moderating role of auditor incentives on the quality of services provided by accounting firms in the private firm market. It differs, however, by specifically focusing on a setting where large auditors have materially weak incentives to deliver high quality audits and by examining the relation between auditor size and audit quality using a battery of distinct audit quality proxies rather than a single, aggregated earnings management measure.

In addition, the current paper contributes to the literature that focuses on the importance of determinants of audit quality. Khurana and Raman (2004) and Francis and Wang (2008) argue that litigation considerations mainly account for the Big 4 versus non-Big 4 differences in audit quality, whereas Skinner and Srinivasan (2012) document the importance of reputation considerations in determining audit quality. By providing evidence of a negative relation between auditor size and audit quality in the absence of strong reputation, litigation, and regulatory scrutiny considerations, I provide findings consistent with these arguments. In addition, I evaluate the moderating role of these considerations relative to the importance of competing explanations in shaping the Big 4 versus non- Big 4 audit quality differences.

The remainder of this paper is organized as follows. In section 3.2, I review the related literature and develop the hypotheses. Section 3.3 presents the empirical models. In section 3.4, I describe the sample selection process and offer descriptive statistics, while in section 3.5, I present the empirical results and additional robustness tests. Section 3.6 concludes.

3.2 Background and Hypothesis Development

Accounting literature seems to conclude that Big 4 auditors deliver superior audit quality compared to non- Big 4 auditors. Dopuch and Simunic (1980) and DeAngelo (1981) argue that Big 4 auditors have stronger incentives to provide high quality audits because they have greater reputations to protect. Khurana and Raman (2004) and Francis and Wang (2008) focus on the importance of litigation considerations and regulatory oversight in construing the Big 4 audit quality advantage. Alternative explanations include

the fact that large auditors are better able to attract and retain higher quality human capital (Dopuch and Simunic 1982), invest more in information technology (Chaney et al. 2004), and are less financially dependent on any individual client, making them less likely to compromise their independence (DeAngelo 1981). Consistent with these arguments, a number of empirical studies have provided evidence of a positive relation between auditor size and audit quality (Teoh and Wong 1993; Becker et al. 1998; Khurana and Raman 2004; Behn et al. 2008; Lennox and Pittman 2010).

Audit research has not explicitly tried to disentangle the importance of auditor incentives from that of competing explanations. However, there is strong evidence that reputation, litigation, and regulatory scrutiny considerations play a very important role in the relation between auditor size and audit quality. At the extreme, when these considerations become sufficiently weak, Big 4 auditors no longer appear to be associated with superior audit quality. For instance, Khurana and Raman (2004) find that, the positive relation between auditor size and perceived audit quality dwindles outside the US. They attribute their findings to the lower litigation risk that characterizes non- US settings, even when considering other common law countries such as the UK, Canada, and Australia. Furthermore, Chaney et al. (2004) report that UK private firm auditees do not regard Big 4 auditors superior to non- Big 4 auditors to a degree significant enough to justify paying a fee premium for their services. In addition, Van Tendeloo and Vanstraelen (2008) who investigate the Big 4 versus non- Big 4 differences in the European private firm setting, conclude that Big 4 auditors restrict aggressive earnings management only in high book-tax conformity countries. They reason that, in the private firm market, the Big 4 audit

quality advantage is primarily a function of the degree of regulatory scrutiny by tax authorities.

Auditor reputation and litigation considerations are significantly mitigated in the private firm setting (Johnstone and Bedard 2004; Van Tendeloo and Vanstraelen 2008; Hope and Langli 2010). This is true even for countries with strict legal institutions and high levels of investor protection (Chaney et al. 2004; Van Tendeloo and Vanstraelen 2008). The UK private firm market therefore qualifies as a setting in which auditor litigation and reputation considerations are significantly low. In addition, the UK has been classified as a country with low financial and tax reporting alignment. This further reduces auditor incentives for high quality audits because of the lower level of regulatory scrutiny by tax authorities (Van Tendeloo and Vanstraelen 2008).

In settings in which auditor incentives to deliver high quality audits are materially weakened, the relation between auditor size and audit quality becomes less obvious. This is particularly true in the private firm setting where firms are typically smaller and less complex than in the public setting and often convey their true economic performance through the use of insider communication channels. In this paper I argue that, in the absence of strong litigation, reputation, and regulatory scrutiny considerations, incentives of small accounting firms to maintain a sufficient level of audit quality, as well as reasons pertinent to their general business model could potentially cause the otherwise positive relation between auditor size and audit quality to reverse.

Audit literature generally supports the argument that non- Big 4 auditors have lower litigation considerations compared to their larger competitors. Large auditors have deeper pockets and, consequently, more wealth at risk in the event of litigation (Dye 1993).

Furthermore, due to their greater wealth, large auditors are also more likely to be called as defendants in lawsuits (Lennox 1999). One could argue, however, that conditional on a lawsuit against an auditor being filed, Big 4 auditors are better able to sustain its consequences compared to non- Big 4 auditors. In particular, due to their greater wealth, larger auditors have better access to high quality legal representation and are better able to sustain the financial discomfort of a potential monetary penalty against them. Under this hypothesis, small auditors are particularly vulnerable to the consequences of lawsuits against them and therefore their litigation considerations are probably strong.

Such considerations are potentially aggravated by the organizational form of non-Big 4 auditors. Small accounting firms are typically organized as unlimited partnerships. Under this organizational form, both inside and outside wealth of all partners is exposed to litigation. Unlimited liability signals that a firm stands to lose everything in a negligence lawsuit (Van Lent 1999). It therefore encourages monitoring among auditors and incentivizes them to deliver superior audit quality (Dye 1993; Dye 1995; Chan and Pae 1998; Van Lent 1999). In contrast, larger accounting firms typically operate as limited liability partnerships (LLPs) (Lennox and Li 2012). Under limited liability status, wealth outside the audit firm is subject to litigation risk only for negligent auditors. Therefore, by protecting the outside wealth of non- negligent partners, LLP status significantly reduces the liability exposure of accounting firms (Lennox and Li 2012).

These arguments gain particular importance in the light of findings by the US Government Accountability Office (GAO) that non- Big 4 accounting firms have difficulties in finding affordable liability insurance coverage (GAO 2008). Small auditors lack the size needed to achieve economies of scale to spread their litigation risk and

insurance costs across a larger capital base (GAO 2003). To the degree that these concerns incentivize small auditors to deliver a relatively "fixed" level of sufficiently high audit quality, they could also partly account for the inelasticity of non- Big 4 audits to variation in the overall level of litigation and regulatory scrutiny compared to Big 4 audits. For example, Francis and Wang (2008) find that, although the audit quality of Big 4 accounting firms is a function of the degree of investor protection and regulatory oversight, the quality of smaller accounting firms does not appear to be affected by these considerations. That is, non- Big 4 auditors may still have strong litigation considerations and therefore deliver sufficiently high quality audits even if their audit quality does not vary with the overall litigation level.

Furthermore, clients of non- Big 4 auditors typically have lower switching costs than clients of Big 4 auditors. Non- Big 4 clients, are smaller and less complex than Big 4 clients. They therefore have lower start- up costs and a larger set of alternative auditors to choose from. As a result, non- Big 4 auditors are more likely to be dismissed in the event of an audit quality failure (Hennes et al. 2014). On the other hand, Lennox (1999) finds that large auditors that become subject to criticism for inaccurate reporting do not suffer reductions in demand. Consequently, the low switching costs of non- Big 4 clients could encourage small accounting firms to deliver high quality audits in order to create a reputation for credible reporting and therefore build client loyalty.

In the private firm setting, non- Big 4 accounting firms additionally differ in the type of services that they offer to their clients. Herda and Lavelle (2013) argue that "the websites of several (private firm) non-Big 4 accounting firms characterize their assurance services as services that provide value beyond the traditional audit". That is, non- Big 4

auditors provide additional support to their clients in the form of advice on accounting and internal control issues as well as on how to improve decision making, profitability, and administrative procedures. These services add value to clients without necessarily being standalone, fee- generating assignments (Knechel 2007; Herda and Lavelle 2013). I therefore argue that non- Big 4 auditors can better understand the business model and inherent risks of their clients. This latter observation is in line with the findings of Louis (2005), who reports that acquirers audited by non-Big 4 accounting firms outperform those audited by Big 4 firms. Louis (2005) supports the view that non- Big 4 auditors have superior advisory skills because they have better knowledge of the local markets and closer relations with their clients. In addition, Boone et al. (2000) argue that the services of small accounting firms are more personalized than those of large auditors because of their superior client- specific information acquisition advantages. On the other hand, small clients of large accounting firms are frustrated by the poor service that they receive and the quality of the personnel assigned to them (Berton 1994). These factors could allow non-Big 4 auditors to deliver improved audit quality, particularly in the private firm setting where firms are more likely to resolve information asymmetry on an "insider basis" (Ball and Shivakumar 2005). Consistent with these arguments, Simunic (1984) purports that auditor knowledge gained from providing services not directly linked to the audit function could result in audit- related knowledge spillovers.

Finally, Big 4 auditors typically invest more in information technology (IT). They are therefore considered better able to perform audits in an efficient way. Such advantages, however, are less likely to materialize in the private firm market where clients are smaller and less complex than in the public firm market. Furthermore, recent evidence has given

rise to a number of inefficiencies associated with the over- reliance of auditors on IT. In particular, using data from interviews with audit partners at a Big 4 audit firm, Westermann et al. (2014) find that IT hampers the development of appropriate behaviors, such as critical thinking, and increases distraction. Interviewed auditors emphasized the loss of human interaction and its potential consequences for audit quality, client retention, and on the job learning. Audit partners seem to agree that valuable information is lost when the auditor cannot "see the person's reaction and look them in the eye" (Westermann et al. 2014). This latter observation is particularly important in the light of findings that audit clients in the private firm setting prefer a more relational approach in auditing (Fontaine and Pilote 2012). Large accounting firms are typically more reliant on IT than their smaller competitors. For this reason, I expect Big 4 auditors to be more likely to experience the consequences of IT- related inefficiencies on audit quality and auditor learning.

Despite strong reasons as to why non- Big 4 auditors would be able to deliver higher quality audits compared to Big 4 auditors, it is not ex- ante clear whether the absence of strong litigation, reputation, and regulatory scrutiny consideration would be sufficient for such advantages to materialize. I therefore formulate my hypothesis (in null format) as follows:

H0: There is no relation between auditor size and audit quality in the UK private firm setting.

3.3 Methodology

3.3.1 Audit Quality Measures

The audit quality proxies that I consider are the following: the level of absolute discretionary accruals, accrual quality, the level of absolute total accruals to absolute CFO, earnings smoothness, and the propensity of firm receiving a qualified auditor opinion.

3.3.1.1 Absolute Discretionary Accruals (ADA)

I estimate performance- adjusted discretionary accruals following Kothari et al. (2005). In particular, I perform annual cross- sectional regressions of the following model for every two- digit SIC code:

$$\boldsymbol{TA_{i,t} = \alpha_0 + \alpha_1 \Delta \text{Sales}_{i,t} + \alpha_2 PPE_{i,t} + \alpha_3 ROA_{i,t} + \varepsilon_{i,t}} \quad \textbf{(1),}$$

where:

$\boldsymbol{TA_{i,t}}$: The total accruals of firm i in year t, calculated as change in current assets less change in current liabilities less change in cash plus change in short- term debt less depreciation ($STA_{i,t} = \Delta CUAS_{i,t} - \Delta CULI_{i,t} - \Delta CASH_{i,t} + \Delta STDB_{i,t} - DEPR_{i,t}$).

$\boldsymbol{\Delta Sales_{i,t}}$: The change in sales of firm i in year t relative to year t-1.

$\boldsymbol{PPE_{i,t}}$: The property, plant, and equipment of firm i in year t.

$\boldsymbol{ROA_{i,t}}$: The ratio of net income before extraordinary items of firm i in year t to total assets in year t-1.

$\boldsymbol{\varepsilon_{STA_{i,t}}}$: The error term.

I scale all non- ratio variables by total assets in year t-1. I further winsorize all variables at the 1% and 99% levels. My measure of absolute discretionary accruals is the absolute value of the firm- specific residuals estimated from regression (1).

3.3.1.2 Accrual Quality (AQ)

My accrual quality measure is the Dechow and Dichev (2002) measure modified by McNichols (2002), which captures the extent to which working capital accruals map on past, present, and future CFO:

$$\boldsymbol{WCA_{i,t} = \beta_0 + \beta_1 CFO_{i,t-1} + \beta_2 CFO_{i,t} + \beta_3 CFO_{i,t+1} + \beta_4 \Delta Sales_{i,t} + \beta_5 PPE_{i,t} + \varepsilon_{i,t}} \quad \boldsymbol{(2)},$$

where:

$\mathbf{WCA_{i,t}}$: The working capital accruals of firm i in year t, calculated as change in current assets less change in current liabilities less change in cash plus change in short- term debt ($WCA_{i,t} = \Delta CUAS_{i,t} - \Delta CULI_{i,t} - \Delta CASH_{i,t} + \Delta STDB_{i,t}$).

$\boldsymbol{CFO_{i,t}}$: The cash flow from operations of firm i in year t calculated as net income before extraordinary items less total accruals ($CFO_{i,t} = NIBE_{i,t} - TA_{i,t}$).

Remaining variables are defined as previously. I scale all variables by total assets in year t-1 and winsorize them at the 1% and 99% levels. I further estimate equation (2) for each year and 2- digit SIC code, while requiring at least 20 observations per regression. My accrual quality measure is the 3-year standard deviation of the firm- year residuals estimated in the previous step.

3.3.1.3 Absolute Total Accruals to Absolute CFO (TACFO)

My third audit quality measure is the ratio of absolute total accruals to absolute CFO (Van Tendeloo and Vanstraelen 2008). Total accruals and CFO are defined as previously.

3.3.1.4 Earnings Smoothness (Smooth)

I define my measure of earnings smoothness as the ratio of the 3-year standard deviation of operating income to the 3-year standard deviation of CFO (Burgstahler et al. 2006; Dou et al. 2013). CFO are defined as previously.

3.3.1.5 Auditor Opinion (Opin)

My final audit quality measure is the propensity of a firm receiving a qualified auditor opinion (DeFond et al. 2002; Francis and Yu 2009). I define this variable as an indicator that takes the value of 1 if a firm receives a qualified auditor opinion on a specific fiscal year, and zero otherwise.

3.3.2 Empirical Models

To test my hypothesis, I use the following OLS model for all continuous audit quality measures (absolute discretionary accruals, accrual quality, absolute total accruals to absolute cash flow from operations, and earnings smoothness):

$$\boldsymbol{Measure_{i,t} = \gamma_0 + \gamma_1 B4_{i,t} + Controls + Year\ FE + Industry\ FE + \varepsilon_{i,t}} \quad (\mathbf{3}),$$

where $Measure_{i,t}$ is the corresponding audit quality measure. For the auditor opinion specification, I perform regression 3 using logit estimation techniques. However, due to

the incidental parameter problem when using fixed effects with logit specifications, as a robustness check, I repeat all logit regressions using OLS estimation techniques as well. In all specifications, I use heteroscedasticity and autocorrelation robust standard errors, clustered at the firm level.

Control Variables

In line with prior literature (Burgstahler et al. 2006; Van Tendeloo and Vanstraelen 2008; Francis and Yu 2009), I include the following audit quality determinants: I control for firm size (*LnToas*) calculated as the natural logarithm of total assets because larger firms typically have higher earnings quality (Becker et al. 1998). I include a control for leverage (*Leverage*) motivated by the debt covenant hypothesis (Watts and Zimmerman 1986). I calculate this variable as the ratio of total debt divided by lagged total assets. I control for profitability (*ROA*) and firms that report negative net income (*Loss*) to capture the link between firm performance and financial reporting quality. I further include sales growth (*Growth*), defined as the percentage change in sales, and predict a negative relation with earnings quality (Menon and Williams 2004). I also control the ratio of current assets to current liabilities (*Curr*) as well as Altman's Z-score (*Z-Score*). Lower values of the latter variable indicate more financial distress. For the auditor opinion specification, I additionally include lagged indicators of variables *Opin* (*Lagged Opin*) and *Loss* (*Lagged Loss*) following Francis and Yu (2009). Finally, I include industry and year fixed effects. I estimate industry fixed effects using 2-digit SIC codes. I winsorize all continuous, non-logarithmic variables at the 1% and 99% levels. Detailed definitions of all variables can be found in Appendix B.

3.3.3 Propensity- Score Matching

Propensity- score matching mitigates the bias that arises from differences in the treatment effect caused by firm- specific characteristics. In addition, it alleviates the impact of non- linearities in the estimated treatment effect when the underlying functional form is non- linear (Lawrence et al. 2011; Minutti-Meza 2013). To evaluate the extent to which firm- specific characteristics drive the Big 4 versus non- Big 4 differences, I estimate the probability of selecting a Big 4 auditor using the following logit model:

$$\boldsymbol{B4_{i,t} = \lambda_0 + Controls + Year\ FE + Industry\ FE + \varepsilon_{i,t}} \quad \textbf{(4)}$$

Controls include all determinants of the corresponding regression. I subsequently match, without replacement, a non- Big 4 client with a Big 4 client with the closest predicted value from equation (4), while allowing a maximum caliper distance of 1%.

3.4 Data

3.4.1 Sample Selection

My source of financial data is the December 2013 file of Amadeus database supplied by Bureau van Dijk. In particular, my sample consists of all UK private firms that are classified by Amadeus as very large-, large-, or medium- sized. That is, firms that meet at least one of the following conditions in their last available year: a) operating revenue greater than or equal to EUR 1 million, b) total assets greater than or equal to EUR 2 million, and c) number of employees greater than or equal to 15. As a result, very small

firms are not included in the sample. I additionally derive my auditor opinion data from FAME database[1].

I remove financials (one- digit SIC code 6) as well as firms without industry classification. I also exclude firms with fiscal years other than 12 months. I further delete subsidiaries of publicly listed companies following Burgstahler et al. (2006) and Van Tendeloo and Vanstraelen (2008). Finally, I remove observations with negative total assets, sales, and debt, as well as observations with missing data in the variables of interest.

Financial data in Amadeus is retained for a rolling period of up to 10 years. When a new year of data is added, the oldest year is dropped. This means that only the most recent data of each company is available. Due to this restriction, sufficient data for both samples is available for the period 2005-2012. Furthermore, the online version of Amadeus contains auditor and quoted status data that correspond only to the last available fiscal year for each firm. In other words, Amadeus does not provide historical data about the auditor name and quoted status in its online version. In order to overcome this limitation and create a longer time- series of auditor and quoted status data, I retrieve this information from older Amadeus updates. To this end, I retrieve the auditor name and quoted status from eight (8) yearly Amadeus updates that cover the period 2005 to 2012[2]. This procedure results in a total of 97,818 firm- year observations and 25,503 firms for the sample that consists of all firm- year observations with sufficient data to be included in at least one of

[1] I thank Bureau van Dijk for graciously providing the auditor opinion data.

[2] Each update yields one auditor name and quoted status indicator per firm. For each update and firm, I match the auditor name and quoted status with that firm's financial data from the December 2013 online version. To perform the matching, I require that the online version fiscal year and the last available fiscal year of the corresponding update are the same. Accordingly, the auditor and quoted status information provided in the online version is retained only for the last available year of the same version.

the regression analyses. Table 3.1, Panel A presents the sample selection procedure. Panel B shows the distribution of the number of firms per fiscal year for the period 2005-2012.

TABLE 3.1

Panel A: Sample Selection Procedure

Initial Sample		**918,631**
Less financials	-224,481	
Less privately held subsidiaries of quoted companies	-40,221	
Less observations without required financial data	-555,698	
Less observations with missing matched auditor name	-413	
Final Sample		**97,818**

Panel B: Number of Observations per Fiscal Year

Fiscal Sear	Number of Observations
2005	8,320
2006	9,845
2007	10,288
2008	10,742
2009	11,847
2010	12,884
2011	18,254
2012	15,638
Sum	**97,818**

Panel A presents the sample selection procedure.The final sample consists of all firm- year observations with sufficient data to be included in at least one of the regression analyses. Panel B presents the distribution of the final sample per fiscal year for the period 2005- 2012.

3.4.2 Descriptive Statistics and Correlations

Table 3.2 presents the descriptive statistics of the variables of interest. Roughly one third of all observations represent Big 4 clients. This means that a significant percentage of UK private firms are audited by smaller accounting firms. The absolute discretionary accruals of the average firm amount to 0.066, whereas for accrual quality, the ratio of

absolute total accruals to absolute cash flow from operations, and earnings smoothness the corresponding values are 0.036, 0.77, and 0.447, respectively. On average, financial statements that have received a qualified auditor opinion represent roughly 1% of the sample.

TABLE 3.2

Descriptive Statistics

Variables	N	Mean	St. Deviation	25%	Median	75%
Big 4	97,818	0.3330	0.4710	0	0	1
ADA	97,818	0.1020	0.1080	0.0286	0.0660	0.1340
AQ	26,751	0.0491	0.0434	0.0199	0.0361	0.0635
TACFO	97,803	1.6780	3.7180	0.4120	0.7700	1.2720
Smooth	75,880	0.7330	0.9180	0.2070	0.4470	0.8810
Opin	92,388	0.0089	0.0940	0	0	0
LnToas	97,818	16.1800	1.5750	15.1700	15.9800	17.0500
ROA	97,818	0.0619	0.1120	0.0105	0.0448	0.0994
Lvg	97,818	0.3060	0.3220	0.0622	0.2180	0.4460
Curr	97,818	1.9110	1.8060	1.0250	1.3840	2.1120
Growth	97,818	0.1200	0.4380	-0.0483	0.0496	0.2400
Loss	97,818	0.1740	0.3790	0	0	0
Z- Score	97,818	3.4030	1.9260	2.1570	3.2950	4.4450

This table presents summary statistics for all firm- year observations with sufficient data to be included in at least one of the regression analyses. All continuous, non- logarithmic variables have been winsorized at the 1% and 99% levels. See Appendix for variable definitions.

Table 3.3 presents the Pearson correlations of the variables of interest. There is a positive and significant correlation (0.443) between firm size and auditor size, which is consistent with large firms being more likely to appoint Big 4 auditors. Moreover, having a Big 4 auditor is positively associated with the level of absolute discretionary accruals (0.071), the Dechow and Dichev (2002) accrual quality measure (0.111), and the ratio of absolute total accruals to absolute cash flow from operations (0.031). Furthermore, there is a negative correlation between auditor size and earnings smoothness (-0.001), as well as the propensity of receiving a qualified auditor opinion (-0.049). These correlations are

TABLE 3.3

Correlation Matrix

	Big 4	ADA	AQ	TACFO	Smooth	Opin	LnToas	ROA	Lvg	Curr	Growth	Loss	Z-Score
Big 4	1												
ADA	**0.0710**	1											
AQ	**0.1114**	**0.3416**	1										
TACFO	**0.0310**	**0.0460**	**0.0602**	1									
Smooth	**-0.0077**	**-0.1404**	**0.0567**	**0.0404**	1								
Opin	**-0.0485**	**-0.0183**	**-0.0148**	0.0041	-0.0021	1							
LnToas	**0.4432**	**-0.0736**	**-0.0802**	**0.0106**	**-0.0577**	-0.0034	1						
ROA	**-0.0216**	**0.1317**	**0.1370**	**-0.0220**	**0.0335**	**-0.0192**	**-0.1040**	1					
Lvg	**0.1443**	**0.1304**	**0.0643**	**0.0079**	**-0.0265**	-0.0046	**0.1452**	**-0.2348**	1				
Curr	**0.0671**	**0.0092**	**0.0594**	**0.0517**	**0.0198**	**0.0105**	**0.0280**	**0.1043**	**-0.2232**	1			
Growth	**-0.0470**	**0.1387**	**0.0333**	-0.0048	-0.0054	**-0.0113**	**-0.0329**	**0.2722**	**0.0529**	**-0.0908**	1		
Loss	**0.0801**	0.0061	**0.1020**	**0.0688**	**0.0694**	**0.0066**	**0.0300**	**-0.5400**	**0.2265**	**-0.0588**	**-0.1638**	1	
Z-Score	**-0.1755**	-0.0008	-0.0043	0.0037	**0.0150**	-0.0013	**-0.2617**	**0.3988**	**-0.5435**	**0.3332**	**0.1712**	**-0.2974**	1

This table presents the correlation matrix for all firm-year observations with sufficient data to be included in at least one of the regression analyses. All continuous, non-logarithmic variables have been winsorized at the 1% and 99% levels. Bold values indicate significance at the two-tailed 5% level. See Appendix for variable definitions.

significant at the 5% or 1% levels and provide some initial evidence of a negative relation between auditor size and audit quality.

3.5 Results

3.5.1 Univariate Comparisons

In Table 3.4, I present the Big 4 versus non- Big 4 univariate comparisons for the full and the propensity- score matched samples. The full sample analysis shows that Big 4 clients are, on average, larger, less profitable and more leveraged than non- Big 4 clients. In addition, clients of Big 4 auditors have, on average, greater current ratios but they exhibit lower sales growth and they are more likely to report losses and be financially distressed than clients of non- Big 4 auditors. These differences are statistically significant at the 1% level. Furthermore, Big 4 private firm clients have, on average, 0.016 more absolute discretionary accruals than non- Big 4 clients. The difference is statistically significant at the 1% level and corresponds to 15.7% of the sample mean absolute discretionary accruals. In addition, clients of large accounting firms have, on average, higher levels of the Dechow and Dichev (2002) accrual quality measure, greater ratios of absolute total accruals to absolute CFO, higher smoothness levels, and are less likely to receive a qualified auditor opinion. These differences are highly statistically significant (at the 5% level for smoothness and 1% level for all other measures) and correspond to roughly 20.4%, 14.5%, and 2% of the average accrual quality level, absolute total accruals to absolute CFO ratio, and earnings smoothness level, respectively. Moreover, non- Big 4 clients are almost 5 times more likely to receive a qualified auditor opinion than Big 4 clients.

The propensity- score matched sample analysis shows the Big 4 versus non- Big 4 differences in means in the matched sample. The analysis shows that, in contrast to the full sample, the differences in the firm- specific characteristics on which the matching is performed are no longer statistically significantly different between the two subgroups[3]. That is, Big 4 and non- Big 4 clients exhibit no statistically significant differences in size, profitability, leverage, current ratio, sales growth, likelihood of reporting a loss, and level of financial distress. This finding provides reassurance that the matching has been successfully implemented. The matched sample analysis also shows that the differences in means between the Big 4 and non- Big 4 subsamples largely persist after the matching. With the exception of smoothness, for which the difference now becomes insignificant, Big 4 clients are still associated with higher levels of absolute discretionary accruals, higher levels of the Dechow and Dichev (2002) accrual quality measure, larger absolute total accruals to absolute CFO ratios, and a lower propensity to receive a qualified auditor opinion. These differences are statistically significant at the 1% level and amount to approximately 19.2%, 21.4%, and 11% of the average accrual quality level, absolute total accruals to absolute CFO ratio, and earnings smoothness level, respectively. Furthermore, non- Big 4 clients are now more than 5 times more likely to receive a qualified auditor opinion. These results seem to indicate that, after the matching, the differences in means between the Big 4 and non- Big 4 subsamples become even larger for three out of the five audit quality proxies.

[3] This analysis presents the outcome of the matching procedure that is based on the main determinants of regression (3). Results are qualitatively identical when I additionally match on lagged loss and lagged auditor opinion. Under this alternative specification, the corresponding differences of variables *Lagged Loss* and *Lagged Opin* are insignificant as well, whereas all test variables retain the sign and significance levels presented in Table 3.4.

TABLE 3.4

Big 4 Versus Non- Big 4 Univariate Comparisons

	Full Sample				***Propensity- Score Matched Sample***			
Variables	**No. Obs**	**Big 4 Mean Std. Dev.**	**Non- Big 4 Mean Std. Dev.**	**Difference in Means** *t-statistic*	**No. Obs**	**Big 4 Mean Std. Dev**	**Non- Big 4 Mean Std. Dev.**	**Difference in Means** *t-statistic*
ADA	97,818	0.1129	0.0967	**0.0162*** **	45,236	0.1141	0.0945	**0.0196*** **
		0.1181	0.1021	*22.25*		0.1168	0.1035	*18.91*
AQ	25,085	0.0554	0.0454	**0.01*** **	12,646	0.0546	0.0441	**0.0105*** **
		0.0477	0.0402	*18.34*		0.0463	0.0403	*13.69*
TACFO	97,803	1.8413	1.5970	**0.2442*** **	45,228	1.8072	1.6228	**0.1844*** **
		3.9836	3.5757	*9.69*		3.9214	3.5952	*5.21*
Smooth	75,880	0.7231	0.7381	**-0.0149** **	33,938	0.7318	0.7326	**-0.0007**
		0.9291	0.9128	*-2.12*		0.9219	0.9099	*-0.08*
Opin	66,829	0.0025	0.0122	**-0.0096*** **	30,127	0.0026	0.0134	**-0.0107*** **
		0.0500	0.1096	*-14.77*		0.0512	0.1150	*-10.94*
LnToas	97,818	17.1709	15.6901	**1.4807*** **	45,236	16.4706	16.4735	**-0.0028**
		1.7064	1.2386	*150.00*		1.3207	1.2405	*0.24*
ROA	97,818	0.0585	0.0636	**-0.0051*** **	45,236	0.0604	0.0601	**-0.0001**
		0.1247	0.1050	*-6.75*		0.1255	0.1074	*-0.22*
Lvg	97,818	0.3789	0.2769	**0.1019*** **	45,236	0.3321	0.3342	**-0.002**
		0.3769	0.2959	*48.50*		0.3530	0.3311	*-0.63*
Curr	97,818	2.0828	1.8256	**0.2572*** **	45,236	1.9864	1.9894	**-0.0029**
		2.0765	1.6472	*21.05*		1.8114	1.9752	*-0.17*
Growth	97,818	0.0905	0.1342	**-0.0437*** **	45,236	0.1040	0.1064	**-0.0023**
		0.3835	0.4626	*-14.72*		0.4144	0.3984	*-0.63*
Loss	97,818	0.2174	0.1529	**0.0645*** **	45,236	0.1930	0.1971	**-0.0041**
		0.4125	0.3599	*25.14*		0.3947	0.3979	*-1.12*
Z- Score	97,818	2.9247	3.6417	**-0.717*** **	45,236	3.2173	3.2253	**-0.008**
		1.9723	1.8569	*-55.76*		1.9652	1.8345	*-0.45*

This table presents the Big 4 versus non- Big 4 univariate comparisons for the full and the propensity- score matched sample. All continuous, non- logarithmic variables have been winsorized at the 1% and 99% level. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix for variable definitions.

3.5.2 Multivariate Results

3.5.2.1 Absolute Discretionary Accruals

Table 3.5 presents the results of the regression of absolute discretionary accruals on the Big 4 indicator and the control variables for the full and the propensity- score matched samples. The first two columns of the table correspond to the regressions of the total absolute discretionary accruals. The middle two and the last two columns of Table 3.5 show the results for the income increasing and income decreasing absolute discretionary accruals only. The regressions of Table 3.5 cover the period 2005- 2012.

The full sample of the total absolute discretionary accrual specification consists of 97,818 firm- year observations, whereas the corresponding propensity- score matched sample consists of 45,236 firm- year observations. Consistent with the univariate results, the analysis of the total absolute discretionary accruals shows that Big 4 auditors are associated with higher levels of absolute discretionary accruals compared to non- Big 4 auditors. The difference is highly statistically significant (at the 1% level) and amounts, on average, to roughly 2.15% of total assets. The matched sample analysis yields similar results: Big 4 clients have, on average, 1.98% of total assets more absolute discretionary accruals compared to non- Big 4 clients. This coefficient is also highly statistically significant (at the 1% level). Moreover, large firms are associated with lower levels of absolute discretionary accruals, whereas firms with high ROA and current ratios, more leveraged firms, growing firms, as well as loss making firms are associated with greater levels of absolute discretionary accruals.

The next two columns of Table 3.5 present the results of the analysis that is based on the income increasing absolute discretionary accruals. This analysis is based on a

TABLE 3.5

Regressions of Absolute Discretionary Accruals on Auditor Size

	ADA		Income Decreasing ADA		Income Increasing ADA	
Variables	Full Sample	Matched Sample	Full Sample	Matched Sample	Full Sample	Matched Sample
B4	0.0215***	0.0198***	0.0277***	0.0258***	0.0148***	0.0143***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
LnToas	-0.0083***	-0.0078***	-0.0116***	-0.0116***	-0.0054***	-0.0043***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
ROA	0.1538***	0.1476***	0.1072***	0.0842***	0.2063***	0.2222***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Lvg	0.0582***	0.0624***	-0.0246***	-0.0221***	0.1203***	0.1211***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Curr	0.0019***	0.0024***	-0.0024***	-0.0016***	0.0045***	0.0053***
	(0.000)	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)
Growth	0.0236***	0.0238***	0.0282***	0.0268***	0.0139***	0.0192***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Loss	0.0192***	0.0175***	0.0237***	0.0192***	0.0149***	0.0188***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Z- Score	0.0005	0.0007	-0.0036***	-0.0037***	0.0045***	0.0038***
	(0.139)	(0.198)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	0.1657***	0.1474***	0.2669***	0.2659***	0.0762***	0.0559***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	97,818	45,236	48,958	22,396	48,860	22,466
R-squared	0.0990	0.1020	0.0870	0.0869	0.1730	0.1868

This table presents the OLS regressions of total, income decreasing, and income increasing absolute discretionary accruals (ADA) on auditor size for the full and the propensity- score matched samples (2005- 2012). All continuous, non- logarithmic variables have been winsorized at the 1% and 99% level. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix for variable definitions.

sample of 48,958 (22,396) firm- year observations for the full (propensity- score matched) sample and yields results that are consistent with original findings. That is, Big 4 auditors are associated with higher levels of income increasing absolute discretionary accruals in

both the full and the propensity- score matched samples. The coefficients are statistically significant at the 1% level and seem to indicate that non- Big 4 auditors are more successful in restricting income increasing earnings management.

The final two columns of Table 3.5 show the results of the analysis that is based on income decreasing absolute discretionary accruals. The sample size amounts to 48,860 (22,466) firm- year observations for the full (propensity- score matched) sample. Once again, results are in line with previous findings. In particular, clients of non- Big 4 auditors are characterized by lower absolute values of income decreasing discretionary accruals than clients of Big 4 auditors. The corresponding coefficients are highly statistically significant (at the 1% level) in both the full and the propensity- score matched specifications and provide evidence of a non- Big 4 audit quality advantage in limiting income decreasing earnings management as well.

3.5.2.2 Accrual Quality

Table 3.6 presents the results of the regressions that examine the relation between auditor size and audit quality using a number of additional audit quality proxies. The first two columns present the analysis that is based on the McNichols (2002) modification of the Dechow and Dichev (2002) accrual quality measure. Higher values of this measure correspond to lower earnings quality. Due to the data restrictions of the Dechow and Dichev (2002) measure, the accrual quality analysis is limited to fiscal years 2007- 2011 and is based on a full (propensity- score matched) sample of 25,085 (12,646) firm- year observations. In line with previous findings, Big 4 auditors are associated with lower accrual quality under both specifications. The corresponding coefficients for the full and the propensity- score matched sample amount to 0.0113 and 0.0106, respectively, and are

statistically significant at the 1% level. In relative terms, these differences amount to roughly 25.9% and 24.2% of the corresponding interquartile range.

TABLE 3.6

Regressions of Audit Quality Proxies on Auditor Size

	AQ		TACFO		Smooth	
Variables	Full Sample	Matched Sample	Full Sample	Matched Sample	Full Sample	Matched Sample
B4	0.0113***	0.0106***	0.1882***	0.1877***	-0.0037	0.0024
	(0.000)	(0.000)	(0.000)	(0.000)	(0.733)	(0.843)
LnToas	-0.0040***	-0.0038***	0.0015	-0.0151	-0.0314***	-0.0219***
	(0.000)	(0.000)	(0.880)	(0.321)	(0.000)	(0.000)
ROA	0.0903***	0.0891***	0.4137**	0.5500**	0.7013***	0.5973***
	(0.000)	(0.000)	(0.018)	(0.025)	(0.000)	(0.000)
Lvg	0.0143***	0.0159***	0.0763	0.0245	-0.0785***	-0.0648***
	(0.000)	(0.000)	(0.104)	(0.707)	(0.000)	(0.003)
Curr	0.0013***	0.0017***	0.1084***	0.1096***	0.0060**	0.0054
	(0.000)	(0.000)	(0.000)	(0.000)	(0.031)	(0.153)
Growth	0.0025***	0.0035***	0.0624**	0.0961**	-0.0058	-0.0060
	(0.005)	(0.007)	(0.032)	(0.038)	(0.515)	(0.667)
Loss	0.0224***	0.0230***	0.7819***	0.7883***	0.2836***	0.2712***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Z- Score	-0.0002	-0.0010**	0.0123	0.0023	-0.0038	-0.0042
	(0.503)	(0.028)	(0.207)	(0.870)	(0.242)	(0.363)
Constant	0.0853***	0.0849***	0.9637***	0.8803**	1.2088***	1.0372***
	(0.000)	(0.000)	(0.000)	(0.010)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	25,085	12,646	97,803	45,228	74,280	33,938
R-squared	0.1305	0.1345	0.0105	0.0117	0.0244	0.0232

This table presents the OLS regressions of accrual quality (AQ) (2007- 2011), ratio of absolute total accruals to absolute cash flow from operations (TACFO) (2005- 2012), and earnings smoothness (Smooth) (2006- 2012) on auditor size for the full and the propensity- score matched samples. All continuous, non- logarithmic variables have been winsorized at the 1% and 99% level. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix for variable definitions.

3.5.2.3 Total Accruals to CFO

The middle two columns of Table 3.6 present the regressions of the absolute total accruals to absolute CFO ratio. The analysis is performed on a sample size of 97,803 (45,228) firm- year observations for the full (propensity- score matched) sample and covers the period 2005-2012. The findings of this analysis provide additional evidence in favor of a non- Big 4 audit quality advantage in the UK private firm market. In particular, Big 4 auditors are associated with greater ratios of absolute total accruals to absolute CFO in both specifications. The coefficients are significant at the 1% level and amount to roughly 21.9% and 23.2% of the corresponding interquartile range for the full and the propensity- score matched samples, respectively.

3.5.2.4 Earnings Smoothness

The last two columns of Table 3.6 present the results of the earnings smoothness regressions. This analysis is restricted to years 2006- 2012 due to the additional data requirements of the measure. The results indicate no statistically significant differences between Big 4 and non- Big 4 clients for both specifications. In untabulated analysis, I repeat the two regressions using earnings smoothness measures that are calculated using 5-year operating income and CFO standard deviations, as opposed to the current 3- year measures. Inferences remain unchanged under this specification as well. That is, both smoothness coefficients are not statistically significant.

3.5.2.5 Auditor Opinion

Table 3.7 presents the logit regressions of the propensity to receive a qualified auditor opinion on the Big 4 indicator and the corresponding controls. The first two

columns show the results for the full and the propensity- score matched samples, which consist of 66,829 and 30,127 firm- year observations, respectively. Results show that clients of Big 4 auditors are less likely to receive a qualified auditor opinion. The coefficients on the Big 4 indicator equal -1.492 for the full sample and -1.3739 for the propensity- score matched sample and are both statistically significant at the 1% level. Due to the incidental parameter problem when using fixed effects in logit specifications, I repeat the two regressions using OLS estimation techniques. Results are robust to this specification. That is, both coefficients remain negative and statistically significant at the 1% level.

A number of prior studies that focus on auditor opinion restrict the analysis to samples of distressed firms (Reynolds and Francis 2000; DeFond et al. 2002; Francis and Yu 2009). I therefore repeat the auditor opinion regressions on loss- making firms only. This alternative specification yields a full sample of 9,714 firm- year observations and a propensity- score matched sample of 4,328 firm- year observations. I present the results of this analysis in the last two columns of Table 3.7. Table 3.7 shows that inferences are unchanged when focusing on distressed firms only. That is, clients of Big 4 auditors are less likely to receive a qualified auditor opinion compared to non- Big 4 clients. The coefficients in both the full and the propensity- score matched samples are negative and significant at the 1% level. Results are qualitatively identical when I use OLS instead of logit estimation techniques.

TABLE 3.7

Regressions of Qualified Auditor Opinion on Auditor Size

	Likelihood of Receiving a Qualified Audit Opinion			
Variables	**Full Sample**	**Matched Sample**	**Distressed Firm Sample**	**Matched Sample**
B4	-1.4920***	-1.3739***	-1.4912***	-1.2787***
	(0.000)	(0.000)	(0.000)	(0.000)
LnToas	0.0824**	-0.0063	0.2036***	0.0723
	(0.018)	(0.912)	(0.006)	(0.534)
ROA	-1.1460	0.0063	-4.2537***	-5.0619***
	(0.190)	(0.995)	(0.004)	(0.008)
Lvg	0.1876	-0.1329	-0.0195	-0.0081
	(0.361)	(0.615)	(0.957)	(0.987)
Curr	0.0378	0.0086	-0.0234	0.0144
	(0.161)	(0.823)	(0.644)	(0.835)
Growth	-0.1356	-0.7748***	0.1392	-0.3314
	(0.405)	(0.004)	(0.654)	(0.475)
Loss	-0.0210	0.2449	-	-
	(0.905)	(0.319)		
Z- Score	0.0066	-0.0860	0.0335	0.0387
	(0.868)	(0.166)	(0.575)	(0.665)
Lagged Loss	0.3100**	0.1600	0.0820	0.2976
	(0.042)	(0.468)	(0.734)	(0.372)
Lagged Opin	5.8539***	5.9540***	5.7243***	5.3877***
	(0.000)	(0.000)	(0.000)	(0.000)
Constant	-6.2656***	-17.6632***	-8.3163***	-17.8737***
	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes
Observations	66,829	30,127	9,714	4,328
Pseudo R-Squared	0.438	0.431	0.406	0.376

This table presents the logit regressions of the likelihood of receiving a qualified auditor opinion on auditor size for the full and the propensity- score matched samples (2005- 2012). The distressed firm sample consists only of all observations with negative net income. All continuous, non- logarithmic variables have been winsorized at the 1% and 99% level. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix for variable definitions.

3.5.3 Non- Big 4 Multivariate Analysis

As a robustness test, I examine the relation between auditor size and audit quality in a sample of non- Big 4 clients only. This results in a sample of 66,388 firm- year observations. To classify accounting firms as large or small, I calculate the aggregate size of their clients (in total assets) and create the indicator variable *Large_NB4* which takes the value of 1 if the corresponding non- Big 4 accounting firm is larger than the median non- Big 4 accounting firm, and zero otherwise. I subsequently regress each of the 5 alternative audit quality proxies on variable *Large_NB4* and the corresponding controls. Results (untabulated) are robust to this specification. That is, the estimated coefficients on absolute discretionary accruals, accrual quality, and the ratio of total accruals to CFO are positive and statistically significant at the 1% level. Moreover, earnings smoothness is insignificant, whereas the coefficient on the auditor opinion indicator is negative and statistically significant at the 1% under both logit and OLS specifications.

In a second step, I derive the corresponding propensity- score matched samples by matching a client that is audited by an above median non- Big 4 auditor to a client that is audited by a below median non- Big 4 auditor. The matching is performed on the basis of the control variables of regression (3). In addition, I include industry and year fixed effects. I further require a caliper distance of 1%. This procedure results in sample sizes that vary from 11,842 to 50,450 firm- year observations, depending on the specification. Table 3.8 presents the results of the regressions on the propensity- score matched samples. In particular, clients of large non- Big 4 auditors are associated with more absolute discretionary accruals (the 1% level), worse accrual quality (at the 1% level), more absolute total accruals to absolute CFO (at the 5% level), and a lower likelihood to receive

TABLE 3.8

Regressions of Audit Quality Proxies on Auditor Size for Non- Big 4 Clients Only

Variables	ADA	AQ	TACFO	Smooth	Opin
	Propensity Score- Matched Sample				
Large_NB4	0.0060***	0.0033***	0.0813**	0.0072	-0.2628**
	(0.000)	(0.000)	(0.013)	(0.516)	(0.031)
LnToas	-0.0106***	-0.0050***	-0.0069	-0.0323***	0.2368***
	(0.000)	(0.000)	(0.691)	(0.000)	(0.000)
ROA	0.1618***	0.0828***	-0.2447	0.8626***	-0.3350
	(0.000)	(0.000)	(0.321)	(0.000)	(0.743)
Lvg	0.0528***	0.0116***	0.1256*	-0.0810***	0.2532
	(0.000)	(0.000)	(0.072)	(0.001)	(0.330)
Curr	0.0015***	0.0011***	0.0715***	0.0080**	0.0572
	(0.000)	(0.008)	(0.000)	(0.041)	(0.108)
Growth	0.0220***	0.0036***	0.0860**	-0.0026	-0.0648
	(0.000)	(0.002)	(0.029)	(0.814)	(0.727)
Loss	0.0199***	0.0196***	0.7837***	0.2848***	0.1282
	(0.000)	(0.000)	(0.000)	(0.000)	(0.525)
Z- Score	-0.0004	0.0002	0.0282**	-0.0085**	-0.0411
	(0.435)	(0.635)	(0.028)	(0.049)	(0.395)
Lagged Loss	-	-	-	-	0.4319**
					(0.013)
Lagged Opin	-	-	-	-	5.7853***
					(0.000)
Constant	0.2080***	0.1009***	1.3817***	1.3373***	-8.3174***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Observations	50,450	11,842	50,426	38,564	33,146
R-squared	0.0993	0.1260	0.0100	0.0260	0.430

This table presents the regressions of the level of absolute discretionary accruals (ADA), accrual quality (AQ), absolute total accruals to absolute CFO (TACFO), earnings smoothness (Smooth), and the likelihood of receiving a qualified auditor opinion (Opin) on auditor size for the propensity- score matched sample that consists of non- Big 4 clients only. Large_NB4 is an indicator variable that takes the value of 1 if the audit firm is larger than the median non- Big 4 audit firm, and zero otherwise. All continuous, non- logarithmic variables have been winsorized at the 1% and 99% levels. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively. See Appendix for variable definitions.

a qualified auditor opinion (at the 5% level[4]) than clients of small non- Big 4 auditors. Earnings smoothness remains insignificant under this specification as well. Overall, these findings are consistent with prior results and provide evidence of a negative relation between auditor size and audit quality in the non- Big 4 subsample.

3.5.4 Additional Robustness Tests

3.5.4.1 Removing Firms that Switch Listing Status

Decisions pertinent to listing status changes could affect the financial reporting quality of private firms for reasons not directly related to the type of auditor they have. For example, firms that go public could improve their financial reporting quality in an attempt to increase transparency and therefore reduce information asymmetry between them and their potential capital providers. Although such firms are more likely to be larger, and thus are typically audited by Big 4 auditors, to mitigate concerns that my results are affected by incentives linked to listing status changes, I remove all related firm- year observations from my initial sample. In particular, I am able to identify 110 unique private firms (209 firm- year observations) that have been previously, or at some future point, classified as publicly listed. Results (untabulated) show that initial findings are not affected by firms that switch listing status. Specifically, all related coefficient estimates have identical signs and statistical significance levels in both full and propensity- score matched specifications. Therefore, listing status switches do not appear to moderate original inferences.

[4] Result applies to both logit and OLS specifications.

3.5.4.2 Testing Original Hypothesis Before and After Audit Partner Signature Requirement

In 2006 the UK adopted the European Union (EU) Eighth Company Law Directive which required engagement partners to sign audit reports. The directive was put into effect for all financial years ending in April 2009 or later. The basic premise of audit partner signature requirement was to enhance partner accountability and thus improve audit quality. Carcello and Li (2013) find evidence consistent with this argument in the UK public firm setting. To evaluate the robustness of original findings before and after the audit partner signature requirement, I repeat the main analysis after splitting the initial sample to those fiscal years ending before and after April 2009. In both subsamples I find results (not tabulated) qualitatively similar to original findings. That is, clients of Big 4 auditors are associated with higher levels of absolute total accruals, lower accrual quality, greater total accrual to CFO ratios, and lower propensity to receive a qualified auditor opinion. The corresponding coefficients are statistically significant at the 1% level in both subsamples and alternative specifications (full and propensity- score matched). Earnings smoothness remains insignificant in all tests. Overall, these findings seem to confirm the existence of a negative relation between auditor size and audit quality in the UK private firm setting both before and after the audit partner signature requirement in 2009.

3.6 Conclusion

The consensus in audit literature seems to be that large accounting firms provide superior audit quality compared to their smaller competitors. In the current paper, I investigate the relation between auditor size and audit quality in the UK private firm

setting where Big 4 auditors have reduced litigation, reputation, and regulatory scrutiny considerations. I argue that, in the absence of strong incentives by large auditors to deliver superior audits, non- Big 4 private firm auditors could even seize an audit quality advantage due to better knowledge of their clients as well as incentives to deliver a sufficiently high level of audit quality. Results are consistent with this hypothesis. Non-Big 4 private firm clients in the UK have lower levels of absolute discretionary accruals, better accrual quality, lower ratios of absolute total accruals to absolute CFO, and higher likelihood to receive a qualified auditor opinion. Furthermore, there is no difference in the level of earnings smoothness between Big 4 and non- Big 4 clients.

This paper contributes to the literature primarily by being one of the first to provide evidence of a negative relation between auditor size and audit quality in the absence of strong incentives by Big 4 auditors to retain their audit quality advantage. Furthermore, to the extent that the otherwise positive link between auditor size and audit quality reverses when reputation, litigation, and regulatory oversight considerations become sufficiently weak, this paper places their moderating role in a relative perspective over the alternative explanations of the Big 4 audit quality advantage. I caution that the private firm setting on which this study is based is unique in that private firm clients differ from public firm clients. Therefore, the extent to which the findings of this study generalize to non- private firm settings where Big 4 auditors have considerably weak incentives to deliver high quality audits remains an open empirical question.

Appendix B

Panel A: Dependent Variables

ADA	The level of absolute discretionary accruals as in Kothari et al. (2005).
AQ	The Dechow and Dichev (2002) accrual quality measure modified by McNichols (2002).
TACFO	The ratio of absolute total accruals to absolute cash flow from operations.
Smooth	The ratio of the 3- year standard deviation of operating income to the 3- year standard deviation of cash flow from operations.
Opin	An indicator variable that takes the value of 1 if the firm has received a qualified auditor opinion in a specific fiscal year, and zero otherwise.

Panel B: Test Variables

B4	An indicator variable that takes the value of 1 if a firm is audited by a Big 4 auditor in a specific fiscal year, and zero otherwise.
Large_NB4	An indicator variable that takes the value of 1 if a firm is audited by a non- Big 4 auditors that is larger than the median non- Big 4 auditor, and zero otherwise.

Panel C: Control Variables

LnToas	The natural logarithm of total assets.
ROA	The ratio of net income to lagged total assets.
Leverage	The ratio of total debt to lagged total assets.
Current Ratio	The ratio of current assets to current liabilities.
Growth	The percentage change in sales relative to the previous fiscal year.
Loss	An indicator variable that takes the value of 1 if the firm reports negative income in a specific fiscal year, and zero otherwise.
Z- Score	Altman's Z- Score calculated as 1.2* (Net Working Capital/Total Assets) + 1.4* (Retained Earnings/Total Assets) + 3.3* (EBIT/Total Assets) + 0.6* (Book Value of Equity/Book Value of Total Liabilities) + Sales/Total Assets.
Lagged Loss	An indicator variable that takes the value of 1 if the firm reports negative income in the previous fiscal year, and zero otherwise.
Lagged Opin	An indicator variable that takes the value of 1 if the firm has received a qualified auditor opinion in the previous fiscal year, and zero otherwise.

Chapter 4*

Big 4 Office Political Connections and Client Restatements

4.1 Introduction

Audit firms devote significant amounts of funds to establishing political connections. Reuters reports that Deloitte, Ernst & Young, KPMG, and PricewaterhouseCoopers spent a combined $9.4 million on in-house and outside lobbyists in 2011. In addition, political action committees (PACs) funded mainly by the firms' employees contributed more to congressional campaigns in the 2010 election cycle than they had in at least a decade[1]. Auditors utilize their political connections in order to influence regulators or legislators for their own benefit as well as for the benefit of their clients (Watts and Zimmerman 1982; Puro 1984). It is not clear, however, what the audit quality consequences of auditor political connections are. Although prior literature generally concludes that politically connected firms exhibit lower accounting quality and are less likely to be targeted by disciplinary agencies (Chaney et al. 2011; Yu and Yu 2011; Correia 2014), there is a paucity of evidence with respect to the relation between *auditor* political connections and audit quality. Burnett et al. (2013) provide a recent exception: They examine the link between auditor lobbying on behalf of their own clients

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[1] http://www.reuters.com/article/2012/03/13/us-usa-accounting-big-idUSBRE82C0JQ20120313

and audit quality using auditor PAC data at the *national* level. However, they do not find evidence of audit quality compromise.

In this paper, I investigate the relation between Big 4 *auditor- specific* political connections and audit quality at the *audit office* level. I specifically focus on the frequency of accounting restatements as it constitutes a more direct measure of low- quality audits compared to accrual- based measures (Francis et al. 2013) and strongly suggestive that the original audit of the misstated financial statement was of low quality (Kinney et al. 2004; Palmrose and Scholz 2004; Francis and Michas 2013). To construct my office- level measures of auditor political connections, I manually retrieve the PAC contributions of all Big 4 employees in the US targeting members of committees responsible for auditor regulation and oversight, i.e., the Senate committee on Banking, Housing, and Urban Affairs and the House of Representatives committee on Financial Services. Through this procedure, I create a sample of office- specific, long- term political connections that spans from 2003 to 2012. To my knowledge, this is the first paper to investigate the audit quality consequences of auditor political connections at the audit office level.

Economists such as Stigler (1971) and Peltzman (1976) have long argued that interest groups provide political support to regulators in exchange for wealth transfers. The political support offered can take the form of either money or votes. Eventually regulators become captured by their supporting groups, which often enjoy preferential treatment over other groups or rivals. Therefore, to the extent that political connections allow firms to enjoy preferential treatment, auditor political connections could result in them being less scrutinized by regulatory and disciplinary agencies. Consequently, politically connected audit offices would be less likely to provide high quality audits.

Interest groups utilize their political connections in order to influence regulators to their benefit. Regulators, however, also stand to benefit from establishing political connections by gaining access to information related to the political as well as policy consequences of their regulatory plans and actions (Aplin and Hegarty 1980; Gilligan and Krehbiel 1989; Austen-Smith and Wright 1992; Hillman and Hitt 1999; Hall and Deardorff 2006). Regulators therefore place great emphasis on the credibility and reputation of the source (Heinz et al. 1993; Hull 1993; Hillman and Hitt 1999). In addition, political science literature suggests that interest groups establish long- term relations with their affiliated politicians by developing implicit non- enforceable contracts that rely on trust and reputation (Snyder 1992; Mccarty and Rothenberg 1996; Berry 1999; Bernhagen 2013). Politically connected auditors could therefore have increased reputation and litigation considerations since an audit failure could adversely affect their trustworthiness and, consequently, put their relations with their affiliated politicians at risk.

Political connections yield informational advantages to auditors as well. Social capital theory predicts that economic agents that are part of a network gain informational advantages from their network connections and position (Coleman 1988; Burt 1992; Horton and Serafeim 2012; Cohen et al. 2010; Horton et al. 2014). Politically connected auditors are part of a network that includes regulators as well as other auditors who are also politically connected. Furthermore, politically connected auditors are deeply involved in the standard- setting procedure and engage in discussions with regulators about issues that relate to audit practice (Watts and Zimmerman 1978; Watts and Zimmerman 1982; Puro 1984; Roberts et al. 2003; Dwyer and Roberts 2004; Thornburg and Roberts 2008).

They therefore could also be more successful in understanding and applying accounting standards as well as identifying areas that need attention early on.

In line with these predictions, I find that clients of politically connected offices are less likely to restate their financial statements. The results are highly statistically significant and robust across three alternative measures of audit office political connectedness. Furthermore, the negative relation between office- level political connectedness and restatement frequency is incremental to and distinct from the relation between firm- specific political connections and restatement frequency. Overall, these findings suggest that, auditor- specific political connections accrue audit quality benefits to clients of politically connected offices.

One might argue that, for audit engagements with clients that are politically connected themselves, auditor reputation and litigation considerations may not be sufficient to deter audit quality impairment. To the extent that politically connected firms are less likely to be targeted by regulatory agencies, politically connected auditors could perceive these clients as being of lower risk. It follows that under this scenario, politically connected offices would have fewer incentives to offer high quality audits to politically connected clients and would therefore be more likely to restate their earnings later on. At the extreme, auditors could even lobby on behalf of their clients as was the case with Ernst & Young which was convicted by the SEC because it had ongoing lobbying contracts with companies it also audited[2]. Apart from the lobbying contracts with their auditor, these clients had established their own firm- specific political connections. Therefore, when both

[2] http://www.reuters.com/article/2014/07/14/us-sec-ernst-young-violations-idUSKBN0FJ2AF20140714

auditors and clients are politically connected, the risk of an audit quality compromise could be even greater.

To investigate this hypothesis, I interact my auditor political connectedness measures with a firm- specific indicator of long- term political connectedness. Consistent with my expectations, I find that the relation between audit office political connectedness and restatement frequency is less negative for politically connected clients. That is, the audit quality benefits that result from the political connections of auditors do not appear to persist for politically connected clients.

Variation in restatement frequency may not always reflect variation in audit quality. While the lower rate of restatements can represent absence of errors or irregularities, it could also be the result of lower enforcement (Srinivasan et al. 2014; Correia 2014). I therefore run several tests to mitigate concerns that lower enforcement accounts for my results. First, I perform a placebo test in which I examine the relation between auditor political connectedness and restatement frequency focusing this time on the restatement announcement year rather than the manipulation year. To the extent that politically connected auditors are subject to favorable treatment by disciplinary and regulatory agencies, the negative relation between auditor political connections and client restatement frequency should persist under this specification as well. That is, the likelihood of restatement detection and disclosure will be lower when auditors are politically connected. I find no empirical evidence in support of this argument. The variables of interest, i.e., my measures of audit office political connectedness, are insignificant in all tests. In contrast to the office- specific results, the relation between firm- specific political connections and restatement frequency remains negative and statistically significant under this alternative

specification, consistent with the argument that politically connected firms are less likely to be targeted by the SEC and are thus subject to lower enforcement (Correia 2014).

I next examine whether the relation between internal control material weaknesses (ICW) and the rate of restatements is conditional on the level of the political connections of auditors. Following Srinivasan et al. (2014), I expect variation in this relation to reflect variation in the quality of detection and disclosure. I find no evidence that the relation between ICW and restatement frequency varies with auditors' political connections for non- politically connected firms. Interestingly, however, I do provide some evidence that this relation is less positive for politically connected clients. That is, for politically connected clients, not only is the frequency of restatements greater, but the association of the rate of restatements with ICW is weaker as well.

Finally, to test the robustness of my findings, I investigate whether the negative relation between audit office political connectedness and client restatement frequency is the result of politically connected offices having a less risky clientele base. I therefore create a propensity score- matched sample in which one observation with above median value of audit office political connectedness is matched with an observation with below median value of audit office political connectedness. I perform the matching separately for each measure of audit office political connectedness and based on firm- specific characteristics that account for innate clientele restatement risk. The results of this analysis are consistent with original findings.

This paper makes several contributions to the literature. Prior empirical research has mainly focused on the consequences of the political connections of firms (Faccio 2006; Faccio 2010; Chaney et al. 2011; Yu and Yu 2011; Blau et al. 2013; Skaife et al. 2013;

Correia 2014). To my knowledge, this is one of the few empirical studies to investigate the audit quality consequences of the political connections of auditors and the first to examine the relation between auditor political connections and audit quality at the audit office level.

Second, by providing evidence of a negative relation between auditor political connections and client restatement frequency, I show that the political connections of auditors accrue audit quality benefits to their clients. This effect is distinct from the relation between the political connections firms and accounting quality and appears to be driven by different underlying factors. That is, the negative link between audit office political connections and restatement frequency reflects superior audit quality rather than lower detection or disclosure.

Third, the current study contributes to the literature on the determinants of audit quality at the audit office level. Francis and Yu (2009), Choi et al. (2010), and Francis et al. (2013) reason that audit office size is a determinant of superior audit quality. Furthermore, Reichelt and Wang (2010) find that there is a positive link between audit office industry expertise and audit quality. I argue that politically connected audit offices are more likely to deliver superior audit quality and this effect is incremental to that of previously defined office- level characteristics.

Finally, this paper contributes to the literature that investigates threats to auditor independence. For example, prior research has identified auditor tenure, as well as the joint provision of audit and non- audit services as potential threats to auditor independence. My findings suggest that politically connected clients are more likely to restate their financial statements when they are being audited by politically connected offices. I therefore argue that the threat of audit quality compromise is greater when both clients and auditors are

politically connected since, from an auditor's perspective, the perceived cost of an audit failure is lower.

The remainder of this paper is organized as follows. In section 2, I review the related literature and develop the hypotheses. Section 3 presents the empirical models. In section 4, I describe the sample selection process and offer descriptive statistics, while in section 5, I present the empirical results and additional robustness tests. Section 6 concludes.

4.2 Background and Hypothesis Development

"Republican Representative Spencer Bachus, chairman of the House Financial Services Committee which oversees the PCAOB, has been a leading beneficiary of donations from Big Four executives. He has accepted $370,000 in contributions from people in the accounting and audit industry in his career, more than any other current House member."

Research in political science generally concludes that firms use PAC contributions to buy access to influential politicians and political favors (Snyder 1990; Snyder 1992; Snyder 1993; Kroszner and Stratmann 1998; Milyo et al. 2000). This argument represents the main principle of *exchange theories* (McConnell 1966; Lowi 1969; Morton and Cameron 1992; Hillman and Hitt 1999; Hall and Deardorff 2006) which interpret lobbying as an exchange of money and votes for political favors. Stigler's *capture theory* draws upon exchange theories and purports that interest groups capture regulators in their attempt to shape law and regulations to their own favor. Recent evidence in accounting and finance

seems to confirm capture theory. For example, Yu and Yu (2011) find that politically connected firms are more likely to avoid fraud detection. Moreover, Correia (2014) finds that politically connected firms are less likely to be targeted by the SEC and conditional on being targeted, they pay lower penalties. In addition, politically connected firms exhibit lower accounting quality (Chaney et al. 2011; Correia 2014). These findings gain additional support in the argument that the SEC is resource- constrained and conducts investigations based on preferences and political influence (Kedia and Rajgopal 2011; Correia 2014).

Auditors use their political connections to lobby for their own interests as well for the interests of their clients. Through their political connections, auditors exercise influence on regulators and shape the standard- setting process to their own benefit. For example, Watts and Zimmerman (1978, 1982) and Puro (1984) argue that auditors lobby standard- setting agencies, such as the Financial Accounting Standards Board, for the introduction of new standards or the amendment of existing standards. Other studies show how audit firms use PAC contributions to gain access to politicians and influence regulatory changes regarding audit practice, such as the Private Securities Ligation Reform Act of 1995 and the Sarbanes- Oxley Act of 2002 (Roberts et al. 2003; Dwyer and Roberts 2004; Thornburg and Roberts 2008). Two congressional committees are mainly responsible for auditor regulation and oversight by the SEC and the PCAOB: The Senate Banking, Housing, and Urban Affairs Committee and the House of Representatives Committee on Financial Services. Using PAC contributions, Big 4 auditors have strongly supported members from both committees over the past years. Therefore, one might argue that, under the premises of capture theory, politically connected Big 4 auditors are able to

capture politicians and extract benefits in the form of lower disciplinary enforcement against them or their clients. For example, clients of politically connected auditors could be less likely to be audited by the SEC or conditional on a client being involved in an SEC enforcement action, politically connected auditors could be less likely to be penalized by the SEC. Under this scenario, connected auditors would have fewer incentives to offer high quality audit services. A recent study from China provides evidence consistent with the argument of regulatory capture by politically connected auditors when they participate in the regulatory decision-making process (Yang 2013).

While exchange theories view lobbying as an exchange of money and votes for political favors, *persuasion theories* focus on the information value of interest groups to regulators. These theories draw on the information asymmetry between legislators and interest groups to justify the existence of lobbying (Hansen 1991; Austen-Smith 1993; Austen-Smith and Wright 1994; Austen-Smith 1995; Naoi and Krauss 2009; Holyoke 2009). Regulators have limited resources in terms of time, labor, and information to address all issues on which they want to be involved (Hall and Deardorff 2006). Since interest groups are specialists in their area, regulators rely on them to acquire specialized information and assess the political and policy consequences of their actions (Aplin and Hegarty 1980; Gilligan and Krehbiel 1989; Austen-Smith and Wright 1992; Hillman and Hitt 1999; Hall and Deardorff 2006). Therefore, the creditworthiness of the agent of the interest group is of great importance to legislators (Heinz et al. 1993; Hull 1993; Hillman and Hitt 1999). Such reputation is built through repeated dealing and shapes the long- term nature of the interest group- legislator relation. There is little guarantee that either party will not renege on its promises as fee- for- service agreements would be considered bribery

(Kroszner and Stratmann 2000). In the absence of formal, enforceable contracts, the demand for reputable and credible agents is amplified by the implicit non- enforceable nature of the agreements on which interest groups and regulators rely. An audit failure could severely impair the creditworthiness and status of the involved auditors and thus threaten the continuation of their relations with political authorities. Such a breach would undermine the ability of the associated accounting firm to influence political authorities and standard setting agencies and thus incur an even greater reputation loss and status downgrade to the involved auditors. Following these arguments, I reason that politically connected auditors have increased reputation and litigation considerations because an audit quality failure could compromise their relations with political authorities and incur consequences for both the auditor and the associated accounting firm. On a related note, Ramanna and Roychowdhury (2010) show that politically connected firms are concerned about the preservation of their relation with their affiliated politicians and take actions to protect them against political embarrassment.

The consequences of a potential breach in the political connections of auditors are probably even greater when considering the informational benefits that flow from politicians to auditors. These benefits allow politically connected auditors to improve their audit-related skills and knowledge. They therefore enhance the reputation and litigation considerations of politically connected auditors because they increase the value of political connections to them. Politically connected auditors are part of a wide network of regulators and other politically connected auditors. Through their interaction with these individuals, they become further involved in the issues that concern their profession. That is, politically connected auditors have access to more peers and regulators with whom they can consult

and therefore more opportunities to enhance their competencies, knowledge, and skills. Francis and Yu (2009) for instance argue that, one of the reasons why auditors in large offices offer superior audit quality is the fact that large offices have greater in-house networking and consultation opportunities. These arguments are consistent with the premises of social capital theory which predicts that network connections accrue informational advantages to members of the network (Coleman 1988; Burt 1992; Horton and Serafeim 2012; Cohen et al. 2010; Horton et al. 2014). Network studies have repeatedly shown that there is a positive link between social capital and performance. For example, Horton et al. (2012) find that firms with better connected directors have better future performance. Moreover, Horton and Serafeim (2012) argue that analysts with more connections issue more accurate and timely forecasts, while Horton et al. (2014) provide evidence that better connected audit partners provide higher quality audits.

I further argue that politically connected auditors exhibit superior performance particularly when it comes to interpreting and correctly applying accounting standards in accordance with GAAP. Politically connected auditors are heavily involved in the standard- setting procedure (Watts and Zimmerman 1978; Watts and Zimmerman 1982; Puro 1984; Roberts et al. 2003; Dwyer and Roberts 2004; Thornburg and Roberts 2008). Legislators discuss with auditors about issues that pertain to audit practice and concern the correct application of GAAP as well as ways on how to improve existing standards. I therefore expect that, compared to non- connected auditors, politically connected auditors are more likely to be informed about potential ambiguities surrounding provisions of the current standards that require judgement. Furthermore, to the extent that audit firms lobby for the introduction of new standards or the amendment of existing standards, politically

connected auditors are more likely to have a better understanding of the letter and spirit of the new or amended standard due to their participation in the deliberations regarding the standard.

In this paper, I focus on the audit quality implications of *auditor- specific* political connections of Big 4 auditors at the audit office level. I define auditor- specific political connections as those that auditors establish with members of committees responsible for auditor regulation and oversight. That is, the Senate Committee on Banking, Housing, and Urban Affairs and the House of Representatives Committee on Financial Services. I measure audit quality as the frequency of accounting restatements because the material restatement of originally audited financial statements is strongly suggestive that the original audit of those financial statements was of low quality (Palmrose and Scholz 2004; Kinney et al. 2004; Francis and Michas 2013; Francis et al. 2013). Moreover, the SEC describes restatements as "the most visible indicator of improper accounting — and source of new investigations" (Schroeder 2001). Restatements can have severe consequences for auditors. They trigger SEC disciplinary actions (Dechow et al. 1995; Dechow et al. 2011), lawsuits against auditors (Palmrose and Scholz 2004) and may even result in auditor resignation or dismissal (Hennes et al. 2014). Due to their visibility and significant reputation- damaging effects, I expect restatements to severely affect the connections of auditors with their affiliated politicians. Politically connected auditors have therefore even stronger incentives to avoid being involved in a restatement. Furthermore, drawing upon Plumlee and Yohn (2010) who find that 37% of all restatements are related to the lack of clarity in accounting standards and the use of judgement in applying the standards, I argue

that the frequency of accounting misstatements is a suitable measure to capture the network- related information and knowledge benefits of politically connected auditors.

Based on these arguments, I formulate my first hypothesis (in alternative format) as follows:

H1: Clients of politically connected offices are less likely to restate their earnings.

Even if, on average, politically connected auditors do not capture regulatory authorities, there might still be settings in which auditor political connections account for a decrease in audit quality. Audit engagements with politically connected clients probably constitute one such setting. Politically connected auditors are more likely to know which clients are politically connected themselves. Since politically connected clients are less likely to be targeted by disciplinary agencies and are subject to lower enforcement (Chaney et al. 2011; Correia 2014), politically connected auditors may perceive these clients as being less risky and essentially cater their desire to remain opaque. That is, politically connected auditors could exert lower effort for those clients for which enforcement costs are lower. Under this scenario, politically connected auditors would be less likely to offer high quality audits to politically connected clients. In line with this argument, Gul (2006) finds that auditors in Malaysia exert greater effort on politically connected firms when they are considered to have lost political support. However, they reduce their effort when their clients' political links are re- established.

What would perhaps pose an even greater threat of audit quality compromise is the possibility that auditors utilize their political connections to explicitly lobby on behalf of

certain clients. Although auditor lobbying is permissible in the US, auditors are prohibited from lobbying on behalf of their clients as such an activity could impair their independence and objectivity. The case of Ernst & Young is a notable example: In March 2012, Reuters questioned Ernst & Young's independence in providing audit services citing the lobbying contracts that the auditing firm had with a number of its clients[3]. The SEC investigation which was initiated following the article resulted in Ernst & Young receiving a fine of $4 million in July 2014 for violating auditor independence rules in lobbying activities[4]. In a recent study, Burnett et al. (2013) investigate the extent to which auditors are likely to compromise their independence for clients sharing the same political connections as the audit firm. Although they fail to find evidence of audit quality impairment, their study is limited by the fact that they use auditor PAC data at the national level. Regardless of whether auditors act as lobbying advocates of their clients or not, the likelihood of audit quality impairment could still be greater when both clients and auditors are politically connected. Alternatively, auditor reputation and litigation considerations could be sufficiently high to preclude the possibility of audit quality compromise.

Based on these arguments, I state my second hypothesis (in alternative format) as follows:

Hypothesis 2: The relation between the frequency of restatements and audit office political connectedness is less negative for politically connected clients.

[3] http://www.reuters.com/article/2012/03/09/us-usa-accounting-ernst-idUSBRE82718C20120309
[4] http://www.sec.gov/News/PressRelease/Detail/PressRelease/1370542298984#.VHOGb4vF8jw

4.3 Methodology

4.3.1 Political Connections Measures

Because interest groups develop long- term relations with affiliated politicians (Berry 1989; Snyder 1992; Mccarty and Rothenberg 1996; Bernhagen 2013), I focus on long- term measures of audit office political connectedness to capture the relation between restatement frequency and audit office political connectedness. Following Cooper et al. (2010) and Correia (2014), I define my first measure as the 5-year dollar amount of PACs targeting auditor- relevant politicians. I calculate this variable at the audit firm- audit office level:

$$\boldsymbol{Measure\ 1} = \sum_{\boldsymbol{p=1}}^{\boldsymbol{P}} \boldsymbol{PAC_{t-4,t}},$$

where p=1,…,P is the politician index and $\sum_{p=1}^{P} PAC_{t-4,t}$ is the dollar amount of PAC contributions to auditor- relevant committee members made by all employees of each audit firm- office over the previous five years.

My second measure is the 5-year sum of distinct per year auditor-relevant politicians supported by each audit firm- office:

$$\boldsymbol{Measure\ 2} = \sum_{\boldsymbol{t-4}}^{\boldsymbol{t}} \sum_{\boldsymbol{p=1}}^{\boldsymbol{P}} \mathbf{1},$$

where p=1,…,P is the politician index and $\sum_{p=1}^{P} 1$ is the total number of politicians supported per audit firm- office- fiscal year.

My last measure is the 5-year sum of distinct per year contributors for each audit firm- office:

$$\boldsymbol{Measure\ 3} = \sum_{\boldsymbol{t-4}}^{\boldsymbol{t}} \sum_{\boldsymbol{e=1}}^{\boldsymbol{E}} \mathbf{1},$$

where e=1,…,E is the politically connected employee index and $\sum_{e=1}^{E} 1$ is total number of employees making PAC contributions per audit firm- office-fiscal year.

Because my office- level measures of auditor political connectedness are strongly positively correlated with the size of the engagement office which has been identified as a determinant of superior audit quality by prior literature (Francis and Yu 2009; Choi et al. 2010; Francis et al. 2013), I regress the natural logarithm of one plus each of these measures on the size of the audit office. My final measures of auditor political connectedness are the residuals of each of these regressions[5].

4.3.2 Empirical Models

To test my first hypothesis, I use the following probit model:

$$\boldsymbol{Restate_{i,t} = a_0 + a_1 Measure\_Res + Controls + Year\ FE + Industry\ FE + Audit\ Office\ FE + \varepsilon_{i,t}} \quad (\mathbf{1}),$$

where $Restate_{i,t}$ is an indicator variable that takes the value 1 if a firm- year is subsequently restated, and 0 otherwise, whereas *Measure_Res* is the corresponding orthogonalized auditor political connectedness measure. Following Francis et al. (2013), I use

[5] Results are qualitatively identical if I use the original measures (rather than the residuals of the regressions on office size). In particular, both Hypothesis 1 and Hypothesis 2 are confirmed and the corresponding test variables are significant at the 1% level.

heteroscedasticity and autocorrelation robust standard errors, clustered at the office- year-audit firm level.

Control Variables

I control for firm- specific long- term PAC contributions (*5y Firm PACs*) to account for the degree of firm- specific political connectedness. I define this variable as the natural logarithm of one plus the 5-year sum of all dollar PAC contributions made by firm i over the past five years. Following Francis and Yu (2009), Choi et al. (2010), and Francis et al. (2013), I control for the size of the engagement office (*Office Size*). I define this variable as the natural logarithm of the audit fees of all clients of the office minus the audit fees of the corresponding client[6]. I control for firm size (*Total Assets*) calculated as the natural logarithm of total assets although most prior studies find no relation between size and restatements (Cao et al. 2012). I include market- to- book ratio (*Market- to- Book*) as a control for firm growth. I control for leverage (*Leverage*) motivated by the debt covenant hypothesis (Watts and Zimmerman 1986). I calculate this variable as the ratio of long-term debt divided by total assets. I control for profitability (*ROA*) and firms that report losses (*Loss*) to capture the link between firm performance and misstatement frequency. I further control for firm complexity by including the natural logarithm of one plus the number of business (*Num. of Business Segments*) and geographic segments (*Num. of Geographic Segments*). Moreover, I include an indicator variable for mergers and acquisitions (*Merger*), as well as for new financing activities (*Financing*) following prior literature (Dechow 1996; Palmrose and Scholz 2004). In a second step, I augment this model with four additional controls: the proportion of assets in receivables and inventory

[6] I follow prior literature and calculate office size prior to merging with Compustat.

(*Receivables & Inventory*) (Feroz et al. 1991; Summers and Sweeney 1998), the standard deviation of ROA (*Std ROA*) to control for operational volatility (Cao et al. 2012), as well as indicators for industry expertise at the city and national level (*City Leader*, *National Leader*) following Francis et al. (2013). In both specifications, I include industry, year, and audit firm fixed effects. I estimate industry fixed effects using 2-digit SIC codes. Finally, I winsorize all continuous, non- logarithmic variables at the 1% and 99% levels. Detailed definitions of all variables can be found in Appendix C.

To test my second hypothesis, I replace the dollar- based firm- specific measure of political connectedness with an indicator variable that takes the value 1 if the firm has made PAC contributions over the past five years, and 0 otherwise. I subsequently estimate the following probit model:

$$\begin{aligned} \boldsymbol{Restate_{i,t}} = \boldsymbol{a_0} + \boldsymbol{a_1 Measure\_Res} \\ + \boldsymbol{a_2 Measure\_Res\ X\ 5y\ Firm\ PAC\ Indicator_{i,t}} \\ + \boldsymbol{a_3 5y\ Firm\ PAC\ Indicator_{i,t}} + \boldsymbol{Controls} + \boldsymbol{Year\ FE} \\ + \boldsymbol{Industry\ FE} + \boldsymbol{Audit\ Office\ FE} + \boldsymbol{\varepsilon_{i,t}} \quad (\mathbf{2}) \end{aligned}$$

Controls are defined as previously. Due to the difficulties in interpreting interaction terms in probit specifications (Ai and Norton 2003; Cornelli et al. 2013), as a robustness check, I repeat all regressions with interaction terms using OLS estimation techniques.

4.4 Data

4.4.1 Audit Office Political Connections Data

To construct my office- level measures of political connectedness, I obtain PAC contribution data originating from individuals from the Center for Responsive Politics (CRP) for the period 1999-2012[7]. In particular, I use the "Individual Contributions" file from the Campaign Finance Database and manually match the name of each Big 4 audit firm to the corresponding employer field[8]. I additionally retrieve location information including the city, address, and zip code of all contributors and use this data to match each contributor to the corresponding local engagement office. My source of data for the list of all local Big 4 audit engagement offices is Audit Analytics. If the city of the contributor cannot be matched, I use the available zip code and require a maximum distance of 10 miles from the closest local office. I further filter out those PAC contributions that do not directly target individual candidates and use Charles Stewart's Congressional Data Page to identify those PACs supporting auditor- relevant politicians[9]. That is, I focus on PACs to members of the Senate Committee on Banking, Housing, and Urban Affairs and the House of Representatives Committee on Financial Services. Because Charles Stewart's database has not been updated to the 112th Congress yet, for years 2011 and 2012 I retrieve the related committee assignments from the official committee websites. Through this procedure, I am able to identify 225 unique Big 4 offices with at least one PAC contribution to auditor- relevant politicians during the period 1999- 2012. I present

[7] http://www.opensecrets.org/
[8] Manually matching is required by the fact that CRP provides no single standardized name for the employment firm of individual contributors. Instead, multiple alternatives names correspond to each employment firm.
[9] http://web.mit.edu/17.251/www/data_page.html#2

descriptive statistics of this sample in Table 4.1 before merging with Compustat and imposing further data restrictions.

TABLE 4.1

Panel A: Number of Politically Connected Offices per Big 4 Audit Firm

Audit Firm	Number of Politically Connected Offices	Total Number of Offices in Audit Analytics	% Politically Connected Offices
Ernst & Young	60	104	57.69%
Deloitte	52	92	56.52%
KPMG	57	97	58.76%
PwC	56	96	58.33%

Panel B: Aggregate Measures of Audit Firm Employee Political Connectedness

Audit Firm	Aggregate $ PACs	Number of Supported Politicians	Number of Politically Connected Employees
Ernst & Young	650,099	129	565
Deloitte	812,833	113	641
KPMG	289,256	78	308
PwC	466,317	98	481

Panel C: Percentage of Connected Employees to the Number of Total Employees per Big 4 Audit Firm

Audit Firm	Number of Politically Connected Employees	Number of Total Employees (2013)	% Politically Connected Employees
Ernst & Young	565	30,900	1.83%
Deloitte	641	60,951	1.05%
KPMG	308	24,618	1.25%
PwC	481	39,158	1.23%

This table presents the Big 4 employee- political connectedness descriprives statistics at the audit firm level for the period 1999- 2012. Panel A shows the number of politically connected offices per audit firm in absolute numbers as well as as a percentage of the total number of engagement offices for each audit firm. An engagement office is classified as politically connected if at least one employee of that office makes PAC contributions to support auditor- relevant politicians during the period 1999-2012. Panel B presents three aggregate measures of audit firm employee political connectedness: the sum of dollar PACs targeting auditor- relevant politicians, the number of distinct auditor- relevant politicians supported, as well as the number of distinct employees identified as PAC contributors over the same 14-year period. Panel C offers descriptive statistics regarding the percentage of politically connected employees to the number of total employees for each audit firm. The number of total employees is obtained from www.statista.com and corresponds to US employees of Big 4 audit firms in year 2013.

Table 4.1, Panel A shows the number of politically connected offices per audit firm for the years 1999-2012. I classify an office as politically connected if at least one employee of that office makes an auditor- relevant PAC contribution during this period. Ernst & Young has the largest number of politically connected offices with 60 distinct offices that have supported at least one auditor- relevant politician during the sample period. Deloitte has the fewest politically connected offices (52), whereas KPMG and PwC rank in the middle with 57 and 56 connected offices respectively. Perhaps with the exception of Deloitte, these numbers do not seem to indicate significant absolute differences among audit firms. When comparing the number of politically connected offices with the total number of all offices reported in Audit Analytics for the same period (1999- 2012), these differences become even smaller[10]. In relative terms, all Big 4 audit firms have roughly the same percentage of politically connected to total number of offices with the difference between the first (KPMG) and the last (Deloitte) being roughly 2.2 percentage points.

Panel B presents aggregate values of three alternative measures of audit firm employee political connectedness calculated at the audit firm level over the period 1999-2012: the dollar amount of PACs, the number of supported auditor- relevant politicians, and the number of politically connected employees. Upon initial review, this panel seems to indicate that there are important differences in the degree of audit employee political connectedness among Big 4 audit firms. For example, Deloitte ranks first in two out of three measures and second in the third with 641 politically connected employees and more than $812 thousand spent on 113 auditor- relevant politicians. KPMG on the other hand,

[10] This comparison is based on the number of Big 4 audit offices reported in Audit Analytics with at least one firm that can be matched with Compustat.

ranks last in all measures: From 1999 to 2012, 308 KPMG employees supported 78 distinct politicians with PAC contributions that amount to roughly $289 thousand. Furthermore, both Ernst & Young and PwC are significantly different from each other, as well as from the other two Big 4 audit firms, in terms of total amount spent on PACs, number of supported politicians, and number of connected employees. Given the PAC contribution limits for individuals[11], these differences could simply reflect differences in the total number of employees per audit firm. To investigate whether this is the case, I retrieve data on the total number of employees of Big 4 audit firms in the US from www.statista.com and present this data in Table 4.1, Panel C[12]. Indeed, Panel C shows that the differences in Panel B are largely due the underlying differences in the number of total employees among Big 4 audit firms. Politically connected employees in Deloitte represent 1.05% of the total number of employees, whereas the corresponding percentages for KPMG and PwC are 1.25% and 1.23% respectively. Ernst & Young still stands out with 1.83% of politically connected employees.

4.4.2 Main Sample Data

I define my sample period from 2003 to 2012 and thus I allow enough office- year observations to construct my 5-year auditor political connectedness measures. I retrieve auditor and restatement data from Audit Analytics. I drop restatements that occur due to clerical errors, quarterly restatements, as well restatements with positive impact on earnings. Moreover, I restrict my sample to clients which are headquartered and

[11] For example, for the 2014 cycle, individuals were allowed to give up to $2,600 to each candidate or candidate committee.
[12] I use audit firm employee data from www.statista.com for the year 2013, since there are no earlier records of this type of data readily available.

TABLE 4.2

Panel A: Office-Year Descriptive Statistics of Current- Year PAC Contributions Only

Variable	N	Mean	SD	P25	Median	P75
$ PACs	574	2,711	4,241	500	1,000	3,000
Number of Politicians	574	1.68	1.61	1	1	2
Number of Contributors	574	3.43	4.82	1	2	4
Number of Unique Offices	176					

Panel B: Office- Year Descriptive Statistics of Long- Term Political Connectedness Measures

Variable	N	Mean	SD	P25	Median	P75
Measure 1	1,246	5,933	10,946	1,000	2,000	5,900
Measure 2	1,246	3.69	4.98	1	2	4
Measure 3	1,246	7.61	12.81	1	3	7
Number of Unique Offices	202					

Panel C: Full Model Descriptive Statistics

Variable	N	Mean	SD	P25	Median	P75
Restate	17,330	0.13	0.34	0	0	0
Measure 1_Res	17,330	0.05	3.17	-2.26	0.71	2.19
Measure 2_Res	17,330	0	0.71	-0.51	-0.07	0.46
Measure 3_Res	17,330	0	0.95	-0.68	-0.09	0.61
5y Firm PACs	17,330	2.02	4.42	0	0	0
5y Firm PAC Indicator	17,330	0.18	0.38	0	0	0
Office Size	17,330	17.36	1.88	16.66	17.65	18.38
Total Assets	17,330	6.59	1.78	5.39	6.57	7.75
Market- to- Book	17,330	2.73	3.95	1.28	2.04	3.36
Leverage	17,330	0.2	0.25	0	0.14	0.31
ROA	17,330	0.01	0.19	-0.01	0.04	0.09
Loss	17,330	0.29	0.45	0	0	1
Num. of Bus. Segments	17,330	0.76	0.75	0	0.69	1.39
Num. of Geog. Segments	17,330	0.91	0.73	0	0.69	1.39
Merger	17,330	0.47	0.5	0	0	1
Financing	17,330	0.24	0.43	0	0	0
Receivables & Inventory	17,330	0.28	0.2	0.13	0.25	0.39
Std ROA	17,330	0.12	0.23	0.02	0.05	0.11
City Leader	17,330	0.66	0.47	0	1	1
National Leader	17,330	0.3	0.46	0	0	1
ICW	13,306	0.06	0.23	0	0	0

This table presents descriptive statistics for the period 2003- 2012 (full model). Panel A shows current-year only office- level political connectedness descriptive statistics. Panel B presents office- year statistics of the long- term political connectedness measures in raw format. Panel C reports firm- year statistics of all regression inputs for the sample period. See Appendix for variable definitions.

incorporated in the US and are audited by US Big 4 practice offices. I additionally drop firm- year observations when an auditor switch occurs during the fiscal year. I merge this database with Compustat as well as with the audit office political connectedness dataset from the previous step. To identify firms that have made PAC contributions in the past, I use firm PAC data from the CRP. I follow Correia (2014) and match this database to Compustat manually by name. Finally, I drop observations with missing values in the variables of interest. These restrictions result in a sample of 17,330 firm- year observations and 3,275 firms for the model that includes all controls (full model). Restated firm- years amount to roughly 13% of the sample. Table 4.2 presents political connectedness descriptive statistics at the office- year level as well descriptive statistics of all regression inputs for the full model.

4.5 Results

4.5.1 Auditor Political Connections

Table 4.3, Panel A presents the probit estimations of the regression of restatement frequency on each of the three alternative office- specific, long- term measures of political connectedness after only including industry, year, and audit firm fixed effects. In a separate regression, I additionally control for client long- term political connections. This specification results in a sample of 24,694 firm- year observations and 4,344 firms. In the first column of each measure, I present the results of the regression without controlling for firm political connections, whereas in the second column I additionally include the related firm- specific control. Panel A shows that all three measures are negative and statistically significant at the 1% level. The coefficients of each measure for the specifications without

controlling for firm political connections are -0.0127, -0.0720, and -0.0473 respectively. Moreover, results displayed in column 2 show that this effect persists and is incremental to the relation between client political connections and restatement frequency when including the related additional control. There is a negative relation between long- term firm political connections and the likelihood of accounting restatements and this effect is significant at the 1% level across all three alternative measures. This finding is consistent with Correia (2014) who argues that politically connected firms are subject to lower enforcement and are less likely to be targeted by the SEC.

TABLE 4.3

Panel A: Regression of Restatements on Audit Office Political Connectedness Without Controls

	Likelihood of Accounting Restatements					
Variables	*Measure 1_Res*		*Measure 2_Res*		*Measure 3_Res*	
Measure_Res	-0.0127***	-0.0126***	-0.0720***	-0.0713***	-0.0473***	-0.0468***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
5y Firm PACs	-	-0.0083***	-	-0.0082***	-	-0.0082***
		(0.002)		(0.003)		(0.002)
Constant	-1.1611***	-1.1378***	-1.1520***	-1.1291***	-1.1579***	-1.1350***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year Fixed FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	No	No	No	No	No
Observations	24,694	24,694	24,694	24,694	24,694	24,694
Pseudo R-Squared	0.0545	0.0550	0.0549	0.0554	0.0547	0.0552

In Table 4.3, Panel B, I present the results of the main and full model. The inclusion of control variables reduces the sample size to 18,593 firm- year observations for the main and 17,330 observations for the full model. Despite the inclusion of additional controls, the

TABLE 4.3

Panel B: Regression of Restatements on Audit Office Political Connectedness With Controls

	Likelihood of Accounting Restatements					
Variables	*Measure 1_Res*		*Measure 2_Res*		*Measure 3_Res*	
Measure_Res	-0.0139***	-0.0122***	-0.0814***	-0.0736***	-0.0549***	-0.0466***
	(0.001)	(0.006)	(0.000)	(0.000)	(0.000)	(0.002)
5y Firm PACs	-0.0128***	-0.0148***	-0.0128***	-0.0147***	-0.0127***	-0.0147***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Office Size	-0.0181***	-0.0163**	-0.0191***	-0.0172***	-0.0192***	-0.0172***
	(0.003)	(0.011)	(0.002)	(0.008)	(0.002)	(0.007)
Total Assets	0.0151	0.0180*	0.0151	0.0181*	0.0151	0.0180*
	(0.143)	(0.097)	(0.142)	(0.096)	(0.143)	(0.098)
Market-to- Book	-0.0028	-0.0028	-0.0028	-0.0028	-0.0028	-0.0028
	(0.375)	(0.401)	(0.370)	(0.401)	(0.374)	(0.404)
Leverage	0.1440***	0.1006*	0.1449***	0.1020*	0.1452***	0.1024*
	(0.005)	(0.073)	(0.005)	(0.070)	(0.005)	(0.068)
ROA	-0.0304	-0.0345	-0.0300	-0.0355	-0.0301	-0.0349
	(0.718)	(0.705)	(0.722)	(0.697)	(0.721)	(0.702)
Loss	0.1200***	0.1192***	0.1185***	0.1179***	0.1188***	0.1181***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Num. of Bus. Seg.	0.0771***	0.0653***	0.0786***	0.0666***	0.0784***	0.0664***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
Num. of Geog. Seg.	0.0598***	0.0647***	0.0583***	0.0632***	0.0584***	0.0634***
	(0.004)	(0.002)	(0.005)	(0.003)	(0.005)	(0.003)
Merger	0.0430	0.0409	0.0431	0.0409	0.0427	0.0406
	(0.187)	(0.226)	(0.185)	(0.226)	(0.190)	(0.229)
Financing	0.0655**	0.0738**	0.0650**	0.0734**	0.0650**	0.0735**
	(0.046)	(0.031)	(0.047)	(0.032)	(0.047)	(0.032)
Rec. & Inv.	-	0.1430*	-	0.1466*	-	0.1437*
		(0.083)		(0.075)		(0.082)
Std ROA	-	0.0054	-	0.0035	-	0.0040
		(0.923)		(0.951)		(0.944)
City Leader	-	0.0058	-	0.0054	-	0.0065
		(0.845)		(0.855)		(0.825)
National Leader	-	0.0372	-	0.0402	-	0.0389
		(0.189)		(0.156)		(0.170)
Constant	-1.0094***	-1.0631***	-0.9841***	-1.0409***	-0.9879***	-1.0458***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year Fixed FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,593	17,330	18,593	17,330	18,593	17,330
Pseudo R-Squared	0.0629	0.0659	0.0635	0.0664	0.0632	0.0661

This table presents the probit regression results of restatement frequency on the three alternative measures of audit office political connectedness for the period 2003- 2012. Panel A presents the results of the regressions without controls as well as after controling only for firm political connections. Panel B presents the results of the regressions after including controls in two alternative model specifications: the main model (first column of each measure) and the full model (second column). See Appendix for variable definitions. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

negative relation between audit office political connections and rate of restatements holds and remains highly statistically significant at the 1% level across all specifications. In addition, all significant control variables have the predicted sign. Overall, these findings seem to suggest that politically connected offices deliver superior audit quality in terms of the restatement frequency of their clients.

4.5.2 Auditor- Client Political Connections

In table 4.4, I present the results of regression (2) in which I test whether politically connected offices are more likely to offer lower quality audits for politically connected clients. Consistent with expectations, I find that the relation between audit office political connections and restatement frequency is less negative for clients that have made PAC contributions to politicians over the past 5 years. In particular, the coefficient of the interaction term between Measure 1 and the firm political connectedness indicator is equal to 0.0204 (p-value 0.047) for the main model and 0.0278 (p-value 0.008) for the full model. For the second measure, the interaction term coefficients are 0.1154 (p-value 0.012) and 0.1467 (p-value 0.002) respectively, whereas for Measure 3 the corresponding coefficients are 0.0849 (p-value 0.011) and 0.1051 (p-value 0.002). These findings indicate 1% and 5% significance levels for the related interaction terms, depending on the specification. Moreover, both main effects retain their sign and significance compared to

TABLE 4.4

Regression of Restatements on Audit Office Political Connectedness and Interaction Term

	Likelihood of Accounting Restatements					
Variables	*Measure 1_Res*		*Measure 2_Res*		*Measure 3_Res*	
Measure_Res	-0.0172***	-0.0168***	-0.1000***	-0.0980***	-0.0690***	-0.0646***
	(0.000)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Interaction	0.0204**	0.0278***	0.1154**	0.1467***	0.0849**	0.1051***
	(0.047)	(0.008)	(0.012)	(0.002)	(0.011)	(0.002)
5y Firm PAC Ind.	-0.1205***	-0.1434***	-0.1196***	-0.1423***	-0.1196***	-0.1429***
	(0.002)	(0.000)	(0.002)	(0.000)	(0.002)	(0.000)
Office Size	-0.0180***	-0.0162**	-0.0191***	-0.0174***	-0.0192***	-0.0173***
	(0.003)	(0.012)	(0.002)	(0.007)	(0.002)	(0.007)
Total Assets	0.0110	0.0133	0.0112	0.0136	0.0110	0.0134
	(0.277)	(0.212)	(0.272)	(0.204)	(0.276)	(0.209)
Market-to- Book	-0.0029	-0.0029	-0.0029	-0.0029	-0.0029	-0.0029
	(0.362)	(0.393)	(0.358)	(0.395)	(0.355)	(0.385)
Leverage	0.1478***	0.1052*	0.1487***	0.1063*	0.1487***	0.1063*
	(0.004)	(0.061)	(0.004)	(0.059)	(0.004)	(0.059)
ROA	-0.0252	-0.0283	-0.0249	-0.0297	-0.0247	-0.0285
	(0.764)	(0.756)	(0.768)	(0.745)	(0.770)	(0.755)
Loss	0.1201***	0.1193***	0.1188***	0.1185***	0.1197***	0.1193***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Num. of Bus. Seg.	0.0761***	0.0641***	0.0776***	0.0656***	0.0771***	0.0649***
	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)
Num. of Geog. Seg.	0.0603***	0.0655***	0.0588***	0.0639***	0.0588***	0.0641***
	(0.003)	(0.002)	(0.004)	(0.002)	(0.004)	(0.002)
Merger	0.0433	0.0411	0.0431	0.0409	0.0422	0.0401
	(0.184)	(0.224)	(0.186)	(0.226)	(0.196)	(0.235)
Financing	0.0666**	0.0755**	0.0663**	0.0753**	0.0662**	0.0753**
	(0.042)	(0.027)	(0.044)	(0.028)	(0.044)	(0.028)
Rec. & Inv.	-	0.1373*	-	0.1421*	-	0.1391*
		(0.096)		(0.085)		(0.092)
Std ROA	-	0.0036	-	0.0015	-	0.0026
		(0.949)		(0.979)		(0.963)
City Leader	-	0.0053	-	0.0045	-	0.0060
		(0.858)		(0.879)		(0.839)
National Leader	-	0.0372	-	0.0394	-	0.0380
		(0.190)		(0.165)		(0.180)
Constant	-0.9811***	-1.0244***	-0.9567***	-1.0038***	-0.9589***	-1.0070***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year Fixed FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes

Observations	18,593	17,330	18,593	17,330	18,593	17,330
Pseudo R-Squared	0.0629	0.0661	0.0636	0.0667	0.0634	0.0664

This table presents the probit regression results of restatement frequency on the three alternative measures of audit office political connectedness and their interaction with politically connected firms for the period 2003- 2012. The two alternative specifications per measure differ in the number of control variables included in each model. See Appendix for variable definitions. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

the model of Table 4.3, Panel B, which does not include the interaction term. Finally, results are robust to using OLS instead of probit regression estimates. That is, inferences are identical under this alternative specification. These findings are in line with the argument that politically connected auditors perceive politically connected clients as being less risky due to auditors' own affiliation with political authorities and they are therefore less inclined to offer higher quality audits.

In untabulated tests, I repeat regression (1) for the subsample of politically connected firms. This analysis results in 2,981 firm- year observations for the main model and 2,887 firm- year observations for the full model. The results show that, for the main model, the coefficients on all three measures of political connectedness are positive but insignificant. For the full model, however, all three measures are positive and statistically significant at the 5% level. This analysis provides evidence that the negative relation between audit office political connectedness and client restatement frequency reverses for politically connected clients.

4.5.3 Restatement Frequency and Competing Explanations

Lower frequency of restatements could be the result of fewer errors and irregularities or lack of detection and disclosure of these errors and irregularities

(Srinivasan et al. 2014). This argument is consistent with Correia (2014) who finds that politically connected firms are less likely to be involved in an SEC enforcement action despite having lower accounting quality (Chaney et al. 2011; Correia 2014). Therefore, the negative relation between audit office political connections and the rate of restatements could simply reflect low enforcement costs rather than superior audit quality. This is a plausible scenario to the extent the auditor political connections capture regulatory authorities and are therefore able to enjoy preferential treatment from disciplinary agencies. The positive interaction term of the previous analysis provides some initial comfort that my results are most likely not driven by lower enforcement. If politically connected auditors as well as their clients were less scrutinized by the SEC, then I would expect the negative relation between auditor political connections and the rate of restatements to be even stronger for politically connected clients or at the very minimum not statistically different from non- connected clients. That is not the case as the results of Table 4.4 indicate. Nevertheless, to further mitigate concerns that my measures of audit office political connections capture variation in audit quality rather than variation in enforcement, I conduct two additional tests.

4.5.4 Placebo Analysis

In the first test, I run a placebo analysis in which I regress the likelihood of a firm restating its financial statements on my audit office political connectedness measures and controls. This time, however, my focus is on the restatement announcement year rather than the manipulation year. I argue that, if clients of politically connected offices are subject to lower enforcement due to the political affiliations of their auditors, then the negative relation between office political connections and restatement frequency should

TABLE 4.5

Placebo Analysis: Restatement Announcement Year rather than Manipulation Year

	Likelihood of Accounting Restatements					
Variables	*Measure 1_Res*		*Measure 2_Res*		*Measure 3_Res*	
Measure_Res	-0.0005	0.0001	-0.0219	-0.0203	-0.0153	-0.0105
	(0.910)	(0.977)	(0.314)	(0.374)	(0.328)	(0.523)
5y Firm PACs	-0.0094**	-0.0098**	-0.0094**	-0.0098**	-0.0094**	-0.0098**
	(0.024)	(0.022)	(0.025)	(0.023)	(0.025)	(0.022)
Office Size	-0.0056	-0.0045	-0.0059	-0.0047	-0.0060	-0.0047
	(0.447)	(0.576)	(0.429)	(0.558)	(0.426)	(0.560)
Total Assets	-0.0046	-0.0043	-0.0047	-0.0044	-0.0047	-0.0044
	(0.712)	(0.741)	(0.707)	(0.734)	(0.707)	(0.734)
Market-to- Book	-0.0052	-0.0060	-0.0052	-0.0060	-0.0052	-0.0060
	(0.216)	(0.174)	(0.214)	(0.173)	(0.215)	(0.174)
Leverage	-0.0026	-0.0101	-0.0025	-0.0098	-0.0025	-0.0098
	(0.967)	(0.884)	(0.969)	(0.887)	(0.969)	(0.887)
ROA	-0.1078	-0.0643	-0.1073	-0.0643	-0.1074	-0.0642
	(0.260)	(0.542)	(0.262)	(0.542)	(0.262)	(0.542)
Loss	0.1597***	0.1608***	0.1591***	0.1603***	0.1594***	0.1605***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Num. of Bus. Seg.	0.0977***	0.0965***	0.0982***	0.0971***	0.0981***	0.0969***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Num. of Geog. Seg.	0.0336	0.0420	0.0329	0.0413	0.0329	0.0415
	(0.187)	(0.117)	(0.196)	(0.123)	(0.196)	(0.121)
Merger	-0.1331***	-0.1612***	-0.1332***	-0.1611***	-0.1332***	-0.1611***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.001)	(0.000)
Financing	0.0028	-0.0135	0.0024	-0.0138	0.0023	-0.0137
	(0.945)	(0.750)	(0.954)	(0.744)	(0.954)	(0.746)
Rec. & Inv.	-	0.1631	-	0.1626	-	0.1620
		(0.122)		(0.123)		(0.124)
Std ROA	-	0.0361	-	0.0350	-	0.0351
		(0.644)		(0.655)		(0.653)
City Leader	-	0.0280	-	0.0273	-	0.0276
		(0.421)		(0.432)		(0.427)
National Leader	-	0.0121	-	0.0128	-	0.0124
		(0.738)		(0.723)		(0.731)
Constant	-2.0433***	-2.1000***	-2.0338***	-2.0903***	-2.0351***	-2.0933***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year Fixed FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	18,593	17,299	18,593	17,299	18,593	17,299
Pseudo R-Squared	0.0511	0.0539	0.0512	0.0540	0.0512	0.0539

This table presents the probit regression results of restatement frequency on the three alternative measures of audit office political connectedness using as restatement year the year that the restatement was announced instead of the manipulation year. This analysis covers the period 2003-2012. The two alternative specifications per measure differ in the number of control variables included in each model. See Appendix for variable definitions. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

persist when using the restatement announcement year instead of the manipulation year. That is, auditors will be less likely to announce a restatement when they are politically connected. The new restatement sample that is based only on the announcement year totals 1,080 restatements. Table 4.5 presents the results of this analysis. Across all alternative specifications, my office- level political connectedness measures turn insignificant when I use the restatement announcement year rather than the manipulation year. In sharp contrast, the firm- specific political connectedness measure remains negative and significant under this setup, consistent with the argument that politically connected firms are subject to lower enforcement costs. To mitigate concerns that these results are affected by the long- term nature of my audit office and firm- specific political connectedness measures and the fact that the time lag between restatement announcement and restatement manipulation year is typically small[13], I repeat the placebo test of Table 4.5 using contemporaneous rather than 5-year audit office and firm- specific political connectedness measures. In a second step, I gradually increase the difference in years between the two dates. That is, I require, in separate steps, that the announcement of the restatement occurs after at least one, two, and three years from the restatement manipulation date. In all tests (not tabulated) the negative relation between firm political connections and restatement

[13] The average time lag between the original financial statement release and a subsequent restatement is roughly 1.87 years in my sample.

frequency persists and remains statistically significant, whereas the relation between auditor political connections and restatement frequency is not statistically significant from zero[14].

4.5.5 ICW Restatement Sensitivity

I further test the extent to which the relation between internal control material weaknesses (ICW) and restatement frequency varies with the level of audit office political connectedness. Prior research has shown that there is a positive link between the quality of firms' internal controls over financial reporting and the rate of restatements (DeFond and Jiambalvo 1991; Hammersley et al. 2008; Plumlee and Yohn 2010). Srinivasan et al. (2014) argue that variation in this relation could reflect variation in the quality of detection and disclosure because if firms conceal their restatements, the positive link between restatements and ICW should be weaker. Therefore, to the extent that the negative relation between the rate of restatements and audit office political connectedness reflects lower levels of detection and disclosure rather than better audit quality, I expect the relation between ICW and restatement frequency to be less positive for politically connected offices. To test this prediction I run the following probit model:

[14] When performing regression (1) using contemporaneous rather than long-term audit office and firm- specific political connectedness measures, I find results consistent with those of Table 4.3, Panel B. That is, under all alternative specifications, both audit office and firm- specific measures of political connectedness are negative and significant at the 1% or 5% levels. Only Measure 3 in the full model specification is negative and significant at the 10% level.

$$
\begin{aligned}
\boldsymbol{Restate_{i,t}} = \boldsymbol{a_0} + \boldsymbol{a_1 Measure\_Res} \\
+ \boldsymbol{a_2 Measure\_Res X 5y\ Firm\ PAC\ Indicator_{i,t}} \\
+ \boldsymbol{a_3 Measure\_Res X 5y\ Firm\ PAC\ Indicator_{i,t} XICW_{i,t}} \\
+ \boldsymbol{a_4 Measure\_Res XICW_{i,t}} \\
+ \boldsymbol{a_5 5y\ Firm\ PAC\ Indicator_{i,t} XICW_{i,t}} \\
+ \boldsymbol{a_6 5y\ Firm\ PAC\ Indicator_{i,t}} + \boldsymbol{a_7 ICW_{i,t}} + \boldsymbol{Controls} \\
+ \boldsymbol{Year\ FE} + \boldsymbol{Industry\ FE} + \boldsymbol{Audit\ Office\ FE} + \boldsymbol{\varepsilon_{i,t}} \quad (\mathbf{3}),
\end{aligned}
$$

where $ICW_{i,t}$ is an indicator variable that takes the value 1 if a firm reported an internal control material weakness (SOX 404), and 0 otherwise. The coefficients of interest in this regression are coefficients α_4 and α_3. Coefficient α_4 captures the extent to which the sensitivity of restatement frequency to the existence of ICW varies with the level of audit office political connectedness, whereas coefficient α_3 captures whether this sensitivity is statistically significantly different between politically connected and non- politically connected firms. Following Srinivasan et al. (2014), I use the original ICW controls and do not include those ICW that were issued due to the restatement itself. Furthermore, because auditor's assessment of internal controls became mandatory in November 2004 for US accelerated filers, I restrict my sample to include only fiscal years starting from 2005. This procedure results in a sample of 11,902 firm- year observations for the full model. I present the results of this analysis in Table 4.6.

Table 4.6 shows no evidence that the relation between ICW and restatement frequency varies with the level of the political connections of auditors for non- politically connected firms. In particular, the interaction term of the respective office political connectedness measure with the ICW indicator (*Measure_Res X ICW*) is not statistically

TABLE 4.6

Sensitvity of Restatement Frequency to ICW Conditional on Audit Office Political Connectednes

	Likelihood of Accounting Restatements					
Variables	*Measure 1_Res*		*Measure 2_Res*		*Measure 3_Res*	
Measure_Res	-0.0214***	-0.0209***	-0.1458***	-0.1442***	-0.0960***	-0.0923***
	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
Measure_Res X 5y Firm PAC Indicator	0.0253*	0.0327**	0.1754***	0.2016***	0.1173***	0.1340***
	(0.050)	(0.015)	(0.002)	(0.001)	(0.005)	(0.002)
Measure_Res X 5y Firm PAC Indicator X ICW	-0.0652	-0.0628	-0.5457**	-0.5280**	-0.3099**	-0.2899*
	(0.205)	(0.241)	(0.014)	(0.020)	(0.045)	(0.067)
Measure_Res X ICW	0.0050	0.0027	0.0979	0.0809	0.0678	0.0530
	(0.809)	(0.901)	(0.272)	(0.382)	(0.323)	(0.452)
5y Firm PAC Indicator X ICW	0.3544**	0.3299*	0.3786**	0.3604**	0.3770**	0.3546**
	(0.040)	(0.059)	(0.032)	(0.044)	(0.031)	(0.046)
5y Firm PAC Indicator	-0.0867*	-0.1052**	-0.0803	-0.0992*	-0.0810*	-0.1001**
	(0.078)	(0.038)	(0.102)	(0.050)	(0.098)	(0.048)
ICW	0.9397***	0.9356***	0.9428***	0.9382***	0.9403***	0.9356***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year, Industry, and Audit Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Additional Controls	No	Yes	No	Yes	No	Yes
Observations	12,581	11,902	12,581	11,902	12,581	11,902
Pseudo R-Squared	0.0805	0.0826	0.0826	0.0846	0.0817	0.0836

This table presents the results of probit specifications of the sensitivity of restatement frequency to the effectiveness of internal control systems for the period 2005- 2012. This analysis is based on the original ICW that were issued prior to identifying the need to restate earnings The two alternative specifications per measure differ in the number of control variables included in each model. Controls are not presented for brevity. See Appendix for variable definitions. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

different from zero across all three measures and two alternative models. This finding suggests that, for non- politically connected firms, the level of political connectedness of the auditor does not appear to moderate the positive relation between ICW and client restatement frequency. It therefore further mitigates concerns that the negative relation between auditor political connections and the rate of restatements could reflect lack of detection or disclosure rather than better audit quality. Interestingly, however, this finding does not appear to hold for politically connected firms. The results show that the three-way interaction term of the corresponding audit office political connectedness measure, the firm political connectedness indicator, and the ICW indicator (*Measure_Res X 5y Firm PAC Indicator X ICW*), is negative and statistically significant at the 5% level for Measures 2 and 3 and for both the main and full models. This finding provides some indication that, politically connected firms are not only more likely to restate their earnings when they are being audited by politically connected auditors, but they are also more likely to disclose fewer restatements after controlling for the quality of their internal controls.

Due to the difficulties in interpreting interaction terms in probit specifications, I repeat the probit regressions of Table 4.6 using OLS estimators instead. Results are qualitatively similar, with the exception of the 3-way interaction term of Measure 3 which remains statistically significant, albeit at the 10% level for both main and full models. Furthermore, due to the problems in interpreting three- way interaction terms, I regress the frequency of accounting restatements on each measure of audit office political connectedness, its interaction with the ICW indicator, and the controls of Table 4.6. I perform this regression separately for the subsamples of politically and non- politically connected clients. I continue to find insignificant coefficients on the ICW interaction term

for the subsample of non- politically connected firms for both the main and full models and under both probit and OLS specifications. Furthermore, I still find a negative and statistically significant ICW interaction term for the second and third measure of audit office political connectedness for the subsample of politically connected firms and under all alternative specifications. In particular, the corresponding coefficients are significant at the 5% level or better[15]. Overall, the results of these analyses are robust to and, in some cases, stronger than original findings.

4.5.6 Propensity- Matched Control Sample

It is possible that the relation between audit office political connections and the rate of restatements is driven by politically connected offices having lower innate clientele restatement risk. Although the inclusion of an extensive set of control variables partly addresses this issue, it could the case that politically connected offices have clients with lower ex- ante probability of restatements. Under this scenario, the results on audit office political connectedness could simply reflect a clientele effect rather than the effect of audit office political connectedness on the frequency of restatements. To mitigate these concerns, I use propensity-score matching technique. For each measure, I estimate a first-stage probit model in which the dependent variable is equal to one if a firm is audited by an office with above median value of political connectedness, and zero otherwise. The independent variables are firm- specific controls of the full model, i.e., *5y Firm PAC Indicator, Total Assets, Market- to- Book, Leverage, ROA, Loss, Num. of Business Segments, Num. of Geographic Segments, Merger, Financing, Receivables & Inventory,*

[15] The coefficient on the ICW interaction term is significant at the 1% level in the OLS specifications of the both the main and full models of Measure 2. In all other specifications, the related interaction term is significant at the 5% level.

and *Std ROA*. Moreover, I include in this probit specification industry, year, and audit firm fixed effects. I subsequently match, without replacement, one observation that has above median value of audit office political connectedness with one that does not, based on the closest predicted value from previous probit regression, while allowing a maximum caliper distance of 3%. This procedure yields sample sizes that range from 11,838 to 13,135 firm-

TABLE 4.7

Propensity Score- Matched Sample

	Likelihood of Accounting Restatements					
Variables	*Measure 1_Res*		*Measure 2_Res*		*Measure 3_Res*	
Measure_Res_M	-0.1052***	-0.1049***	-0.1610***	-0.1611***	-0.0899**	-0.0908***
	(0.003)	(0.003)	(0.000)	(0.000)	(0.010)	(0.010)
Interaction	0.1944**	0.1930**	0.3012***	0.2995***	0.2609***	0.2600***
	(0.013)	(0.014)	(0.000)	(0.000)	(0.001)	(0.001)
5y Firm PAC Ind.	-0.2252***	-0.2282***	-0.2856***	-0.2876***	-0.2786***	-0.2811***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE						
Audit Firm FE						
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Additional Controls	No	Yes	No	Yes	No	Yes
Observations	13,135	13,135	11,838	11,838	13,087	13,087
Pseudo R-Squared	0.0691	0.0694	0.0716	0.0721	0.0674	0.0679

This table presents the probit regression results of restatement frequency on median- based indicators of the three alternative measures of audit office political connectedness and their interaction with politically connected firms for the period 2003- 2012. This analysis is based on a propensity score- matched sample which is created by matching one firm- year observation that is audited by an office with above median value of political connectdness with one that is audited by an office with below median value of political connectedness. The matching is performed separately for each political connectedness measure and is based on the firm-specific controls of the full model that account for innate clientele restatement risk. The two alternative specifications per measure differ in the number of control variables included in each model. See Appendix for variable definitions. P-values are in parentheses. *, **, and *** indicate significance at the two-tailed 10%, 5%, and 1% levels, respectively.

year observations depending on the measure[16]. Table 4.7 presents the results of the propensity score- matched sample regressions.

Table 4.7 shows that main findings are robust to this alternative specification. All three measures are negative and statistically significant at the 1% and 5% levels. Furthermore, the coefficient of the interaction term between the corresponding audit office political connectedness measure and the firm political connectedness indicator (*Measure_Res X 5y Firm PAC Indicator*) is positive and significant at the 1% and 5% levels across all alternative measures and in both main and full models. Once again, OLS estimation yields identical results. Overall, these findings suggest that the relation between auditor political connectedness and client restatement frequency is not driven by politically connected offices having a less risky clientele base.

4.6 Conclusion

The political connections of firms have garnered considerable research attention the past few years. Until now, accounting literature has mainly focused on the accounting quality consequences of politically connected firms, reviving Stigler's theory of regulatory capture in an accounting context. Yet, despite growing public focus on the lobbying activities of audit firms, there is still little and inconclusive evidence regarding the audit quality consequences of the political connections of auditors. In this paper, I attempt to close this gap in the literature and investigate the relation between auditor political connections and client restatement frequency at the audit office level. To this end, I retrieve all Big 4 employee PAC contributions to members of committees directly

[16] Few observations drop when including industry fixed effects in the probit specifications.

responsible for auditor regulation and oversight and create a dataset that spans from 2003 to 2012. I argue that politically connected auditors are more likely to offer high quality audits due to stronger reputation and litigation considerations as well as network- related information and knowledge acquisition benefits. My results are consistent with these arguments. Clients of politically connected offices are less likely to restate their earnings. This finding is robust to a battery of tests aimed at investigating the extent to which variation in restatement frequency reflects variation in audit quality or variation in the level of enforcement. I further find that the negative relation between the rate of restatements and audit office political connectedness does not appear to persist for politically connected firms for which the likelihood of an audit quality compromise is significantly higher.

This paper contributes to the literature by being one of the first to investigate the audit quality consequences of the political activities of auditors at the audit office level. My results indicate that there is a positive relation between the political connections of auditors and audit quality and therefore, on average, auditor- and firm- specific political connections affect accounting quality in opposite directions. This is true, however, only for non- politically connected clients. This latter finding suggests that, to the extent that auditors perceive politically connected clients as less risky due to their own political affiliations or even explicitly lobby on their behalf, the audit quality concerns of regulators about audit firms' lobbying activities may not be unfounded. Future research can explore other settings in which politically connected auditors are likely to compromise their independence as well as whether the political connections of the local engagement office affect auditor choice.

Appendix C

Panel A: Dependent Variable

Restate	An indicator variable that takes the value 1 if the firm- year is subsequently misstated, and zero otherwise.

Panel B: Test Variables

Measure 1	The 5-year sum of dollar PACs targeting auditor- relevant politicians per Big 4 audit firm- office- fiscal year.
Measure 2	The 5- year sum of distinct per year auditor-relevant politicians targeted per Big 4 audit firm- office- fiscal year.
Measure 3	The 5- year sum of distinct per year employees making PAC contributions to auditor- relevant politicians per Big 4 audit firm- office - fiscal year.
Measure_Res	The residuals from the regression of the logarithmic transformation of each political connectedness measure on office size.
Measure_Res_M	An indicator variable that takes the value 1 if a firm is audited by an office with above median value of political connectedness for the corresponding measure, and 0 otherwise.

Panel C: Control Variables

5y Firm PACs	The 5- year sum of total firm- specific dollar PAC contributions.
5y Firm PAC Indicator	An indicator variable that takes the value 1 if a firm has made PAC contributions over the last 5 years, and 0 otherwise.
Office Size	The natural logarithm of the audit fees of all clients of the office minus the audit fees of the corresponding client.
Total Assets	The natural logarithm of total assets.
Market- to- Book	The ratio of market value of equity to book value of equity.
Leverage	The ratio of long- term debt to lagged total assets.
ROA	The ratio of net income to lagged total assets.
Loss	An indicator variable that equals 1 if the firm reports negative net income, and zero otherwise.
Num. of Business Segments	The natural logarithm of one plus the number of business segments.
Num. of Geographic Segments	The natural logarithm of one plus the number of geographic segments.
Merger	An indicator variable that takes the value 1 if a firm has engaged in a merger or acquisition in the corresponding fiscal year, and 0 otherwise.

Financing	An indicator variable that takes the value 1 if Merger is equal to zero and number of shares outstanding increased by at least 10% or long-term debt increased by at least 20%, and zero otherwise.
Receivables & Inventory	The ratio of receivables plus inventory to lagged total assets.
Std ROA	The 5- year standard deviation of ROA.
City Leader	An indicator variable that takes the value 1 if an office is the number one auditor in terms of aggregated client audit fees in an industry within that city in a specific fiscal year, and 0 otherwise.
National Leader	An indicator variable that takes the value 1 if an auditor is the number one auditor in an industry in terms of aggregated audit fees in a specific fiscal year, and 0 otherwise.
ICW	An indicator variable that takes the value 1 if a firm reported an internal control material weakness (SOX 404) prior to identifying the need to restate earnings, and 0 otherwise.

Chapter 5

Summary and Concluding Remarks

The purpose of this dissertation is to investigate determinants and consequences of financial reporting quality. In chapter 2, I investigate the association between attributes of accounting earnings and private firms' access to two main sources of financing: bank debt and trade credit capital. Using a sample of private firms from the European Union's five largest economies (United Kingdom, Germany, France, Italy, and Spain) during the period 1997- 2010, I find that financial reporting quality is associated with a lower cost of debt and lower levels of short to total debt. Furthermore, high quality financial reporting is associated with better access to trade credit financing. Overall, the findings of chapter 2 suggest that the financial reporting choices of private firms do have economic implications despite the presence of private communication channels that serve as alternative information asymmetry- mitigating mechanisms.

In chapter 3, I investigate the link between auditor size and audit quality in a setting where Big 4 auditors have reduced incentives to retain their audit quality advantage, i.e., the private firm market of a low book- tax conformity country (the U.K.). I find that clients of non- Big 4 auditors have lower levels of absolute discretionary accruals, better accrual quality, lower levels of absolute total accruals to absolute cash flow from operations, and greater likelihood to receive a qualified auditor opinion compared to Big 4 clients. I report no statistically significant differences in the level of earnings smoothness. The results are robust to a battery of alternative specifications, including a propensity- score matched sample analysis. Overall, these findings provide evidence of a non- Big 4 audit quality

advantage in the private firm market when Big 4 auditor incentives to deliver high quality audits become sufficiently weak.

In chapter 4, I focus on the political connections of Big 4 accounting firms with members of committees directly responsible for auditor regulation and oversight and investigate the relation between auditor political connections and the restatement frequency of their clients at the audit office level. I report that clients of politically connected offices are less likely to restate their earnings. However, in sharp contrast to the findings of prior literature on the political connections of firms, I find no evidence that the political connections of auditors are associated with lower enforcement by regulatory agencies. I further report that the negative relation between audit office political connections and client restatement frequency does not persist for politically connected clients. That is, precisely for those audit engagements for which politically connected auditors are most likely to compromise their independence.

Overall, the results of chapter 2 suggest that the financial reporting quality of private firms do have economic consequences despite lower demand for high quality financial reporting. Chapter 3 suggests that, in the absence of strong reputation, litigation, and regulatory oversight considerations the otherwise positive relation between auditor size and audit quality reverses in the private firm market. Chapter 4 highlights the audit quality consequences of the political connections of auditors.

Summary in Dutch

Het doel van deze dissertatie is om de oorzaken en gevolgen te onderzoeken van de kwaliteit van financiële verslaggeving. In hoofdstuk 2 onderzoek ik de relatie tussen eigenschappen van boekhoudkundige resultaten en de toegang die private ondernemingen hebben tot twee belangrijke bronnen van financiering: bancaire leningen en handelskrediet. Gebruikmakend van een steekproef van private ondernemingen uit de vijf grootste economieën van de Europese Unie (Verenigd Koninkrijk, Duitsland, Frankrijk, Italië en Spanje) in de periode 1997-2010 is mijn bevinding dat de kwaliteit van financiële verslaggeving gerelateerd is aan lagere kosten van vreemd vermogen en een kleinere verhouding van kort vreemd vermogen tot totaal vreemd vermogen. Daarnaast is een hoge kwaliteit van financiële verslaggeving gerelateerd aan betere toegang tot handelskrediet. In het algemeen suggereren de bevindingen in hoofdstuk 2 dat de keuzes van private ondernemingen omtrent financiële verslaggeving economische implicaties hebben, ondanks de aanwezigheid van private communicatiekanalen die als alternatieve mechanismen ter reductie van informatie-asymmetrie dienen.

In hoofdstuk 3 onderzoek ik de link tussen de grootte van de accountant en de kwaliteit van de audit in een situatie waarin accountants van de big 4 verminderde incentives hebben om hun voordeel op de kwaliteit van de audit te behouden; d.w.z. de markt van private ondernemingen in een land met grote verschillen tussen de fiscale en commerciële boekhouding (het Verenigd Koninkrijk). Mijn bevinding is dat cliënten van niet Big 4- accountancykantoren lagere niveaus van absolute discretionaire accruals, een betere kwaliteit van accruals, lagere verhoudingen van absolute totale accruals tot absolute

operationele kasstromen en een grotere kans op het ontvangen van een accountantsverklaring dan Big 4-cliënten. Ik rapporteer geen statistisch significante verschillen in de earnings management. De resultaten zijn robust onder een serie alternatieve specificities, waaronder een propensity-score matched sample-analyse. In hun geheel bieden deze vondsten bewijs dat niet Big 4 accountancykantoren een kwaliteitsvoordeel bieden in de markt voor private ondernemingen wanneer de incentives van Big 4 accountancykantoren om audits van hoge kwaliteit te doen zwak genoeg worden.

In hoofdstuk 4 richt ik mij op de politieke connecties tussen Big 4 accountancykantoren en commissieleden die direct verantwoordelijk zijn voor de regulering van en toezicht op accountants; ik onderzoek de relatie, op het niveau van accountancyvestiging, tussen politieke connecties van auditors en de frequentie de jaarverslagen van hun cliënten wordt herzien. Ik rapporteer dat cliënten van vestigingen met politieke connecties minder vaak hun resultaten herzien/corrigeren. Echter vind ik, in scherp contrast met de bevindingen in voorgaande literatuur over de politieke connecties van ondernemingen, geen bewijs dat de politieke connecties van accountants gerelateerd zijn aan minder strenge handhaving door toezichthouders. Verder rapporteer ik dat de negatieve relatie tussen de politieke connecties van accountants en de frequentie van restatements van hun cliënten niet houdt voor cliënten die zelf politieke connecties hebben. Dat wil zeggen: juist voor die audit-opdrachten waarbij het het meest waarschijnlijk is dat accountants met politieke connecties hun onafhankelijkheid compromitteren.

In het algemeen suggereren de resultaten van hoofdstuk 2 dat de kwaliteit van de financiële verslaggeving van private ondernemingen wel degelijk economische

consequenties heeft, ondanks de mindere vraag naar financiële verslaggeving van hoge kwaliteit. Hoofdstuk 3 suggereert dat wanneer reputationele, gerechtelijke en regulatieve overwegingen geen grote rol spelen, de anderszins positieve relatie tussen de grootte van de accountancykantoor en de kwaliteit van de audit omkeert in de markt voor private ondernemingen. Hoofdstuk 4 benadrukt de consequenties voor de kwaliteit van audits van de politieke connecties van accountants.

Summary in Greek

Η παρούσα διατριβή ερευνά παράγοντες που διαμορφώνουν την ποιότητα των χρηματοοικονομικών καταστάσεων καθώς και τις συνέπειες που απορρέουν από τη χρήση υψηλής ποιότητας λογιστικών καταστάσεων. Το κεφάλαιο 2 ερευνά τη σχέση μεταξύ της ποιότητας των χρηματοοικονομικών καταστάσεων και της πρόσβασης των μη εισηγμένων εταιριών σε δύο βασικές μορφές δανεισμού: του τραπεζικού δανεισμού καθώς και της προμήθειας με πίστωση. Συγκεκριμένα, το κεφάλαιο 2 επικεντρώνεται στις μη εισηγμένες εταιρίες των πέντε μεγαλύτερων οικονομιών της Ευρώπης, δηλαδή της Μεγάλης Βρετανίας, της Γαλλία, της Γερμανίας, της Ιταλίας και της Ισπανίας για την περίοδο 1997-2010. Τα αποτελέσματα δείχνουν ότι μη εισηγμένες εταιρίες με υψηλής ποιότητας λογιστικές καταστάσεις χαρακτηρίζονται από χαμηλότερο κόστος δανεισμού και κάνουν μεγαλύτερη χρήση μακροπρόθεσμου δανεισμού, ενώ παράλληλα επιτυγχάνουν μεγαλύτερη πίστωση στην αγορά προμηθειών. Συμπερασματικά, η ποιότητα των λογιστικών καταστάσεων επιφέρει οικονομικές συνέπειες ακόμα και για τις μη εισηγμένες εταιρίες, οι οποίες κατά γενική ομολογία χρησιμοποιούν εναλλακτικούς μηχανισμούς μείωσης της ασύμμετρης πληροφόρησης μεταξύ αυτών και των πιστωτών τους.

Το κεφάλαιο 3 εξετάζει τη σχέση μεταξύ του μεγέθους των ελεγκτικών εταιριών και των προσφερόμενων από αυτές υπηρεσιών για τις μη εισηγμένες εταιρίες της Μεγάλης Βρετανίας, οι οποίες λειτουργούν σε ένα περιβάλλον χαμηλής εποπτείας από τις αρμόδιες ρυθμιστικές αρχές και χαμηλού κινδύνου δικαστικής αγωγής εναντίον τους. Επιπρόσθετα, στη Μεγάλη Βρετανία οι λογιστικές καταστάσεις χρησιμοποιούνται σε μικρότερο βαθμό ως βάση για τις φορολογικές καταστάσεις. Το γεγονός αυτό, μειώνει σημαντικά την

πιθανότητα εποπτείας των ελεγκτικών εταιριών από τις αρμόδιες φορολογικές αρχές. Χρησιμοποιώντας ένα δείγμα μη εισηγμένων εταιριών από το 2005 έως το 2012, το κεφάλαιο 3 δείχνει ότι οι μικρές ελεγκτικές εταιρίες παρέχουν υψηλότερης ποιότητας ελεγκτικές υπηρεσίες σε σύγκριση με τις ελεγκτικές εταιρίες μεγαλύτερου μεγέθους. Συμπερασματικά, το κεφάλαιο 3 καταδυκνείει την ύπαρξη ενός πλεονεκτήματος στην παροχή υψηλής ποιότητας ελεγκτικών εταιριών από τις μικρές ελεγκτικές εταιρίες υπό συνθήκες χαμηλών κινήτρων παροχής ποιοτικών ελεγκτικών υπηρεσιών από τις ελεγκτικές εταιρίες μεγάλου μεγέθους.

Το κεφάλαιο 4 εξετάζει την επίδραση των πολιτικών διασυνδέσεων των ελεγκτικών εταιριών στην ποιότητα των προσφερόμενων ελεγκτικών υπηρεσιών. Έρευνα στο χώρο της λογιστικής έχει δείξει ότι οι εταιρίες που έχουν πολιτικές διασυνδέσεις έχουνε χαμηλής ποιότητας λογιστικές καταστάσεις και απολαμβάνουν μειωμένης εποπτείας από τις αρμόδιες ρυθμιστικές αρχές. Ο βασικός σκοπός του τέταρτου κεφαλαίου είναι να εξετάσει τη σχέση μεταξύ των πολιτικών διασυνδέσεων των ελεγκτικών εταιριών και των προσφερόμενων από αυτές ελεγκτικών υπηρεσιών σε επίπεδο περιφερειακού ελεγκτικού γραφείου. Χρησιμοποιώντας ένα δείγμα πολιτικών συνεισφορών υπαλλήλων των τεσσάρων μεγαλύτερων ελεγκτικών εταιριών των ΗΠΑ σε μέλη επιτροπών υπεύθυνων σε θέματα εποπτείας για την περίοδο 2003-2012, το κεφάλαιο 4 δείχνει ότι πελάτες πολιτικά συνδεδεμένων ελεγκτικών εταιριών έχουνε χαμηλότερη πιθανότητα να επαναδιατυπώσουνε τις λογιστικές τους καταστάσεις. Σε αντίθεση όμως με τα ευρήματα αναφορικά με τις πολιτικές διασυνδέσεις των ίδιων των πελατών, οι πολιτικές διασυνδέσεις των ελεγκτικών εταιριών δε φαίνεται να σχετίζονται με χαμηλότερα επίπεδα εποπτείας από τις αρμόδιες ρυθμιστικές αρχές. Η θετική όμως σχέση μεταξύ των

πολιτικών διασυνδέσεων των ελεγκτικών εταιριών και της ποιότητας των παρεχόμενων από αυτές υπηρεσιών παύει να υφίσταται στην περίπτωση πελατών που είναι οι ίδιοι πολιτικά συνδεδεμένοι. Αυτό το εύρημα καταδεικνύει ότι οι πολιτικά συνδεδεμένες ελεγκτικές εταιρίες προσφέρουν χαμηλότερης ποιότητας ελεγκτικές υπηρεσίες σε εκείνους τους πελάτες που είναι λιγότερο πιθανό να ελεγχθούν από τις εποπτικές αρχές.

Συμπερασματικά, το δεύτερο κεφάλαιο δείχνει ότι η ποιότητα των λογιστικών καταστάσεων έχει οικονομικές συνέπειες ακόμα και υπό καθεστώς μειωμένης χρησιμότητάς τους. Το τρίτο κεφάλαιο καταγράφει την ύπαρξη μιας αρνητικής σχέσης μεταξύ του μεγέθους των ελεγκτικών εταιριών και της ποιότητας των παρεχόμενων ελεγκτικών υπηρεσιών υπό συνθήκες επαρκώς μειωμένων κινήτρων παροχής υψηλής ποιότητας ελεγκτικών υπηρεσιών από τις μεγάλες ελεγκτικές εταιρίες. Τέλος, το τέταρτο κεφάλαιο φωτίζει τις συνέπειες των πολιτικών διασυνδέσεων των ελεγκτικών εταιριών στην ποιότητα των παρεχόμενων υπηρεσιών.

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Anastasios (Tassos) Elemes was born in Athens, Greece on July 5th, 1981. He obtained with BSc in Marketing and Communication from Athens University of Economics and Business and his MSc in Finance and Investments (Cum Laude) from Rotterdam School of Management, Erasmus University. During his Master's degree, Tassos was invited to the ING Honour's Class (top 5%) in which he was awarded the "Best Academic Essay" and "Best Group" awards. In October 2011, he started his PhD in Accounting at Rotterdam School of Management. His research interests lie in the areas of auditing and international financial reporting. During his PhD, Tassos spent four months as visiting scholar at Rotman School of Management, University of Toronto and attended leading international conferences, such as the AAA Midyear and Annual Meetings and the International Symposium on Audit Research. Furthermore, he has been involved in teaching financial accounting and in supervising bachelor and master thesis projects. Alongside his PhD, Tassos successfully passed all three levels of the Chartered Financial Analyst (CFA) program. Since September 2015, Tassos has been appointed as Assistant Professor at ESSEC Business School.

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