Does cultural similarity between CFOs and auditors impact audit quality?

Xiong, Xi

2021

Xiong, X. (2021). Does cultural similarity between CFOs and auditors impact audit quality?.
Doctoral thesis, Nanyang Technological University, Singapore.
<https://hdl.handle.net/10356/148127>

<https://hdl.handle.net/10356/148127>

<https://doi.org/10.32657/10356/148127>

This work is licensed under a Creative Commons Attribution-NonCommercial 4.0
International License (CC BY-NC 4.0).

Downloaded on 26 Apr 2023 21:42:07 SGT

**NANYANG
TECHNOLOGICAL
UNIVERSITY**

SINGAPORE

**DOES CULTURAL SIMILARITY BETWEEN CFOS AND
AUDITORS IMPACT AUDIT QUALITY?**

XIONG XI

NANYANG BUSINESS SCHOOL

2021

**DOES CULTURAL SIMILARITY BETWEEN CFOS AND
AUDITORS IMPACT AUDIT QUALITY?**

XIONG XI

NANYANG BUSINESS SCHOOL

A thesis submitted to the Nanyang Technological University in partial
fulfilment of the requirement for the degree of Doctor of Philosophy

2021

Statement of Originality

I hereby certify that the work embodied in this thesis is the result of original research, is free of plagiarised materials, and has not been submitted for a higher degree to any other University or Institution.

05/March/ 2021

Date

xiong xi

Xi Xiong

Supervisor Declaration Statement

I have reviewed the content and presentation style of this thesis and declare it is free of plagiarism and of sufficient grammatical clarity to be examined. To the best of my knowledge, the research and writing are those of the candidate with amendments, changes and improvements as suggested by me as the Supervisor. I confirm that the investigations were conducted in accord with the ethics policies and integrity standards of Nanyang Technological University and that the research data are presented honestly and without prejudice.

05/March/ 2021

Date

Huai Zhang

Authorship Attribution Statement

This thesis does not contain any materials from papers published in peer-reviewed journals or from papers accepted at conferences in which I am listed as an author.

05/March/ 2021

Date

xiong xi

Xi Xiong

Acknowledgements

First of all, my most sincere gratitude goes to my supervisor, Prof Huai Zhang. He continuously supports me in research by giving invaluable guidance, sharing his deep knowledge of accounting research, and spending a lot of time and efforts through our papers. He not only taught me how to do research but also supported me to overcome the difficulties I encountered in the past four years. I would not have completed my thesis without his dedicated support and guidance.

I would also like to thank my thesis committee members, Prof Yen Hee Tong, Prof Xin Chang, and Prof Yachang Zeng for their insightful comments and suggestions. In addition, I am grateful to Prof Byung Hun Chung for his insightful guidance and incessant care. Thanks go to Prof Hun Tong Tan, Prof Jun-koo Kang, and Prof Chuan Yang Hwang. I learnt how to do high quality research from their courses.

My sincere thanks also go to my friends and colleagues at Nanyang Business School. We have had so much fun and I had learnt a lot from all of you. To my parents and family, thanks for giving me the unreserved love, support, and care.

Finally, I owe my gratitude to Nanyang Business School PhD Program. I appreciate the help by Ms Laura Posadas Verma, Ms Karen Barlaan, and Ms Quek Bee Hua.

Table of Contents

Summary	1
1. Introduction	1
2. Institutional Backgrounds and Hypothesis Development.....	6
2.1 Institutional Backgrounds	6
2.2 CFOs' role in audits	7
2.3 Hypothesis Development	8
3. Variable Construction and Research Design	11
3.1 Measuring Cultural Similarity	11
3.2 Measuring Audit Quality	13
4. Sample and Empirical Results	16
4.1 Sample Selection and Summary Statistics	16
4.2 Main Results	18
4.3 Robustness Checks.....	19
4.3.1 Endogeneity	19
4.3.2 Alternative measures for audit quality	21
4.4 Test H2	23
4.5 Test H3	24
4.6 Test H4	25
4.7 Placebo tests.....	26
5. Conclusions	27
Reference	30
Figure1 Country clusters according to GLOBE	35
Figure 2 An example of a passenger record from Ansectory.com	36
Appendix I Variable Definitions	37
Appendix II The nine dimensions by GLOBE to construct cultural clusters	39
Appendix III Using PSM sample.....	40
Table 1 Cultural cluster distribution by auditors and CFOs	41
Table 2 Sample Distribution and Summary Statistics	42
Table 3 The impact of CFO-auditor cultural similarity on audit quality	43
Table 4 Using CFO retirements as exogenous shocks to cultural similarity	44
Table 5 Alternative measures for audit quality	45
Table 6 Test H2.....	46
Table 7 Test H3.....	47

Table 8 Test H4.....	48
Table 9 Placebo tests: the impact of CEO auditor cultural similarity on audit quality..	49

Does cultural similarity between CFOs and auditors impact audit quality?

Summary

Conceptually, it is ambiguous how the cultural similarity between the CFO and the engagement partner influences audit quality. Using last names to infer cultural values, I find that the cultural similarity between the CFO and the engagement partner is associated with high audit quality. Using the exogenous change in cultural similarity as a result of normal CFO retirement, I show that the relationship between cultural similarity and audit quality is likely to be causal and unlikely driven by endogeneity. I also hypothesize and find that the positive impact of CFO-auditor cultural similarity on audit quality is more pronounced when firms have greater information asymmetry, greater information uncertainty, and weaker corporate governance. Collectively, my findings suggest that cultural similarity influences audit quality positively.

Keywords: Audit quality; Cultural similarity; Individual auditor

JEL Classification: M42; Z10

1. Introduction

A long line of literature has recognized the importance of culture in decision makings (Guiso, Sapienza, and Zingales, 2009; Pan, Siegel, and Wang, 2017; Hirshleifer, Jian, and Zhang, 2018; Nguyen, Hagendorff, and Eshraghi, 2018). In settings where economic agents interact or cooperate, prior research has suggested that cultural similarity between economic agents shapes stock market participation (Guiso, Sapienza, and Zingales, 2008), mutual fund cash flows (Kumar, Niessen-Ruenzi, and Spalt, 2015), information flows between firms and analysts (Du, Yu, and Yu, 2017), credit allocations (Giannetti and Yafeh, 2012), consensus earnings forecasts (Merkley, Michaely, and Pacelli, 2020), and market reaction to analyst forecasts revisions (Jung, Kumar, Lim, and Yoo, 2019). However, how cultural similarity affects the audit process has received scant academic attention. This question is especially important in the U.S., a society whose members are descendants of immigrants of different cultures.

Chief Financial Officer (CFO) is the senior manager in charge of the client-auditor negotiations regarding financial reporting issues (Gibbins, McCracken, Salterio, 2007). Given the important role played by the CFO in collaborating with auditors on a day-to-day basis, I examine how cultural similarity between engagement partners and CFOs affects audit quality.

The effect of CFO-engagement partner cultural similarity on audit quality is unclear a priori. On the one hand, cultural similarity can increase audit quality. Communication becomes more effective when participants share similar cultures. Giannetti and Yafeh (2012) suggest that cultural proximity facilitates information flows and lowers information asymmetry between banks and borrowers. If cultural similarity facilitates information transfers and monitoring, then the engagement partner who

shares similar cultures with the CFO can use this information advantage. Specifically, the soft information (e.g. accent, wording, tone, verbal cues, mistakes, body gestures) of CFOs is recoverable by engagement partners who share similar ethnicities, hence facilitating the information production and increasing audit quality.

On the other hand, cultural similarity may decrease audit quality through social bonds and group identity. Pachucki and Breiger (2010) suggest that cultural similarity helps to form social bonds. The social bonds between executives and directors are shown to be detrimental to firm value (Fracassi and Tate, 2012; Hwang and Kim, 2009). When a cosy relationship is formed between the CFO and the auditor, it may overpower the auditor's professional judgment, leading to audits that are less critical and objective. In addition, people often adopt favorable opinions about members of their own group (Hewstone, Rubin, and Willis, 2002). Therefore, the CFO-Auditor cultural similarity may encourage favoritism and bias the auditor's judgment.

Since there is no clear prediction, I take this research question to the data. Following Pan et al. (2017), Nguyen et al. (2018), and Merkley et al. (2020), I infer cultural similarity, using surnames of the CFO and the engagement audit partner. Public Company Accounting Oversight Board (PCAOB) Rule 3211 requires registered audit firms to disclose the names of engagement partners that participate in issuing audit reports on or after January 31, 2017. I use the surname of each engagement partner and CFO to infer his or her cultural heritage based on the list of passengers arriving in the port of New York between 1820 and 1957. Using the citizenship information of arriving passengers, I map each surname to the most frequent country origin. Based on the country origin of each surname, I map each country of origin to a cultural cluster following House, Javidan, Hanges, and Dorfman (2002) and Merkley et al. (2020). Cultural distance between any CFO-Auditor pair of surnames is measured as the nodes

distance between the cultural clusters in Figure 1. The cultural similarity is simply the value of cultural distance multiplying by minus one.

Using a sample of 5,846 firm-year observations from 2016-2018, I analyze how cultural similarity between CFOs and engagement partners impacts audit quality. I use absolute discretionary accruals to measure audit quality (Palmrose and Scholz, 2004; Kothari, Leone, and Wasley, 2005; Cassell, Dreher, and Myers, 2013; DeFond and Zhang, 2014; Pittman and Zhao, 2017). I find that cultural similarity between CFOs and engagement partners has an economically and statistically significant positive effect on audit quality. Specifically, a one-standard-deviation increase in cultural similarity is associated with a decrease in the absolute discretionary accrual, amounting to 17% of the sample mean after controlling for the client-, auditor-, and board characteristics and various fixed effects.

Next, I conduct several robustness checks. First, while the cultural similarity between the CFO and the engagement partner is likely determined by factors other than audit quality, I can't completely rule out the possibility that there are firm characteristics that drive both audit quality and the cultural similarity. To deal with this endogeneity concern, I examine the exogenous shock to the CFO-auditor cultural similarity as a result of the CFO's normal retirement. Using a difference-in-differences research design, I find that an exogenous increase in cultural similarity between the CFO and engagement partner decreases the absolute discretionary accruals.

Second, I use alternative measures for audit quality. Since my existing measure is based on absolute discretionary accruals, I test the robustness of my results, using accounting restatements as another proxy for audit quality. I focus on core accounting restatements because core accounting issues occur annually and across all firms. In contrast, non-core accounting issues may not happen every year or may not be present

across all firms (Cunningham, Myers, and Short, 2020). Both absolute discretionary accruals and the restatement likelihood have been shown by prior studies to be important measures of audit quality (Palmrose and Scholz, 2004; Kothari, Leone, and Wasley, 2005; Cassell, Dreher, and Myers, 2013; DeFond and Zhang, 2014; Pittman and Zhao, 2017). In addition, I use an alternative model (i.e., the modified Jones model) to compute discretionary accruals. My conclusion remains unchanged.

I attempt to triangulate the main results through subsample tests. If indeed, my results are driven by the information transfers between the auditor and the CFO, I hypothesize that the positive effect of the CFO-auditor cultural similarity on audit quality is more pronounced for firms with high information asymmetry and information uncertainty, because high information asymmetry/uncertainty give rise to the practise of managers' earnings manipulation (Schipper, 1989; Warfield, Wild, and Wild, 1995) . If a firm's information asymmetry/uncertainty is high, the CFO-auditor cultural similarity helps the detection of the earnings manipulation incentives and thus improves financial reporting quality. I measure information asymmetry through firm size, analyst coverage, and forecast dispersion. Prior research suggests that firm's information asymmetry is high, when the firm is small (Chae, 2005; Demsetz, 1986), when the analyst coverage is low (Chang, Dasgupta, Hilary, 2006), and when the analyst forecasts dispersion is high (Barron and Pamela, 1998). My results based on all three measures convey the same message: the positive impact of CFO-auditor cultural similarity on audit quality is more pronounced when firms have information asymmetry.

Information uncertainty is measured through stock volatility and earnings volatility (Jiang, Lee, and Zhang, 2005; Zhang, 2006). Consistent with my hypothesis, the empirical results show that the impact of CFO-auditor cultural similarity on audit quality is more pronounced for firms with greater information uncertainty.

Finally, I consider firms' corporate governance. The quality of corporate governance through CEO chairman duality and the percentage of financial expertise on audit committee. Prior research suggests that corporate governance is more effective, when the CEO and Chairman are different individuals (Brickley, Coles, and Jarrell, 1997), and when the percentage of financial expertise on audit committee is higher (Menon and Williams, 1994; Beasley and Salterio, 2001). Consistent with my hypothesis, the empirical results show that the impact of CFO-auditor cultural similarity on audit quality is more pronounced for firms with weaker corporate governance.

This study contributes to the existing literature in the following ways. First, this study contributes to the literature on the role of cultural similarity in accounting and finance. Kumar et al. (2015) suggest that fund managers with foreign-sounding names have lower fund inflows, implying that cultural distance influences investors' preferences. Du et al. (2017) find that Chinese analysts issue more accurate forecasts for Chinese firms. Giannetti and Yafeh (2012) document that banks charge a lower interest rate from their culturally similar banks. Ahern and Daminelli, and Fracassi (2015) show that cultural proximity increases the volume of cross-border mergers. Merkley et al. (2020) indicate that the increases in cultural diversity of sell-side analysts improve the quality of consensus earnings forecasts. While the issue of cultural similarity between economic agents has been investigated in various contexts, no previous study has examined this issue in auditing. Evidence provided in this study fills this void and helps to better understand the role of auditor-client cultural similarity in determining audit quality.

Second, this paper extends the literature on how individual auditors influence audit quality. Chen, Sun, and Wu (2010) find that the effect of client importance on individual auditor independence is conditional on the strength of investor protection.

Gul, Wu, and Yang (2013) document that individual partners' characteristics such as educational background, Big N audit firm experience, and political affiliation can partly explain audit quality. Guan, Su, Wu, and Yang (2016) show that school ties between top executives and auditors impair audit quality while He, Pittman, Rui, and Wu (2017) demonstrate that social ties between engagement auditors and audit committee members lower audit quality. Lee, Nagy, and Zimmerman (2019) document that female engagement partners are associated with higher audit quality, and Pittman, Stein, and Valentine (2020) show that engagement partners with prior legal infractions exhibit lower audit quality. To the best of my knowledge, no studies have examined how cultural similarity affects audit quality, and this study adds to this line of literature by providing evidence from a novel perspective.

The rest of the paper proceeds as follows. Section 2 introduces institutional backgrounds and develops hypotheses. Section 3 describes variable construction and research design. Section 4 covers empirical results and checks the robustness of my results. Section 5 concludes.

2. Institutional Backgrounds and Hypothesis Development

2.1 Institutional Backgrounds

PCAOB adopted Rule 3211 (Auditor Reporting of Certain Audit Participants) that requires disclosure of audit engagement partners in Form AP. Accounting firms are required to comply with this rule for audit reports issued on or after January 31, 2017 (PCAOB, 2015). Within 35 days of the date that the auditor's report is first included in a document filed with the SEC, registered public accounting firms must file

the AP form to the PCAOB. As of May 2020, 28,843 AP forms have been filed by 480 audit firms. Upon filing, the PCAOB disseminates Form AP data on its website.¹

2.2 CFOs' role in audits

While SOX (2002) makes the audit committee responsible for audit matters, in reality, CFOs play a crucial role in such matters.

The audit committee meets only occasionally with the external auditor, and sometimes in the presence of the management. In contrast, the CFO meets much more frequently with the auditor, cooperating with the auditor in audit planning and providing audit evidence (Hellman, 2011; Knechel, 2007). Gibbins et al. (2007) find that 81 percent of CFOs participate in negotiations with auditors and are typically the only senior management member responsible for resolution. What's more, CFOs continue to influence auditor selection and retention decisions after SOX and have a say in auditor compensation (McCracken et al., 2008; Cohen, Krishnamoorthy, and Wright, 2010; Fiolleau, Hoang, Jamal, and Sunder, 2013; Beck and Mauldin, 2014; Dhaliwal, Lamoreaux, Lennox, and Mauler, 2015).

Based on the prior studies that CFOs are personally accountable for the auditor–client negotiation about financial reporting (Gibbins et al., 2010, 2007), I study cultural similarity between CFO and engagement partner to examine its impact on audit quality.

¹ The AP filling forms are available at <https://pcaobus.org>.

2.3 Hypothesis Development

Whether and how cultural similarity between CFO and engagement partner affects audit quality can be ambiguous *ex-ante*. On the one hand, recent studies have shown that cultural similarity reduces information asymmetry among economic agents. Du et al. (2017) suggest that the earnings of firms traded in the U.S. but headquartered in regions sharing Chinese culture can be more accurately forecasted by Chinese analysts, which implies that cultural proximity mitigates information asymmetry in the capital market. Giannetti and Yafeh (2012) show that banks offer borrowers who share similar cultures bigger loans at a lower interest rate and require fewer guarantees, suggesting that cultural similarity lowers information asymmetry and facilitates the monitoring of leaders in syndicated bank loans. Ahern et al. (2015) document that cultural similarity between countries increases the volume of cross-border mergers and synergy gains. In this sense, it's optimal for individuals to transact with those of similar ethnicities to limit market imperfections (Greif, 1993). Specifically, if the divergence between CFOs and engagement partners is too pronounced, engagement partners may underweight or even ignore the earnings management incentives of CFOs. On the contrary, if CFOs and engagement partners share a same culture, engagement partner may easily capture the soft information (e.g. accent, wording, tone, verbal cues, mistakes, body gestures) shared by CFOs with similar ethnicities. Zhang (2019) shows that CEOs who share a same native language with analysts leave some soft information to be recovered by analysts, hence increasing forecast accuracy. I therefore expect that cultural similarity between CFO and engagement partner facilitates information transfer between the client and the auditor, resulting in a higher quality of audits.

On the other hand, cultural similarity may decrease audit quality through social bonds and group identity. Individuals of the same or similar culture are more likely to

develop a personal relationship because of their shared values and norms (Pachucki and Breiger, 2010). This personal relationship may erode the professional independence of auditors, leading to low quality of audits. In addition, cultural similarity gives the engagement partner and the CFO the same group identity. Hewstone et al. (2002) argue that people systematically adopt favorable opinions about members of their own group and might be indifferent or have lower opinions about members who are outside of their group. Therefore, the CFO-Auditor cultural similarity may encourage favoritism, biasing auditor's judgment. Consequently, the cultural similarity between CFOs and engagement partners may be detrimental to audit quality.

Given the conflicting views, I state the hypothesis in the null form as below:

Hypothesis 1: The cultural similarity between CFO and engagement partner does not affect audit quality.

Next, I consider the impact of CFO-auditor cultural similarity is conditional on firms' information asymmetry and information uncertainty. Information uncertainty refers to the ambiguity of the information concerning a firm's value. High information asymmetry/uncertainty gives rise to the practise of managers' earnings manipulation. If cultural similarity improves audit quality through more effective information sharing, I expect that the impact of cultural similarity to be more pronounced for firms with high information asymmetry/information uncertainty, as the need for effective communication is likely especially important (Autore, Billingsley, Schneller, 2009). If cultural similarity results in low quality of audits through social bonds and group identity, I expect that the impact of cultural similarity to be more pronounced for firms with high information asymmetry/information uncertainty, because information

uncertainty provides a cover for intentionally biased audit opinions.² This discussion leads to the second and third hypothesis:

Hypothesis 2: The impact of cultural similarity on audit quality is more pronounced for firms with high information asymmetry.

Hypothesis 3: The impact of cultural similarity on audit quality is more pronounced for firms with high information uncertainty.

Lastly, I consider whether the effect of CFO-auditor cultural similarity on audit quality hinges on the quality of corporate governance. Beasley (1996) suggests that higher-quality boards lower the incidence of financial statement fraud. Dechow, Sloan, and Sweeney (1996) find evidence that better corporate governance reduces the likelihood of SEC enforcement actions for earnings manipulation. Carcello et al. (2010) show that audit quality, proxied by audit fees, is higher in firms with high-quality corporate governance. Prior evidence therefore suggests that effective corporate governance leads to high audit quality and effectively deters agency issues. If cultural similarity elevates audit quality through information sharing, I expect that the benefit is less pronounced for firms with effective corporate governance, given that their audit quality is already high. I also expect that the negative impact of cultural similarity is less pronounced for these firms, because effective corporate governance makes it difficult for the CFO and auditor to “collude” on biased audit opinions. My fourth hypothesis is stated as follows:

² For example, an auditor who favors a firm may decide not to issue a going-concern opinion due to the social bonds with the firm’s management. Later, when the firm goes bankrupt, the auditor can attribute this failure to the information uncertainty of the firm. He is less able to do so when the information uncertainty is low.

Hypothesis 4: The impact of cultural similarity on audit quality is more pronounced for firms with weak corporate governance.

3. Variable Construction and Research Design

3.1 Measuring Cultural Similarity

Following Merkley et al. (2020) and Pan et al. (2017), I measure cultural similarity by mapping the surnames of engagement partners and CFOs to the most likely country of ancestry. To identify the country of origin associated with a surname, I use the passenger lists of ships arriving in New York City from foreign ports between 1820 and 1957 to identify the country origin of each surname in the U.S. (Pan et al., 2017; Nguyen et al., 2018). The passenger lists, which are available through Ancestry.com, indicate each passenger's first and last name, gender, approximate birth year, and nationality. Figure 2 shows an example of the arriving record from Ancestry.com.

While the passenger lists of ships were before 1957, cultural differences persist because the descendants of immigrants inherit cultural traditions from their parents or grandparents. Guiso, Sapienza, and Zingales (2006) and Fernández and Fogli (2009) show the cultural distinctiveness over several subsequent generations. Tran (2013) provides evidence that relevant culturally inherited differences persist in the U.S. population. As a result, I can reasonably assign the surnames of an engagement partner and CFO to his/her ancestry culture even if the individual family immigrated to the US several generations ago.

Using Ancestry.com, I first identify the surnames of CFOs and engagement partners to their country of origin. In the case of multiple origins, I map surnames to

the most likely country based on the relative frequency of the name. Next, I link the country of origin to a cultural cluster following Merkle et al. (2020). Merkle et al. (2020) assign the surname to its cultural cluster constructed by the Global Leadership & Organizational Behavior Effectiveness (GLOBE) Study (i.e., House et al., 2002). Figure 1 illustrates the map of ten cultural clusters by GLOBE. These ten cultural clusters are: (i) Anglo; (ii) Nordic; (iii) Latin American; (iv) Southern Asian; (v) Confucian; (vi) Middle Eastern; (vii) Eastern European; (viii) African; (ix) Latin European; and (x) Germanic.

Following Merkle et al. (2020), I focus on the ten cultural clusters to analyse the cultural similarity between CFOs and engagement partners. I construct two measures of cultural similarity. My primary cultural similarity measure is based on the cultural distance between two cultural clusters. House et al. (2002) suggest that certain cultures have greater distances (similarities) in terms of values and norms, these distances (similarities) can impact how people interact and behave. The distance between any two cultural clusters is calculated by the methodology of GLOBE (House et al., 2002), and is measured as the number of nodes away from a given cultural cluster between any CFO-auditor pair.³ For example, the distance between Southern Asia and Germanic Europe is coded as four nodes apart, and the distance between Nordic and Latin European clusters is three nodes apart. The most distinct distance between two clusters is five nodes away. I thus code one node as 0.2 and the furthest distance between two clusters is coded as 1. *Cultural Similarity* is the distance between the cluster of engagement partner and that of CFO by multiplying with minus one.

³ GLOBE uses nine dimensions of culture to construct the cultural clusters among societies. These nine dimensions of culture are: power distance, uncertainty avoidance, humane orientation, collectivism I, collectivism II, Assertiveness, Gender Egalitarianism, Future Orientation, and Performance Orientation. Please see Appendix II for the definitions of the nine dimensions used to construct cultural clusters.

To ensure of the robustness the primary measure, I also create an additional measure of cultural similarity. House et al. (2002) suggest that cultural similarity is greatest among the countries that constitute a cluster. The second measure of cultural similarity is based on whether the CFO and engagement partner represent a same cultural cluster. *Cultural Cluster* equals 1 if CFO and engagement partner represent the same cultural cluster, 0 otherwise.

3.2 Measuring Audit Quality

Consistent with DeFond and Zhang (2014) and Carey and Simnett (2006), I use absolute abnormal discretionary accruals as the measure of audit quality.

An extensive branch of audit research focuses on the quality of the client's financial statements, in which discretionary accruals are often used as a proxy for audit quality, as they reflect the auditor's constraint over management's reporting decisions. Hence, I use the absolute value of discretionary accruals as the measure of audit quality. I run the Kothari et al. (2005) for each industry-year combination. Each industry is classified by its two-digit SIC code. I require at least 20 observations in each industry-year combination. The model is specified as follows:

$$\frac{ACCRUAL_{it}}{ASSETS_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{ASSETS_{i,t-1}} + \beta_2 \frac{\Delta REV_{it} - \Delta AR_{it}}{ASSETS_{i,t-1}} + \beta_3 \frac{PPE_{it}}{ASSETS_{i,t-1}} + \beta_4 ROA_{it} + e_{it},$$

(1)

where *ACCRUAL* is earnings before extraordinary items and discontinued operations minus operating cash flows from continuing operations from the statement of cash flows; *REV* is total revenue; *AR* is accounts receivable; *PPE* is the gross property, plant,

and equipment; *ROA* is the return on assets, and *ASSETS* is total assets. The residual of Model (1) is used as the measure of discretionary accruals.

3.3 Research Design

To test my hypothesis, I model *Cultural Similarity*, board related characteristics, auditor related characteristics, and client firm characteristics that may affect audit quality. Specifically, I run the following regressions:

$$Absolute\ DA = \alpha * Cultural\ Similarity_{it} + \beta * Controls_{it} + Firm/Industry\ FE + Year\ FE + e_{it}(2)$$

I use *Absolute DA* as the dependent variable to measure audit quality supplied to the client company. The absolute discretionary accruals (i.e., *Absolute DA*) in equation (2) is estimated using Kothari et al. (2005) model. I run Kothari et al. (2005) model for each industry-year combination and require the number of observations in each combination to be at least 20.

I use OLS regressions for the absolute discretionary accruals models. The primary variable of interest in this paper is cultural similarity. I use *Cultural Similarity* and *Cultural Cluster* as proxies. *Cultural Similarity* measures the cultural proximity between the origins of CFO and engagement partner. If *Cultural Similarity* equals zero, it means that CFO and the engagement partner share the same culture cluster. *Cultural Cluster* equals 1 is the CFO and engagement partner represent the same culture cluster.

Audit quality is the degree of assurance that the financial statements reflect the firm's underlying economic conditions, conditional on the firm's financial reporting system, and innate characteristics (DeFond and Zhang 2014). To control for the firms' operating environments and inherent characteristics, I control for various client firm related variables. I include *Size* (the natural logarithm of the total assets) to control for

the client size effect on audit quality (Dechow and Dichev, 2002). *Leverage* (long term debt divided by total assets) is included since firms with high leverage are associated with worse financial reporting quality. I control for *Loss* (the incidence of negative earnings), *ROA* (operating income before depreciation divided by total assets), and *Operating Cash Flow* (cash flow from operations divided by total assets) to capture the firm performance, as the performance affects managers' incentive to manipulate earnings (Jones et al., 2008; Chen et al., 2015). I use *Sales growth* (current sales minus lagged sales divided by lagged sales) and *BTM* (the book-to-market ratio) to capture firm growth. Managers in high-growth firms are more likely to manipulate their earnings (Skinner and Sloan, 2002). I also include *Financing* (An indicator variable that equals one if the sum of new long-term debt plus new equity of lagged total assets exceeds two percent of lagged total assets) because firms with external financing needs are incentivized to manage earnings upwards.

Next, I control several auditor related variables because auditor characteristics affect audit quality. I control for *Big 4* (a dummy variable indicating whether the annual report is audited by a Big four audit firm) because Big 4 audit firms presumably provide higher audit quality (Francis and Krishnan, 1999). *Internal Control Weakness* (a dummy variable indicating the internal control weakness disclosure) is included to control for the effects of internal control system effectiveness on audit quality. *Auditor Expertise* (a dummy variable indicating whether the client firm is audited by the expertise whose market share is greater than 35% in a given industry-year combination) is added because industry specialists supply higher-quality audits (Balsam, Krishnan, and Yang, 2003).

Further, I include *Board Size* (the natural logarithm of the directors on board) and *Independent Director Ratio* (the percentage of independent directors on the board)

because high-quality governance restrains earnings management and financial restatements (Klein, 2002; Xie, Davidson, DaDalt, 2003).

Finally, I control for firm- and year-fixed effects to alleviate the concern that my results are driven by firm-, or year-specific effects. Some tests include industry- and year- fixed effects in place of firm- and year- fixed effects.⁴ In all regressions, standard errors are corrected for heteroskedasticity and clustered by firm. The detailed description of all variables is provided in Appendix I.

4. Sample and Empirical Results

4.1 Sample Selection and Summary Statistics

PCAOB Rule 3211 requires registered audit firms to disclose, in AP filings, the names of engagement partners who participate in issuing audit reports on or after January 31, 2017. I therefore start with the AP filings to obtain the surnames of each engagement partner involved in auditing listed firms. Specifically, I use the last filing in each firm-year combination to identify the surname of the engagement partner. I then obtain the surname of the CFO from BoardEx by matching on the firm and the fiscal year. I extract financial statement data from Compustat, board data from BoardEx, and auditor data from Audit Analytics. I remove firms operating in financial industries (SIC 6000–6999) since they face different regulatory requirements. I require all observations in the baseline regression as specified in Equation (2) to be non-missing. This selection process results in a sample of 5,846 observations.

Table 1 reports the distribution of cultural cluster by engagement partners and CFOs respectively. Panel A shows the distribution of cultural cluster by auditors. 57.01%

⁴ Industry is defined as the four digits SIC code.

of engagement partners in the sample are associated with ancestry immigrated from Anglo countries. 16.37% of engagement partners in the sample are Germanic. Panel B suggests the cultural cluster distribution by CFOs. 56.74% of CFOs are Anglo, while the remaining CFOs are associated with diverse cultural clusters. For example, 15.53% of CFOs are Germanic, and 12.73% of CFOs are Latin European.

Table 2 presents the distribution of sample observations by year (Panel A) and summary statistics (Panel B). Panel A indicates that the annual distribution ranges from 29.97% in 2016 to 35.71% in 2018, suggesting that the sample is not dominated by observations from one single year.

Panel B shows the summary statistics for the variables used in my regression analyses. All continuous variables are winsorized at the 1st and 99th percentiles. The mean and median of *Cultural Similarity* are -0.25 and -0.20, meaning that the cultural cluster on average between the engagement partner and CFO is one node away. The mean and median of *Cultural Cluster* are 0.40 and 0.00, indicating that about 40% of auditor-CFO pairs share a same cultural cluster. Consistent with prior studies (e.g., Baugh et al., 2019), the mean and median values of *Absolute DA* are 0.10 and 0.04 respectively. The mean and median values of *Operating Cash Flow* is 0.02 and 0.06 respectively. On average, firms in my sample have *BTM* of 0.52. The mean of *Financing* is 0.64, meaning that about 64% of the firms obtain financing from either the debt market or the equity market. The mean value of *Size* is 7.24 and suggests the average total assets of the sample observations are 1,394 million in USD. The mean value of *Leverage* is 0.22, and the mean value of *Loss* shows that 29% of the sample observations report losses. The mean and median values of *ROA* are respectively -0.03 and 0.02. The mean and median values of *Sales Growth* are 0.13 and 0.07 respectively, suggesting a skewed distribution. The mean value of *Board Size* is 2.24, suggesting that

the number of directors on the board averages about 9.⁵ The mean value of *Independent Director Ratio* is 0.76, indicating that firms on average have 76% independent directors on board. The mean values of *Auditor Expertise* and *Big4* are 0.08 and 0.68 respectively, revealing that 8% of the sample observations are audited by industry specialists and 68% of the observations are audited by the Big 4 audit firms. Finally, the mean value of *Internal Control Weakness* indicates that about 6% of sample firms report internal control weakness.

4.2 Main Results

Table 3 reports the OLS regression results based on *Absolute DA*. Column (1) and (2) report results for *Cultural Similarity*. Column (3) and (4) report for the results for *Cultural Cluster*. For each measure, I first analyse the OLS regressions include firm and year fixed effects, and then replace with industry and year fixed effects. In column (1), the coefficient on *Cultural Similarity* is -0.060, significant at the 1% level. The coefficient of -0.060 for *Cultural Similarity* indicates that a one-standard-deviation increase in *Cultural Similarity* (0.28) is associated with a decrease in *Absolute DA* amounting to 16.8% of the sample mean (0.10). In column (2), the coefficient of *Cultural Similarity* is -0.16, significant at the 5% level. The coefficients on control variables are consistent with prior literature. The coefficient on *Size* is negative, suggesting that large firms are less likely to manipulate their earnings. The coefficient on *BTM*, indicating that firms with greater uncertainty have a greater tendency to manipulate their earnings. The coefficient on *Big 4* is negative, suggesting that high-quality auditor provides better auditor scrutiny. Similarly, the coefficient on

⁵ The mean number of directors of the board is equal to $e^{2.22}$, i.e., 9.39.

Independent Director Ratio is negative, showing that high-quality corporate governance restrains earnings management. The coefficient on *Internal Control Weakness* is positive, indicating that firms with internal control weaknesses are associated with low earnings quality. In column (3), the coefficient on *Cultural Cluster* is -0.021, significant at the 5% level. The results are not only statistically but also economically significant. When the CFO-auditor cultural cluster increases by one standard deviation (0.50), *Absolute DA* decreases 10.50%. In column (4), the coefficient on *Cultural Cluster* is -0.007, significant at the 10% level.

Taken together, the evidence suggests that cultural similarity between CFO and engagement partner is associated with higher audit quality, indicated by lower *Absolute DA*. My finding is consistent with the notion that cultural similarity facilitates the information flows between the engagement partners and CFOs, which is beneficial to the auditing process.

4.3 Robustness Checks

4.3.1 Endogeneity

One potential endogeneity is that there are firm characteristics that drive both audit quality and cultural similarity. To deal with this endogeneity concern, I examine the exogenous shock to the CFO-auditor cultural similarity as a result of CFO's normal retirement. Treatment firms consist of firms that experience a CFO turnover and the departing CFO's age is greater than or equal 60. Hazarika, Karpoff, and Nahata (2012) define normal retirement in the same way. I further separate treatment firms with an increase in CFO-auditor cultural similarity from those treatment firms with a decrease. The control group consists of firms with no change in cultural similarity (i.e., the firms'

CFO and engagement partner remain the same individuals) and in the same industry-year combination as the treatment firms.⁶

Next, I regress the change in discretionary accruals (i.e., the current year value minus lagged value) on the change in cultural similarity and all other control variables. I regress $\Delta Absolute DA$ on *Increase* (the increase in CFO-auditor cultural similarity because of CFO normal retirement, and it is coded as 0 if the firm doesn't experience any CFO-auditor cultural similarity increase) and *Decrease* (the decrease in CFO-auditor cultural similarity because of CFO normal retirement, and it is coded as 0 if the firm doesn't experience any CFO-auditor cultural similarity decrease), and changes in control variables in an OLS. This model reflects a difference-in-differences approach, since the coefficient on *Increase/Decrease* represents the difference in the change in earnings quality between treatment firms that increase/decrease cultural similarity and control firms that do not experience any change in cultural similarity. What's more, the model uses a change specification and essentially controls for firm fixed effects.

Table 4 reports the results. For $\Delta Absolute DA$ in column (1), the coefficient on *Increase* is -0.031, significant at the 1% level, while the coefficient on *Decrease* is -0.005, not significant at the 10% level. The results document that the increase in CFO-auditor cultural similarity improves accruals quality. I also use F-test and find that the difference between the coefficients on *Increase* and *Decrease* is significant.

To further address the concern that firm characteristics that drive both audit quality and cultural similarity, I employ propensity score matching (PSM) approach to address the endogeneity arising from the choice of auditors. I first run a logit regression

⁶ There are 59 CFO normal retirements in my sample. 26 of the retirements cause CFO-auditor cultural similarity increase, and 22 of the retirement cause CFO-auditor cultural similarity decrease, and 11 of the retirement didn't change the CFO-auditor cultural similarity.

of *Cultural Cluster* on *Size*, *Leverage*, *BTM*, *ROA*, *Big4*, *Internal Control Weakness*, and *Financing*. The regression model includes seven control variables as well as year and industry (two-digit SIC) fixed effects. I use it to estimate the probability of having an engagement partner with the same cultural cluster. I then match, without replacement, a treatment observation with a control observation that has the closest propensity score, with a caliper of 0.01. Appendix III reports the results with the PSM sample. The coefficient on *Cultural Cluster* is -0.020, significant at the 5% level.

Overall, the results in Table 4 indicate that the exogenous increase in CFO-auditor cultural similarity improves audit quality, addressing the concern that unobservable firm characteristics that may impact both audit quality and the cultural similarity.

4.3.2 Alternative measures for audit quality

I use two alternative measures for audit quality to check the robustness. The first measure of audit quality is the absolute discretionary accruals using the modified Jones model. I run the Dechow, Sloan, and Sweeney (1995) for each industry-year combination. Each industry is classified by its two-digit SIC code. I require at least 20 observations in each industry-year combination.⁷ I use core accounting restatements as the second measure because higher restatements imply lower-quality audits supplied by auditors (Ireland and Lennox, 2002; Higgs and Skantz, 2006).

⁷ The modified Jones model is specified as follows: $\frac{ACCRUAL_{it}}{ASSETS_{i,t-1}} = \beta_0 + \beta_1 \frac{1}{ASSETS_{i,t-1}} + \beta_2 \frac{\Delta REV_{it} - \Delta AR_{it}}{ASSETS_{i,t-1}} + \beta_3 \frac{PPE_{it}}{ASSETS_{i,t-1}}$. where *ACCRUAL* is earnings before extraordinary items and discontinued operations minus operating cash flows from continuing operations from the statement of cash flows, *ASSET* is total assets, *REV* is total revenue, *AR* is accounts receivable, and *PPE* is gross property, plant, and equipment.

I focus on core accounting restatements (Cassell et al., 2013; Palmrose and Scholz, 2004; Pittman and Zhao, 2017) because CFOs make decisions regarding core accounting treatments every year. In contrast, decisions related to non-core accounting issues may arise only in certain years, and CFOs do not always make the decisions on non-core accounting treatments. Following Pittman and Zhao (2018) and Cassell et al. (2013), I classify restatement announcements as related to core versus non-core items. The classification captures core accounting issues related to revenue, cost of sales, operating expenses, debt, leases, current assets and liabilities, and property, plant, and equipment.⁸ I use the incidence of the core accounting restatements as the second proxy for audit quality.

Table 5 reports the results. Column (1) reports for *Modified Jones Accruals* (absolute discretionary accruals calculated by modified Jones model), and Column (2) reports for the results of *Restatements*. In Column (1), the coefficient on *Cultural Similarity* is -0.058, significant at the 5% level, suggesting that the increase in *Cultural Similarity* increases *Modified Jones Accruals*. In column (2), the coefficient on *Cultural Similarity* is -0.582, significant at the 5% level, suggesting that the increase in *Cultural Similarity* lowers the likelihood of accounting restatements subsequently. The coefficient on *Board Size* is negative, showing that stronger corporate governance is associated with better financial reporting quality and fewer accounting restatements. The coefficient on *Internal Control Weakness* is positive, indicating that firms with

⁸ After Palmrose and Scholz (2004) and Cassell et al. (2013), all restatements within Audit Analytics restatement category 1 (depreciation, depletion, or amortization issues), 3 (PPE intangible or fixed assets issues), 4 (debt, quasi-debt, warrants, and equity security issues), 6 (revenue recognition issues), 7 (expense, payroll, SG&A issues), 12 (liabilities, payables, reserves, and accrual estimate issues), 14 (account/loan receivables, investments, and cash issues), 20 (inventory and costs of sales issues), 21 (lease, SFAS 5, legal contingency, and commitment issues), 23 (capitalization of expenditure issues), 29 (asset classification issues), and 42 (leasehold and SFAS 13 issues) are classified as misstatements of core-accounts; all other restatements are classified as misstatements of non-core-accounts.

internal control weaknesses are associated with more accounting restatements subsequently.

Collectively, the results in Table 5 suggest that the CFO-auditor cultural similarity increases the absolute discretionary accruals and decreases audit fees. These findings are consistent with the evidence in Table 3.

4.4 Test H2

H2 hypothesizes that the impact of cultural similarity between CFO and engagement partner on audit quality is conditional on information asymmetry. I use several proxies for information asymmetry. Chae (2005) shows that small firms have higher information asymmetry than large firms. Demsetz (1986) suggests that small firms have high amounts of internal information. I thus use firm size as the first information asymmetry proxy. I add *Small firm* (an indicator equals 1 if the firm size is below the sample median) and its interaction with *Cultural Similarity* in equation (2) and re-run the regression.

Analyst following strongly reduces information asymmetry, because analysts reduce information asymmetry or because they extend coverage to more transparent firms. Barron et al. (1998) find that forecast dispersion is strongly associated with a firm's level of information asymmetry. I thus use analyst coverage and forecast dispersion as additional proxies for information asymmetry. *Low analyst coverage* (indicating whether the unique analyst following for the firm is below the sample median) and its interaction are added to equation (2) for the test. *High forecast dispersion* (indicating whether the forecast dispersion of the firm is greater than the sample median) and its interaction are added to equation (2) to re-run the regression.

Forecast dispersion is the standard deviation of the EPS forecasts for firm i in year t divided by the absolute value of mean EPS forecasts.

Table 6 reports whether the impact of CFO-auditor cultural similarity on audit quality is conditional on information asymmetry. In column (1), the coefficient on *Cultural Similarity* Small firm* is -0.065, significant at the 5% level, indicating that the effect of CFO-auditor cultural similarity on audit quality is more pronounced when the firms are small. In column (2), the coefficient of *Cultural Similarity* Low analyst coverage* is -0.067, significant at the 5% level. The results in column (2) of Table 6 suggest that the benefit of CFO-auditor cultural similarity on financial reporting quality is more evident when firms have lower analyst coverage. In column (3), the coefficient of *Cultural Similarity* High forecast dispersion* is -0.010, significant at the 5% level, suggesting the stronger impact of CFO-auditor cultural similarity in the high forecast dispersion subgroup.

Using firm size, analyst coverage, and forecast dispersion, the results in Table 6 suggest that impact of CFO-auditor cultural similarity on audit quality is more pronounced when firms' information asymmetry is high.

4.5 Test H3

Following Zhang (2006) and Jiang et al. (2005), I use annual stock volatility and earnings volatility as proxies for firms' information uncertainty. I add *High Stock Volatility* (a dummy indicating whether the firm's annual stock volatility is greater than the sample median) and its interaction with *Cultural Similarity* to equation (2). *High Earnings Volatility* (indicating whether the standard deviation of the firm's prior five years ROAs is greater than the sample median) and its interaction are added to equation

(2) to re-run the regression. Next, I re-run the regressions and report the results in Table 7.

For the regression in Column (1), the coefficient on *Cultural Similarity* High Stock Volatility* is -0.054, significant at the 5% level. In Column (2), the coefficient on *Cultural Similarity* High Earnings Volatility* is -0.086, significant at the 1% level. These results indicate that the impact of cultural similarity on audit quality is more evident for firms with higher stock volatility and earnings volatility.

In sum, results in Table 7 suggest that the positive impact of cultural similarity between CFO and engagement partner on audit quality is more pronounced for firms with higher information uncertainty.

4.6 Test H4

I use several proxies for corporate governance quality. Studies show that financial expertise on audit committee complements strong governance (e.g., Menon and Williams, 1994; Defond, Hann, and Hu, 2005). Beasley and Salterio (2001) find that high-expert audit committees are often associated with boards with stronger governance because such boards have greater incentives to improve financial reporting quality. Thus, I use the percentage of financial expertise (i.e., the audit committee members that are qualified as financial experts according to BoardEx) on audit committee as the first proxy for corporate governance. I add *Low Expertise on AC* (indicates if the percentage of financial expertise on audit committee is below the sample median) and its interaction with *Cultural Similarity* to equation (2). Then, I re-estimate the regressions.

Brickley et al. (1997) show that the split titles of CEO and Chairman of the board increase governance quality and firm value. I use *CEO Chairman Duality* (an indicator equals 1 if the CEO is also chairman of the board) as the second proxy for corporate governance quality. I add *CEO Chairman Duality* and its interaction with *Cultural Similarity* to equation (2), and re-run the regressions.

Table 8 reports the results. In Column (1), the coefficient on *Cultural Similarity* High Expertise on AC* is -0.049, significant at the 10% level. In Column (2), the coefficient on *Cultural Similarity* CEO Chairman duality* is 0.002, not significant at the 10% level. These results indicate that the impact of *Cultural Similarity* on audit quality is more pronounced for firms with a lower percentage of financial expertise on audit committee.

Taken together, I use CEO Chairman duality, and the percentage of financial expertise on audit committee as proxies for corporate governance and find that the impact of CFO-auditor cultural similarity on audit quality is more evident when firms have less financial expertise on audit committee.

4.7 Placebo tests

To test whether CFO is really in charge of financial reporting quality and whether CFO-auditor cultural similarity impacts audit quality, I conduct a placebo test using the cultural similarity between CEO and engagement partner to test its impact on audit quality. Similar to the measures of cultural similarity between CFOs and auditor, I use *Cultural Similarity CEO* and *Cultural Cluster CEO* to proxy CEO-auditor cultural proximity. *Cultural Similarity CEO* measures the cultural similarity between the

engagement partners and CEOs. *Culture Cluster CEO* equals 1 if the CEO and engagement partner belong to a same cultural cluster, 0 otherwise.

Table 9 reports the OLS regression results for the placebo tests. Column (1) and (2) report the results for *Cultural Similarity CEO*. Column (3) and (4) report for the results for *Cultural Cluster CEO*. For each measure, I first analyse the OLS regressions include firm and year fixed effects and then replace firm with industry fixed effects. The coefficients of *Cultural Similarity CEO* and *Cultural Cluster CEO* are not significant at the 10% level in Table 9, indicating that CFO-auditor instead of CEO-auditor cultural similarity impacts financial reporting quality.

5. Conclusions

I explore the impact of cultural similarity between CFOs and engagement partners on audit quality. While prior studies have examined how cultural similarity affects financial analysts, mutual fund managers, M&A deals, credit allocation, and stock market participation (Guiso et al., 2008; Ahern et al., 2015; Giannetti and Yafeh, 2012; Kumar et al., 2015; Du et al., 2017), little is known about how cultural similarity plays out in auditing. This question is especially important in the U.S., a society whose members are from different cultures.

PCAOB Rule 3211 enables my analysis by requiring registered audit firms to disclose the names of engagement partners that participate in issuing audit reports on or after January 31, 2017. I estimate the cultural values associated with each last name by making use of the passenger list from Ancestry.com and the cultural clusters constructed by GLOBE. Cultural similarity is measured according to the nodes distance between two cultural in clusters in GLOBE figure. My proxy for audit quality is

absolute discretionary accruals. My results suggest that when CFOs and engagement partners are culturally close, audit quality is improved. The effect is not only statistically significant but also economically significant.

To draw causality concern and to address the endogeneity concern, I examine the normal CFO retirement, which introduces an exogenous shock to the cultural similarity. My difference-in-differences analyses show that when culture distance between the CFO and the engagement partner becomes smaller as a result of the normal CFO retirement, earnings quality improves. In addition, I use the PSM sample to address the concern of the endogeneity of auditor choice, and the results are in consistent with the main results. Using the normal retirement of CFOs and PSM sample can largely mitigate the endogeneity concern, there still could be unobservable variables affecting both CFO-auditor cultural similarity and audit quality. The unexpected exogenous shocks to CFO-auditor cultural similarity would better solve the problem. In this sense, the potential endogeneity is a limitation of this paper.

I continue to hypothesize that the impact of cultural similarity on audit quality is conditional on information asymmetry. I use three measures of information asymmetry: firm size, analyst coverage, and the forecast dispersion. Results from all three measures suggest that the positive impact of cultural similarity on audit quality is more pronounced when firms have relatively higher information asymmetry.

I also hypothesize that the impact of cultural similarity on audit quality is conditional on information uncertainty. Since information uncertainty give the CFOs more opportunity to manipulate earnings, CFO-auditor cultural similarity facilitates the information flows and helps to uncover the earnings manipulation incentives of CFOs. I predict that the positive impact of cultural similarity on audit quality will be more

pronounced for firms with high information asymmetry. My empirical results lend support to my prediction.

Next, I test whether the impact of cultural similarity on audit quality is conditional on corporate governance. The empirical results suggest that the effect of CFO-auditor cultural similarity is more pronounced when firms have lower financial expertise on audit committee. Collectively, my findings suggest that cultural similarity influences audit quality positively.

Reference

- Ahern, K.R., Daminelli, D., Fracassi, C., 2015. Lost in translation? The effect of cultural values on mergers around the world. *J. financ. econ.* 117, 165–189. <https://doi.org/10.1016/J.JFINECO.2012.08.006>
- Autore, D.M., Billingsley, R.S., Schneller, M.I., 2009. Information uncertainty and auditor reputation. *J. Bank. Financ.* 33, 183–192. <https://doi.org/10.1016/j.jbankfin.2008.07.011>
- Balsam, S., Krishnan, J., Yang, J.S., 2003. Auditor industry specialization and earnings quality. *Auditing* 22, 71–97. <https://doi.org/10.2308/aud.2003.22.2.71>
- Barron, O., Pamela, S., 1998. Dispersion in analysts' earnings forecasts as a measure of uncertainty. *J. Accounting, Audit. Financ.* 13, 245–270.
- Baugh, M., Hallman, N., Kachelmeier, S.J., 2019. A Matter of Appearances: Does Financial Expertise Help Audit Committees Look Beyond the Superficial When Selecting and Compensating Auditors?
- Beasley, M.S., Salterio, S.E., 2001. The Relationship between Board Characteristics and Voluntary Improvements in Audit Committee Composition and Experience. *Contemp. Account. Res.* 18, 539–570. <https://doi.org/10.1506/RM1J-A0YM-3VMV-TAMV>
- Beck, M.J., Mauldin, E.G., 2014. Who's really in charge? Audit committee versus CFO power and audit fees. *Account. Rev.* 89, 2057–2085. <https://doi.org/10.2308/accr-50834>
- Brickley, J.A., Coles, J.L., Jarrell, G., 1997. Leadership structure: Separating the CEO and Chairman of the Board. *J. Corp. Financ.* 3, 189–220. <https://doi.org/10.1134/S0005117916100076>
- Carcello, J. V., Hermanson, D.R., Neal, T.L., Riley, R.A., 2010. Board Characteristics and Audit Fees. *Contemp. Account. Res.* 19, 365–384. <https://doi.org/10.1506/CHWK-GMQ0-MLKE-K03V>
- Carey, P., Simnett, R., 2006. Audit partner tenure and audit quality. *Account. Rev.* 81, 653–676. <https://doi.org/10.2308/accr.2006.81.3.653>
- Cassell, C.A., Dreher, L.M., Myers, L.A., 2013. Reviewing the SEC's review process: 10-K comment letters and the cost of remediation. *Account. Rev.* 88, 1875–1908. <https://doi.org/10.2308/accr-50538>
- Chae, J., 2005. Trading volume, information asymmetry, and timing information. *J. Finance* 60, 413–442. <https://doi.org/10.1111/j.1540-6261.2005.00734.x>
- Chang, X., Dasgupta, S., Hilary, G., 2006. Analyst coverage and financing decisions. *J. Finance* 61, 3009–3048. <https://doi.org/10.1111/j.1540-6261.2006.01010.x>
- Chen, S., Sun, S.Y.J., Wu, D., 2010. Client importance, institutional improvements, and audit quality in China: An office and individual auditor level analysis. *Account. Rev.* 85, 127–158. <https://doi.org/10.2308/accr.2010.85.1.127>
- Chen, X., Cheng, Q., Wang, X., 2015. Does increased board independence reduce earnings management? Evidence from recent regulatory reforms. *Rev. Account.*

- Stud. 20, 899–933. <https://doi.org/10.1007/s11142-015-9316-0>
- Cohen, J., Krishnamoorthy, G., Wright, A., 2010. Corporate governance in the post-Sarbanes-Oxley era: Auditors' experiences. *Contemp. Account. Res.* 27, 751–786. <https://doi.org/10.1111/j.1911-3846.2010.01026.x>
- Cunningham, L.M., Myers, L.A., Short, J., 2020. CFO Outside Directorships: Simply a Distraction or an Opportunity for Development?
- Dechow, P., Dichev, I.D., 2002. The Quality of Accruals and Earnings : The Role of Accrual Estimation Errors. *Account. Rev.* 77, 35–59.
- Dechow, P.M., Sloan, R.G., Sweeney, A.P., 1996. Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemp. Account. Res.* 13, 1–36. <https://doi.org/10.1111/j.1911-3846.1996.tb00489.x>
- Dechow, P.M., Sloan, R.G., Sweeney, A.P., 1995. Detecting Earnings Management. *Account. Rev.* 70, 193–225. <https://doi.org/10.2307/248303>
- DeFond, M., Zhang, J., 2014. A review of archival auditing research. *J. Account. Econ.* 58, 275–326. <https://doi.org/10.1016/j.jacceco.2014.09.002>
- Defond, M.L., Hann, R.N., Xuesong, H.U., Engel, E., 2005. Does the market value financial expertise on audit committees of boards of directors? *J. Account. Res.* 43, 153–193. <https://doi.org/10.1111/j.1475-679x.2005.00166.x>
- Demsetz, H., 1986. Corporate Control , Insider Trading , and Rates of Return. *Am. Econ. Rev.* 76, 313–316.
- Dhaliwal, D.S., Lamoreaux, P.T., Lennox, C.S., Mauler, L.M., 2015. Management Influence on Auditor Selection and Subsequent Impairments of Auditor Independence during the Post-SOX Period. *Contemp. Account. Res.* 32, 575–607. <https://doi.org/10.1111/1911-3846.12079>
- Du, Q., Yu, F., Yu, X., 2017. Cultural proximity and the processing of financial information. *J. Financ. Quant. Anal.* 52, 2703–2726. <https://doi.org/10.1017/S0022109017001028>
- Fernández, R., Fogli, A., 2006. Fertility: The Role of Culture and Family Experience. *J. Eur. Econ. Assoc.* 4, 552–561. <https://doi.org/10.2307/40005121>
- Fiolleau, K., Hoang, K., Jamal, K., Sunder, S., 2013. How Do Regulatory Reforms to Enhance Auditor Independence Work in Practice? *Contemp. Account. Res.* 30, 864–890. <https://doi.org/10.1111/1911-3846.12004>
- Fracassi, C., Tate, G., 2012. External networking and internal firm governance. *J. Finance* 67, 153–194. <https://doi.org/10.1111/j.1540-6261.2011.01706.x>
- Francis, J.R., Krishnan, J., 1999. Accounting Accruals and Auditor Reporting Conservatism. *Contemp. Account. Res.* 16, 135–165. <https://doi.org/10.1111/j.1911-3846.1999.tb00577.x>
- Giannetti, M., Yafeh, Y., 2012. Do Cultural Differences between Contracting Parties Matter? *Manage. Sci.* 58, 365–383.
- Gibbins, M., McCracken, S., Salterio, S.E., 2010. The auditor's strategy selection for

- negotiation with management: Flexibility of initial accounting position and nature of the relationship. *Accounting, Organ. Soc.* 35, 579–595.
<https://doi.org/10.1016/j.aos.2010.01.001>
- Gibbins, M., McCracken, S.A., Salterio, S.E., 2007. The Chief Financial Officer's Perspective on Auditor–Client Negotiations. *Contemp. Account. Res.* 24, 387–422. <https://doi.org/10.1506/9208-G324-1R15-4U3H>
- Greif, A., 1993. Contract Enforceability and Economic Institutions in Early Trade : The Maghribi Traders ' Coalition Author (s): Avner Greif Source : The American Economic Review , Vol . 83 , No . 3 (Jun . , 1993) , pp . 525-548 Published b. *Am. Econ. Rev.* 83, 525–548.
- Guan, Y., Su, L.N., Wu, D., Yang, Z., 2016. Do school ties between auditors and client executives influence audit outcomes? *J. Account. Econ.* 61, 506–525.
<https://doi.org/10.1016/j.jacceco.2015.09.003>
- Guiso, L., Sapienza, P., Zingales, L., 2009. Cultural Biases in Economic Exchange? *Q. J. Econ.* 124, 1095–1131. <https://doi.org/10.1162/qjec.2009.124.3.1095>
- Guiso, L., Sapienza, P., Zingales, L., 2008. Trusting the stock market. *J. Finance* 63, 2557–2600. <https://doi.org/10.1111/j.1540-6261.2008.01408.x>
- Guiso, L., Sapienza, P., Zingales, L., 2006. Does culture affect economic outcomes? *J. Econ. Perspect.* <https://doi.org/10.1257/jep.20.2.23>
- Gul, F.A., Wu, D., Yang, Z., 2013. Do individual auditors affect audit quality? Evidence from archival data. *Account. Rev.* 88, 1993–2023.
<https://doi.org/10.2308/accr-50536>
- Hazarika, S., Karpoff, J.M., Nahata, R., 2012. Internal corporate governance, CEO turnover, and earnings management. *J. financ. econ.* 104, 44–69.
<https://doi.org/10.1016/j.jfineco.2011.10.011>
- Hellman, N., 2011. Chief Financial Officer Influence on Audit Planning. *Int. J. Audit.* 15, 247–274. <https://doi.org/10.1111/j.1099-1123.2011.00433.x>
- Hewstone, M., Rubin, M., Willis, H., 2002. Intergroup Bias. *Annu. Rev. Psychol.* 53, 575–604. <https://doi.org/10.1146/annurev.psych.53.100901.135109>
- Higgs, J.L., Skantz, T.R., 2006. Audit and nonaudit fees and the market's reaction to earnings announcements. *Auditing* 25, 1–26.
<https://doi.org/10.2308/aud.2006.25.1.1>
- Hirshleifer, D., Jian, M., Zhang, H., 2018. Superstition and financial decision making. *Manage. Sci.* 64, 235–252. <https://doi.org/10.1287/mnsc.2016.2584>
- House, R., Javidan, M., Hanges, P., Dorfman, P., 2002. Understanding culture and implicit leadership theories. *J. world Bus.* 37, 3–10.
- Hwang, B.H., Kim, S., 2009. It pays to have friends. *J. financ. econ.* 93, 138–158.
<https://doi.org/10.1016/j.jfineco.2008.07.005>
- Ireland, J.C., Lennox, C.S., 2002. The Large Audit Firm Fee Premium: A Case of Selectivity Bias? *J. Accounting, Audit. Financ.* 17, 73–91.
<https://doi.org/10.1177/0148558X0201700104>

- Jiang, G., Lee, C.M.C., Zhang, Y., 2005. Information uncertainty and expected returns, in: *Review of Accounting Studies*. Springer, pp. 185–221. <https://doi.org/10.1007/s11142-005-1528-2>
- Jones, K.L., Krishnan, G. V., Melendrez, K.D., 2008. Do models of discretionary accruals detect actual cases of fraudulent and restated earnings? An empirical analysis. *Contemp. Account. Res.* 25, 499–531. <https://doi.org/10.1506/car.25.2.8>
- Jung, J.H., Kumar, A., Lim, S.S., Yoo, C.Y., 2019. An analyst by any other surname: Surname favorability and market reaction to analyst forecasts. *J. Account. Econ.* 67, 306–335. <https://doi.org/10.1016/j.jacceco.2019.02.002>
- Khan, M., Watts, R.L., 2009. Estimation and empirical properties of a firm-year measure of accounting conservatism. *J. Account. Econ.* 48, 132–150. <https://doi.org/10.1016/j.jacceco.2009.08.002>
- Klein, A., 2002. Audit committee, board of director characteristics, and earnings management. *J. Account. Econ.* 33, 375–400. [https://doi.org/10.1016/S0165-4101\(02\)00059-9](https://doi.org/10.1016/S0165-4101(02)00059-9)
- Knechel, W.R., 2007. The business risk audit: Origins, obstacles and opportunities. *Accounting, Organ. Soc.* 32, 383–408. <https://doi.org/10.1016/j.aos.2006.09.005>
- Kothari, S.P., Leone, A.J., Wasley, C.E., 2005. Performance matched discretionary accrual measures. *J. Account. Econ.* 39, 163–197. <https://doi.org/10.1016/j.jacceco.2004.11.002>
- Kumar, A., Niessen-Ruenzi, A., Spalt, O.G., 2015. What’s in a Name? Mutual Fund Flows When Managers Have Foreign-Sounding Names. *Rev. Financ. Stud.* 28, 2281–2321. <https://doi.org/10.1093/rfs/hhv017>
- Lee, H.S., Nagy, A.L., Zimmerman, A.B., 2019. Audit partner assignments and audit quality in the United States. *Account. Rev.* 94, 297–323. <https://doi.org/10.2308/accr-52218>
- McCracken, S., Salterio, S.E., Gibbins, M., 2008. Auditor-client management relationships and roles in negotiating financial reporting. *Accounting, Organ. Soc.* 33, 362–383. <https://doi.org/10.1016/j.aos.2007.09.002>
- Menon, K., Williams, D.J., 1994. The use of audit committees for monitoring. *J. Account. Public Policy* 13, 121–139. [https://doi.org/10.1016/0278-4254\(94\)90016-7](https://doi.org/10.1016/0278-4254(94)90016-7)
- Merkley, K., Michaely, R., Pacelli, J., 2020. Cultural diversity on Wall Street: Evidence from consensus earnings forecasts. *J. Account. Econ.* <https://doi.org/10.1016/j.jacceco.2020.101330>
- Nguyen, D.D., Hagendorff, J., Eshraghi, A., 2018. Does a CEO’s cultural heritage affect performance under competitive pressure? *Rev. Financ. Stud.* 31, 97–141. <https://doi.org/10.1093/rfs/hhx046>
- Pachucki, M.A., Breiger, R.L., 2010. Cultural Holes: Beyond Relationality in Social Networks and Culture. *Annu. Rev. Sociol.* 36, 205–224. <https://doi.org/10.1146/annurev.soc.012809.102615>

- Palmrose, Z.-V., Scholz, S., 2004. The Circumstances and Legal Consequences of Non-GAAP Reporting: Evidence from Restatements. *Contemp. Account. Res.* 21, 139–190. <https://doi.org/10.1506/wbf9-y69x-l4dx-jmv1>
- Pan, Y., Siegel, S., Wang, T.Y., 2017. Corporate risk culture. *J. Financ. Quant. Anal.* 52, 2327–2367. <https://doi.org/10.1017/S0022109017000771>
- Pittman, J., Zhao, Y., 2017. The Impact of Financial Statement Audits on Non-Income-Increasing Misreporting: Evidence from Restatements, SSRN Electronic Journal. <https://doi.org/10.2139/ssrn.2912478>
- Pittman, J.A., Stein, S.E., Valentine, D.F., 2020. Audit Partners' Risk Tolerance and the Impact on Audit Quality. <https://doi.org/10.2139/ssrn.3311682>
- Public Company Accounting Oversight Board (PCAOB), 2015. Improving the Transparency of Audits: Rules to Require Disclosure of Certain Audit Participants on a New PCAOB Form and Related Amendments to Auditing Standards.
- Schipper, K., 1989. Earnings Management. *Account. Horizons* 3, 91.
- Skinner, D.J., Sloan, R.G., 2002. Earnings surprises, growth expectations, and stock returns or don't let an earnings torpedo sink your portfolio. *Rev. Account. Stud.* 7, 289–312. <https://doi.org/10.1023/a:1020294523516>
- Tran, L., 2013. Compassionate Vietnamese American CEOs: How Six High-Tech Entrepreneurs Achieve Bottom Line Success by Leading with Their Hearts.
- Warfield, T.D., Wild, J., Wild, L., 1995. Managerial ownership , accounting choices , and informativeness of earnings. *J. Account. Econ.* 20, 61–91.
- Xie, B., Davidson, W.N., Dadalt, P.J., 2003. Earnings management and corporate governance: The role of the board and the audit committee. *J. Corp. Financ.* 9, 295–316. [https://doi.org/10.1016/S0929-1199\(02\)00006-8](https://doi.org/10.1016/S0929-1199(02)00006-8)
- Zhang, R., 2019. Language Commonality and Sell-side Information Production.
- Zhang, X.F., 2006. Information uncertainty and stock returns. *J. Finance* 61, 105–137. <https://doi.org/10.1111/j.1540-6261.2006.00831.x>

Figure1 Country clusters according to GLOBE

Luke Gates in the New York, Passenger Lists, 1820-1957

Name:	Luke Gates
Arrival Date:	9 Jan 1865
Birth Date:	abt 1842
Age:	23
Gender:	Male
Ethnicity/ Nationality:	English
Place of Origin:	England
Port of Departure:	Liverpool, England
Destination:	New York
Port of Arrival:	New York, New York
Ship Name:	Escort

Figure 2 An example of a passenger record from Ansectory.com

Appendix I Variable Definitions

Variable	Definition	Source
<i>Cultural Similarity</i>	Multiply cultural distance between the CFO and engagement partner with minus one. Cultural distance is the nodes distance between two cultural clusters by House et al. (2002).	AP-filing, BoardEx, Ancestry.com, and GLOBE
<i>Cultural Cluster</i>	An indicator equals 1 if the CFO and engagement partner shares a same cultural cluster.	Ancestry.com, and GLOBE
<i>Absolute DA</i>	The absolute value of discretionary accruals, controlling for firm performance (Kothari et al. 2005).	Compustat
<i>Restatement</i>	Indicator variable equals 1 if core accounting issues in annual financial reports were restated subsequently, and zero otherwise.	Audit Analytics
<i>Operating Cash Flow</i>	Cash flow from operations divided by total assets.	Compustat
<i>BTM</i>	Book-to-Market ratio.	Compustat
<i>Financing</i>	An indicator equals 1 if the sum of new long-term debt plus new equity exceeds two percent of lagged total assets, and 0 otherwise.	Compustat
<i>Size</i>	Natural log of total assets.	Compustat
<i>Leverage</i>	Long term debt divided by total assets.	Compustat
<i>Loss</i>	An indicator equals 1 if net income is negative, and 0 otherwise.	Compustat
<i>ROA</i>	Income before extraordinary items divided by lagged total assets.	Compustat
<i>Sales Growth</i>	Current sales minus lagged sales divided by lagged sales.	Compustat
<i>Board Size</i>	Natural log of the total number of board members plus one.	BoardEx
<i>Independent Director Ratio</i>	The percentage of independent directors on the board.	BoardEx
<i>Auditor Expertise</i>	An indicator equals 1 if the firm is audited by the expertise whose market share is greater than 35% in a given industry-year combination, 0 otherwise.	Audit Analytics

<i>Big4</i>	An indicator equals 1 if the client firm is audited by the big four audit firms, 0 otherwise.	Compustat
<i>Internal Control Weakness</i>	An indicator equals 1 if the firm has internal control material weaknesses, and 0 otherwise.	Audit Analytics
<i>Increase</i>	The increase in CFO-auditor cultural similarity if the firm experiences an increase in CFO-auditor cultural similarity as a results of normal CFO retirement, 0 otherwise.	BoardEx
<i>Decrease</i>	The decrease in CFO-auditor cultural similarity if the firm experiences an decrease in CFO-auditor cultural similarity as a results of normal CFO retirement, 0 otherwise.	BoardEx
<i>Modified Jones Accruals</i>	The absolute value of discretionary accruals using the modified Jones model (Dechow et al., 1995).	Compustat

Appendix II The nine dimensions by GLOBE to construct cultural clusters

GLOBE use nine cultural dimensions to capture the similarities and/or differences in norms, values, beliefs, and practices among societies. They are:

Power Distance: *The degree to which members of a collective expect power to be distributed equally.*

Uncertainty Avoidance: *The extent to which a society, organization, or group relies on social norms, rules, and procedures to alleviate unpredictability of future events.*

Humane Orientation: *The degree to which a collective encourages and rewards individuals for being fair, altruistic, generous, caring, and kind to others.*

Collectivism I: (Institutional) *The degree to which organizational and societal institutional practices encourage and reward collective distribution of resources and collective action.*

Collectivism II: (In-Group) *The degree to which individuals express pride, loyalty, and cohesiveness in their organizations or families.*

Assertiveness: *The degree to which individuals are assertive, confrontational, and aggressive in their relationships with others.*

Gender Egalitarianism: *The degree to which a collective minimizes gender inequality.*

Future Orientation: *The extent to which individuals engage in future-oriented behaviors such as delaying gratification, planning, and investing in the future.*

Performance Orientation: *The degree to which a collective encourages and rewards group members for performance improvement and excellence.*

Appendix III Using PSM sample

This table reports the OLS regression results using the PSM sample. The sample consists of 3,704 observations from 2016 to 2018. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)
	Absolute DA
<i>Culture Cluster</i>	-0.020** (0.027)
<i>Operating Cash Flow</i>	-0.021 (0.790)
<i>BTM</i>	-0.012 (0.454)
<i>Financing</i>	0.005 (0.483)
<i>Size</i>	0.049* (0.076)
<i>Leverage</i>	-0.050 (0.452)
<i>Loss</i>	-0.015 (0.205)
<i>ROA</i>	-0.036 (0.396)
<i>Sales Growth</i>	-0.002 (0.860)
<i>Board Size</i>	-0.026 (0.528)
<i>Independent Director Ratio</i>	0.089 (0.142)
<i>Auditor Expertise</i>	0.010 (0.534)
<i>Big4</i>	-0.008 (0.776)
<i>Internal Control Weakness</i>	-0.018 (0.301)
Industry Fixed Effects	YES
Year Fixed Effects	YES
Adjusted R-squared	0.397
Number of observations	3,704

Table 1 Cultural cluster distribution by auditors and CFOs

This table reports cultural cluster distribution by auditors and CFOs. Panel A reports cultural cluster distribution by engagement partners. Panel B reports cultural cluster distribution by CFOs. My sample consists of 5,846 observations from 2016 to 2018. See Appendix I for variable definitions.

Panel A: Cultural cluster distribution by auditors		
Auditor Cluster	Frequency	Percent
African	5	0.09
Anglo	3,333	57.01
Confucian	59	1.01
Eastern European	521	8.91
Germanic	957	16.37
Latin American	6	0.1
Latin European	741	12.68
Middle eastern	20	0.34
Nordic	166	2.84
Southeast Asian	38	0.65
Total	5,846	100
Panel B: Cultural cluster distribution by CFOs		
CFO cluster	Frequency	Percent
Anglo	3,317	56.74
Confucian	121	2.07
Eastern European	426	7.29
Germanic	908	15.53
Latin American	3	0.05
Latin European	744	12.73
Middle Eastern	20	0.34
Nordic	222	3.8
Southeast Asian	85	1.45
Total	5,846	100

Table 2 Sample Distribution and Summary Statistics

This table reports summary statistics. Panel A reports the distribution of the sample across the year. Panel B reports descriptive statistics. My sample consists of 5,846 observations from 2016 to 2018. All the continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

Panel A: Sample Distribution by Year						
Year	Frequency			Percent		
2016	1,752			29.97		
2017	2,195			37.55		
2018	1,899			32.48		
Total	5,846			100		
Panel B: Summary Statistics						
	N	Mean	SD	P25	Median	P75
<i>Cultural Similarity</i>	5,846	-0.25	0.28	-0.40	-0.20	0.00
<i>Cultural Cluster</i>	5,846	0.40	0.49	0.00	0.00	1.00
<i>Absolute DA</i>	5,846	0.10	0.15	0.01	0.04	0.11
<i>Operating Cash Flow</i>	5,846	0.02	0.21	0.01	0.06	0.11
<i>BTM</i>	5,846	0.52	0.54	0.22	0.46	0.74
<i>financing</i>	5,846	0.64	0.48	0.00	1.00	1.00
<i>Size</i>	5,846	7.24	2.27	5.81	7.35	8.76
<i>Leverage</i>	5,846	0.22	0.23	0.02	0.18	0.35
<i>Loss</i>	5,846	0.29	0.46	0.00	0.00	1.00
<i>ROA</i>	5,846	-0.03	0.29	-0.02	0.02	0.06
<i>Sales Growth</i>	5,846	0.13	0.47	-0.01	0.07	0.17
<i>Board Size</i>	5,846	2.24	0.26	2.08	2.30	2.40
<i>Independent Director Ratio</i>	5,846	0.76	0.14	0.67	0.78	0.88
<i>Auditor Expertise</i>	5,846	0.08	0.26	0.00	0.00	0.00
<i>Big4</i>	5,846	0.68	0.47	0.00	1.00	1.00
<i>Internal Control Weakness</i>	5,846	0.06	0.24	0.00	0.00	0.00

Table 3 The impact of CFO-auditor cultural similarity on audit quality

This table reports the OLS regression results. My sample consists of 5,846 observations from 2016 to 2018. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)	(2)	(3)	(4)
	<i>Absolute DA</i>	<i>Absolute DA</i>	<i>Absolute DA</i>	<i>Absolute DA</i>
<i>Cultural Similarity</i>	-0.060*** (0.001)	-0.016** (0.049)		
<i>Cultural Cluster</i>			-0.021** (0.024)	-0.007* (0.088)
<i>Operating Cash Flow</i>	-0.008 (0.894)	0.011 (0.815)	-0.011 (0.859)	0.011 (0.812)
<i>BTM</i>	-0.015 (0.295)	-0.014** (0.017)	-0.015 (0.308)	-0.014** (0.016)
<i>Financing</i>	0.005 (0.500)	-0.001 (0.788)	0.005 (0.447)	-0.001 (0.768)
<i>Size</i>	0.021 (0.313)	-0.009*** (0.000)	0.020 (0.343)	-0.009*** (0.000)
<i>Leverage</i>	-0.040 (0.464)	0.024 (0.215)	-0.040 (0.469)	0.024 (0.209)
<i>Loss</i>	-0.025** (0.014)	-0.037*** (0.000)	-0.025** (0.015)	-0.037*** (0.000)
<i>ROA</i>	-0.054 (0.195)	-0.204*** (0.000)	-0.054 (0.200)	-0.204*** (0.000)
<i>Sales Growth</i>	-0.002 (0.828)	0.012 (0.117)	-0.001 (0.892)	0.012 (0.116)
<i>Board Size</i>	-0.041 (0.270)	-0.026** (0.042)	-0.041 (0.280)	-0.026** (0.042)
<i>Independent Director Ratio</i>	0.057 (0.263)	0.016 (0.411)	0.059 (0.254)	0.016 (0.419)
<i>Auditor Expertise</i>	0.016 (0.175)	0.005 (0.499)	0.015 (0.188)	0.005 (0.508)
<i>Big4</i>	0.002 (0.918)	-0.018*** (0.004)	0.001 (0.938)	-0.018*** (0.004)
<i>Internal Control Weakness</i>	-0.012 (0.364)	0.026** (0.048)	-0.013 (0.349)	0.026** (0.046)
Firm Fixed Effects	YES	NO	YES	NO
Industry Fixed Effects	NO	YES	NO	YES
Year Fixed Effects	YES	YES	YES	YES
Adjusted R ²	0.393	0.327	0.391	0.327
Number of observations	5,846	5,846	5,846	5,846

Table 4 Using CFO retirements as exogenous shocks to cultural similarity

This table reports the OLS regression results. The sample consists of 1,724 for Δ *Absolute DA* from 2016 to 2018. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Δ *Absolute DA* is current year *Absolute DA* minus lagged *Absolute DA*. The other variables in this table are defined similarly. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)
	Δ <i>Absolute DA</i>
<i>Increase (continuous)</i> [A]	-0.311*** (0.005)
<i>Decrease (continuous)</i> [B]	-0.005 (0.932)
Δ <i>Operating Cash Flow</i>	0.019 (0.805)
Δ <i>BTM</i>	-0.010 (0.755)
Δ <i>Financing</i>	0.003 (0.772)
Δ <i>Size</i>	0.036 (0.328)
Δ <i>Leverage</i>	-0.070 (0.392)
Δ <i>Loss</i>	-0.043*** (0.004)
Δ <i>ROA</i>	-0.082* (0.066)
Δ <i>Sales Growth</i>	-0.004 (0.709)
Δ <i>Board Size</i>	-0.148** (0.031)
Δ <i>Independent Ratio</i>	0.081 (0.327)
Δ <i>Expertise</i>	-0.021 (0.228)
Δ <i>Big4</i>	-0.010 (0.744)
Δ <i>Internal Control Weakness</i>	-0.019 (0.419)
Industry Fixed Effects	YES
Year Fixed Effects	YES
Adjusted R ²	0.080
Number of observations	1,724
<i>p</i> -value of testing $\beta(A) < \beta(B)$	0.000***

Table 5 Alternative measures for audit quality

This table reports multivariate regression results. Column (1) reports the OLS regression results. Column (2) reports the logistic regression results. My sample consists of 6,810 and 6,120 observations for *Modified Jones Accruals* and *Restatements* analyses respectively, from 2016 to 2018. The OLS regression results are reported. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)	(2)
	<i>Modified Jones Accruals</i>	<i>Restatements</i>
<i>Culture Similarity</i>	-0.058** (0.028)	-0.582** (0.013)
<i>Operating Cash Flow</i>	-0.065 (0.326)	0.010 (0.977)
<i>BTM</i>	0.000 (0.999)	0.029 (0.843)
<i>Financing</i>	0.001 (0.944)	0.225 (0.165)
<i>Size</i>	0.007 (0.773)	0.075 (0.192)
<i>Leverage</i>	-0.006 (0.937)	0.320 (0.340)
<i>Loss</i>	-0.019 (0.228)	0.037 (0.848)
<i>ROA</i>	-0.045 (0.396)	0.068 (0.786)
<i>Sales Growth</i>	0.037*** (0.001)	-0.131 (0.245)
<i>Board Size</i>	0.027 (0.582)	-0.701* (0.076)
<i>Independent Director Ratio</i>	0.023 (0.688)	-0.360 (0.516)
<i>Auditor Expertise</i>	0.026 (0.102)	0.453** (0.049)
<i>Big4</i>	0.018 (0.408)	0.295 (0.157)
<i>Internal Control Weakness</i>	-0.003 (0.856)	2.419*** (0.000)
Firm Fixed Effects	YES	NO
Industry Fixed Effects	NO	YES
Year Fixed Effects	YES	YES
Adjusted R ² /Pesudo R ²	0.388	0.183
Number of observations	6,810	6,120

Table 6 Test H2

This table reports the OLS regression results. The sample consists of 5,846 observations from 2016 to 2018. *Small firm* equals 1 if the firm size (i.e., the natural logarithm of total assets) is below the sample median, 0 otherwise. *Low analyst coverage* equals 1 if the analyst coverage (i.e., the number of unique analysts following the firm *i* in year *t*) is below the sample median, 0 otherwise. *High forecast dispersion* equals 1 if the analyst forecasts dispersion of the firm (i.e., the standard deviation of the EPS forecasts for firm *i* in year *t* divided by the absolute value of mean EPS forecasts) is above the sample median, 0 otherwise. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)	(2)	(3)
	Absolute DA	Absolute DA	Absolute DA
<i>Cultural Similarity* Small firm</i>	-0.065** (0.046)		
<i>Cultural Similarity* Low analyst coverage</i>		-0.067** (0.026)	
<i>Cultural Similarity* High forecast dispersion</i>			-0.010** (0.041)
Variables in Table 3 and the split variable	YES	YES	YES
Firm Fixed Effects	YES	YES	YES
Year Fixed Effects	YES	YES	YES
Adjusted R ²	0.393	0.290	0.293
Number of observations	5,846	4,904	4,385

Table 7 Test H3

This table reports the OLS regression results. The sample consists of 5,846 observations from 2016 to 2018. *High stock volatility* equals 1 if the annual stock volatility is greater than the sample median, 0 otherwise. *High earnings volatility* equals 1 if the standard deviation of prior five years' *ROAs* is greater than the sample median, 0 otherwise. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(2)	(2)
	<i>Absolute DA</i>	<i>Absolute DA</i>
<i>Culture Similarity*High stock volatility</i>	-0.054** (0.013)	
<i>Culture Similarity*High earnings volatility</i>		-0.086*** (0.002)
Variables in Table 3 and the split variable	YES	YES
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
Adjusted R ²	0.326	0.394
Number of observations	5,620	5,846

Table 8 Test H4

This table reports the OLS regression results. The sample consists of 5,846 observations from 2016 to 2018. *Low financial expertise on AC* equals 1 if the percentage of financial expertise on audit committee is below than the sample median, 0 otherwise. *CEO Chairman duality* equals 1 if the firm has the CEO and the Chairman of the board as the same person, 0 otherwise. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)	(2)
	<i>Absolute DA</i>	<i>Absolute DA</i>
<i>Cultural Similarity* Low financial expertise on AC</i>	-0.049*	
	(0.080)	
<i>Cultural Similarity* CEO Chairman duality</i>		0.002
		(0.952)
Variables in Table 3 and the split variable	YES	YES
Firm Fixed Effects	YES	YES
Year Fixed Effects	YES	YES
Adjusted R ²	0.391	0.393
Number of observations	5,846	5,846

Table 9 Placebo tests: the impact of CEO auditor cultural similarity on audit quality

This table reports the OLS regression results. My sample consists of 5,886 observations from 2016 to 2018. *Cultural Similarity CEO* measures the cultural similarity between the engagement partners and CEOs. *Culture Cluster CEO* equals 1 if the CEO and engagement partner belong to a same cultural cluster, 0 otherwise. *, **, and *** indicate significance (two-sided) at the 10 percent, 5 percent, and 1 percent levels respectively. Standard errors are corrected for heteroskedasticity and clustered by firms. All continuous variables are winsorized at the 1st and 99th percentiles. See Appendix I for variable definitions.

	(1)	(2)	(3)	(4)
	<i>Absolute DA</i>	<i>Absolute DA</i>	<i>Absolute DA</i>	<i>Absolute DA</i>
<i>Culture Similarity CEO</i>	0.025 (0.170)	-0.008 (0.247)		
<i>Culture Cluster CEO</i>			0.009 (0.356)	-0.004 (0.345)
<i>Operating Cash Flow</i>	-0.016 (0.769)	0.028 (0.448)	-0.016 (0.772)	0.028 (0.447)
<i>BTM</i>	0.002 (0.894)	-0.005 (0.385)	0.002 (0.905)	-0.005 (0.380)
<i>Financing</i>	0.009 (0.201)	0.001 (0.844)	0.009 (0.204)	0.001 (0.851)
<i>Size</i>	0.046** (0.011)	-0.008*** (0.000)	0.046** (0.010)	-0.008*** (0.000)
<i>Leverage</i>	-0.027 (0.614)	0.020 (0.185)	-0.027 (0.622)	0.020 (0.186)
<i>Loss</i>	-0.027*** (0.005)	-0.034*** (0.000)	-0.027*** (0.005)	-0.034*** (0.000)
<i>ROA</i>	-0.070* (0.071)	-0.204*** (0.000)	-0.070* (0.070)	-0.204*** (0.000)
<i>Sales Growth</i>	-0.011 (0.185)	0.008 (0.210)	-0.011 (0.186)	0.008 (0.209)
<i>Board Size</i>	-0.047 (0.185)	-0.024** (0.041)	-0.047 (0.192)	-0.024** (0.040)
<i>Independent Director Ratio</i>	0.031 (0.512)	-0.004 (0.807)	0.032 (0.499)	-0.005 (0.785)
<i>Auditor Expertise</i>	0.018* (0.073)	0.007 (0.267)	0.018* (0.071)	0.007 (0.262)
<i>Big4</i>	-0.004 (0.882)	-0.019*** (0.001)	-0.003 (0.889)	-0.019*** (0.001)
<i>Internal Control Weakness</i>	-0.010 (0.467)	0.013 (0.246)	-0.010 (0.466)	0.013 (0.239)
Firm Fixed Effects	YES	NO	YES	NO
Industry Fixed Effects	NO	YES	NO	YES
Year Fixed Effects	YES	YES	YES	YES
Adjusted R ²	0.362	0.326	0.362	0.326
Number of observations	5,886	5,886	5,886	5,886