Financial Expert CEOs and Earnings Management around Initial Public Offerings[1]

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Abstract

This study examines the association between financial expert CEOs and earnings management (EM) around initial public offerings. We identify financial expert CEOs as those having past experience in either banking or investment firms, large auditing firms, or finance-related roles. We find strong evidence that newly listed firms with financial expert CEOs are less likely to engage in either accrual-based or real EM in the offering year than those with non-financial expert CEOs. In particular, our results are robust after controlling for the potential selection issue that occurs due to non-random matching of CEOs to firms. In addition, we employ alternative measures of financial expertise, including past experience in a CFO position, financial experience variety, and professional qualifications. We document that CEOs who used to work as CFOs and those who gained varied financial experience are less likely to manage earnings through both accruals and real activities. Moreover, CEOs who have a professional qualification in finance and/or accounting are also associated with lower accrual-based EM.

JEL classification: G10, G14, G3
Keywords: IPOs, financial expertise, CEOs, earnings management

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1. Introduction

Earnings are widely used by investors to evaluate firms' prospective performance and managers are tempted to manipulate earnings to influence short-term stock prices. The incentives to engage in earnings management (EM) are stronger around initial public offerings (IPOs) due to the high level of information asymmetry between managers and investors. Prior research on EM around IPOs has provided evidence for positive abnormal accruals in the year of issue and a negative relation between at-issue abnormal accruals and post-issue long-run stock performance, suggesting that managers manipulate earnings to mislead investors (Aharony, Lin, & Loeb, 1993; DuCharme, Malatesta, & Sefcik, 2004; Friedlan, 1994; Gramlich & Sorensen, 2004; Roosenbloom & van de Goot, 2003; Teoh, Welch, & Wong, 1998a; Teoh, Wong, & Rao, 1998b).

Given the prevalence of the EM issue, researchers have extensively explored the determinants of EM, such as firm-level factors (e.g., firm size, firm performance, leverage, growth, corporate governance, financing needs, and target beating) and external factors (e.g., capital requirements and regulations; see Dechow, Ge, & Schrand, 2010, for a review). In the IPO context, several studies suggest the significance of external parties such as auditors, underwriters, venture capitalists, and credit rating agencies in restraining EM by IPO firms (Gounopoulos & Pham, 2017; Hochberg, 2012; Lee & Masulis, 2011; Morsfield & Tan, 2006; Venkataraman, Weber, & Willenborg, 2008; Wongsunwai, 2013). Moreover, increasing attention has been paid to examining manager-level factors driving EM. Research on the effects of managerial characteristics on accounting choices is primarily based on the upper echelons theory (Hambrick, 2007; Hambrick & Mason, 1984), which postulates that managerial background characteristics may partially influence top managers' decision-making and

organizational outcomes. Prior literature has documented the link between earnings quality and several managerial characteristics such as CEO reputation (Francis, Huang, Rajgopal, & Zang, 2008), superstar CEOs (Malmendier & Tate, 2009) and managerial ability (Demerjian, Lev, Lewis, & McVay, 2013). However, to the best of our knowledge, the impact of CEOs' financial experience on EM around IPOs remains unexplored.

The financial career background of CEOs may play an important role in determining the quality of financial reporting. The financial skills and experience that CEOs have accumulated over their career equip them with deeper understanding of financial and accounting issues, which they may draw upon to make proper accounting decisions and improve the financial reporting process. Moreover, extensive experience and interaction with the financial market make financial expert CEOs highly aware of the type of information demanded by investors and appreciative of the significance of accounting information in affecting investors' firm evaluation (Custódio & Metzger, 2014). Thus, financial expert CEOs may have more incentives to provide high-quality financial reporting to the market so that investors can appropriately gauge the firms' values. Furthermore, although CEOs are not directly involved in overseeing the accounting process, they can set the tone from the top and influence the decisions of chief financial officers (CFOs) (Feng, Ge, Luo, & Shevlin, 2011). The financial background facilitates communication between CEOs and CFOs, allowing them to effectively work together to develop sound accounting policies. Moreover, financial expert CEOs who hold a professional qualification are required to adhere to ethical codes of conduct, considerably influencing their risk attitudes towards greater conservatism in financial reporting. In addition, detection of financial reporting misrepresentations will adversely affect the reputation of financial expert CEOs. Thus, reputational concerns may restrain financial expert CEOs from managing earnings.

Therefore, we are interested in investigating whether the variation in the EM of IPO firms is partially attributable to CEOs' past financial experience. We collect detailed CEO profiles of our sample of U.S. common share IPOs over the period 2003–2011 from Boardex. Based on CEOs' employment histories, we categorize financial expert CEOs as those having past experience in either banking or investment firms, large auditing firms, or finance-related roles, such as an accountant, a treasurer, a vice president (VP) of finance, and a CFO. We find that IPO firms with a financial expert CEO are less likely to engage in both accrual-based and real EM around IPOs. In addition, we employ the propensity score matching method to address the potential endogenous selection bias issue that occurs due to the non-random matching of CEOs to firms and the correlation of unobserved firm and/or CEO characteristics with CEOs' financial experience. Our results still hold after controlling for endogenous selection.

Moreover, investigating the interaction effect between financial expert CEOs and CEO power, we document that CEO power significantly enhances the impacts of financial expert CEOs on accrual-based EM. This suggests that although CEOs are not directly responsible for overseeing the financial reporting process, financial expert CEOs' decision-making power allows them to more effectively influence CFOs' decisions. In addition, we employ several different measures of financial expertise, including past experience in a CFO position, financial experience variety, and professional qualifications. We find a negative relationship between CEOs' past experience as a CFO and both accrual-based and real EM. In regard to the variety of financial experience, we employ the principal component analysis to measure an index for financial experience variety that takes four aspects of CEOs' financial work experience into account (a) the number of firms in which the CEO acquired financial experience, (b) the number of financial roles in which the CEO worked, (c) whether the CEO had financial experience in

another firm, and (d) the duration of the financial experience. We document that CEOs with varied financial experience are associated with lower accrual-based and real EM. Additionally, in examining the effects of CEOs with a professional qualification on EM, we find that accrual-based EM is significantly lower when the CEO holds a professional qualification in accounting and/or finance.

Our study makes several contributions to the EM, IPO, and management literature. First, it adds to the growing literature on determinants of EM by highlighting CEOs' financial experience as a new dimension of influencing factors to be further explored in future research. Prior literature has documented the significance of CEOs' past managerial experience on accounting choices. For example, Demerjian et al. (2013) argue that managerial ability is positively related to earnings quality. They measure the ability of managers based on the extent of their efficiency in utilizing the firm's resources. Our research is distinguishable from their study, as we examine a different perspective of managerial skills—that is, the functional experience of CEOs and, specifically, their career background in finance. With regard to financial experience, Custódio and Metzger (2014) document the impact of financial expert CEOs on firms' financial policies, such as cash holdings, debts, and share purchases. We provide additional evidence of the relevance of CEOs' financial experience to firms' accounting decisions.

Another paper close to ours is the one by Jiang et al. (2013) that documents a negative association between CEOs with financial experience and real EM among Chinese listed firms. We examine the impact of financial expert CEOs on EM in the IPO context. The IPO market is a more favorable setting to explore the incentives of managers in undertaking EM because managerial opportunism is more strongly driven by information asymmetries (Dye, 1988;

Trueman & Titman, 1988), which are strongly manifested around IPOs. In particular, in order to have a comprehensive view of EM activities, we analyze both accrual-based and real EM. In addition, the prior literature on EM around IPOs has mainly explored the impact of external parties, such as auditors, reputable underwriters, venture capitalists, and credit rating agencies, on EM by IPO issuers (Gounopoulos & Pham, 2017; Hochberg, 2012; Lee & Masulis, 2011; Morsfield & Tan, 2006; Venkataraman et al., 2008; Wongsunwai, 2013). To the best of our knowledge, our study is the first to provide the empirical evidence of the influence of a manager-level factor—CEOs' financial experience—on EM around IPOs. The paper also contributes to the management literature by providing evidence consistent with the upper echelons theory's prediction about the effect of managerial functional experience on corporate strategic choices. Furthermore, our findings provide implications for investors assessing the financial reports of IPO firms led by financial expert CEOs and for firms considering recruiting CEOs with financial experience.

The paper is organized as follows. Section 2 discusses the related literature and hypothesis development. Section 3 explains the methodology to estimate EM and describes the sample. Section 4 presents the empirical model and findings of the effect of financial expert CEOs on EM around IPOs, while section 5 provides robustness checks. Finally, section 6 concludes the paper.

2. Related literature and hypothesis development

The study of EM around IPOs is mainly governed by consideration of agency theory. This theory is concerned with the principal-agent problem that arises due to conflicts of interests between the principals (e.g., shareholders), who provide capital for the firm, and the agent (e.g., company executives), who manage day-to-day activities of the firm, in the presence of

information asymmetry (Jensen & Meckling, 1976). Information asymmetry creates an adverse selection problem, which happens when inside managers have access to relevant information not made available to outsiders, and a moral hazard issue, which occurs when managers behave inappropriately from the perspective of less informed investors.

The IPO market is characterized by a high level of information asymmetry. Public information about an IPO firm is scarce and often limited to the prospectus, leaving market participants with much uncertainty about the firm. The information disparity creates strong incentives for self-interested managers to maximize their gain by overstating earnings to influence stock prices (Fields, Lys, & Vincent, 2001). Prior literature has provided evidence suggesting opportunistic EM around IPOs. The early studies of Aharony et al. (1993) and Friedlan (1994) state that managers are involved in accrual-based EM before the stock offering in an effort to increase reported earnings. Teoh et al. (1998a) find positive abnormal accruals in the year of issue and a negative association between the accruals and post-issue long-run stock performance, suggesting that managers manipulate earnings around IPOs to mislead investors. Several later studies also attest to the aggressive use of accruals around the stock issuance to overstate earnings (e.g., Alhadab, Clacher, & Keasey, 2014; DuCharme, 2001; DuCharme et al., 2004; Lee & Masulis, 2011; Marquardt & Wiedman, 2004; Morsfield & Tan, 2006; Roosenboom, van der Goot, & Mertens, 2003).[2] The phenomenon of EM by IPO issuers is also reported in an international context, such as the Netherlands (Roosenboom et al., 2003), the United Kingdom (Alhadab et al., 2014; Alhadab et al., 2016), and Asian countries (Ahmad-Zaluki, Campbell, & Goodacre, 2011; Kouwenberg & Thontirawong, 2015).

[2] Ball and Shivakumar (2008) suggest that the stringent monitoring from various parties, such as regulators, auditors, analysts, and the press, may discourage IPO firms from engaging in aggressive EM. They analyze a sample of UK firms whose financial statements filed as private firms are comparable to those restated and included in the IPO prospectuses. They find that IPO firms are more likely to be conservative in their financial reporting. However, Lo (2008) argues that the restriction in the sample selection by Ball and Shivakumar (2008) may exclude firms that engage in EM since managers tend to hide their misbehavior by providing non-comparable reports.

Besides accrual-based EM, recent research has provided some evidence of real EM around IPOs. Darrough and Rangan (2005) document that IPO issuers overstate earnings in the issue year by reducing research and development (R&D) expenses. Cohen and Zarowin (2010) find that firms engage in real EM around seasoned equity offerings. Alhadab et al. (2014) studied IPOs in the UK market and indicate that issuers manage earnings upwards in the offering year by manipulating both accruals and sales. The level of EM can be explained by various firm-level factors (e.g., firm size, firm performance, leverage, growth, corporate governance, financing needs, and target beating) and external factors (e.g., capital requirements and regulations; see Dechow et al., 2010, for a review). Furthermore, in the IPO context, researchers highlight the importance of external parties, such as auditors, reputable underwriters, venture capitalists, and credit rating agencies, in restraining EM by IPO issuers (Gounopoulos & Pham, 2017; Hochberg, 2012; Lee & Masulis, 2011; Morsfield & Tan, 2006; Venkataraman et al. 2008; Wongsunwai, 2013). Surprisingly, research on the influence of managerial factors on EM around IPOs is scarce.

The upper echelons theory suggests that managerial personalities, background, and experience, such as age, socioeconomic background, formal education, and functional track can partially affect managers' interpretations of the situations and problems they have to deal with and, in turn, influence their decision-making (Hambrick, 2007; Hambrick & Mason, 1984). Prior empirical studies document the impact of several managerial characteristics on accounting decisions. Bamber, John, and Yanyan (2010) argue that managers' idiosyncratic differences play a significant role in firms' voluntary financial disclosure choices. In particular, managers with financial, accounting, and legal backgrounds; those born before World War II; and those with past military service tend to be more conservative in disclosures. Dyreng, Hanlon, and Maydew

(2010) document that individual executive effects significantly influence firms' tax avoidance. Francis et al. (2008) report a negative association between earnings quality and CEO reputation. Malmendier and Tate (2009) investigate the behavior changes of CEOs after winning prestigious awards in the business press and find that EM increases considerably subsequent to the award. Demerjian et al. (2013) show that managerial ability is related to greater earnings quality, which is represented by fewer subsequent restatements, higher earnings persistence, fewer errors in bad debt provisions, and better accrual estimations. Jiang et al. (2013) examine Chinese listed firms and find evidence that the appointment of CEOs with financial experience significantly reduces real EM and thus provides higher quality earnings information.

Despite prior findings of the influence of managerial characteristics on accounting decisions, it remains an empirical question whether financial expert CEOs affect IPO firms' financial reporting behaviors. Custódio and Metzger (2014) argue that financial expert CEOs tend to communicate accounting information more effectively to the market because they appreciate the importance of the information in influencing investors' evaluation of the firm. Moreover, past financial experience equips financial expert CEOs with profound technical training and deep understanding of accounting and financial concepts and structures, which they may draw upon to make proper accounting decisions. Although CEOs are not directly involved in overseeing the accounting process and the preparation of financial statements, they may set the tone from the top and influence the decisions of CFOs (Feng et al., 2011). Furthermore, the theory of top management teams (Bunderson & Sutcliffe, 2002; Cannella, Park, & Lee, 2008) posits that common functional backgrounds facilitate communication among top management team members. Therefore, the understanding of financial and accounting issues may allow financial expert CEOs to work more effectively with CFOs to enhance the financial reporting

process. In addition, reputational concerns may prevent financial expert CEOs from engaging in EM, as financial reporting misbehavior will reflect unfavorably on the career of a CEO with a track record as a financial expert. Moreover, as IPO firms face stringent monitoring from regulators and various parties such as auditors, investors, analysts, and the press, the reputation of CEOs will be severely damaged if EM activities are detected. Furthermore, if financial expert CEOs hold a professional qualification in accounting and/or finance, they are required to adhere to strict ethical codes of conduct. This affects their risk attitudes towards greater conservatism in financial reporting. Along with the aforementioned arguments, we predict that IPO firms with a financial expert CEO will exhibit lower EM in the offering year than non-financial expert CEOs.

3. Methodology and sample description

3.1. Earnings management estimation

3.1.1 Accrual-based earnings management

We measure abnormal accruals as a proxy for accrual-based EM based on the accruals model by Dechow and Dichev (2002), in which the short-term working capital accruals are regressed on present, past, and future cash flows. We follow McNichols (2002) and Francis, La Fond, Olsson, and Schipper (2005) to take into account biases caused by long-term accruals and modify the model by including changes in sales and property, plant, and equipment (PPE). The following regression is estimated cross-sectionally for each year and for non-IPO firms in a two-digit Standard Industrial Classification (SIC) code industry with at least 10 firms.

$$\frac{TCA_{i.t}}{TA_{i.t-1}} = \beta_0 \frac{1}{TA_{i.t-1}} + \beta_1 \frac{CFO_{i.t-1}}{TA_{i.t-1}} + \beta_2 \frac{CFO_{i.t}}{TA_{i.t-1}} + \beta_3 \frac{CFO_{i,t+1}}{TA_{i.t-1}} + \beta_4 \frac{\Delta SALES_{i,t}}{TA_{i,t-1}} + \beta_5 \frac{PPE_{i,t}}{TA_{i.t-1}} + \varepsilon_{i.t} \quad (1)$$

where:

$$TCA_{i,t} = (\Delta CA_{i,t} - \Delta Cash_{i,t}) - (\Delta CL_{i,t} - \Delta STD_{i,t})$$

$$CFO_{i,t} = NIBE_{i,t} - (TCA_{i,t} - DEPN_{i,t})$$

$TCA_{i,t}$ is total current working capital accruals; $CFO_{i,t}$ is cash flows from operations; $PPE_{i,t}$ is the gross value of plant, property, and equipment; $NIBE_{i,t}$ is net income before extraordinary items; $DEPN_{i,t}$ is depreciation and amortization expenses; and $TA_{i,t-1}$ is lagged total assets. $\Delta SALES_{i,t}$ is the change in sales; $\Delta CA_{i,t}$ is the change in current assets; $\Delta Cash_{i,t}$ is the change in cash; $\Delta CL_{i,t}$ is the change in current liabilities; and $\Delta STD_{i,t}$ is the change in short-term debt. The changes are from the fiscal year before IPO to the fiscal year of the offering. All variables are winsorized at the 1st and 99th percentile levels to mitigate the issue of outliers. The estimated coefficients of Equation (1) are then used to estimate the normal level of current accruals of IPO firms. An IPO firm's abnormal current accruals are computed as the difference between the firm's actual total current accruals and its estimated current accruals.

3.1.2 Real earnings management

Roychowdhury (2006) argues that managers exploit their discretion in operating decisions and adjust real activities to overstate earnings to avoid losses. They may offer price discounts or more generous credit terms to temporarily boost sales, overproduce to reduce the cost of goods sold, and cut discretionary expenses such as selling, general, and administrative (SG&A); R&D; and advertising expenses. These activities result in higher earnings; however, they also lead to unusually low cash flow from operations and discretionary expenses and unusually high production costs. We follow Roychowdhury (2006) and measure abnormal cash flow from operations, abnormal production costs, and abnormal discretionary expenses as proxies for real EM. The normal levels of cash flow from operations, productions costs, and discretionary expenses are estimated as follows.

$$\frac{CFO_{i,t}}{TA_{i,t-1}} = \beta_0 \frac{1}{TA_{i,t-1}} + \beta_1 \frac{SALES_{i,t}}{TA_{i,t-1}} + \beta_2 \frac{\Delta SALES_{i,t}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (2)$$

$CFO_{i,t}$ is cash flows from operations; $SALES_{i,t}$ is total sales in the offering year; $TA_{i,t-1}$ is lagged total assets; and $\Delta SALES_{i,t}$ is the change in sales from the fiscal year before the IPO to the fiscal year of the issue.

$$\frac{PROD_{i,t}}{TA_{i,t-1}} = \beta_0 \frac{1}{TA_{i,t-1}} + \beta_1 \frac{SALES_{i,t}}{TA_{i,t-1}} + \beta_2 \frac{\Delta SALES_{i,t}}{TA_{i,t-1}} + \beta_3 \frac{\Delta SALES_{i,t-1}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (3)$$

$PROD_{i,t}$ is production costs in the offering year, computed as the sum of the cost of goods sold and the change in inventory from the fiscal year before the IPO to the fiscal year of the issue; $SALES_{i,t}$ is total sales in the offering year; $TA_{i,t-1}$ is lagged total assets; $\Delta SALES_{i,t}$ is the change in sales from the fiscal year before the IPO to the fiscal year of the issue; and, $\Delta SALES_{i,t-1}$ is the change in sales from the fiscal year two years before the IPO to the fiscal year prior to the issue.

$$\frac{DISEXP_{i,t}}{TA_{i,t-1}} = \beta_0 \frac{1}{TA_{i,t-1}} + \beta_1 \frac{SALES_{i,t-1}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (4)$$

$DISEXP_{i,t}$ is discretionary expenses in the offering year, computed as the sum of SG&A, R&D, and advertising expenses; $TA_{i,t-1}$ is lagged total assets; and $SALES_{i,t-1}$ is total sales in the fiscal year before the IPO.

Equations (2), (3), and (4) are estimated for each year for non-IPO firms in a two-digit SIC code industry with at least 10 observations. All variables are winsorized at the 1st and 99th percentile levels to alleviate the problem of outliers. An IPO firm's abnormal levels of cash flow from operations, productions costs, and discretionary expenses are computed as the difference

between the firm's actual levels and its estimated levels, measured using the coefficients from regressions (2), (3), and (4), respectively. We also multiply the abnormal cash flow from operations and abnormal discretionary expenses by negative one for the real EM metrics to have the same interpretation as the accrual-based EM proxy; i.e., higher values indicate higher EM. Furthermore, we match real EM estimates of IPO firms to those of non-IPO counterparts based on year, industry, and ROA to produce performance-matched real EM measures. In addition, following Cohen and Zarowin (2010), we calculate REM1 and REM2 to measure the combined effects of individual real EM tools. REM1 is computed as the sum of abnormal production costs and abnormal discretionary expenses, and REM2 as the sum of abnormal cash flow from operations and abnormal discretionary expenses.[3] The higher values of these measures suggest higher levels of real EM.

3.2. Sample description

We retrieve our sample of U.S. common-share IPOs over the period January 1, 2003, to December 31, 2011, from the Securities Data Corporation (SDC) New Issues database.[4] Following prior IPO literature, we exclude IPOs with an offer price below $5 per share, limited partnerships, unit offerings, rights issues, American depositary receipts (ADRs), leveraged buyouts (LBOs), closed-end funds, real estate investment trusts (REITs), spin-offs, privatizations, and financial institutions. We then match the sample with Compustat to obtain accounting data. Our final sample consists of 467 IPO firms. Furthermore, we collect

[3] We do not combine abnormal production costs and abnormal cash flows from operations to avoid double-counting, as activities causing high abnormal production costs also result in low abnormal cash flow from operations (Cohen & Zarowin, 2010; Roychowdhury, 2006).

[4] We start our sample from 2003, as we focus on examining EM around IPOs after the Sarbanes-Oxley Act (2002). The U.S. Congress passed the Sarbanes-Oxley Act in 2002 as a response to various corporate accounting scandals such as the cases of Enron and WorldCom in the early 2000s. The Act includes many stringent regulations to strengthen financial disclosures and improve corporate governance practices. Lobo and Zhou (2006) find that the SEC's requirement for financial statements to be certified by CEOs and CFOs influences managerial behaviors towards greater conservatism in financial reporting. Furthermore, Cohen, Dey, and Lys (2008) also report a decrease in accrual-based EM in the post-Sarbanes Oxley period.

information on CEOs' employment histories from Boardex. Following Custódio and Metzger (2014), we define financial expert CEOs as those having past experience in either banking or investment firms, large auditing firms (Pricewaterhouse, Deloitte, Ernst & Young, KPMG, Arthur Andersen, Coopers, and Touche Ross), or finance-related roles (e.g., accountant, treasurer, VP of finance, and CFO). There are 127 financial expert CEOs in our sample.

Table 1 presents the distribution of our IPO sample from 2003 to 2011 by issue year and industry. The majority of IPOs is concentrated from 2004 to 2007, which is consistent with the recovery of the U.S. economy after the early 2000s recession. Subsequently, the IPO activity shows a considerable decline due to the financial crisis of 2007–2008, before gradually improving again from 2010. Moreover, approximately 40% of IPO firms are clustered in the computer and high-tech industries (SIC codes 35, 36, 38, and 73).

[Please insert Table 1 about here]

Table 2 provides descriptive statistics for our overall IPO sample and the sub-samples of IPO firms with financial expert CEOs and those with non-financial expert CEOs. We winsorize all continuous variables at the 1st and 99th percentile levels to mitigate the issue of outliers. Panel A shows the descriptive statistics of CEO characteristics. With regard to financial expertise, on average, 27% of the CEOs have prior financial experience. Notably, 11% used to work as a CFO, 5% as a banker, 3% as an auditor, 2% as an accountant, 5% as a treasurer, 3% as a VP of finance, and 13% in other financial roles. Furthermore, 5% of the CEOs also hold a professional qualification in finance and/or accounting such as the Chartered Financial Analyst (CFA), the Chartered Certified Accountant (ACCA), the Certified Public Accountant (CPA), and the Certified Management Accountant (CMA). In addition, 7% of the CEOs are firm founders, while 45% are also the chairman of the board. In general, the CEOs have been managing the firm for

around five years and own roughly 11% of the firm before the offering. Moreover, 15% of the CEOs graduated from an Ivy League institution. The percentages of CEOs holding dual positions as a CEO and a chairman, and of those being Ivy League graduates, are significantly larger for the sample of IPOs with a financial expert CEO (50% and 20%, respectively) than those with a non-financial expert CEO (43% and 13%, respectively).

[Please insert Table 2 about here]

Panel B illustrates firm and offering characteristics for all IPOs, IPO firms with a financial expert CEO, and IPO firms with a non-financial expert CEO. On average, IPO firms are 19 years old and have total assets of 475 million dollars, while their market value at the time of listing is 568 million dollars. In general, 68% of IPOs are underwritten by top-tier investment banks, 85% are audited by Big Four accounting firms, and 53% are venture-backed. In addition, IPO firms have the mean leverage ratio of 0.78, while the ratio of R&D to total assets is 0.12 and the return on assets (ROA) is -0.26. As they are generally unprofitable, the mean ratio of retained earnings to total equity is also negative (- 0.58). Moreover, in terms of diversification, 18% of firms operate in more than one business segment. Compared to IPO firms with a non-financial expert CEO, those with a financial expert CEO have a lower leverage ratio (mean leverage ratio of 0.69 versus 0.81) and are less R&D intensive (mean ratio of R&D to total assets of 0.10 versus 0.13). There is also a lower proportion of IPO firms with a financial expert CEO being supported by venture capitalists (46% versus 55%).

With respect to EM proxies, we rely on medians for statistical inferences because medians are less likely than means to be influenced by extreme observations. The median value of abnormal accruals (0.01) is significantly positive, suggesting that IPO firms tend to engage in income- increasing accrual-based EM. This finding is consistent with prior EM literature, which

documents aggressive accrual-based EM around IPOs. In regard to real EM, IPO firms have significantly positive abnormal cash flow from operations (0.01), yet negative abnormal production costs (-0.07), abnormal discretionary expenses (-0.23), REM1 (-0.21), and REM2 (-0.20). This indicates that issuers are inclined to overstate earnings through sales manipulation but are conservative in production and discretionary expense decisions. The finding that IPO firms engage in sales-based EM besides accrual-based EM is in line with earlier research (e.g., Alhadab et al., 2014).

IPO firms with a non-financial expert CEO also exhibit significantly positive abnormal accruals (0.01) and abnormal cash flow from operations (0.02), but negative abnormal production costs (- 0.06), abnormal discretionary expenses (-0.19), REM1 (-0.16), and REM2 (-0.14). On the other hand, for IPO firms with a financial expert CEO, the abnormal accruals and the abnormal cash flow from operations are not significantly different from zero. This suggests that IPO firms with a financial expert CEO do not appear to manipulate accruals and sales to inflate earnings in the offering year. In addition, they have significantly negative abnormal production costs (-0.13), abnormal discretionary expenses (-0.29), REM1 (-0.37), and REM2 (-0.31), indicating that issuers with a financial expert CEO tend to be conservative in managing earnings through production and discretionary expenses. In particular, compared to firms with a non-financial expert CEO, firms with a financial expert CEO have significantly lower abnormal accruals, abnormal cash flow from operations, abnormal production costs, REM1, and REM2.

Overall, our initial univariate results show that IPO firms with a financial expert CEO exhibit lower accrual-based and real EM in the issue year than those with a non-financial expert CEO. In order to provide more concrete empirical evidence, we conduct multivariate analysis of the association between financial expert CEOs and EM, controlling for various EM determinants,

in the next section. Panel C of Table 2 presents the correlation matrix of the variables used in our analysis. No multicollinearity is detected among the variables.

4. Empirical analysis

4.1. Empirical model

We estimate the following model to investigate the association between financial expert CEOs and EM.

$$EM_i = \alpha_0 + \beta_1 Financial\ expert\ CEO_i + \beta_2 Log(age)_i + \beta_3 Log(assets)_i + \beta_4 Big4\ auditor_i + \beta_5 Top-tier\ underwriter_i + \beta_6 Venture\ capitalist_i + \beta_7 Leverage_i + \beta_8 ROA_i + Industry\ dummies + Year\ dummies + \varepsilon_i \quad (5)$$

The dependent variable *EM* is an earning management proxy including abnormal accruals, abnormal cash flow from operations, abnormal production costs, abnormal discretionary expenses, REM1, and REM2. The variable of interest *financial expert CEO* is a dummy variable that equals one if a CEO has financial work experience and zero otherwise. We then control for several firm characteristics that are suggested by earlier studies as important determinants of EM. *Log(age)* is the logarithm of one plus firm age. *Firm age* (in years) is measured as the difference between the firm's IPO year and its founding year. Younger firms appear to have more volatile earnings and less solid accounting systems, creating more incentives for managers to manipulate earnings. *Log(assets)* is the logarithm of total assets and is used as a proxy for firm size. Larger firms have more complex financial structures, which bring more room for managers' discretion over accounting policies; yet, these firms are exposed to closer scrutiny from regulators and market participants, which may discourage managers from financial reporting misbehavior. *Leverage* is the ratio of total debts to total assets. Leverage tends to be positively linked with EM, as firms that are close to debt covenant violations are more

likely to engage in EM to overstate earnings (DeFond & Jiambalvo, 1994; Franz, HassabElnaby, & Lobo, 2014). We also account for the influence of firm performance on EM by including the firm's ROA (Kothari, Leone, & Wasley, 2005).

In addition, financial intermediaries participating in the IPO process can exert their impact on EM performed by IPO issuers. In particular, Jo, Kim, and Park (2007) and Lee and Masulis (2011) document that the reputational issue creates strong incentives for top-tier investment banks to detect financial reporting misrepresentations. Morsfield and Tan (2006), Hochberg (2012), and Wongsunwai (2013) find that the monitoring by venture capitalists also restrains EM around IPOs. Moreover, Becker, DeFond, Jiambalvo, and Subramanyam (1998), Krishnan (2003), and Gul, Fung, and Jaggi (2009) report that the higher quality audit provided by Big Four accounting firms discourages managers from manipulating earnings. Therefore, we control for the effects of reputable underwriters, venture capitalists, and Big Four auditors on EM by including the dummy variables *Top-tier underwriter, Venture capitalist,* and *Big4 auditor,* which indicate the involvement of these financial intermediaries in the IPO.

4.2. Empirical results

Table 3 presents our OLS regression analysis of the association between financial expert CEOs and EM around IPOs. In the regression of abnormal accruals on financial expert CEOs, the coefficient on the variable *financial expert CEO* is negative and statistically significant at the 1% level. This strongly suggests that financial expert CEOs are associated with lower accrual-based EM in the offering year. The signs of control variables are generally in line with prior literature. Specifically, at-issue abnormal accruals are negatively linked with firm size and venture backing, and positively related to leverage and ROA. In the regressions of real EM proxies on financial expert CEOs, we also find significantly negative coefficients on the variable

financial expert CEO across each of the specifications, indicating the negative relationship between financial expert CEOs and real EM around IPOs. Overall, the results provide evidence supporting our hypothesis that IPO firms with a financial expert CEO are less likely to engage in both accrual-based and real EM in the issue year.

[Please insert Table 3 about here]

5. Robustness checks

5.1. Endogeneity control

IPO issuers that are committed to providing high-quality financial information to investors may prefer to hire managers with prior financial experience. Meanwhile, managers with financial backgrounds may be inclined to draw upon their past experience to make accounting choices. The endogeneity of CEO selection makes it unclear whether the differences in EM are attributable to CEOs with financial experience or due to the non-random assignment of CEOs to firms. Therefore, we address the concern about endogenous CEO–firm matching by employing the propensity score matching (PSM) procedure. Using this method, we can compare the EM of a firm that appoints a financial expert CEO with that of the same firm if it had appointed a non-financial expert CEO. To perform the matching, we measure the propensity score, which is the conditional probability of receiving the treatment (i.e., having a financial expert CEO) given a firm's pre-treatment characteristics for all the IPO firms by estimating a probit regression for the likelihood of firms having a financial expert CEO.

Custódio and Metzger (2014) document that financial expert CEOs are more likely to be matched to firms in the mature stage of their life cycles, while non-financial expert CEOs are more likely to be appointed by growth firms. Therefore, in the probit regression, we control for firm characteristics associated with firms' life cycle, including *log(age)*, *log(assets)*, *ROA*, *R&D*,

retained earnings, *diversification*, and *business segment*. We then match each observation in the treated group with the control group based on the propensity score obtained from the predicted probability taken from the first-stage probit estimation.

Table 4 presents the results of the average treatment effect on the treated (ATET) on EM for IPO firms with a financial expert CEO versus those with a non-financial expert CEO. The ATET is negative and significant across all specifications, with different EM proxies as dependent variables. This finding is consistent with the results presented previously in our OLS regressions, which indicate that IPO firms with a financial expert CEO are associated with significantly lower accrual-based and real EM.

[Please insert Table 4 about here]

We also check the robustness of our results using other commonly used econometric methods for addressing the selection problem, including Heckman's (1979) two-step treatment-effect, maximum likelihood estimation (MLE) treatment effect, and two-stage least squares instrumental variable (2SLS IV). These approaches all require the estimation of a selection model accounting for the assignment of financial expert CEOs to firms. In the selection model, we include firm characteristics similar to those used in the PSM discussed above; namely, *log(age)*, *log(assets)*, *ROA*, *R&D*, *retained earnings*, *diversification*, and *business segment*. For the two-step treatment effect model, in the first stage, we estimate the selection equation using a probit regression of the likelihood that a firm appoints a financial expert CEO. The estimated self-selection correction term, i.e., the inverse Mills ratio, is added to the outcome regression (equation 5), and the linear outcome regression is estimated as normal. For the MLE model, both the selection and the outcome regressions are estimated simultaneously by maximum likelihood estimation. For the 2SLS IV model, in the first stage, we estimate the

regression of the endogenous variable *financial expert CEO* on exogenous variables in equation (5) and firm characteristics that may influence the likelihood of firms having a financial expert CEO, including *R&D*, *retained earnings*, *diversification*, and *business segment*. In the second stage, we run the outcome regression (equation 5) with the endogenous variable being replaced by the fitted value from the first-stage regression. We document consistent results (unreported) with the main OLS regressions, suggesting that having a financial expert CEO is negatively related to accrual-based and real EM around IPOs.

5.2. Interaction effect between CEO financial experience and CEO power

Prior research suggests that CEOs with greater decision-making power can impose significant impacts on corporate financial strategies (Adams, Almeida, & Ferreira, 2005; Chikh & Filbien, 2011; Daily & Johnson, 1997; Gounopoulos and Pham, 2018; Veprauskaitė & Adams, 2013). Moreover, CEOs may set the tone from the top and influence CFOs' decisions (Feng et al., 2011). Therefore, the influence of financial expert CEOs on EM may be more pronounced if the CEOs have more power over the board and other executives. We measure CEO power by employing the four dimensions suggested by Finkelstein (1992) and widely used in prior studies on CEO power (e.g., Adams et al., 2005; Chikh & Filbien, 2011; Veprauskaitė & Adams, 2013): structural, ownership, expertise, and prestige power.

Structural power is based on the organizational structure. The authority earned at a higher rank allows managers to have a greater degree of control over their subordinates. To proxy for structural power, we use *CEO-Chairman*, which indicates whether the CEO also holds the position of the chairman of the board. In regard to ownership power, managers are in a stronger position in the agent–principal relationship if they have more ownership in the firm. In addition, being a founder of the firm also strengthens the relationship between the CEO and the board.

Thus, to proxy for ownership power, we use *CEO ownership,* which is the percentage of shares owned by the CEO before the offering, and *CEO-Founder*, which indicates whether the CEO is also the firm founder.

In terms of expertise power, the relevant expertise that is critical to the organization allows managers to more effectively handle both internal and external factors influencing organizational success. CEOs' understanding of the firm accumulates over the time that they work in the firm. Therefore, we use *CEO tenure*, which is the duration of the CEO's service in the firm, as a proxy for expertise power.

With regard to prestige power, managerial prestige enhances the power of managers in many ways; for example, by conveying to other executives their personal importance and adding value to the firm through their external connections. CEOs who graduated from an Ivy League institution not only possess a top qualification, but also tend to have more powerful friends and contacts. Hence, we use *Ivy League graduate*, which indicates whether the CEO is a graduate of an Ivy League institution, as a proxy for prestige power.

We standardize and aggregate the five variables (i.e., *CEO-Chairman*, *CEO-Founder*, *CEO ownership*, *CEO tenure*, and *Ivy League graduate*) to generate the variable *CEO power,* which accounts for the effects of all four sources of managerial power. We then create an interaction term between *financial expert CEO* and *CEO power,* and run the main regression (equation 5) including the interaction effect. The results are presented in Table 5. The coefficients on the variable *financial expert CEO* remain negative and significant in all specifications, with different EM proxies as dependent variables. The coefficient on the interaction term is significantly negative in the regression with *abnormal accruals* as a dependent variable, but not in the regressions with real EM proxies as dependent variables. This

indicates that CEO power significantly strengthens the effect of financial expert CEOs on accrual-based EM, but not real EM. The findings support the argument that although CEOs are not directly responsible for overseeing the financial reporting process, their decision-making power allows them to effectively exert their influence on CFOs' financial reporting decisions. Therefore, the impact of a financial expert CEO on reducing accrual-based EM is more pronounced when the CEO is more powerful. However, as CEOs are directly in charge of making decisions on operating activities, CEO power does not significantly enhance the extent to which financial expert CEOs exercise their discretion in operating decisions to influence earnings.

[Please insert Table 5 about here]

5.3. Alternative measures of financial experience

In the main analysis, we define financial experience broadly as past work experience in a banking or investment firm, a large auditing firm, or a finance-related role. In this section, we examine alternative measures of financial expertise. Specifically, we investigate whether EM around IPOs is influenced by CEOs who have past experience as a CFO, a wide variety of financial experience, or professional qualifications in finance and/or accounting. We run the regressions of EM on the variables *CFO experience*, *financial experience variety dummy*, and *professional qualification*, controlling for the same firm characteristics as in the main regression model (equation 5).

The results are presented in Table 6. Panel A shows the regressions of the effect of CFO experience on accrual-based and real EM. The coefficients on *CFO experience* are negative and significant in every specification, except for the one with *abnormal discretionary expenses* as a dependent variable. The results indicate that CEOs who used to work as a CFO are less likely to

manipulate earnings through accruals, sales, production, and a combination of activities related to sales, production, and discretionary expenses.

[Please insert Table 6 about here]

Panel B displays the regression analyses of the impact of CEOs' financial experience variety on EM around IPOs. To measure the variety of financial experience, we consider four aspects of CEOs' financial work histories: (a) the number of firms in which the CEO acquired financial experience, (b) the number of finance- and accounting-related positions in which the CEO worked, (c) whether the CEO obtained financial experience in another firm, and (d) the duration of the financial experience. For each of these aspects, a higher value indicates greater financial experience variety. We employ the principal component analysis (PCA) method to extract common components from the four variables. Using one variable instead of four variables individually mitigates the multicollinearity problem, reduces measurement errors, and enhances the power of regression tests. The variables used to proxy for financial experience variety are highly correlated, which is desirable since the common factor generated by PCA will better summarize their effects. The PCA method generates one component with an eigenvalue higher than one (i.e., 3.433). The financial experience variety index is the first factor of the PCA of the four proxies. As expected, all four variables have positive loadings and are positively correlated with the index. Based on the financial experience variety index, we create an indicator variable, *financial experience variety dummy*, which takes the value of one if the CEO's financial experience variety index is greater than the overall median. We then run the regressions of EM proxies on *financial experience variety dummy* and the same set of controls as in the main regression (equation 5). The coefficients on *financial experience variety dummy* are negative and significant in all specifications except for the one with *Abnormal discretionary expenses* as a

dependent variable. This indicates that CEOs with more varied financial experience are less likely to engage in EM through accruals, sales, production, and a combination of real activities.

Panel C presents the regressions of the association between EM and CEOs with a professional qualification in accounting and/or finance (e.g., CFA, ACCA, CPA, CMA). In order to gain the accreditation by a professional body, qualification holders need to obtain required skills, knowledge, and practical experience, as well as adhere to ethical codes of conduct. Thus, CEOs who are charter holders are expected to have a thorough understanding of finance and accounting and possess high levels of professional ethics. In the specification with *abnormal accruals* as a dependent variable, the coefficient on *professional qualification* is significant and negative, suggesting that CEOs with a professional qualification are linked with lower accrual-based EM. However, the association between the existence of a professional qualification and real EM is not significant. Thus, having a CEO with a professional qualification significantly reduces accrual-based EM around IPOs, but not real EM.

5.4. Alternative estimation of abnormal accruals

In the main analysis, we employ the accruals model by Dechow and Dichev (2002) to measure abnormal accruals. For robustness, we estimate abnormal accruals using the modified Jones (1991) model described in Dechow et al. (1995). We run the following regression for each industry-year (the industry is identified by the two-digit SIC code) with at least 10 observations.

$$\frac{TACC_{i.t}}{TA_{i,t-1}} = \beta_0 \frac{1}{TA_{i,t-1}} + \beta_1 \frac{\Delta SALES_{i,t}}{TA_{i,t-1}} + \beta_2 \frac{PPE_{i.t}}{TA_{i,t-1}} + \varepsilon_{i,t} \quad (6)$$

$TACC_{i,t}$ is total accruals computed as earnings before extraordinary items and discontinued operations, less cash flow from operations.[5] $TA_{i.t-1}$ is lagged total assets, and $\Delta SALES_{i,t}$ is the

[5] Following Hribar and Collins (2002), we compute total accruals using the cash flow approach to avoid the non-articulation problem of the balance sheet method.

change in total sales from the fiscal year before the IPO to the fiscal year of the offering, while $PPE_{i,t}$ is the gross value of property, plant, and equipment. Continuous variables are winsorized at the 1st and 99th percentile levels to mitigate the influence of outliers. The expected component of total accruals ($NACC_{i.t}$) for the IPO sample is computed using the coefficient estimates from equation (6), as follows:

$$NACC_{i.t} = \hat{\beta}_0 \frac{1}{TA_{i,t-1}} + \hat{\beta}_1 \frac{\Delta SALES_{i,t} - \Delta REC_{i.t}}{TA_{i,t-1}} + \hat{\beta}_2 \frac{PPE_{i.t}}{TA_{i,t-1}} \quad (7)$$

$\Delta REC_{i.t}$ is the change in receivables from the fiscal year before the IPO to the fiscal year of the offering. The abnormal accruals are computed as the difference between total accruals and expected accruals. In addition, in order to mitigate the potential correlation between the abnormal accruals measured using the Jones model and firm performance (Dechow et al. 1995), we employ the performance matching procedure suggested by Kothari et al. (2005) to match an IPO firm to a non-IPO firm in the same two-digit SIC industry and year with the closest ROA in the fiscal year before the offering. We allow a difference in ROA within the range of +/-10% of the IPO firm's ROA. The matched firm's abnormal accruals are deducted from the IPO firm's abnormal accruals to obtain the performance-matched abnormal accruals for the IPO firm. Employing the alternative estimation of abnormal accruals does not change our main findings. In unreported results, we continue to document the negative relationship between financial expert CEOs and accrual-based EM around IPOs.

6. Conclusions

This paper provides novel empirical evidence for the association between financial expert

CEOs and EM around IPOs. Financial experience provides CEOs with profound insights into financial and accounting issues, which allows them to make sound accounting decisions. Financial background also helps CEOs to work more effectively with CFOs to enhance the financial reporting process. Moreover, past experience in the financial market makes financial expert CEOs highly aware of the importance of accounting information in allowing investors to derive a firm's value. Reputational concerns also restrain financial expert CEOs from financial reporting misbehavior. Therefore, financial expert CEOs are more incentivized to provide higher quality financial reporting to the market.

In our analysis, we identify financial expert CEOs as those having past experience in banking or investment firms, large auditing firms, or finance-related roles. Our main findings indicate that IPO firms with a financial expert CEO are less likely to engage in accrual-based and real EM in the offering year. In particular, the impact of financial expert CEOs on accrual-based EM is more pronounced when the CEO has greater decision-making power. Our findings remain consistent after controlling for the potential endogenous CEO–firm matching. Moreover, we check the robustness of our results with different measures of financial expertise, including prior experience as a CFO, financial experience variety, and professional qualifications in finance and/or accounting. We continue to find that CEOs who used to work as a CFO and those who gained financial experience in various firms, financial roles, and for a longer period of time are less likely to manage earnings through accruals and real activities. Having a CEO with a professional qualification is negatively associated with lower accrual-based EM in the offering year. The overall evidence suggests the significance of financial expert CEOs in reducing EM by IPO firms in the issue year.

References

Adams, R. B., Almeida, H., & Ferreira, D. (2005). Powerful CEOs and their impact on corporate performance. *The Review of Financial Studies, 18*(4), 1403–1432.

Aharony, J., Lin, C., & Loeb, L. (1993). Initial public offerings, accounting choices, and earnings management. *Contemporary Accounting Research, 10*(1), 61–81.

Ahmad-Zaluki, N. A., Campbell, K., & Goodacre, A. (2011). Earnings management in Malaysian IPOs: The East Asian crisis, ownership control, and post-IPO performance. *The International Journal of Accounting, 46*(2), 111–137.

Alhadab, M., Clacher, I., & Keasey, K. (2014). Real and accrual earnings management and IPO failure risk. *Accounting and Business Research, 45*(1), 55–92.

Alhadab, M., Clacher, I., & Keasey, K. (2016). A comparative analysis of real and accrual earnings management around initial public offerings under different regulatory environments. *Journal of Business Finance & Accounting* (forthcoming).

Ball, R., & Shivakumar, L. (2008). Earnings quality at initial public offerings. *Journal of Accounting and Economics, 45*, 324–349.

Bamber, L. S., John, J., & Yanyan, W. I. (2010). What's my style? The influence of top managers on voluntary corporate financial disclosure. *The Accounting Review, 85*(4), 1131–1162.

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

Bunderson, J. S., & Sutcliffe, K. M. (2002). Comparing alternative conceptualizations of functional diversity in management teams: Process and performance effects. *The Academy of Management Journal, 45*(5), 875–893.

Cannella, A. A., Park, J.-H., & Lee, H.-U. (2008). Top management team functional background diversity and firm performance: Examining the roles of team member colocation and environmental uncertainty. *The Academy of Management Journal*, *51*(4), 768–784.

Chikh, S., & Filbien, J.-Y. (2011). Acquisitions and CEO power: Evidence from French networks. *Journal of Corporate Finance*, *17*(5), 1221–1236.

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

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

Custódio, C., & Metzger, D. (2014). Financial expert CEOs: CEO′s work experience and firm′s financial policies. *Journal of Financial Economics*, *114*(1), 125–154.

Daily, C. M., & Johnson, J. L. (1997). Sources of CEO power and firm financial performance: A longitudinal assessment. *Journal of Management*, *23*(2), 97–117.

Darrough, M., & Rangan, S. (2005). Do insiders manipulate earnings when they sell their shares in an initial public offering? *Journal of Accounting Research*, *43*(1), 1–33.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting & Economics*, *50*, 344–401.

Dechow, P., Sloan, R., & Sweeney, A. (1995). Detecting earnings management. *The Accounting Review*, *70*(2), 193–225.

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

DeFond, M. L., & Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting & Economics, 17*, 145–176.

Demerjian, P. R., Lev, B., Lewis, M. F., & McVay, S. E. (2013). Managerial ability and earnings quality. *The Accounting Review, 88*(2), 463–498.

DuCharme, L., Malatesta, P., & Sefcik, S. (2004). Earnings management, stock issues, and shareholder lawsuits. *Journal of Financial Economics, 71*(1), 27–49.

Dyreng, S. D., Hanlon, M., & Maydew, E. L. (2010). The effects of executives on corporate tax avoidance. *The Accounting Review, 85*(4), 1163–1189.

Feng, M., Ge, W., Luo, S., & Shevlin, T. (2011). Why do CFOs become involved in material accounting manipulations? *Journal of Accounting and Economics, 51*(1–2), 21–36.

Fields, T. D., Lys, T. Z., & Vincent, L. (2001). Empirical research on accounting choice. *Journal of Accounting and Economics, 31*(1–3), 255–307.

Finkelstein, S. (1992). Power in top management teams: Dimensions, measurement, and validation. *The Academy of Management Journal, 35*(3), 505–538.

Francis, J., Huang, A. H., Rajgopal, S., & Zang, A. Y. (2008). CEO reputation and earnings quality. *Contemporary Accounting Research, 25*(1), 109–147.

Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics, 39*(2), 295–327.

Franz, D., HassabElnaby, H., & Lobo, G. (2014). Impact of proximity to debt covenant violation on earnings management. *Review of Accounting Studies, 19*(1), 473–505.

Friedlan, J. (1994). Accounting choices of issuers of initial public offerings. *Contemporary Accounting Research, 11*, 1–31.

Gounopoulos, D., & H. Pham. 2017. Credit Rating Effect on Earnings Management in U.S.

IPOs *Journal of Business Finance and Accounting* 44 (1-2):154-195

Gounopoulos, D., & H. Pham. 2018. Specialist CEOs and IPO survival. *Journal of Corporate Finance* 48 (217-243).

Gramlich, J., & Sorensen, O. (2004). Voluntary management earnings forecasts and discretionary accruals: Evidence from Danish IPOs. *European Accounting Review, 13*(2), 235–259.

Gul, F. A., Fung, S. Y. K., & Jaggi, B. (2009). Earnings quality: Some evidence on the role of auditor tenure and auditors' industry expertise. *Journal of Accounting and Economics, 47*(3), 265–287.

Hambrick, D. C. (2007). Upper echelons theory: An update. *The Academy of Management Review, 32*(2), 334–343.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *The Academy of Management Review, 9*(2), 193–206.

Hochberg, Y. V. (2012). Venture capital and corporate governance in the newly public firm. *Review of Finance, 16*(2), 429–480.

Hribar, P., & Collins, D. W. (2002). Errors in estimating accruals: Implications for empirical research. *Journal of Accounting Research, 40*(1), 105–134.

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

Jiang, F., Zhu, B., & Huang, J. (2013). CEO's financial experience and earnings management. *Journal of Multinational Financial Management, 23*(3), 134–145.

Jo, H., Kim, Y., & Park, M. S. (2007). Underwriter choice and earnings management: Evidence from seasoned equity offerings. *Review of Accounting Studies, 12*(1), 23–59.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research, 37,* 55–81.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics, 39*(1), 163–197.

Kouwenberg, R., & Thontirawong, P. (2015). Group affiliation and earnings management of Asian IPO issuers. *Review of Quantitative Finance and Accounting*.

Krishnan, G. V. (2003). Does Big 6 auditor industry expertise constrain earnings management? *Accounting Horizons (Suppl.),* 1–16.

Lee, G., & Masulis, R. W. (2011). Do more reputable financial institutions reduce earnings management by IPO issuers? *Journal of Corporate Finance, 17*(4), 982–1000.

Lo, K. (2008). Earnings management and earnings quality. *Journal of Accounting and Economics, 45*(2-3), 350–357.

Lobo, G. J., & Zhou, J. (2006). Did conservatism in financial reporting increase after the Sarbanes-Oxley Act? Initial evidence. *Accounting Horizons, 20*(1), 57–73.

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

McNichols, M. F. (2002). The quality of accruals and earnings: The role of accrual estimation errors: Discussion. *The Accounting Review, 77,* 61–69.

Morsfield, S. G., & Tan, C. E. L. (2006). Do venture capitalists influence the decision to manage earnings in initial public offerings? *Accounting Review, 81*(5), 1119–1150.

Roosenbloom, P., & van der Goot, T. (2003). Takeover defences and IPO firm value in the Netherlands. *European Financial Management, 9*(4), 484–511.

Roosenboom, P., van der Goot, T., & Mertens, G. (2003). Earnings management and initial

public offerings: Evidence from the Netherlands. *The International Journal of Accounting*, *38*(3), 243–266.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, *42*(3), 335–370.

Teoh, S., Welch, I., & Wong, T. (1998a). Earnings management and the long-run market performance of initial public offerings. *Journal of Finance*, *53*, 1935–1974.

Teoh, S. H., Wong, T. J., & Rao, G. R. (1998b). Are accruals during initial public offerings opportunistic? *Review of Accounting Studies*, *3*, 175–208.

Venkataraman, R., Weber, J. P., & Willenborg, M. (2008). Litigation risk, audit quality, and audit fees: Evidence from initial public offerings. *The Accounting Review*, *83*(5), 1315–1345.

Veprauskaitė, E., and Adams, M. (2013). Do powerful chief executives influence the financial performance of UK firms? *The British Accounting Review*, *45*(3), 229–241.

Wongsunwai, W. (2013). The effect of external monitoring on accrual-based and real earnings management: Evidence from venture-backed initial public offerings. *Contemporary Accounting Research*, *30*(1), 296–324.

Appendix A: Variable Definitions

Panel A: CEO characteristics	
Variable	**Definition**
CEO tenure	Number of years working as a CEO in the firm.
CEO-Chairman	Dummy variable that equals one if the CEO is also the chairman of the board, zero otherwise.
CEO-Founder	Dummy variable that equals one if the CEO is also a founder of the firm, zero otherwise.
CEO ownership	Percentage of shares owned by the CEO before the offering.
Ivy League graduate	Dummy variable that equals one if the CEO is a graduate of an Ivy League institution, zero otherwise.
CFO experience	Dummy variable that equals one if the CEO has past experience in a CFO position, zero otherwise.
Professional qualification	Dummy variable that equals one if the CEO holds a professional qualification in finance and/or accounting (e.g. CFA, ACCA, CPA, CMA).
Financial expert CEO	Dummy variable that equals one if the CEO has past financial experience in either a banking or investment firm, in a large auditing firm (e.g., Pricewaterhouse, Deloitte, Ernst & Young, KPMG, Arthur Andersen, Coopers, Touche Ross), or in a finance-related role (e.g., accountant, treasurer, VP of finance, CFO); zero otherwise.
Financial experience variety index	First factor of applying the principal component analysis to four proxies of the variety of financial experience: (a) the number of firms in which the CEO gained past financial experience, (b) the number of finance and accounting related roles in which the CEO worked, (c) whether the CEO had financial experience in another firm, and (d) the duration of the financial experience.
Financial experience variety dummy	Dummy variable that equals one if the CEO's financial experience variety index is above the overall median, zero otherwise.

Panel B: Firm characteristics	
Variable	**Definition**
Abnormal accruals	Abnormal accruals in the offering year, computed using the modified Jones (1991) model and adjusted for the abnormal accruals of a performance-matched, non-IPO firm based on year, industry, and ROA according to the performance matching procedure suggested by Kothari et al. (2005).
Abnormal cash flow from operations	Abnormal cash flow from operations in the offering year, estimated following Roychowdhury (2006). The value is multiplied by negative one.
Abnormal production costs	Abnormal production costs in the offering year, estimated following Roychowdhury (2006).
Abnormal discretionary expenses	Abnormal discretionary expenses in the offering year, estimated following Roychowdhury (2006). The value is multiplied by negative one.
REM1	Aggregate level of real earnings management in the offering year, calculated as the sum of abnormal production costs and abnormal discretionary expenses.
REM2	Aggregate level of real earnings management in the offering year, calculated as the sum of abnormal cash flow from operations and abnormal discretionary expenses.
Firm age	Firm age in years, calculated as the difference between the firm's IPO year and its founding year. Company founding years are retrieved from the Field-Ritter dataset.*
Log(age)	Logarithm of one plus firm age.
Market value	Market value at the time of the listing.

* The Field-Ritter dataset is available on Jay Ritter's webpage: http://bear.warrington.ufl.edu/ritter/FoundingDates.htm

Total assets	Total assets in the fiscal year before the offering.
Log(assets)	Logarithm of total assets.
Leverage	Ratio of total debt to total assets in the fiscal year before the offering.
ROA	Return on assets calculated as the ratio of net income to total assets in the fiscal year before the offering.
Big4 auditor	Dummy variable that equals one if the firm is audited by a big four accounting firm, zero otherwise. Big four accounting firms include Ernst & Young, Deloitte & Touche, KPMG, and PricewaterhouseCoopers.
Venture capitalist	Dummy variable that equals one if the firm is venture backed, zero otherwise.
Top-tier underwriter	Dummy variable that equals one if the firm has reputable underwriters, zero otherwise. Reputable underwriters are those with a ranking score of 8.0 or above based on Jay Ritter's underwriter rakings.**
R&D	Ratio of research and development expenses to book value of total assets in the fiscal year before the offering.
Retained earnings	Ratio of retained earnings to common equity in the fiscal year before the offering.
Diversification	Dummy variable that equals one if the firm has more than one business segment, zero otherwise.
Business segment	Number of the firm's business segments.

**IPO underwriter reputation rankings are available on Jay Ritter's webpage: http://bear.warrington.ufl.edu/ritter/ipodata.htm

Table 1. Distribution of IPOs by issue year and industry
This table presents the sample distribution of IPO firms over the period 2003–2011 by issue year (Panel A) and by industry (Panel B). *N* denotes the number of observations.

Panel A: IPO distribution by issue year

Year	All IPOs (*N* = 467)		IPOs with a non-financial expert CEO (*N* = 340)		IPOs with a financial expert CEO (*N* = 127)	
	N	*%*	*N*	*%*	*N*	*%*
2003	25	5	16	5	9	7
2004	85	18	63	19	22	17
2005	70	15	49	14	21	17
2006	79	17	57	17	22	17
2007	84	18	63	19	21	17
2008	12	3	8	2	4	3
2009	29	6	21	6	8	6
2010	41	9	28	8	13	10
2011	42	9	35	10	7	6

Panel B: IPO distribution by industry

Industry name	SIC codes	All IPOs		IPOs with a non-financial expert CEO		IPOs with a financial expert CEO	
		N	*%*	*N*	*%*	*N*	*%*
Oil and gas	13	22	5	15	4	7	6
Food products	20	4	1	3	1	1	1
Chemical products	28	90	19	70	21	20	16
Manufacturing	30–34	16	3	14	4	2	2
Computer equipment & services	35, 73	113	24	70	21	43	34
Electronic equipment	36	40	9	34	10	6	5
Scientific instruments	38	44	9	34	10	10	8
Transportation and public utilities	42, 44–49	38	8	30	9	8	6
Wholesale and retail trade	50-59	37	8	24	7	13	10
Entertainment services	70, 79	3	1	2	1	1	1
Health services	80	11	2	8	2	3	2
All others	01, 12, 17, 23–27, 29, 37, 39, 72, 82, 87, 96	49	10	36	11	13	10
Total	45	467	100	340	100	127	100

Table 2. Descriptive statistics

This table presents descriptive statistics for the overall sample and the sub-samples of IPO firms with financial expert CEOs and those with non-financial expert CEOs over the period 2003–2011. The CEO characteristics, firm and offering characteristics, and correlation matrix are illustrated in Panel A, B, and C, respectively. All variables are defined in Appendix A. Wilcoxon sign rank tests are used to test the difference of medians from zero. Tests of differences in means and medians between the two sub-samples are based on t-tests and Wilcoxon rank sum tests. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively. *N* denotes the number of observations.

Panel A: CEO characteristics

	All IPOs			IPOs with a non-financial expert CEO			IPOs with a financial expert CEO			Difference in mean (p-value)	Difference in median (p-value)
	N	Mean	Median	*N*	Mean	Median	*N*	Mean	Median		
Financial expertise											
Financial expert CEO	467	0.27									
CFO	467	0.11									
Banker	467	0.05									
Auditor	467	0.03									
Accountant	467	0.02									
Treasurer	467	0.05									
VP of finance	467	0.03									
Other financial roles	467	0.13									
Professional qualification	467	0.05									
Other CEO characteristics											
CEO-Chairman	467	0.45	0.00	340	0.43	0.00	127	0.50	0.00	0.099	0.198
CEO-Founder	467	0.07	0.00	340	0.07	0.00	127	0.08	0.00	0.382	0.763
CEO ownership	453	10.79	4.70	330	10.48	4.65	123	11.62	4.70	0.265	0.817
CEO tenure	458	4.98	4.04	332	4.99	4.08	126	4.94	3.98	0.451	0.560
Ivy League graduate	467	0.15	0.00	340	0.13	0.00	127	0.20	0.00	0.028	0.055

Table 1, cont'd.

Panel B: Firm characteristics

	All IPOs			IPOs with a non-financial expert CEO			IPOs with a financial expert CEO			Difference in mean (p-value)	Difference in median (p-value)
	N	Mean	Median	*N*	Mean	Median	*N*	Mean	Median		
Firm characteristics											
Firm age	467	19.11	10.00	340	19.87	10.00	127	17.07	10.00	0.139	0.577
Total assets	467	475.04	77.54	340	500.14	76.35	127	407.84	89.55	0.312	0.341
Market value	467	567.75	326.25	340	543.73	319.06	127	632.06	349.50	0.203	0.773
Big4 auditor	467	0.85	1.00	340	0.86	1.00	127	0.83	1.00	0.284	0.568
Top-tier underwriter	465	0.68	1.00	339	0.70	1.00	126	0.65	1.00	0.175	0.350
Venture capitalist	467	0.53	1.00	340	0.55	1.00	127	0.46	0.00	0.032	0.064
Leverage	467	0.78	0.66	340	0.81	0.67	127	0.69	0.64	0.065	0.505
ROA	467	-0.26	0.00	340	-0.28	-0.01	127	-0.21	0.00	0.211	0.414
R&D	417	0.12	0.03	297	0.13	0.04	120	0.10	0.01	0.072	0.026
Retained earnings	417	-0.58	-0.22	297	-0.81	-0.25	120	-0.03	-0.16	0.159	0.101
Diversification	467	0.18	0.00	340	0.17	0.00	127	0.19	0.00	0.322	0.643
Business segment	414	1.52	1.00	298	1.51	1.00	116	1.56	1.00	0.351	0.779
Earnings management proxies											
Abnormal accruals	467	0.01	0.01*	340	0.02	0.01***	127	-0.02	-0.01	0.000	0.000
Abnormal cash flow from operations	451	0.08	0.01*	330	0.12	0.02***	121	-0.03	-0.05	0.013	0.005
Abnormal production costs	427	-0.06	-0.07***	317	-0.01	-0.06*	110	-0.22	-0.13***	0.008	0.049
Abnormal discretionary expenses	429	-0.44	-0.23***	318	-0.42	-0.19***	111	-0.50	-0.29***	0.240	0.395
REM1	410	-0.50	-0.21***	306	-0.43	-0.16***	104	-0.72	-0.37***	0.037	0.068
REM2	429	-0.35	-0.20***	318	-0.30	-0.14***	111	-0.52	-0.31***	0.023	0.024

Table 1, Cont'd.

Panel C: Correlation matrix

	Financial expert CEO	Log(age)	Log(assets)	Big4 auditor	Top-tier underwriter	Venture capitalist	Leverage	ROA
Financial expert CEO	1.000							
Log(age)	-0.037	1.000						
Log(assets)	0.035	0.466	1.000					
Big4 auditor	-0.027	0.041	0.149	1.000				
Top-tier underwriter	-0.043	0.107	0.230	0.263	1.000			
Venture capitalist	-0.086	-0.472	-0.423	0.203	0.109	1.000		
Leverage	-0.070	0.088	-0.099	-0.052	-0.029	-0.165	1.000	
ROA	0.037	0.223	0.476	0.013	0.118	-0.123	-0.547	1.000

Table 3. Regressions of financial expert CEOs on earnings management

This table illustrates the effect of financial expert CEOs on earnings management around IPOs. All regressions control for industry and year fixed effects, whose coefficients are suppressed. All variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively. Test statistics are shown in parentheses below coefficient estimates. Standard errors are adjusted for heteroskedasticity.

	Abnormal accruals	Abnormal cash flow from operations	Abnormal production costs	Abnormal discretionary expenses	REM1	REM2
Financial expert CEO	-0.038***	-0.102**	-0.235***	-0.166*	-0.394**	-0.271***
	(-4.35)	(-2.05)	(-2.61)	(-1.84)	(-2.43)	(-2.85)
Log(age)	-0.004	-0.013	0.114	0.224*	0.360*	0.201
	(-0.34)	(-0.16)	(1.23)	(1.95)	(1.94)	(1.51)
Log(assets)	-0.015**	-0.035	0.046	0.210**	0.244	0.168
	(-2.06)	(-0.77)	(0.65)	(2.31)	(1.64)	(1.58)
Big4 auditor	0.000	0.063	-0.102	-0.284**	-0.433**	-0.226*
	(0.03)	(1.13)	(-1.04)	(-2.49)	(-2.41)	(-1.83)
Top-tier underwriter	-0.005	-0.145**	-0.056	0.110	0.094	-0.046
	(-0.53)	(-2.32)	(-0.65)	(0.98)	(0.52)	(-0.36)
Venture capitalist	-0.019*	0.015	-0.127	-0.302***	-0.426**	-0.285**
	(-1.83)	(0.26)	(-1.28)	(-2.86)	(-2.26)	(-2.24)
Leverage	0.012*	0.041	-0.230***	-0.271***	-0.514***	-0.220**
	(1.84)	(0.89)	(-3.24)	(-3.19)	(-3.58)	(-2.25)
ROA	0.019**	-0.350***	-0.356***	0.227*	-0.141	-0.116
	(2.10)	(-6.27)	(-3.57)	(1.66)	(-0.66)	(-0.98)
Intercept	0.058**	0.113	0.058	-0.465**	-0.392	-0.320
	(2.55)	(0.99)	(0.27)	(-2.17)	(-1.02)	(-1.18)
Number of observations	465	449	425	427	408	427
Adjusted *R*-squared	0.050	0.319	0.091	0.254	0.117	0.067

Table 4. Endogeneity control – Propensity score matching

This table illustrates the analysis of the effect of financial expert CEOs on earnings management around IPOs, controlling for the endogeneity of CEO selection using propensity score matching approach. The variables used for matching include *log(age), log(assets), ROA, R&D, retained earnings, diversification*, and *business segment* All variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively.

	Abnormal accruals	Abnormal cash flow from operations	Abnormal production costs	Abnormal discretionary expenses	REM1	REM2
ATET	-0.035***	-0.172**	-0.206*	-0.261*	-0.484**	-0.260*
(Financial expert vs. Non-financial expert)	(-2.82)	(-2.00)	(-1.66)	(-1.90)	(-2.00)	(-1.65)
Number of observations	376	360	339	343	327	343

Table 5. Analysis of the interaction effect between CEO financial experience and CEO power

This table illustrates the effect of financial expert CEOs on earnings management around IPOs, controlling for the interaction effect between CEO financial experience and CEO power. All regressions control for industry and year fixed effects, whose coefficients are suppressed. *CEO power* is measured as the sum of the standardized variables: *CEO-Chairman*, *CEO-Founder*, *CEO ownership*, *CEO tenure*, and *Ivy League graduate*. All variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively. Test statistics are shown in parentheses below coefficient estimates. Standard errors are adjusted for heteroskedasticity.

	Abnormal accruals	Abnormal cash flow from operations	Abnormal production costs	Abnormal discretionary expenses	REM1	REM2
Financial expert CEO	-0.038***	-0.101*	-0.218**	-0.164*	-0.367**	-0.269***
	(-4.20)	(-1.96)	(-2.39)	(-1.79)	(-2.27)	(-2.80)
Financial expert CEO * CEO power	-0.006**	-0.012	-0.010	-0.002	-0.020	-0.014
	(-2.08)	(-0.80)	(-0.32)	(-0.06)	(-0.39)	(-0.46)
CEO power	0.003*	-0.001	-0.008	-0.002	-0.008	-0.003
	(1.86)	(-0.10)	(-0.57)	(-0.13)	(-0.31)	(-0.19)
Log(age)	-0.006	-0.022	0.150	0.197	0.381*	0.166
	(-0.55)	(-0.27)	(1.49)	(1.65)	(1.90)	(1.16)
Log(assets)	-0.011	-0.018	0.070	0.199**	0.264*	0.175
	(-1.61)	(-0.38)	(0.93)	(2.18)	(1.68)	(1.62)
Big4 auditor	-0.004	0.048	-0.069	-0.201*	-0.317*	-0.162
	(-0.30)	(0.86)	(-0.74)	(-1.85)	(-1.81)	(-1.30)
Top-tier underwriter	-0.005	-0.143**	-0.034	0.115	0.124	-0.039
	(-0.49)	(-2.25)	(-0.39)	(1.02)	(0.67)	(-0.30)
Venture capitalist	-0.021**	0.001	-0.091	-0.268**	-0.347*	-0.268**
	(-1.99)	(0.02)	(-0.89)	(-2.48)	(-1.77)	(-2.03)
Leverage	0.010	0.022	-0.229***	-0.260***	-0.502***	-0.228**
	(1.56)	(0.43)	(-3.03)	(-3.44)	(-3.70)	(-2.52)
ROA	0.012	-0.404***	-0.357**	0.349***	-0.029	-0.049
	(1.53)	(-6.08)	(-2.53)	(3.08)	(-0.12)	(-0.40)
Intercept	0.059***	0.110	-0.112	-0.504**	-0.637	-0.355
	(2.62)	(0.93)	(-0.54)	(-2.25)	(-1.56)	(-1.28)
Number of observations	443	429	407	408	391	408
Adjusted *R*-squared	0.049	0.282	0.061	0.270	0.127	0.070

Table 6. Alternative measures of CEO financial expertise – CFO experience, financial experience variety, and professional qualification

This table illustrates the analyses of the effect of CEOs' past experience as a CFO, financial experience variety, and professional qualifications on earnings management around IPOs. All regressions control for industry and year fixed effects, whose coefficients are suppressed. All variables are defined in Appendix A. *, **, and *** denote statistical significance at the 10%, 5%, and 1% level, respectively. Test statistics are shown in parentheses below coefficient estimates. Standard errors are adjusted for heteroskedasticity.

Panel A: CFO experience

	Abnormal accruals	Abnormal cash flow from operations	Abnormal production costs	Abnormal discretionary expenses	REM1	REM2
CFO experience	-0.022*	-0.172**	-0.357***	-0.145	-0.527**	-0.326**
	(-1.83)	(-2.56)	(-2.89)	(-1.15)	(-2.39)	(-2.39)
Log(age)	0.001	0.002	0.142	0.245**	0.402**	0.235*
	(0.08)	(0.02)	(1.54)	(2.15)	(2.18)	(1.81)
Log(assets)	-0.016**	-0.038	0.043	0.209**	0.242	0.164
	(-2.19)	(-0.84)	(0.62)	(2.30)	(1.64)	(1.56)
Big4 auditor	0.001	0.068	-0.095	-0.284**	-0.426**	-0.222*
	(0.05)	(1.19)	(-0.96)	(-2.49)	(-2.37)	(-1.80)
Top-tier underwriter	-0.004	-0.141**	-0.043	0.115	0.114	-0.037
	(-0.39)	(-2.27)	(-0.50)	(1.04)	(0.64)	(-0.28)
Venture capitalist	-0.016	0.019	-0.115	-0.286***	-0.402**	-0.266**
	(-1.51)	(0.34)	(-1.16)	(-2.66)	(-2.11)	(-2.08)
Leverage	0.014**	0.043	-0.225***	-0.265***	-0.503***	-0.212**
	(2.04)	(0.93)	(-3.08)	(-3.08)	(-3.43)	(-2.14)
ROA	0.019**	-0.348***	-0.355***	0.229	-0.136	-0.112
	(2.10)	(-6.30)	(-3.37)	(1.64)	(-0.61)	(-0.91)
Intercept	0.042*	0.085	-0.015	-0.529**	-0.518	-0.411
	(1.93)	(0.77)	(-0.07)	(-2.55)	(-1.40)	(-1.58)
Number of observations	465	449	425	427	408	427
Adjusted *R*-squared	0.018	0.321	0.094	0.251	0.116	0.064

Table 6, cont'd.

Panel B: Financial experience variety

	Abnormal accruals	Abnormal cash flow from operations	Abnormal production costs	Abnormal discretionary expenses	REM1	REM2
Financial experience variety dummy	-0.022**	-0.108*	-0.263**	-0.131	-0.429**	-0.250**
	(-2.03)	(-1.77)	(-2.37)	(-1.25)	(-2.26)	(-2.15)
Log(age)	0.002	0.008	0.159*	0.255**	0.439**	0.255*
	(0.20)	(0.10)	(1.72)	(2.24)	(2.38)	(1.96)
Log(assets)	-0.016**	-0.039	0.041	0.208**	0.237	0.163
	(-2.20)	(-0.84)	(0.59)	(2.28)	(1.60)	(1.54)
Big4 auditor	0.001	0.069	-0.091	-0.282**	-0.421**	-0.220*
	(0.08)	(1.21)	(-0.92)	(-2.47)	(-2.34)	(-1.77)
Top-tier underwriter	-0.004	-0.144**	-0.051	0.113	0.104	-0.041
	(-0.45)	(-2.30)	(-0.59)	(1.02)	(0.58)	(-0.32)
Venture capitalist	-0.016	0.020	-0.115	-0.286***	-0.398**	-0.263**
	(-1.52)	(0.36)	(-1.15)	(-2.67)	(-2.09)	(-2.05)
Leverage	0.014**	0.043	-0.225***	-0.265***	-0.504***	-0.212**
	(2.01)	(0.94)	(-3.08)	(-3.08)	(-3.43)	(-2.13)
ROA	0.019**	-0.348***	-0.353***	0.229	-0.134	-0.111
	(2.11)	(-6.28)	(-3.35)	(1.64)	(-0.60)	(-0.90)
Intercept	0.042*	0.075	-0.029	-0.536**	-0.544	-0.431*
	(1.92)	(0.67)	(-0.14)	(-2.58)	(-1.46)	(-1.65)
Number of observations	465	449	425	427	408	427
Adjusted *R*-squared	0.020	0.317	0.088	0.251	0.114	0.061

Pairwise correlation

	Number of firms	Number of roles	Financial experience in another firm	Financial experience duration
Number of firms	1.000			
Number of roles	0.912	1.000		
Financial experience in another firm	0.860	0.772	1.000	
Financial experience duration	0.823	0.746	0.747	1.000

First component: Eigenvalue of 3.433 and proportion explained of 0.858

	Loadings
Number of firms	0.525
Number of roles	0.500
Financial experience in another firm	0.492
Financial experience duration	0.482

Table 6, cont'd.

Panel C: Professional qualification

	Abnormal accruals	Abnormal cash flow from operations	Abnormal production costs	Abnormal discretionary expenses	REM1	REM2
Professional qualification	-0.030*	-0.023	-0.046	0.066	0.025	0.037
	(-1.86)	(-0.42)	(-0.30)	(0.45)	(0.08)	(0.26)
Log(age)	-0.000	-0.001	0.140	0.249**	0.411**	0.239*
	(-0.01)	(-0.01)	(1.53)	(2.17)	(2.22)	(1.82)
Log(assets)	-0.015**	-0.037	0.047	0.209**	0.248*	0.169
	(-2.05)	(-0.80)	(0.66)	(2.29)	(1.66)	(1.58)
Big4 auditor	0.001	0.063	-0.113	-0.296***	-0.459**	-0.242*
	(0.10)	(1.10)	(-1.14)	(-2.59)	(-2.56)	(-1.96)
Top-tier underwriter	-0.005	-0.142**	-0.049	0.117	0.109	-0.037
	(-0.48)	(-2.26)	(-0.56)	(1.04)	(0.60)	(-0.28)
Venture capitalist	-0.016	0.027	-0.099	-0.273**	-0.369*	-0.242*
	(-1.48)	(0.49)	(-0.99)	(-2.58)	(-1.94)	(-1.89)
Leverage	0.015**	0.046	-0.217***	-0.263***	-0.494***	-0.207**
	(2.16)	(1.00)	(-2.92)	(-3.05)	(-3.33)	(-2.06)
ROA	0.020**	-0.348***	-0.354***	0.227	-0.139	-0.115
	(2.16)	(-6.26)	(-3.37)	(1.62)	(-0.62)	(-0.93)
Intercept	0.040*	0.064	-0.051	-0.554***	-0.593	-0.462*
	(1.83)	(0.57)	(-0.24)	(-2.64)	(-1.54)	(-1.73)
Number of observations	465	449	425	427	408	427
Adjusted *R*-squared	0.017	0.313	0.074	0.250	0.103	0.053