

**THE MEDIATION EFFECT OF AUDIT COMMITTEE QUALITY AND INTERNAL AUDIT
FUNCTION QUALITY ON FIRM SIZE-FINANCIAL REPORTING QUALITY NEXUS**

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Abstract

Purpose – This study examines the effects of firm size on financial reporting quality (FRQ) through the mediating effects of audit committee (AC) quality and internal audit function (IAF) quality.

Design/methodology/approach – Based on data from a questionnaire survey and archival sources of non-financial companies listed on the Dhaka Stock Exchange (DSE), we perform both structural equation modelling and ordinary least squares regression to test the developed hypotheses.

Findings – Results show that the firm size is positively related to IAF quality. Firm size, AC quality, and IAF quality are significantly associated with abnormal accruals (FRQ). Moreover, we find a mediation effect of the IAF quality on the relationship between firm size and FRQ, while no mediation effect is observed for AC quality. Thus, the study advocates companies focus on AC quality and IAF quality to enhance FRQ, as it has a significant impact on corporate disclosure and investor decisions.

Research limitations/implications –First, the study is restricted to the survey questions that cover particular areas of the AC and IAF. Second, our sample selection focuses on relatively big industries in terms of the number of firms and excludes small sectors.

Practical implications – The findings provide significant implications for professionals and policymakers in making regulatory reforms and revising existing policies to improve governance monitoring performance and FRQ.

Originality/value – To the best of the authors' knowledge, this is the first study to explore the mediation effect of AC quality and IAF quality on firm size-financial reporting quality nexus in a developing country.

Keywords: Audit committee quality, internal audit function, firm size, reporting quality, corporate governance

Paper type: Research paper

1. Introduction

In the aftermath of corporate scandals and the recent financial statement distortions, the significance of internal monitoring mechanisms (e.g., AC and IAF) has been increasing remarkably among the

regulators to improve the quality of financial reporting. The AC and IAF have become vital components of the corporate governance (CG) mosaic (Gramling & Hermanson, 2009) and play a crucial role in monitoring the financial statement preparation to restrain fraudulent reporting (García et al., 2012). Regarding the effectiveness of the AC and IAF, a greater financial size of firms has a substantial effect on the provision of adequate resources and support. Large firms generally tend to exhibit and emphasize stringent internal monitoring to accomplish organizational objectives and enhance FRQ (Gebayel et al., 2018). The AC and IAF are the governance mechanisms that assist the management in multiple ways and contribute to enhancing FRQ. For instance, the IAF provides assurance services to the AC in areas such as financial reporting integrity, fraud investigations, compliance, internal control, and organizational governance (Gramling & Hermanson, 2009). Standard setters (AICPA, 2013) consider the IAF to be a valuable resource for the AC to find the required information for monitoring the senior management and fulfilling its oversight responsibilities. To ensure AC and IAF efficiency, both need sufficient financial support for adequate staffing and training (Alzeban & Sawan, 2013). Thus, firm size is an important issue and concerns the decision to allocate the necessary financial resources to ensuring better AC and IAF quality. Larger firms are likely to focus more on the AC (Klein, 2002), which results in high-quality financial reporting. As such, AC and IAF quality and operational performance mostly rely on the organizational financial size.

Earlier studies (e.g., Abbott et al., 2016; Prawitt et al., 2009) have revealed that the IAF effectiveness relies on the IAF quality determinants, such as competence and independence, and work performance, and which help to improve FRQ. Likewise, the AC quality characteristics (e.g., size, independence, frequency of meetings, and financial literacy) have been found to be positively associated with higher FRQ (Abbott et al., 2004; Alqaraleh & Nour, 2020). Despite the intuitive appeal of the firm size, AC quality, and IAF quality positively affecting FRQ, the prior empirical evidence is not as strong as the intuition would suggest. For example, larger firms have greater monitoring needs and higher incentives to maintain AC effectiveness and FRQ (Klein, 1998; Raimo et al., 2021). Carcello et al. (2005) revealed that larger firms have a larger budget for internal audits, which changes the IAF performance. Conversely, Prawitt et al. (2009) suggested that a lack of resourcing for the IAF results in poor IAF quality. This flow of research focused on the firm size effects on the AC quality and the IAF, while their relationship with FRQ remains unobserved. On the other hand, several studies have explored the relationship between AC and IAF quality; for example,

Alzoubi (2019) addressed the effect of the existence of an AC and IAF on earnings management; and Gebrayel et al. (2018) studied the AC's and the IAF's influence on FRQ. Komal et al. (2022) recommend that other measurements of earnings quality, such as real earnings management should be considered when exploring the effectiveness of audit committee. While from the firm-size and FRQ perspective, previous studies address the firm-size effects on AC effectiveness (Deli & Gillan, 2000; Klein, 2002) and the firm-size relationship with the IAF (Carcello et al., 2005; Sarens & Abdolmohammadi, 2011). However, the firm-size association with FRQ with the mediation of AC quality and IAF quality were overlooked.

Much of the research related to the AC and IAF has been conducted in developed country settings, considering for example the AC quality characteristics associated with financial reporting among US firms (Klein, 2002). Goodwin and Seow (2002) explored the relationship between AC characteristics and financial statement error in the UK setting; other studies have examined the AC characteristics and IAF relationship with earnings management in the Spanish setting (García et al., 2012). Meanwhile, from the developing country perspective, few studies (e.g., Johl et al., 2013; Mat Zain et al., 2006) have focused on AC and IAF effectiveness. Therefore, based on a unique data set from primary (survey questionnaire) and secondary (company annual reports and DataStream) sources, we aim to answer the following research questions:

RQ1. Do AC quality and IAF quality influence FRQ?

RQ2. Do AC quality and IAF quality mediate the relationship between firm size and FRQ?

To address our research questions, we utilize 157 observations from 2018 to 2020 to estimate abnormal accruals (a proxy for FRQ). The results reveal that firm size, AC quality, and IAF quality are positively and significantly related to FRQ. The results also indicate that IAF quality mediates the relationship between firm size and FRQ, while AC quality has found no mediation effect on FRQ.

This study contributes to the AC and internal audit literature and have significant implications for concerned parties (e.g., regulators and business entities) regarding several aspects. Firstly, this study examines the association between firm size, AC, and IAF quality and FRQ, constructing composite scores for ACQ and IAFQ using the quartile scheme method, which is unique and has not been adopted in the prior literature. Secondly, unlike prior studies that have addressed the firm size effects on the AC's effectiveness and the IAF's performance (Sarens and Abdolmohammadi, 2011; Phornlaphatrachakorn, 2020), this study contributes to a deeper understanding of the relationship between firm size and FRQ

through the effects of the AC and IAF quality. Thirdly, to the best of the authors' knowledge, this is the first empirical study to address the impact of the AC and IAF quality in the relationship between firm size and FRQ, the results of which will be useful for the entities, investors, and regulators in realizing the importance of the AC and IAF quality in producing high-quality financial reporting.

The remainder of this paper is structured as follows. The following section provides a review of the pertinent literature and hypothesis development. The research methodology is described in Section 3, followed by the empirical results. The paper ends with a summary of the conclusions.

2. Literature review and hypotheses development

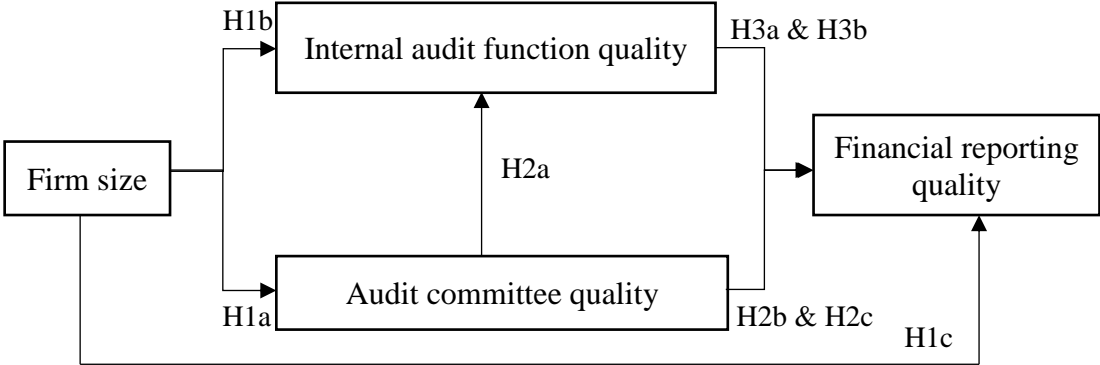
2.1 Prior studies on firm size, AC quality, IAF quality, and financial reporting quality

In this study, we examine the relationship between firm size and FRQ with the effect of governance monitoring mechanisms (i.e., AC and IAF). The AC and IAF are the decisive mechanisms to reduce agency conflict. Of course, firm size has an impact on AC and IAF effectiveness by providing financial resources. The AC plays a crucial role in reducing agency problems and information asymmetry, improving financial reporting reliability (Klein, 2002). Similarly, IAF quality plays a significant role in ensuring FRQ (Abbott et al., 2016; Gros et al., 2017). As mentioned, earlier studies have reported limited investigations of the firm size, mostly in developed economic settings. This stream of research includes a group of studies focusing on examining the firm size effects on AC effectiveness (Deli & Gillan, 2000; Klein, 2002) and other groups of studies that investigate the firm size relationship with the IAF (Carcello et al., 2005; Sarens & Abdolmohammadi, 2011).

Whereas prior research related to the AC and IAF (Alzoubi, 2019; García et al., 2012; Gebrayel et al., 2018; Phornlaphatrachakorn, 2020) has investigated the AC characteristics and IAF relationship with FRQ, this stream of research has marginally emphasized the AC determinants' relationship with FRQ and highlighted in the internal audit without considering the IAF quality attributes. However, the IAF quality attributes play an important role in ensuring FRQ (Abbott et al., 2016; Gros et al., 2017; Prawitt et al., 2009). In the Bangladeshi context, a few studies have investigated the impact of AC characteristics and their effects on organizations' performance. Rahman et al. (2019) reported that the AC size assists in improving the profitability of firms, but AC independence is scarce. Adhikary and Mitra (2016) showed that AC independence is related to firm size and leverage. They confirmed that large firms with potential

opportunities reduce the freedom of the AC, while firms with high leverage demand AC independence to ensure FRQ. Ali and Meah (2021) investigated the factors of AC independence and reported that larger corporate boards and independent directors increase AC independence. Thus, the current study examines the impact of AC quality and IAF quality on FRQ, which has not been widely tested in developed or developing country contexts. Figure I shows the conceptual framework for this study.

Figure I: The conceptual model of the Firm size-financial reporting quality relationships



2.2 Hypothesis development

2.2.1 Relationship between firm size and AC quality

Firm size is one of the crucial factors for improving AC quality. The resource dependence theory explains that the AC may rely on the board members for financial resources to attain a competitive advantage in internal monitoring efficiency (Hasan et al., 2020). AC quality also helps to reduce agency problems by improving its supervision of the board and management (Ruiz-Barbadillo et al., 2007). Thus, company size and required resource allocation are important aspects to ensure AC quality and a sound internal monitoring system. Firm size is also a determinant of the audit fees and auditor choices as larger companies need to exert greater audit effort due to their high business volume (O’Sullivan, 1999). Klein (2002) examined the relationship between the AC and the board characteristics and found that a larger firm size has a significant effect on the AC effectiveness. This finding reflects that the larger firms provide more resources for AC quality than the smaller firms. Deli and Gillan (2000) investigated factors related to the AC composition and showed that the firm size is positively associated with the AC, while DeZoort et al. (2002) suggested that AC effectiveness is related to qualified members with the resources and authority to secure shareholders’ interest by producing reliable financial reporting through decent oversight efforts.

Hence, it is likely that firm size plays a decisive role in improving AC quality. Based on the above findings, the following hypothesis is stated:

H_{1a} Firm size is positively associated with AC quality.

2.2.2 *Relationship between firm size and IAF quality*

The IAF needs to have adequate resources to ensure its effectiveness. The resource dependence theory posits that the management may depend on the board of directors for the necessary resource allocation to increase effective performance (Cohen et al., 2008). Moreover, the IAF should be well resourced to enhance its quality as it makes a significant contribution to decreasing the agency conflict and minimizing agency costs (Adams, 1994). Large firms are likely to allocate more resources to their IAF to meet their potential needs (training, staffing, and external certification). Sarens and Abdolmohammadi (2011) investigated this issue utilizing data from the Belgian context and showed that the firm's size is one of the significant factors in the IAF's size and effectiveness. Carcello et al. (2005) found a positive association between the firm size and the financial budget for the IAF. They specified that a larger budget is associated with the large financial resources of a firm, which has a positive impact on the IAF. Krane and Eulerich (2020) examined the drivers of IAF internationalization. The study revealed that the firm size is one of the drivers associated with the degree of IAF internationalization. Moreover, the IAF size, existence, and budget are influenced by several firm-level determinants. Alhajri (2017) contended that the size of the IAF is not significantly related to the size of the firm, though the result is not consistent with those of other similar studies, possibly due to the data sample being from a smaller market size. Goodwin-Stewart and Kent (2006) examined this issue using data related to Australian companies and found that IAF effectiveness is strongly related to firm size and risk management. Thus, large firms allocate more resource to the IAF to improve internal monitoring efficiency. The following hypothesis is suggested:

H_{1b} Firm size is positively associated with IAF quality.

2.2.3 *Relationship between firm size and financial reporting quality*

The resource dependence theory describes board members as being responsible for allocating resources to internal monitoring mechanisms to attain competitive advantages in FRQ (Hasan et al., 2020). Large companies usually employ more resources to ensure better monitoring mechanisms and high-quality financial reporting. DeZoort et al. (2002) noted that large firms provide more resources for AC and IAF

effectiveness to prepare high-quality financial reporting through their stringent monitoring system. Xie et al. (2003) explored the role of the AC, executive committee, and board of directors in preventing earnings management. The findings of the studies showed that earnings management is less likely to happen in companies that include more independent board members and corporate expertise. They also concluded that firm size is positively related to board independence. Several more relevant studies have witnessed firm size as being positively and significantly related to FRQ (Abbott et al., 2016; Alzeban, 2019; Alzoubi, 2019; Gros et al., 2017; Johl et al., 2013; Mardessi, 2021; Phornlaphatrachakorn, 2020). Based on the above, the research findings confirm that firm size significantly affects FRQ. Hence, we expect the firm size to be crucial to reducing earnings management and ensuring FRQ, leading to the following hypothesis:

H_{1c}. Firm size is positively associated with FRQ.

2.2.3 *Relationship between AC quality and IAF quality*

AC is a unique form of CG mechanism for overseeing the IAF's performance and FRQ. It is required to review internal audit programs to maintain the adequacy of the scope of internal audits (Mat Zain et al., 2006). The IAF is also increasingly being trusted by ACs to deliver their CG responsibilities. More specifically, the AC corresponds with the IAF to diminish the information asymmetry problem between executive managers and itself. In this regard, AC characteristics are crucial to ensure the supervision of IAF quality. Carcello et al. (2005) argued that to ensure IAF quality and assistance for the AC, the AC should monitor the IAF's performance. Prior studies have predominantly focused on AC effectiveness rather than AC quality characteristics' effects on IAF quality. Concerning the relationship between AC characteristics and IAF attributes, the BRC (1999) argued that frequent meetings between the AC and the internal auditors improve IAF effectiveness. Haron et al. (2005) investigated the companies' compliance requirements relating to the AC in the Malaysian context. They found that AC meetings and independence are likely to be beneficial to IAF quality improvement. Earlier studies also noted that AC characteristics positively and significantly affect IAF quality (Mat Zain et al., 2006). [From the audit fees perspective, Usman et al. \(2022\) addressed the relationship between ACs and audit fee classification shifting. They reported that AC's financial expertise and frequency of audit meetings are negatively related to audit fee classification shifting. However, Krishnan and Lee \(2009\) emphasized the AC's financial expertise, which helps to increase IAF quality. AC independence involves a certain degree of support and adds quality to the IAF \(Mat Zain et al.,](#)

2006). Thus, AC characteristics are likely significant drivers in enhancing IAF quality. The hypothesis is formulated as follows:

H_{2a}. AC quality is positively related to IAF quality.

2.2.4 Relationship between AC quality and financial reporting quality

The AC performs a tremendous role in ensuring the integrity of financial reporting by reducing earnings management, fraudulent reporting, and illegal actions (Asiedu & Deffor, 2017). AC characteristics (i.e., size, independence, meetings, and financial expertise) are crucial to monitoring financial reporting procedures. Abbott et al. (2004) noted that an AC's characteristics assist in enhancing its efficiency and performance in the preparation of better financial reporting. Likewise, Raimo et al. (2021) confirmed that AC attributes positively affect the publication of high-quality integrated reports. From the firms' disclosure point of view, the firms with AC's quality attributes significantly influence the disclosure of voluntary information (Agyei-Mensah, 2018) and positively affect intellectual capital disclosure (Astuti et al., 2020). Substantial archival literature has reported the effects of AC determinants on FRQ (e.g., Alzoubi, 2019; García et al., 2012; Gebrayel et al., 2018; Mardessi, 2021; Phornlaphatrachakorn, 2020). Nour and Tanbour (2023) conclude that there is a high impact of the attributes (integrity, objectivity, confidentiality, and competency) on the effectiveness of internal auditing. Salem et al. (2021) conclude that audit quality restrains earnings management practices of Islamic bank managers. Moreover, prior studies have addressed the effects of the AC's attributes on FRQ and showed their relative importance. For instance, several studies have found that AC size is significantly associated with FRQ and timeliness of financial reporting as they share diverse skills and experiences (Alqaraleh & Nour, 2020; Dhaliwal et al., 2010), while others have shown that it is irrelevant to the financial reporting process (Mardessi, 2021; Xie et al., 2003). Related to the AC meetings, an AC can be more effective when AC members hold frequent meetings. Gebrayel et al. (2018), Xie et al. (2003), and Alqaraleh and Nour (2020) suggested that regular meetings between AC members are negatively related to the level of earnings management and better financial statement monitoring. However, Shahkaraiah and Amiri (2017) and Khatib and Nour (2021) showed that AC meetings are negatively and significantly related to FRQ. Conversely, AC independence is often considered an imperative tool to enhance AC efficiency in overseeing the financial reporting process. Several studies have investigated whether AC independence affects FRQ. The results reflect a positive association between

AC independence and FRQ (Klein, 2002). The AC's financial expertise is deemed crucial to the AC's effectiveness as it requires the performance of multiple duties that need a high level of financial knowledge (DeFond et al., 2005). Abbott et al. (2004) posited that having financial expertise in AC could be crucial for FRQ. Dhaliwal et al. (2010) revealed that AC financial literacy increases FRQ. Based on the above literature findings, the AC's characteristics are important to ensuring FRQ. Moreover, AC quality significantly affects the relationship between firm size and FRQ. Hence, it is likely that AC quality mediates the association between firm size and FRQ. Thus, the hypotheses are posited as follows:

H_{2b}. AC quality is positively associated with FRQ.

H_{2c}. AC quality mediates the relationship between firm size and FRQ.

2.2.5 *Relationship between IAF quality and financial reporting quality*

IAF quality depends on the outcomes of better AC quality, which leads to higher FRQ. Professional agencies (e.g., AICPA, 1991) have stipulated that IAF quality attributes compress internal auditor competence, independence, and work performance. Earlier literature (e.g., Abbott et al., 2016; Alzeban & Sawan, 2013; Prawitt et al., 2009) has considered these attributes to be indicators of IAF quality and suggested that FRQ is significantly related to the IAF quality attributes. Archival studies have largely emphasized the IAF's competence and independence to examine the relationship between IAF quality and FRQ (Prawitt et al., 2009).

Our third hypothesis is related to the relationship between IAF quality and FRQ. The agency theory explains the agency problem between the principal (shareholders) and agent (management) (Jensen & Meckling, 1976). The IAF assists in alleviating agency conflicts and information asymmetry (Adams, 1994) and detecting fraud in the preparation of financial reporting (Coram et al., 2008). Thus, we expect that the IAF quality attributes decrease earnings management and enhance FRQ. Previous literature (Abbott et al., 2016; Gros et al., 2017; Prawitt et al., 2009) has asserted that IAF quality is associated with higher FRQ. Prawitt et al.'s (2009) archival study was the first to examine the relationship between IAF quality attributes and FRQ using the GAIN database. They measured IAF quality determinants by following external auditing standards relating to competence and objectivity. They confirmed a positive relationship between IAF quality and FRQ. Abbott et al. (2016) explored IAF quality (competence and independence) joint effects on FRQ using a survey and archival data. They reported that IAF quality positively affects FRQ. Gros et

al. (2017) addressed the relationship between IAF quality and FRQ in the German setting and revealed that IAF quality reduces earnings management and ensures a high level of FRQ. Phornlaphatrachakorn (2020) reported that IAF quality is positively and significantly related to FRQ and organizational success.

Whereas several studies have reported contrary results, Johl et al. (2013), for example, noted a negative relationship between IAF quality and FRQ; however, some IAF quality attributes showed a significant association with FRQ. Similarly, García et al. (2012) indicated that the IAF is negatively related to earnings management. These literature findings are consistent; however, they primarily emphasize the formation and presence of an IAF but overlook the design or qualities of the IAF. Despite several negative results concerning IAF quality and FRQ, we still believe that IAF quality attributes improve the performance of internal auditors and assist in reducing financial reporting errors and enhancing FRQ. Moreover, IAF quality plays a decisive role in the relationship between firm size and FRQ. Hence, we expect that IAF quality mediates the relationship between firm size and FRQ. The following hypotheses are proposed:

H_{3a} IAF quality is positively associated with FRQ.

H_{3b} IAF quality mediates the relationship between firm size and FRQ.

3. Research methodology

3.1 Sample and data collection

Prior internal audit research that relied on case studies, questionnaires, and interviews is scarce (Hazaea et al., 2021). This study addresses the role of the IAF quality in the relationship between AC quality and FRQ, utilizing a survey questionnaire and archival data from the Bangladesh perspective. Bangladeshi companies were selected because AC and IAF in Bangladesh are significantly different from the US and European settings in terms of policy implication and inconsistent corporate compliance. Moreover, a limited number of studies have been observed on these aspects in Bangladesh. A survey was conducted on non-financial firms listed on the DSE in Bangladesh. Consistent with the earlier AC and internal audit research (e.g., García et al., 2012; Alzoubi, 2019), our survey targeted the head of internal auditors, AC members, and chief financial officers (CFOs). The survey posed questions about the participant company's general information, IAF service provided, IAF quality attributes, and AC information. We emailed our survey questionnaire to all listed non-financial firms (223) in February 2021 and received a total of 48

usable responses. To promote a high volume of responses from the participants, we sent two reminders every 2 weeks after the beginning and subsequent follow-up email. After the fourth week (March 2021), we made a telephone call to all non-responding recipient firms to encourage them to participate in the survey and obtained an additional 37 answers, thereby increasing the total to 85 responses (a company-specific response rate of 38%) (Table I).

Of the total 85 responses, two responses were eliminated due to incompleteness and double submission by the same participant, bringing our total to 83. We calculate AC quality and IAF quality using 80 survey responses because three more responses were eliminated as the respondent company's financial statements did not match the abnormal accruals (ABNACC), as shown in Table I. We estimate the ABNACC of the modified Jones model using 157 non-financial companies from eight distinctive industries from 2018 to 2020, as presented in Table I. The abnormal accruals samples (157) are high than the questionnaire response (80) because the higher number of observations provides better accruals estimation as used by Abbott et al. (2016), Gros et al. (2017), and Johl et al. (2013), and subsequently merge them with survey data. The archival data are extracted from secondary sources (e.g., company annual reports, Thomson Reuters DataStream, and the DSE official website) to estimate the dependent variables (ABNACC) and continuous variables. Financial institutions are excluded from the sample due to their unique industry regulations and accounting implications.

(Insert Table I about here)

3.2 Variable measurement

3.2.1 Dependent variable

To measure FRQ, we apply the ABNACC model as a proxy for FRQ, following the prior literature (Abbott et al., 2016; Alzeban, 2019; Johl et al., 2013; Prawitt et al., 2009). We adopt the performance-adjusted cross-sectional modified Jones model (Dechow et al., 1996) to estimate abnormal accruals, as described by Kothari et al. (2005). Kothari et al.'s model includes both an intercept term and a measure of performance. Following previous research, we measure industry-specific coefficients to calculate abnormal accruals based on the year and company (ISIN code) for all listed non-financial firms (Dhaka Stock Exchange) in DataStream 2020. We estimate ABNACC as the residual from the following regression:

$$\left[\frac{TA_{it}}{A_{it-1}} \right] = \beta_0 + \beta_1 \left[\frac{1}{A_{it-1}} \right] + \beta_2 \left[\frac{(\Delta REV_{it} - \Delta AR_{it})}{A_{it-1}} \right] + \beta_3 \left[\frac{PPE_{it}}{A_{it-1}} \right] + \beta_4 \left[\frac{NI_{it}}{A_{it-1}} \right] + \varepsilon_{it}$$

Where, TA_{it} is the total accruals for estimation firm i in year t , A_{it-1} is the total assets at $t-1$ for firm i , ΔREV_{it} is the change in net revenue, ΔAR_{it} is the change in accounts receivable, PPE_{it} is the gross property, plant, and equipment and NI_{it} is the net income for estimation firm i in year t . We then investigate the ABNACC's relationship with the IAFQ score to establish whether they are positively or negatively associated.

3.2.2 Independent variable

The firm size (*FIRMSIZE*) is computed using the total assets of the company (Abbott et al., 2016, 2010; Mat Zain et al., 2006). We expect that *FIRMSIZE* (log of company assets) increases the size of the abnormal accruals (Dechow & Dichev, 2002). Firm size data extract from the company's annual reports and DataStream sources. Consistent with prior related studies, we expect that the *FIRMSIZE* is positively associated with FRQ (Abbott et al., 2016; Gros et al., 2017; Mat Zain et al., 2006).

To measure AC quality (*ACQ score*), we used survey questionnaire responses and company annual report information related to the AC characteristics (i.e., size, independence, meetings, and financial literacy). AC size is number of AC members (Mardessi, 2021). AC independence is the proportion of independent members of the AC (Abbott et al., 2004). AC financial expertise is calculated by the proportion of AC members with financial experts (Abbott et al., 2004; Carcello et al., 2005). AC meetings are the number of meetings held between AC members in a financial year (García et al., 2012). Subsequently, we calculate quartile scores on all AC components and cumulated them to construct an AC quality score, as shown in Table II.

(Insert Table II about here)

While IAF quality (*IAFQ score*) is computed using five IAF quality factors (i.e., internal audit employee work experience, professional certification, average annual training days, IAF independence, and IAF work performance) in questionnaire responses (Abbott et al., 2016; Gros et al., 2017; Prawitt et al., 2009). IAF quality independence and work performance are measured by applying the principal component method (PCM) to check the correlation between variables (KMO and Bartlett's test). Afterward, we utilize a quartile scouring scheme on all five IAF quality attributes to measure a composite score of IAF quality.

The quartile scores of five IAF quality attributes are accumulated to construct *the IAFQ score*, as presented in Table III.

(Insert Table III about here)

3.2.3 Control variables

Following prior studies, we encompass several firm-specific factors that may influence the level of FRQ, as shown in Table IV. We control *AGE* is the number of years the company appeared on the DataStream, it includes because firms may experience several accruals patterns during the firm life cycle (Abbott et al., 2016; Prawitt et al., 2009). We include *ROA* (Return on Assets) and *LOSS* to control for performance because low performance increases an incentive for accruals management. Moreover, firms' managers that are struggling may have increased incentives to manage earnings, thus we include *ROA* and *LOSS*. *ROA* also may affect the computation of abnormal accruals and leads to a positive or negative relationship between *ROA* and abnormal accruals (Abbott et al., 2016). Whereas firms with repeated loss may have less value in financial statements (Klein, 2002). *ROA* computes as net income scaled by total assets and *LOSS* (coded "1" if the firm experienced a loss in the preceding year, "0" otherwise) (Tanyi & Smith, 2015). *CFO* (cash flows from the operation), *CFOVOL* (Operation cash flows volatility), and *SGROWTH* (sales growth from the preceding year) are included because these variables may affect the accrual estimation (Dechow et al., 1996). We expect that variable *LEVERAGE* (total debt/total assets) will be related to the company's nonvoluntariness of debt covenants and income-decreasing accruals (Bravo & Reguera-Alvarado, 2018). Earlier studies reveal that independent directors (*BINDP*) play an important role in strengthening CG and enhancing FRQ (Bravo & Reguera-Alvarado, 2018).

3.3 Model specification

We use the structural equation model (SEM) to examine the mediation effect of the AC quality and IAF quality on the relationship between firm size and FRQ. The SEM is an appropriate statistical method for a composite-based approach (Sarstedt et al., 2016). Additionally, least squares (OLS) regression models are utilized to test the variables' relationships. In this study, we test the effect of the IAF quality and AC quality on FRQ as estimated by abnormal accruals (*ABNACC*). The following models utilize to test our hypotheses:

$$ACQ_i = \beta_0 + \beta_1 FIRM SIZE_i + \beta_2 AGE_i + \beta_3 LEVERAGE_i + \beta_4 CFO_i + \beta_5 SGROWTH_i + \beta_6 COFVOL_i + \beta_7 ROA_i + \beta_8 BINDP_i + \varepsilon_i \quad (1)$$

$$ABNACC_i = \beta_1 ACQ_i + \beta_2 IAFQ_i + \beta_3 FIRM SIZE_i + \beta_4 AGE_i + \beta_5 LEVERAGE_i + \beta_6 CFO_i + \beta_7 SGROWTH_i + \beta_8 COFVOL_i + \beta_9 ROA_i + \beta_{10} BINDP_i + \varepsilon_i \quad (2)$$

$$IAFQ_i = \beta_0 + \beta_1 FIRM SIZE_i + \beta_2 AGE_i + \beta_3 LEVERAGE_i + \beta_4 CFO_i + \beta_5 SGROWTH_i + \beta_6 COFVOL_i + \beta_7 ROA_i + \beta_8 BINDP_i + \varepsilon_i \quad (3)$$

$$IAFQ_i = \beta_0 + \beta_1 ACQ_i + \beta_2 FIRM SIZE_i + \beta_3 AGE_i + \beta_4 LEVERAGE_i + \beta_5 CFO_i + \beta_6 SGROWTH_i + \beta_7 COFVOL_i + \beta_8 ROA_i + \beta_9 BINDP_i + \varepsilon_i \quad (4)$$

(Insert **Table IV** about here)

4. Results

4.1 Descriptive statistics

Tables 5, 6, and 7 present the summary statistics of the study. Tables 5 and 6 contain the descriptive results for the 80 respondent firms' IAF and AC quality characteristics scores. The survey results show that, on average, about three-quarters of the IAF employees have more than 3 years of works experience, and nearly 25% have a professional certification, as shown in Table V. The annual training days vary between 0 and 60 days, with a mean (median) of about 19 (30) days. The IAF independence mean (median) is 1 (0.8788), which is lower than the IAF work experience of 2.99. The overall IAFQ score mean (median) is 3.3170 (3.25), with a minimum value of 2 and a maximum value of 4.75, which reflects a moderate variation that exists between firms, as shown in Table V.

(Insert **Table V** about here)

Table VI provides the descriptive statistics for AC quality scores. The results show that the AC size average (median) is 3.42 (3), with the lowest number being three and the highest of 10 members. Regarding the average number of meetings held between AC members, the mean (median) is about 4.58 (4), which indicates that all the respondent companies meet the requirement of the Bangladeshi Code of CG regarding the minimum number of AC size and number of meetings (BSEC, 2018). The results further indicate that the mean (median) number of AC independent members is 1.42 (1), with the lowest value of 1 and the

highest value of 4, while the minimum number of financial expertise in the AC is 1 and the maximum is 4, with a mean of 3.12. This shows that all the selected companies comply with the Bangladeshi CG code's minimum requirement concerning AC independent and financial expert members (BSEC, 2018).

(Insert Table VI about here)

Table VII presents the descriptive scores for the *ABNACC* and control variables. The results show that the mean (median) *ABNACC* is -0.0045 (0.0035) and ranges from the lowest score of -0.5618 to the highest score of 0.2199. The results also indicate that the sample firms' assets size has a mean (median) of TK12.24 million (TK36.10 million) and their mean (median) age is 14.80 (12) years. While the sample firms' leverage is relatively high (mean 49.83%; median of 42.93%), their operating cash flow is TK71.96 million (mean) and TK 12.170 million (median). Notably, the average sales growth from 2019 to 2020 was 6.59%, and the mean (median) *ROA* is 3.8% (3.21%), with a range from a minimum value of -2.9% to a maximum value of 18.94%, which indicates that a financial performance gap exists between companies. Additionally, it shows that the mean of board of directors' independence is 24.93%, with the lowest values of 0 and the highest of 69.89%.

(Insert Table VII about here)

Table VIII reports the Pearson correlation coefficients between *ABNACC*, *FIRMSIZE*, *ACQ*, and *IAFQ* results. The correlation shows that the *ABNACC* is negatively correlated with *FIRMSIZE*, *ACQ*, and *IAFQ*, which supports our hypotheses. We undertake a robustness check for multicollinearity in the model and carry out an assessment of the variance inflation factor (VIF) (Table VIII). The VIF value is at a satisfactory level, showing no multicollinearity problem (Gujarati, 2003). Specifically, the highest VIF level is 2.29 (less than 10), which indicates that multicollinearity is no longer a problem in the model.

(Insert Table VIII about here)

4.2 Multivariate analysis

Table IX reports the SEM path coefficients and hypothesis test results of the relationship between firm size, AC quality, IAF quality, and *ABNACC* (a proxy for *FRQ*). Tables 10 shows the ordinary least squares (OLS) regression results of the *FRQ* relationship with firm size, AC quality, IAF quality, and control variables. First, we assess whether the model 'fits' the data using different goodness of fit indices by analysing the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the

goodness of fit index (GFI), and the standardized root mean square residual (SRMR). The RMSEA's acceptable fit ranges are 0 to .08 (Pituch & Stevens, 2016). A CFI value below .90 indicates that the model has a good fit (Byrne, 1998). The GFI statistic ranges from 0 to 1, and the values .90 or higher indicate a good model fit (Byrne, 1998). The SRMR ranges from 0 to 1, with a good fit obtaining values less than 0.05 (Byrne, 1998). In our model, the goodness of fit statistics values show that the model fits the data well (RMSEA = 0.08, CFI = 0.81, GFI = 0.75, and SRMR = 0.05).

Our predicted signs for *FIRMSIZE*, *ACQ*, and *IAFQ* are negative as we anticipated that the larger the *FIRMSIZE*, the greater impact on the *ACQ* and *IAFQ* and the lower income-increasing accruals. The path results show that *FIRMSIZE* is not significantly related to *ACQ*, which does not support our H1a. Moreover, our regression results show that *FIRMSIZE* is not significantly associated with *ACQ* (Table I0), which is inconsistent with earlier research. Meanwhile, the path findings indicate that *FIRMSIZE* is significant and positively correlated with *IAFQ*, with a *p*-value (coefficient) of < 0.05 (0.1247), which supports our H1b (Table IX). Similar findings emerge from the OLS model (Table I0). They indicate that *FIRMSIZE* is positively and significantly related to *IAFQ*, which means that a larger firm size is associated with higher IAF quality. This result is consistent with the earlier research that highlighted the firm size effects on the IAF quality (Goodwin-Stewart & Kent, 2006; Sarens & Abdolmohammadi, 2011). Turning to the hypothesis concerning firm size and FRQ, support is found for hypothesis H1c, which suggests that a relationship exists between firm size and FRQ. The path results show that *FIRMSIZE* is significantly and negatively (positively) related to *ABNACC* (FRQ), with a *p*-value (coefficient) of < 0.05 (-0.0101) (Table IX) and a *p*-value (coefficient) of < 0.05 (-0.0101) (Table I0). The results suggest that the firm size strongly affects FRQ. This result is consistent with the prior audit-related research (Abbott et al., 2016; Alzoubi, 2019; Prawitt et al., 2009).

The multivariate results related to the relationship between AC quality and IAF quality reflect that *ACQ* is not significantly associated with the *IAFQ*. The findings indicate that AC quality does not play an important role in improving IAF quality and thus do not support our H2a. The results are consistent with the earlier AC-related studies (Gebayel et al., 2018). However, they are contrary to those obtained by Phornlaphatrachakorn (2020). The reason could be related to countries' differing contextual factors or the distinct constructs used for the IAF quality and AC effectiveness estimation in the earlier literature. Moreover, the lack of coordination between the AC and the internal audit department might be among other

potential reasons for the insignificant outcomes. Overall, our results suggest that the AC is likely to have a limited capacity in the scope of work enhancing the IAF's quality in the Bangladeshi context.

On the other hand, the path and OLS results show that *ACQ* is significantly and negatively (positively) related to *ABNACC* (FRQ), with a *p*-value (coefficient) of < 0.1 (-0.0268) (Table IX) and a *p*-value (coefficient) of < 0.1 (-0.0268) (Table I0), which support H2b. The results indicate that the AC quality plays an important role in producing better financial reporting. The results are consistent with the prior literature focusing on the AC effectiveness, indicating that it can improve financial reporting monitoring and enhance the level of corporate disclosure by decreasing abnormal accruals, thereby mitigating agency problems (Phornlaphatrachakorn, 2020). Tables 9 and 10 report the results concerning the relationship between IAF quality and FRQ. The findings reveal that *IAFQ* has a significant and negative (positive) effect on *ABNACC* (FRQ), with a *p*-values (coefficients) of < 0.1 (-0.0172) (Table IX) and < 0.1 (-0.0172) (Table I0), which support H3a. The results support the argument that the IAF quality has an important effect on FRQ, which suggests that higher IAF quality is associated with higher FRQ and is more likely to reduce *ABNACC*. Our results are consistent with the earlier IAF-related literature (Abbott et al., 2016; Gros et al., 2017; Prawitt et al., 2009).

We test the mediation effects of the AC quality and IAF quality in the relationship between firm size and FRQ. The path analysis's indirect effects results show that the *ACQ* has no significant mediation effect on the relationship between *FIRMSIZE* and *ABNACC*, which does not support our H2c. The result is contrary to the observation of the study by Xie et al. (2003), who noted that firm size affects the AC effectiveness and thereby leads to a better FRQ. However, the IAF quality is considered to be a mediator of the firm size and FRQ. The path indirect effect results reveal that *IAFQ* has a significant mediation effect on the relationship between *FIRMSIZE* and *ABNACC*, with a *p*-value (coefficient) of < 0.1 (-0.0027) (Table IX). The results suggest that firm size has a positive effect on IAF quality, which leads to higher FRQ, a result that is consistent with the earlier literature (Abbott et al., 2016; Gros et al., 2017). Overall, the findings reflect that the AC and IAF quality are individually and significantly related to FRQ, while their mutual effect on FRQ is not significant. From the economic perspective, these suggest that firms' size is a vital factor in terms of larger budget allocation to enhance IAF quality, thus, improve FRQ. In other words, the presence of IAF quality is a necessary antecedent in the relationship between firm size and FRQ.

(Insert Tables IX and X about here)

5. Conclusion

Due to the expansion of the business operations and numerous cases of financial fraud, there is an urgent need for effective internal monitoring mechanisms (e.g., AC and IAF) to enhance the overseeing of the financial reporting process. In this study, we examine the association between firm size, AC quality, IAF quality, and FRQ. The analysis is performed using a unique data set of survey responses and archival data from the Bangladeshi perspective. Firms' size is computed using their total assets. We developed AC and IAF quality scores by applying a quartile technique. The IAFQ score is constructed using IAF quality attributes, such as internal auditor work experience, professional certification, average annual training days, IAF independence, and IAF work performance, while the ACQ score is computed utilizing AC characteristics, for instance, AC size, meeting, independence, and financial expertise. Both constructs are developed following survey responses. Our analysis shows that firm size is significantly and positively related to IAF quality, while the firm size relationship with AC quality is not significant. The results also reflect that AC quality is negatively and significantly related to ABNACC and plays a distinct role in the effective monitoring and enhancing of FRQ. However, the findings do not support the relationship between AC quality and IAF quality. Relating to the relationship between IAF quality and FRQ, the results indicate that IAF quality has a significant and positive effect on ABNACC. This outcome suggests that higher IAF quality is likely to reduce abnormal accruals (earnings management) and thereby enhance FRQ. In addition, our empirical results show that AC quality has no mediation effect on the relationship between firm size and FRQ. However, IAF quality mediates the firm size and FRQ relationship. These findings support the agency theory assumption that firm size, AC quality, and IAF quality contribute to mitigating the agency conflict between the management and the shareholders of a company by overseeing the overall financial reporting process. **Based on the study findings, we recommend policy makers and companies' management pay attention to the AC quality and IAF quality to enhance FRQ. In particular, larger firms with higher budget allocations can improve IAF quality, which results in high-quality financial reporting.**

This study contributes to the AC- and IAF-related literature by offering insights into the relationship between firm size and FRQ with the presence of AC quality and IAF quality. Our findings complement the earlier literature by addressing the effects of AC quality and IAF quality on the interaction between firm

size and FRQ. In this vein, Phornlaphatrachakorn (2020) examined the relationship between AC effectiveness and organizational success with the mediation effects of the IAF quality and FRQ using different constructs. In our study, we develop composite scores for the AC quality and IAF quality to explore the relationship between firm size and FRQ, thus making a distinct contribution to the existing literature. Moreover, this paper's findings offer further empirical confirmation that AC quality and IAF quality are important antecedents to FRQ. Our findings also reveal that IAF quality mediates the relationship between firm size and FRQ. These results will be relevant to professionals and policymakers in making regulatory reforms and revising existing policies to improve work performance. Additionally, the outcomes of this study could be useful for other similar institutional and economic settings. Eventually, in response to the lack of empirical evidence in this vein of the research area, we attempt to focus on providing a better explanation for the relationship between firm size, AC quality and IAF quality, and FRQ. This study has several limitations that provide opportunities for future research. First, the study is restricted to the survey questions that cover limited details of several areas of the AC and IAF. Second, our sample selection focuses on relatively big industries in terms of the number of firms and omits small sectors. Further studies may examine the mediation effects of board executives in the relationship between AC quality, IAF quality, and FRQ from other country perspectives. Also, it would be interesting to investigate the role of AC and IAF quality in protecting the information system and examining the effects of AC diversity on FRQ.

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Table I: Sample selection process

	Sample Firms	%
<i>Survey sample description and responses breakdown</i>		
Total sample size	223	
Questionnaires distributed	223	100
Questionnaire responses received	85	38
Missing questionnaires information (Unusable)	-2	1
DataStream missing data of respondent firms	-3	2
Final responses used merged with dependent and control data	80	35
<i>Sample description of Discretionary accruals and Kothari m-Jones model</i>		
Total number of DSE listed firms (financial and non-financial)	604	
Total listed financial firms	367	
Total listed non-financial firms	223	100
Firms excluded due to the small industry	-26	12
Sample firms missing data items for model estimation	-40	18
Total observation used for abnormal accruals estimation - Kothari m-Jones model	157	70

Table II: AC quality score (ACQ score)

	Description	Measurement technique
<i>ACQ-characteristics</i>		
<i>(1) AC size</i>	The number of AC members	Quartile score
<i>(2) AC independence</i>	The percentage of independent AC members	Quartile score
<i>(3) AC meetings</i>	The number of AC meetings held in one year	Quartile score
<i>(3) AC financial expertise</i>	The proportion of financial expertise AC members	Quartile score
ACQ score (AC size + AC independence + AC meetings + AC financial expertise)		Cumulative score

Table III: Internal audit function quality score (IAFQ Score)

	Description	Measurement technique
<i>IAFQ-attributes</i>		
<i>(1) IAF competence</i>		
(a) Internal auditor work experience	Percentage of internal auditors work experience, who possess at least three years of professional experience	Quartile score
(b) Internal auditor professional certification	Percentage of internal auditors with one or more audit certification	Quartile score
(c) Internal auditor training	Internal auditors' average number of training days during last year	Quartile score
<i>(2) IAF independence</i>	Likert-scale survey responses factorize to obtain useable data	Factor analysis
<i>(3) IAF work performance</i>	Factor test performs on IAF work performance-related Likert-scale questions	Factor analysis
IAFQ score (Internal auditor work experience + certification + training+ IAF independence + IAF work performance)		Cumulative score

Table IV: Variable Definition and Measurement

Variable	Description
<i>ABNACC</i> (FRQ)	FRQ estimates using the total value of abnormal accruals adopting the Kothari et al. (2005) version of the modified Jones model. Abnormal accruals are the error term of the equation below: $[TAit/Ait-1] = \beta_0 + \beta_1 [1/Ait-1] + \beta_2 [(\Delta REVit - \Delta ARit)/ Ait-1] + \beta_3 [PPEit/Ait-1] + \beta_4 [NIit/Ait-1] + \varepsilon it$ Where TA is the total accruals for estimation firm i for year t, Ait-1 is the total assets at t -1 for firm i, $\Delta REVit$ is the change in net revenue, $\Delta ARit$ is the change in account receivable, PPEit is gross property, plant, and equipment, and NIit is the net income for estimation firm i for year t
<i>FIRMSIZE</i>	Natural log of total assets
<i>ACQ score</i>	ACQ composite score construct using AC characteristics (size, independence, meetings, and financial expertise)
<i>IAFQ score</i>	IAFQ score is the unweighted average score of IAF competence (employee experience, certification, training), IAF independence, and work performance
<i>AGE</i>	The number of years since a firm first appearance in the DataStream database
<i>LEVERAGE</i>	Debt as a proportion of total assets

<i>CFO</i>	Cash flow from operations scaled by lagged total assets
<i>SGROWTH</i>	Sales growth (sales of current period minus sales of prior year) divided by sales of the prior year
<i>CFOVOL</i>	Standard deviation of Cash flow from operations for 2018-2020
<i>LOSS</i>	Dummy variable equal to 1 if a company experienced a loss in the fiscal year 2020, 0 otherwise
<i>ROA</i>	Net income scaled by total assets
<i>BINDP</i>	Percentage of the independent directors to the total number of board members

Table V: IAFQ score measurement

IAF quality attributes	Obs	Mean	Median	SD	Min	Max
<i>IAF competence</i>	80	2.0152	2	0.4813	1	3
% Auditors with >3 years' work experience	80	0.7651	0.75	0.1603	0.4	1
% Auditors with external certification	80	0.2464	0.25	0.1434	0	0.6666
Internal auditor training days per year	80	19.06	20	9.012	0	60
<i>IAF independence</i>	80	1	0.8788	0.7074	0.1472	4.0651
<i>IAF work performance</i>	80	2.9999	2.9787	0.6463	0.5184	4.4305
Total IAFQ score	80	3.3170	3.25	0.6357	2	4.75

Notes: All IAF quality components definitions are defined in Table III.

To obtain a positive value of IAF independence and IAF work performance, we recalibrated both factor values by adding 2.

Table VI: ACQ score measurement

ACQ-characteristics	Obs	Mean	Median	SD	Min	Max
<i>AC size</i>	80	3.4268	3	0.6826	3	6
<i>AC meeting</i>	80	4.5853	4	1.1913	3	10
<i>AC independence</i>	80	1.4268	1	0.6067	1	4
<i>AC financial expertise</i>	80	1.7195	1	0.9161	1	5
Total ACQ score	80	3.1209	3.25	0.4211	1.75	3.75

Notes: All IAF quality components definitions are defined in Table II.

Table VII: ABNACC and control variables summary statistics

Variable name	Obs	Mean	Median	SD	Min	Max
<i>ABNACC</i>	80	-0.0045	0.0035	0.1672	-0.5618	0.2199
<i>FIRMSIZE (TK'000)</i>	80	1224790	3610384	2768810	64247	292717
<i>LFIRMSIZE</i>	80	22.0380	22.0259	1.7349	18.0728	26.0224
<i>ACQ</i>	80	3.1209	3.25	0.4211	1.75	3.75
<i>IAFQ</i>	80	3.3170	3.25	0.6357	2	4.75
<i>AGE</i>	80	14.80	12	8.9783	2	28
<i>LEVERAGE</i>	80	0.4983	0.4293	0.4644	0.0195	3.0409
<i>CFO (TK'000)</i>	80	719612	121709	266836	-101597	248204
<i>CFO</i>	80	0.0568	0.0443	0.0856	-0.1029	0.3475
<i>SGROWTH</i>	80	0.0659	0.0542	0.7447	-0.6365	0.8733
<i>CFOVOL</i>	80	0.0462	0.0372	0.0362	0.0028	0.2100
<i>LOSS</i>	80	0.1102	0	0.3137	0	1
<i>ROA</i>	80	0.0380	0.0321	0.0891	-0.2899	0.1894
<i>BINDP</i>	80	0.2493	0.3010	0.1907	0	0.6989

Notes: All variable definitions describe in Table IV.

ABNACC is Kothari et al.'s (2005) form of the modified Jones model to estimate abnormal accruals, *FIRMSIZE* is the taka value of total assets in millions, *AGE* is the years since the company's appearance in the DataStream, *LEVERAGE* equals the total debt (sum of long- and short-term debt) of a company, *CFO* is the cash flow from operations scaled by lagged total assets. *ROA* equals a return on assets, *LOSS* is coded "1" if the firm had losses, and "0" otherwise, *SGROWTH* is the percentage of one-year sales growth, *CFOVOL* is the standard deviation of the cash flows from operations for 2018-2020

Table VIII Pairwise correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10	11	12	VIF
1. ABNACC	1												
2. LFIRMSIZE	-0.0683 (0.5473)	1											1.30
3. ACQ score	-0.0707 (0.5333)	-0.0719 (0.5265)	1										1.20
4. IAFQ score	-0.0964 (0.3951)	0.2738*** (0.0140)	0.0042 (0.9707)	1									1.52
5. AGE	-0.0449 (0.6923)	-0.2120 (0.0603)	-0.1056 (0.3513)	-0.0071 (0.9504)	1								1.33
6. LEVERAGE	-0.0848 (0.4544)	-0.1166 (0.3029)	0.0436 (0.7007)	-0.0059 (0.9585)	-0.2491** (0.0259)	1							1.61
7. LCFO	-0.2260** (0.0438)	0.0845 (0.4563)	0.1322 (0.2424)	0.0557 (0.6238)	-0.0632 (0.5773)	-0.1154 (0.3079)	1						1.57
8. SGROWTH	0.0906 (0.4241)	0.1329 (0.2400)	0.3078*** (0.0055)	0.1211 (0.2846)	0.1252 (0.2684)	-0.3369*** (0.0022)	0.2510** (0.0247)	1					1.58
9. LCFOVOL	0.1733 (0.1242)	-0.1357 (0.2300)	0.1182 (0.2963)	0.0243 (0.8308)	0.1918* (0.0883)	0.1692 (0.1335)	0.1728 (0.1254)	-0.0784 (0.4895)	1				1.39
10. LOSS	-0.3354*** (0.0024)	-0.2528** (0.0237)	-0.1135 (0.360)	0.0655 (0.5625)	0.2784** (0.0124)	0.4370*** (0.000)	-0.2014* (0.0733)	-0.2054 (0.0676)	-0.1200 (0.2910)	1			2.29
11. ROA	0.1476 (0.0686)	0.1911 (0.0896)	0.1237 (0.2742)	0.1482 (0.1894)	-0.0621 (0.5842)	-0.2753** (0.0135)	-0.5423*** (0.000)	0.2107 (0.0606)	0.0946 (0.4040)	-0.5257*** (0.000)	1		2.37
12. LBINDP	-0.1457 (0.1971)	0.3748*** (0.0006)	0.1878* (0.0953)	0.0391 (0.7306)	-0.1102 (0.3305)	-0.1988* (0.0771)	0.2606** (0.0196)	0.0529 (0.6409)	0.0909 (0.4220)	0.1021 (0.3673)	0.1009 (0.3732)	1	1.73

Variables defined in Table IV, p values reported in parentheses

Statistical significance levels: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Table IX: Results of path coefficient and hypotheses testing

Hypotheses	Relationships	Coefficients	Standard error	<i>t</i> -statistics
H1a	FIRMSIZE→ACQ	0.0170	0.0264	0.64
H1b	FIRMSIZE→IAFQ	0.1247	0.0372	3.03**
H1c	FIRMSIZE→FRQ	-0.0101	0.0034	-2.92**
H2a	ACQ→IAFQ	-0.0349	0.1572	-0.22
H2b	ACQ→FRQ	-0.0268	0.0140	-1.91*
H3a	IAFQ→FRQ	-0.0172	0.0092	-1.87*

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$, RMSEA = 0.08, CFI = 0.81, GFI = 0.75, SRMR = 0.05, $R^2 = .6662$

Table X: Results of multiple regression analysis

Independent variables	Dependent variables					
	ACQ	IAFQ	FRQ	IAFQ	FRQ	FRQ
Intercept	3.9861*** (0.0288)	0.5615 (1.0106)	0.2742** (0.0851)	0.6121 (1.2520)	0.3812*** (0.1032)	0.2839*** (0.0841)
FIRMSIZE	-0.0243 (0.0445)	0.1247** (0.0439)	-0.0101** (0.0037)	0.1244** (0.0445)	-0.0107** (0.0036)	-0.0079** (0.0038)
ACQ				-0.0127 (0.1832)	-0.0268* (0.0150)	
IAFQ						-0.0172* (0.0099)
AGE	-0.0096* (0.0054)	-0.0011 (0.0083)	-0.0006 (0.0007)	-0.0012 (0.0085)	-0.0009 (0.0007)	-0.0006 (0.0006)
LEVERAGE	0.2369** (0.1031)	-0.0533 (0.1569)	0.0183 (0.0132)	-0.0503 (0.1639)	0.0247* (0.0135)	0.0174 (0.0130)
CFO	-0.1364 (0.6246)	-0.1169 (0.9507)	-0.6333*** (0.0801)	-0.1186 (0.9579)	-0.6369*** (0.0789)	-0.6353*** (0.0789)
SGROWTH	0.6982** (0.2167)	0.2609 (0.3299)	-0.0053 (0.0278)	0.2698 (0.3560)	0.0133 (0.0293)	-0.0008 (0.0275)
COFVOL	0.0974* (0.0577)	-0.0389 (0.0878)	0.0044 (0.0074)	-0.0376 (0.0902)	0.0070 (0.0074)	0.0037 (0.0073)
LOSS	-0.2362 (0.1758)	0.6331* (0.2676)	-0.0288 (0.0225)	0.6301* (0.2729)	-0.0352 (0.0224)	-0.0179 (0.0231)
ROA	-0.3675 (0.5226)	1.2972 (0.7955)	0.5295*** (0.0670)	1.2925 (0.8040)	0.5197*** (0.0662)	0.5520*** (0.0673)
BINDP	-0.6236** (0.2844)	-0.6109 (0.4330)	0.0334 (0.0364)	-0.6030 (0.4508)	0.0502 (0.0371)	0.0229 (0.0364)
<i>Model</i>						
R^2	0.2328	0.6154	0.6316	0.1655	0.6478	0.6471
<i>Adjusted R</i> ²	0.1342	0.581	0.5843	0.0446	0.5967	0.596
<i>N</i>	80	80	80	80	80	80

Statistical significance levels: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$, Standard errors values report in parentheses
Variables are defined in Table IV