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# Corporate governance and financial reporting quality: a comparative study

Arshad Hasan, Doaa Aly and Khaled Hussainey

## Abstract

**Purpose** – This paper aims to investigate the impact of corporate governance on financial reporting quality (FRQ) in Pakistan and the UK.

**Design/methodology/approach** – In this paper, three accrual-based models are used to analyse FRQ for a sample of 1,550 firm-year observations, including 78 Pakistani firms and 77 UK firms, for the period 2009–2018.

**Findings** – The analysis shows that board size has a negative impact on FRQ while foreign ownership has a positive impact for Pakistani and UK firms. It also shows that board independence has a positive impact on FRQ of Pakistani firms, while board meetings frequency and audit committee independence have a negative impact. We make no such observation for UK firms. In addition, the analysis shows that board gender diversity and ownership concentration negatively affect FRQ of UK firms. This study makes no such observation for Pakistani firms.

**Research limitations/implications** – Due to the study's focus on Pakistani and UK firms, the findings may not be generalizable to other developed and emerging economies.

**Practical implications** – The findings provide valuable insight to policymakers, regulators and investors by suggesting that the impact of board composition on FRQ of both Pakistani and UK firms is weak. The findings suggest that board size and foreign ownership are the attributes that require regulatory focus to increase FRQ. The negative impact of audit committee independence on FRQ induces rethinking among the policymakers in Pakistan and calls for fully independent audit committees.

**Originality/value** – To the best of the authors' knowledge, this is the first research endeavour to compare the context of a developed and an emerging economy regarding the impact of corporate governance on FRQ. It also contributes to the governance literature by using three measures of FRQ and a comprehensive set of corporate governance attributes.

**Keywords** Corporate governance, Board composition, Audit committees, Ownership structure, Financial reporting quality

**Paper type** Research paper

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## 1. Introduction

Capital markets are instrumental in making an economy function effectively and efficiently through the market participants (Beuselinck *et al.*, 2017; Ellili, 2022). Firms use financial statements to communicate their financial performance and position with these stock market participants who need to believe in the quality of information provided in these statements to make economic decisions. Financial reporting quality (FRQ) reflects the extent to which the financial statements of an entity provide transparent information about its operating performance, financial position and expected cash flows (Biddle *et al.*, 2009). FRQ reduces the cost of capital and improves the allocation of resources, which in turn stimulates economic growth (Gomariz and Ballesta, 2014). Therefore, FRQ is of prime concern not only for the potential stakeholders, but for the whole society as well, because it influences the economic decisions, which may ultimately affect the society at large (Gerged *et al.*, 2020). It is substantiated by a series of accounting frauds (Enron, WorldCom, etc.) and financial institution collapses (Lehman Brothers, AIG, etc.). As a result, the confidence

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of stakeholders towards the reliability of financial reporting has been shattered, while a much more significant social purpose justifies regulating this activity (Cohen *et al.*, 2004).

Corporate governance refers to the rules, regulations and practices for the operation and control of businesses [organisation for economic co-operation and development (OECD), 2015]. It describes the monitoring mechanism to ensure the quality of financial information and improve the level of transparency in the financial reporting process. Cohen *et al.* (2004) suggest that board composition, ownership structure and audit committee are the key mechanisms of corporate governance. Capital market regulators are working endlessly to ensure the dissemination of relevant and reliable information to all stakeholders through implementing these mechanisms and best practices (OECD, 2015). The association between corporate governance practices and FRQ is widely debated from the perspective of developed economies (Beuselinck *et al.*, 2017; Arun *et al.*, 2015), while the emphasis has recently been diverted to the emerging markets (Cumming *et al.*, 2015; Klai and Omri, 2011). This study is motivated by corporate governance reforms in emerging economies.

Globalisation of capital markets influences country-level corporate governance systems and facilitates their convergence to bring about international harmonisation of corporate governance practices (Fang *et al.*, 2015). However, the unique institutional setting in each country has a substantial effect on the corporate governance mechanisms it adopts. The reason is that the systems of corporate governance and the structure of corporate entities vary from country to country because each country has its own characteristics (González and García-Meca, 2014). Therefore, the literature provides contradictory findings of the association between corporate governance attributes and FRQ for developed and emerging economies (Yasser *et al.*, 2017). Owing to these conflicting research findings from research around the world, this study aims to explore the impact of corporate governance practices on FRQ in an emerging economy (Pakistan) and a developed country (the UK).

Comparing the impact of corporate governance practices on FRQ between Pakistan and the UK is useful because both have different economic, regulatory and cultural contexts. The critical disparities in institutional settings comprise a developed capital market, vigorous investor rights and robust regulatory framework in the UK, while a less developing capital market, poor investor protection and weak regulatory structure in Pakistan. Table 2 shows that UK firms have more independent boards (60% in the UK vs 17% in Pakistan), greater board gender diversity (19% in the UK vs 6% in Pakistan), less dispersed shareholding (23% in the UK vs 64% in Pakistan), higher foreign ownership (63% in the UK vs 24% in Pakistan) and more independent audit committees (99% in the UK vs 30% in Pakistan).

In this paper, we investigate the impact of corporate governance on FRQ in Pakistan and the UK. Three accrual-based models are used to analyse FRQ for a sample of 1,550 firm-year observations, including 78 Pakistani firms and 77 UK firms, for the period 2009–2018. We find that board size has a negative impact on FRQ while foreign ownership has a positive impact for Pakistani and UK firms. We also find that board independence has a positive impact on FRQ of Pakistani firms, while board meetings frequency and audit committee independence have a negative impact. We make no such observation for UK firms. In addition, the analysis shows that board gender diversity and ownership concentration negatively affect FRQ of UK firms. We make no such observation for Pakistani firms. These results are robust to various model specifications.

This study makes three major contributions to the literature. First, so far as we are aware, it is the only paper to examine the measures and compares FRQ of a developed and an emerging economy. Second, we noted that no effort has been made before to compare the context of a developed and an emerging economy regarding the impact of corporate governance mechanisms on FRQ. So, our paper adds to the limited research on the relations between corporate governance and FRQ in an emerging market (Pakistan) and

provides a more comprehensive picture of this association from the perspective of a developed economy (UK). Third, we extend the growing body of literature by using a comprehensive set of corporate governance attributes embracing board composition, ownership structure and audit committee and uses the data collected over a relatively long and recent period.

The rest of the paper is structured as follows. Section 2 provides regulatory background, reviews the literature and develops the hypotheses. Section 3 presents the research design. Section 4 reports and discusses the empirical results. Section 5 concludes.

## 2. Relevant literature and research hypotheses

### 2.1 Regulatory background

The Cadbury Committee published the first version of the Corporate Governance Code in 1992 to establish a high-quality monitoring and control mechanism in the UK's equity market. The contents of the Code were revised in 1998, 2003, 2008, 2010 and 2012. The recent version has been issued by the Financial Reporting Council in 2016 (Council, 2016). The UK corporate governance codes have improved the standard of governance and the level of trust in the corporate sector, but still require a stronger focus on the culture, more workforce engagement, stricter independence definition and greater diversity (Elmagrhi *et al.*, 2016; Price *et al.*, 2018). Inspired by the corporate governance reforms worldwide, the Securities and Exchange Commission of Pakistan (SECP) issued the Code of Corporate Governance in 2002. The Code has been revised in 2012 and 2017 to keep the governance framework relevant and useful (SECP, 2017). The World Bank reports that corporate governance practices adopted by the listed companies in Pakistan have improved and the regulatory framework has been strengthened over the years (ROSC, 2018). However, the areas of improvement include the protection of stockholder rights, the disclosure of beneficial ownership and the composition of independent boards.

Both the UK and Pakistani corporate governance codes are not a rigid set of rules, but consist of principles and provisions based on the “comply or explain” approach. Both the codes require a unitary board system, a separate role for the Chairperson and Chief Executive Officer, an audit committee comprising of not less than three members, and also focus on shareholder engagement. However, UK requires that at least half the board should comprise independent directors, while Pakistan requires a minimum of one-third only. The chairperson of the board should be an independent director in UK, while the same is not required to be an independent director in Pakistan. All the audit committee members in the UK should be independent directors, while Pakistan requires at least one member to be independent. Both the Codes emphasize sufficient gender diversity on corporate boards, while Pakistan requires a minimum of one female director. Overall, the latest Code in Pakistan is a step towards bringing the corporate governance practices in Pakistan at par with the global best practices, but it is not so stringent as that of the UK.

### 2.2 Financial reporting quality

FRQ is a subjective concept that reflects the extent to which financial information is free of manipulation and accurately indicates an enterprise's financial position and operating performance (Tang *et al.*, 2008). Biddle *et al.* (2009) define FRQ as “the precision with which financial reports convey information about the firm's operations, in particular, its cash flows, in order to inform equity investors”. The Conceptual Framework for Financial Reporting contemplates adherence to financial information's objective and qualitative characteristics as a basic prerequisite for FRQ. Jonas and Blanchet (2000) define FRQ as “quality financial reporting is full and transparent financial information that is not designed to obfuscate or mislead users”. They further suggest that FRQ should serve the dual purpose of meeting user needs and investor protection. Cohen *et al.* (2004) define FRQ in terms of

the absence of earnings management, which is the deliberate exploitation of the financial reporting process. This practice exploits the discretion permitted by accounting standards and distorts the usefulness of earnings to its potential users. The motives behind earnings management include capital market motivations, management compensation and debt covenants, which result in lower quality of financial information (Gomariz and Ballesta, 2014).

The financial statements prepared by entities may look similar from one country to another, but there are differences due to social, economic and legal circumstances. There are no generally accepted measures of FRQ and empirical researchers measure it through certain attributes of financial information (Francis *et al.*, 2008). Accrual quality is most extensively used in this respect as firms use discretionary accruals to manipulate earnings leading to poor FRQ (Dimitropoulos and Asteriou, 2010). Jones (1991), Dechow *et al.* (1995); and Kothari *et al.* (2005) are the models most widely used in corporate governance studies to measure FRQ. The study contributes to literature by using these commonly used models to measure and compare a developed and emerging economy's FRQ.

### 2.3 Corporate governance mechanisms

Agency theory provides a theoretical foundation for corporate entities' direction and control through different governance mechanisms (González and García-Meca, 2014). These mechanisms enhance the relevance and reliability of financial statements, which investors use to make their economic decisions (Gerged *et al.*, 2020). Evidence suggests that board composition, ownership structure and audit committee are the key mechanisms of corporate governance (Cohen *et al.*, 2004). The composition of a board is the critical governance mechanism that sets firm's direction and monitors its management to achieve the corporate objectives (Allegrini and Greco, 2013; Torchia and Calabro, 2016). Ownership structure is the key pillar of corporate governance framework as it influences the management incentives, firm performance and disclosure practices (Alnabsha *et al.*, 2018; Aygun *et al.*, 2014). The audit committee implements efficient decision control and oversight mechanisms in a firm to ensure the integrity of its financial reporting process (Fodio *et al.*, 2013; Sharma and Kuang, 2014).

*2.3.1 Board composition.* Board composition influences the effectiveness of oversight function and sets the direction of a firm (Cumming *et al.*, 2015; Williamson, 2008; Zadeh *et al.*, 2018). Peasnell *et al.* (2005) contend that board size has a positive impact on FRQ of the UK firms as larger boards are less likely to be dictated by controlling shareholders and can effectively discharge their monitoring obligations. Aygun *et al.* (2014) suggest a positive association between board size and the quality of accounting information, measured by Jones (1991) and Dechow *et al.* (1995) models, in a Turkish setting. Using the Polish data, Dobija *et al.* (2021) find that board size has a positive impact on FRQ, measured by Jones (1991) and Dechow *et al.* (1995) models, owing to more wisdom, valuable experience and diverse background. However, Alnabsha *et al.* (2018) argue that board size is negatively related to the level of corporate disclosures in Libya. Likewise, González and García-Meca (2014) report that board size is positively associated with earnings management and so it negatively influences FRQ in the Latin American context. Fodio *et al.* (2013) advocate that size of a board is its key resource which has a positive impact on FRQ of Nigerian firms measured by modified Jones (Dechow *et al.*, 1995) model. Agency theory contends that a larger corporate board strengthens its capacity and improves the monitoring of firm operations (Allegrini and Greco, 2013). We, therefore, hypothesise that:

*H1. Board size positively impacts FRQ.*

Corporate boards should include independent directors to exercise unbiased judgment and protect capital market participants' interests (Mohammad *et al.*, 2016; OECD, 2015). Chang and Sun (2009) argue that the presence of independent directors improves FRQ of

US firms, measured by [Kothari et al. \(2005\)](#) model, as they are vigilant gatekeepers who maintain check and balance on the firm's management. [Peasnell, et al. \(2005\)](#) contend that board independence has a positive impact on FRQ of the UK firms, measured by [Jones \(1991\)](#) and [Dechow et al. \(1995\)](#) models. [Torchia and Calabro \(2016\)](#) report that independence of a corporate board in Italy is positively related to the transparency of financial disclosures. Likewise, [Dimitropoulos and Asteriou \(2010\)](#) advocate that board independence has a positive impact on FRQ in the Greece context. Using the Kenyan data, [Iraya et al. \(2015\)](#) find that the firms with a higher fraction of independent directors are less likely to engage in discretionary reporting practices, proxied by [Dechow et al. \(1995\)](#) model. [Fodio et al. \(2013\)](#) provide that independent directors in Nigeria undertake key monitoring role to resolve the agency conflicts resulting in enhanced quality of financial information, measured by [Dechow et al. \(1995\)](#) model. We, therefore, hypothesise that:

*H2. Board independence positively impacts FRQ.*

Gender diversity brings distinct characteristics to the board which improve the monitoring of firm operations and managerial actions ([Darmadi, 2013](#); [Terjesen et al., 2016](#)). Women demonstrate more independence in making their decisions, low tolerance of unethical conduct and less risk taking ([Habbash, 2010](#)). [Srinidhi et al. \(2011\)](#) argue that board gender diversity constrains earnings management and strengthens FRQ of US firms. [Dobija et al. \(2021\)](#) contend that Polish female directors are less likely to engage in discretionary accounting practices, measured by [Jones \(1991\)](#) and [Dechow et al. \(1995\)](#) models, and advocate for enhancing the gender balance on corporate boards. However, [Arun et al. \(2015\)](#) submit that the level of gender diversity on UK corporate boards has a negative impact on FRQ, measured by [Dechow et al. \(1995\)](#) model. [Arioglu \(2020\)](#) finds a positive association between board gender diversity and earnings quality of Turkish firms. [Cumming et al. \(2015\)](#) advocate that female directors in Chinese firms are more active in obtaining voluntary information which reduces the information asymmetry faced by potential investors and consequently increases the quantity and quality of firm disclosures. [Orazalin \(2019\)](#) suggests that board gender diversity improves FRQ of Kazakhstani firms, measured by modified Jones ([Dechow et al., 1995](#)) model. We, therefore, hypothesise that:

*H3. Board gender diversity positively impacts FRQ.*

Board meeting is the mechanism through which a board acquires information to execute its oversight responsibilities ([Alnabsha et al., 2018](#); [Arora and Sharma, 2016](#)). [González and García-Meca \(2014\)](#) argue that frequent board meetings enhance the earnings quality of Latin American firms measured by [Dechow et al. \(1995\)](#) model because regular meetings assist the firm to recognise and mitigate the potential challenges associated with the relevance and reliability accounting information. However, [Habbash \(2010\)](#) advocates that frequency of meetings is an indication of the board's response to business challenges instead of oversight responsibility for financial reporting. Using the data from 47 developed and emerging countries, [Terjesen et al. \(2016\)](#) argue that these meetings are not generally useful because routine tasks absorb much of the meetings time, while corporate directors are less reactive to monitoring obligations owing to their hectic schedule. Likewise, [Iraya et al. \(2015\)](#) report a significant negative association between number of board meetings and earnings quality, proxied by modified Jones ([Dechow et al., 1995](#)) model, for firms operating in Kenya (a weak governance regime). [Cumming et al. \(2015\)](#) contend that Chinese firms with greater board meeting frequency are more likely to have lower FRQ as their directors meet more often to discuss any questionable activities. We, therefore, hypothesise that:

*H4. The frequency of board meetings negatively impacts FRQ.*

**2.3.2 Ownership structure.** Ownership structure influences a firm's board composition and the effectiveness of its monitoring mechanism ([Darko et al., 2016](#); [Iraya et al., 2015](#)). [Habbash \(2010\)](#) advocates that ownership concentration induces agency problems owing

to potential conflict of interests between the majority and minority shareholders, which negatively influences FRQ of the UK firms, measured by [Dechow et al. \(1995\)](#) model. [Arioglu \(2020\)](#) suggests that block-holders may appropriate the firm's resources due to their authority, which encouraging opportunistic behaviour and earnings management in Turkish firms. Using a sample of firms from the developed and emerging economies, including Australia, Malaysia and Pakistan, [Yasser et al. \(2017\)](#) advocate that ownership concentration diminishes the credibility of the reported earnings to outside investors as it gives the controlling shareholders both the ability and incentive to manipulate earnings for outright expropriation. [Klai and Omri \(2011\)](#) find that concentrated ownership is the primary cause of weak governance system and inadequate financial disclosures in Tunisian firms. Using the Jordanian data, [Alhaddad and Whittington \(2019\)](#) contend that ownership concentration negatively influences the independence of the board, which reduces its oversight capacity and the quality of financial information. We, therefore, hypothesise that:

*H5. Ownership concentration negatively impacts FRQ.*

The increased presence of institutional ownership has turned it into a major force in the capital markets ([Alnajjar, 2010](#); [OECD, 2015](#)). [Burns et al. \(2010\)](#) argue that the presence of institutional shareholders improves FRQ of US firms because of the incentives to safeguard their investment proactively. [Aygün et al. \(2014\)](#) advocate that institutional investors are highly skilled, well-resourced and exercise their ownership functions meritoriously, which reduces the likelihood of earnings management in Turkish firms, measured by [Jones \(1991\)](#) and [Dechow et al. \(1995\)](#) models. Using a sample of firms from developed and emerging economies, [Lel \(2019\)](#) and [Terjesen et al. \(2016\)](#) provide that institutional ownership reduces managerial opportunism and agency problems, which enhances FRQ. Likewise, [Alnabsha et al. \(2018\)](#) contend that institutional ownership in Libyan firms is positively associated with disclosure practices as managers disclose more information to meet the information needs of these investors. [Kamran and Shah \(2014\)](#) find that institutional ownership has a positive impact on FRQ of Pakistani firms, measured by [Jones \(1991\)](#), [Dechow et al. \(1995\)](#); and [Kothari et al. \(2005\)](#) models. [Klai and Omri \(2011\)](#) suggest that the presence of institutional investors in Tunisian firms strengthens their oversight function and improves the quality of financial information. We, therefore, hypothesise that:

*H6. Institutional ownership positively impacts FRQ.*

Managerial ownership is a mechanism that aligns ownership and control through stock ownership ([Aldhamari et al., 2017](#); [Allam, 2018](#)). [Lafond and Roychowdhury \(2008\)](#) argue that managerial ownership in US firms provides direct economic incentives for managers to engage in active monitoring and to mitigate agency problems. [An \(2015\)](#) contends that the presence of managerial ownership in South Korean firms has a positive impact on the level of corporate disclosure practices. However, [Aygün et al. \(2014\)](#) suggest that managerial ownership is negatively related to earnings quality in Turkish firms. [Kamran and Shah \(2014\)](#) find that managerial ownership in Pakistani firms encourages opportunistic behaviour, which leads to lower quality of accounting earnings. [González and García-Meca \(2014\)](#) advocate that managerial ownership is considered a corporate governance mechanism in the Latin American context, that constrains earnings management measured by [Dechow et al. \(1995\)](#) model. Using the Libyan data, [Alnabsha et al. \(2018\)](#) find that managers are more oriented to their monitoring role when they have a substantial ownership stake in the company. [Alhaddad and Whittington \(2019\)](#) and [Klai and Omri \(2011\)](#) advocate that managerial ownership is positively associated with the quality of financial information in Jordanian and Tunisian settings. We, therefore, hypothesise that:

*H7. Managerial ownership positively impacts FRQ.*

Foreign ownership has played a major role in the emergence of the present global capital market, which is the critical factor in improving the quality of accounting information ([Fang et al., 2015](#); [Udin et al., 2017](#)). Firms are required to implement a sound corporate

governance structure and adhere to an internationally accepted financial reporting system to ensure the flow of capital from a larger pool including foreign investors (OECD, 2015). Beuselinck *et al.* (2017) contend that foreign investors, enhance the monitoring capacity of corporate boards in Europe and strengthen FRQ measured by Jones (1991) model. An (2015) advocates that the level of foreign ownership is positively associated with FRQ of South Korean firms. Using a sample of firms from 76 developed and emerging economies, Lei (2019) finds that the presence of foreign shareholders constrains earnings management and alleviates information asymmetry. Debnath *et al.* (2021) submit that foreign ownership boosts the financial oversight of Bangladeshi firms and consolidates their governance structure leading to enhanced quality of financial information. Alzoubi (2016) finds that the presence of foreign investors in the Jordanian firms has a positive impact on FRQ measured by the modified Jones model. We, therefore, hypothesise that:

*H8. Foreign ownership positively impacts FRQ.*

**2.3.3 Audit committee.** Audit committee performs a vital role in assisting the board to execute its monitoring responsibilities regarding financial reporting, risk management and audit (Allegrini and Greco, 2013; Alzeban, 2019). The size of an audit committee represents its capacity, knowledge base and expertise (Rahman and Ali, 2006). Agency theory suggests that a larger audit committee can effectively discharge its corporate oversight function (Alrassas and Kamardin, 2016). Using a sample of New Zealand firms, Sharma and Kuang (2014) find that audit committee size is positively associated with earnings quality measured by the modified Jones model. The reason is that the committee assignments are spread across a sufficient number of directors, which constrains the likelihood of opportunistic behaviour. Mardessi (2021) argues that audit committee size is positively associated with FRQ of Dutch companies. Likewise, Fodio *et al.* (2013) document that audit committee size has a negative impact on earnings management in the Nigerian context, measured by Dechow *et al.* (1995) model. Nelson and Devi (2013) contend that audit committee size is positively related to the quality of financial information in a Malaysian setting. We, therefore, hypothesise that:

*H9. Audit committee size positively impacts FRQ.*

The empirical literature suggests that an audit committee should be independent to exercise unbiased judgement, avoid conflict of interests and protect the capital market participants (Soliman and Ragab, 2014). Sharma and Kuang (2014) contend that independent audit committee ensures effective monitoring of firm performance and audit quality, which positively influence FRQ of New Zealand firms measured by the modified Jones model. Mardessi (2021) finds that independent audit committees constrain the likelihood of earnings management in the Dutch context. On the other hand, Fodio *et al.* (2013) advocate that audit committee independence has a negative impact on the quality of financial information in a weak governance system. Using a sample of firms from Hong Kong, Singapore and Malaysia, Woidtke and Yeh (2013) argue that an audit committee is effective only when it is fully independent. Kapoor and Goel (2017) suggest that the independence of an audit committee is an essential attribute that improves its efficiency and resolves agency conflicts, which strengthens the credibility of the financial reporting process. Using the Egyptian data, Soliman and Ragab (2014) provide that audit committee independence is positively associated with FRQ as these committees facilitate objective assessment and oversight. We, therefore, hypothesise that:

*H10. Audit committee independence positively impacts FRQ.*

### 3. Research design

#### 3.1 Sample and data

The sample population for this study is KSE 100 Index and FTSE 100 Index listed on the Pakistan Stock Exchange and London Stock Exchange, respectively. Financial data of the firms operating in both countries should follow the same accounting practices to provide an

unbiased measure of FRQ (Yasser *et al.*, 2017). The UK adopted International Financial Reporting Standards in 2005 (Habbash, 2010), while Pakistan completed its compliance process in 2008 (Deloitte, 2008). Consequently, the sample period starts from 2009 and ended on 2018 due to data availability at the time of the analysis. We excluded financial firms because of their unique accounting practices (Elshandidy *et al.*, 2015). The final sample for this study is 1,550 firm-year observations, comprising 78 Pakistani firms and 77 UK firms. Adopting within the overall framework of quantitative research strategy, a secondary method for data collection is used in this study. Corporate governance data are manually collected from the annual reports available on the websites of the selected firms, while financial data are extracted from the OSIRIS database.

After collecting the necessary data, preliminary assessments are conducted to determine the suitability of the statistical tests to be used. The Lagrange multiplier test is used to understand whether the collected data represent panel or pooled. The  $p$ -value is lower than 0.05 for all the models. Therefore,  $H_0$  is rejected, and panel data are used for model estimation. Moreover, the Hausman test is used to determine the nature of panel data, i.e. whether it is a fixed or random effect. The  $p$ -value for the Hausman test is lower than 0.05 for all the models. Therefore,  $H_0$  is rejected, which indicates that the model has to be estimated through the fixed effects method. Finally, the Woolridge test is used to test for autocorrelation in the panel data. The  $p$ -value for all the models is lower than 0.05, suggesting that autocorrelation is present in the panel data. Therefore, the study uses the non-parametric generalised least squares (GLS) regression. GLS estimation method reweights the error variance and thus corrects the heteroscedasticity and autocorrelation in data (González and García-Meca, 2014; Habbash, 2010). This regression technique is also used to address the possibility of a spurious relationship between the outcome and predictor variables owing to the omission of some relevant explanatory variables (An, 2009).

### 3.2 Measures of financial reporting quality

The study uses accrual-based models to capture the FRQ. Firm managers generally engage in accruals management, as it is less obvious and more challenging to detect (Francis *et al.*, 2008; Jones *et al.*, 2008). Therefore, we used three different proxies on the basis of accounting fundamentals, previous research and summary statistics.

The first measure of FRQ is obtained from the model developed by Jones (1991) which regresses the total accruals on the gross property, plant and equipment and changes in revenues. Non-discretionary accruals are computed as a linear function of this model through its coefficients (Dimitropoulos and Asteriou, 2010; Francis *et al.*, 2008). The model is presented as follows:

$$\frac{TA_{it}}{TA_{it-1}} = \beta_0 + \beta_1 \frac{1}{TA_{it-1}} + \beta_2 \frac{\Delta REV_{it}}{TA_{it-1}} + \beta_3 \frac{PPE_{it}}{TA_{it-1}} + \varepsilon_{it} \quad (1)$$

where  $TA$  is total accruals computed as the change in non-liquid current assets, minus the change in current liabilities, plus the change in short-term bank debt, minus depreciation;  $\Delta REV$  is the change in revenue from year  $t-1$  to  $t$ ;  $PPE$  is the property, Plant & Equipment; and  $TA_{t-1}$  is the lagged total assets.  $i$  is the individual firm,  $t$  represents the time-period,  $\beta$  is the estimated parameter, while  $\varepsilon$  represents the error term. The residuals from equation (1) are contemplated as discretionary accruals. Hence, the first proxy for FRQ is the absolute value of residuals multiplied by  $-1$ , and a higher value represents higher FRQ (Jones<sub>it</sub> =  $-|\varepsilon_{it}|$ ).

The second measure is based on the model of discretionary accruals developed by Dechow *et al.* (1995), also known as modified Jones model. Under this method, total accruals are regressed on the gross property, plant and equipment, while the change in revenue is adjusted for variation in receivables ( $\Delta AR$ ) on the assumption that changes in

credit sales provoke revenue manipulation (González and García-Meca, 2014; Jones *et al.*, 2008). The model is presented below:

$$\frac{TA_{it}}{TA_{it-1}} = \beta_0 + \beta_1 \frac{1}{TA_{it-1}} + \beta_2 \frac{\Delta REV_{it} - \Delta AR_{it}}{TA_{it-1}} + \beta_3 \frac{PPE_{it}}{TA_{it-1}} + \varepsilon_{it} \quad (2)$$

As the magnitude of accruals varies with firm size, all terms are deflated by lagged total assets. The residuals from equation (2) indicate variation in total accruals unexplained by the changes in credit sales and property, plant and equipment. A higher unexplained portion implies the lower quality of accruals. Therefore, the second measure of FRQ is the absolute value of the residuals multiplied by  $-1$  and a higher value denotes higher FRQ ( $Dechow_{it} = -|\varepsilon_{it}|$ ).

The third first measure of FRQ is obtained following the model proposed by Kothari *et al.* (2005), which is an extension of the Dechow *et al.* (1995) model. It incorporates return on assets (ROA) as an explanatory variable in the discretionary accrual regression to mitigate the challenge of performance related misspecification and remove the probable impact of correlation between discretionary accruals and firm performance (Jones *et al.*, 2008). The model is presented as follows:

$$\frac{TA_{it}}{TA_{it-1}} = \beta_0 + \beta_1 \frac{1}{TA_{it-1}} + \beta_2 \frac{\Delta REV_{it} - \Delta AR_{it}}{TA_{it-1}} + \beta_3 \frac{PPE_{it}}{TA_{it-1}} + \beta_4 \frac{ROA_{it}}{TA_{it-1}} + \varepsilon_{it} \quad (3)$$

The residuals from equation (3) indicate the discretionary component of total accruals. Hence, the third proxy for FRQ is the absolute value of residuals multiplied by  $-1$ , and a higher value represents higher FRQ ( $Kothari_{it} = -|\varepsilon_{it}|$ ).

### 3.3 Independent variables

To investigate the impact of corporate governance on FRQ in the UK and Pakistan, three sets of independent variables are used on the basis of cited literature. The board composition (board size, board independence, board gender diversity, board meeting frequency), ownership structure (ownership concentration, institutional ownership, managerial ownership, foreign ownership) and audit committee (audit committee size, audit committee independence). These independent variables, their definitions and measures are described in Table 1.

### 3.4 Control variables

Prior research suggests that determining the association between corporate governance practices and FRQ without controlling for the firm characteristics may cause heteroscedasticity and misspecification problems in the regression models (González and García-Meca, 2014; Peasnell *et al.*, 2005). Therefore, this study uses eight control variables to proxy for firm size, leverage, performance, liquidity, financial capacity, growth opportunities, age and Big Four auditors. These variables are included on the basis of empirical literature which demonstrates their impact on FRQ (Firoozi *et al.*, 2016; Habbash, 2010). The control variables, their definitions and measures are presented in Table 1.

### 3.5 Empirical model

The following regression model is proposed to test the given hypotheses:

**Table 1** Definition and measurement of variables

Variable	Definition	Measure
<i>Independent variables</i>		
BSIZE	Board size	Total number of directors on the board
BIND	Board independence	Proportion of independent directors to total board members
BGD	Board gender diversity	Proportion of female directors to total board members
BMEET	Board meetings	Number of board meetings held during the financial year
COWN	Ownership concentration	Percentage of total shares outstanding belonging to block holders having 5% or more shares
IOWN	Institutional ownership	Percentage of total shares held by institutional investors
MOWN	Managerial ownership	Percentage of total shares belonging to the board of directors
FOWN	Foreign ownership	Percentage of total shares outstanding held by foreign investors
AUDS	Audit committee size	Total number of members serving on the audit committee
AUDI	Audit committee independence	The fraction of independent audit committee members to audit committee size
<i>Control variables</i>		
BIG4	Big Four auditors	A dummy variable takes 1 if the auditor is from big 4, otherwise 0
SIZE	Firm size	Natural logarithm of total assets of a firm
ROA	Firm performance	Ratio of income before tax to total assets
LIQ	Firm liquidity	Ratio of the current assets to current liabilities
MTB	Growth opportunities	Market value of a firm's equity divided by its book value
FCF	Financial capacity	Free cash flow of a firm divided by its net sales
LEV	Firm leverage	Ratio of a firm's total debt to its total assets
AGE	Firm age	Natural logarithm of the number of years a firm operates in the market

$$\begin{aligned}
FRQ_{it} = & \beta_0 + \beta_1 BSIZE_{it} + \beta_2 BIND_{it} + \beta_3 BGD_{it} + \beta_4 BMEET_{it} + \beta_5 COWN_{it} \\
& + \beta_6 IOWN_{it} + \beta_7 MOWN_{it} + \beta_8 FOWN_{it} + \beta_9 AUDS_{it} + \beta_{10} AUDI_{it} + \beta_{11} BIG4_{it} \\
& + \beta_{12} SIZE_{it} + \beta_{13} ROA_{it} + \beta_{14} LIQ_{it} + \beta_{15} MTB_{it} + \beta_{16} FCF_{it} + \beta_{17} LEV_{it} \\
& + \beta_{18} AGE_{it} + \varepsilon_{it}
\end{aligned}
\tag{4}$$

where, for firm  $i$  and time  $t$ ,  $FRQ$  is the dependent variable and represents FRQ;  $BSIZE$  is board size;  $BIND$  is board independence;  $BGD$  is board gender diversity;  $BMEET$  is board meetings;  $COWN$  is ownership concentration;  $IOWN$  is institutional ownership;  $MOWN$  is managerial ownership;  $FOWN$  is foreign ownership;  $AUDS$  is audit committee size;  $AUDI$  is audit committee independence;  $BIG4$  is big four auditors;  $SIZE$  is firm size;  $ROA$  is firm performance;  $LIQ$  is firm liquidity;  $MTB$  is growth opportunities;  $FCF$  is financial capacity;  $LEV$  is leverage; and  $AGE$  is firm age. To mitigate the undue influence of outliers, all continuous variables are winsorized at the 1st and 99th percentile.

## 4. Results and discussion

### 4.1 Univariate analysis

Table 2 provides univariate analysis represented by descriptive statistics and comparison tests for the FRQ measures, corporate governance attributes and firm specific characteristics of the UK and Pakistan subsamples. Descriptive statistics exhibit the mean, standard deviation and median, while comparison tests identify the differences between the UK and Pakistani firms. For continuous variables, the non-parametric Wilcoxon rank-sum (Mann–Whitney) tests highlight the significant differences in mean rank values, while a test of proportions focuses on the significant differences in mean values for binary variables.

The descriptive statistics and comparison tests show that there are significant differences in all the measures of FRQ, *Jones*, *Dechow* and *Kothari*, between the UK and the Pakistani firms. The lower values for Pakistan imply a poorer fit of the model and represent an

**Table 2** Descriptive statistics and differences

	Pakistan					UK			Difference
Variable	N	Mean	SD	Mdn	N	Mean	SD	Median	z-value
Panel A: Continuous variables									
Jones	780	−0.018	0.020	−0.013	770	−0.014	0.051	−0.010	7.678 **
Dechow	780	−0.019	0.004	−0.018	770	−0.014	0.050	−0.010	15.081 ***
Kothari	780	−0.018	0.009	−0.016	770	−0.013	0.050	−0.010	13.329 ***
BSIZE	780	8.668	1.965	8.000	770	10.627	2.317	10.000	17.764 ***
BIND	780	0.170	0.130	0.143	770	0.602	0.133	0.600	32.866 ***
BGD	780	0.056	0.097	0.000	770	0.188	0.103	0.182	23.132 ***
BMEET	780	5.731	2.481	5.000	770	8.321	2.553	8.000	23.119 ***
COWN	780	0.642	0.198	0.681	770	0.234	0.168	0.186	−29.318 ***
IOWN	780	0.512	0.319	0.588	770	0.674	0.233	0.705	9.780 ***
MOWN	780	0.145	0.222	0.018	770	0.022	0.094	0.001	−8.178 ***
FOWN	780	0.242	0.301	0.077	770	0.629	0.166	0.649	22.529 ***
AUDS	780	3.712	0.919	3.000	770	4.101	1.099	4.000	7.850 ***
AUDI	780	0.296	0.229	0.333	770	0.990	0.045	1.000	35.120 ***
SIZE	780	12.096	1.233	12.072	770	15.946	1.440	15.846	32.315 ***
ROA	780	0.126	0.124	0.106	770	0.089	0.086	0.075	−5.681 ***
LIQ	780	1.112	0.997	0.870	770	1.470	1.208	1.170	9.828 ***
MTB	780	2.914	5.489	1.384	768	4.436	8.178	2.414	10.553 ***
FCF	780	0.582	1.280	0.401	770	0.893	2.488	0.575	4.917 ***
LEV	780	0.205	0.198	0.167	770	0.812	0.479	0.781	25.724 ***
AGE	780	3.579	0.593	3.689	770	3.661	0.896	3.611	2.167 ***
Panel B: Binary variables									
BIG4	780	0.803	0.398	1.000	770	0.988	0.108	1.000	11.919 ***
Notes: *** $p < 0.01$ ; ** $p < 0.05$ ; * $p < 0.1$									

Notes: \*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*  $p < 0.1$

emerging economy that has unique political, social and economic circumstances. Consequently, FRQ of Pakistani firms is lower than that of UK firms.

The results suggest that differences in all the board composition characteristics are statistically significant, which indicate that UK boards are larger (Mean: UK 10.6, Pakistan 8.7), more independent (Mean: UK 60%, Pakistan 17%), have greater women representation (Mean: UK 19%, Pakistan 6%) and are more active as compared to Pakistan. Similarly, differences in the ownership structure attributes are also significant, indicating that the UK firms have lower block holdings (Mean: UK 23%, Pakistan 64%), lower managerial ownership (Mean: UK 2.2%, Pakistan 14.5%) and a higher degree of institutional and foreign ownership (Mean: UK 63%, Pakistan 24%) than the Pakistani firms. Likewise, audit mechanism factors are also statistically significant implying that UK firms have larger audit committees that are more independent (Mean: UK 99%, Pakistan 30%) compared to the Pakistani firms. Moreover, the UK firms have significantly larger size, greater proportion of debt in their capital structure, more growth opportunities, higher cash resources, while these firms are less profitability, older, more liquid and more likely to be audited by the big four auditors than the Pakistani firms. Overall, UK firms are associated with better governance mechanisms and expected to be seeking higher FRQ.

## 4.2 Bivariate analysis

Table 3 provides non-parametric Spearman rank correlations for Pakistan and the UK, respectively. The correlation coefficients for all the FRQ measures exhibit a positive and significant correlation with each other in both countries. This significant relationship between the dependent variables is not surprising and is considered a relevant instrument for accrual quality proxies (Jones *et al.*, 2008; Peasnell, *et al.*, 2005). The variance inflation factor statistics for all independent variables indicate that multicollinearity does not appear

**Table 3** Spearman correlation matrix

	Jones	Dechow	Kothari	BSIZE	BIND	BGD	BMEET	COWN	IOWN	MOWN	FOWN	AUDS	AUDI	BIG4	SIZE	ROA	LIQ	MTB	FCF	LEV	AGE
Jones																					
Dechow	0.748***																				
Kothari	0.898***	0.786***																			
BSIZE	0.893***	0.695***	0.032																		
BIND	-0.099***	-0.101***	-0.078**																		
BGD	0.082*	0.096***	0.090**	0.082**																	
BMEET	-0.125***	-0.122***	-0.119***	-0.004	0.009																
COWN	-0.124***	-0.129***	-0.131***	-0.058	-0.148**																
IOWN	0.051	0.05	0.047	0.034	0.066*	0.105***															
MOWN	0.066*	0.079*	0.081**	-0.190***	-0.398**	-0.223***	-0.154***														
FOWN	0.068*	0.063*	0.065*	0.130***	0.012	0.024	0.01	-0.104***													
AUDS	0.138**	0.133*	0.133**	0.118*	0.080*	0.173***	0.066*	-0.139***													
AUDI	0.074*	0.077**	0.077**	0.029	0.024	-0.135***	-0.011	0.002	-0.028	0.043	0.02	-0.085**	-0.139***	0.248**	0.112**	0.145***	0.105***	0.130**	0.023	-0.065**	0.107***
BIG4	0.126**	0.124*	0.121**	0.072**	-0.036	0.054	0.140***	-0.086**	-0.117***	-0.134***	-0.045	0.041	-0.025	0.094***	0.136**	0.166***	0.151***	0.293**	0.113**	-0.361***	-0.157***
SIZE	-0.132***	-0.116***	-0.120***	0.495***	0.387***	0.188***	0.088**	-0.157***	0.113***	-0.481**	0.110***	0.094***	-0.071**	0.142***	-0.216***	-0.216***	-0.007	-0.106***	-0.143**	0.143***	-0.042
ROA	0.274**	0.272*	0.258***	-0.072**	0.01	0.033	-0.156***	-0.007	0.05	0.041	0.094**	0.095***	0.035	-0.053	-0.335***	-0.335***	0.444**	0.557*	0.514**	-0.466***	0.004
LIQ	0.125**	0.118**	0.123***	-0.187***	-0.067*	-0.141***	-0.083**	0.210***	-0.063*	0.285**	0.091**	-0.019	0.046	-0.168***	-0.289***	0.186***		0.140**	0.354***	-0.558***	-0.024
MTB	0.283**	0.278**	0.269***	-0.119**	-0.099**	0.089*	-0.158***	-0.124**	0.024	-0.003	0.008	0.125***	-0.034	-0.015	-0.306**	0.474**	-0.028		0.211**	-0.352***	0.060*
FCF	-0.151***	-0.127***	-0.137**	0.068*	0.101***	-0.016	-0.037	-0.009	0.146***	-0.102**	0.065*	0.039	0.027	-0.093*	0.078**	0.100***	0.124***	0.056		-0.324***	-0.028
LEV	-0.068*	-0.072**	-0.074**	0.170**	0.100**	0.029	0.072**	-0.184**	-0.039	-0.239**	-0.088*	0.131**	0.006	0.176**	0.342***	-0.296***	-0.262**	0.213**	0.017		-0.112***
AGE	-0.127***	-0.128***	-0.128***	0.113**	0.027	0.112***	0.114***	-0.104***	0.017	-0.197***	-0.018	0.078**	-0.041	0.110***	0.235***	-0.099**	-0.064*	-0.231***	-0.046	0.02	

**Notes:** Lower triangular cells report correlation coefficients for UK, upper triangular cells exhibit coefficients for Pakistan. \*\*\*, \*\*  $p < 0.01$ , \*  $p < 0.05$ , \*  $p < 0.1$

to create a threat to the interpretation of the regression coefficients. Table 3 reveals that FRQ measures are significantly and negatively correlated with board size and board meetings, while these are positively linked to board independence for both UK and Pakistan. Likewise, the FRQ measures are significantly associated with all the ownership structure variables, except IOWN in case of UK and COWN in case of Pakistan. The correlation matrix also suggests that FRQ measures are positively correlated with AUDS for both countries, while AUDI is related positively for UK and negatively for Pakistan. Overall, the FRQ measures are more significantly associated with most of the independent and control variables in the UK than in Pakistan.

### 4.3 Multivariate analysis

Table 4 reports the GLS regression results of three FRQ measures on board composition, ownership structure and audit mechanism by estimating equation (4) for the UK and Pakistan. This estimation is also controlled for a number of firm specific incentives. Adjusted  $R^2$  are reported for each model, which indicate the extent to which the respective model explains the variability in the FRQ measures. Adjusted  $R^2$  of the three models range between 4% and 28%, which are comparable with those in similar studies (Dimitropoulos and Asteriou, 2010; Rahman and Ali, 2006). The results reveal that board size has a negative and significant impact on FRQ of both the UK and Pakistani firms. It suggests that smaller boards bring about better coordination and communication among the members, which improves board effectiveness and strengthens financial reporting function (González and García-Meca, 2014; Terjesen et al., 2016).

The study also finds that board independence is positively related to the quality of accounting information generated by Pakistani firms. Agency theory provides that independent directors undertake key monitoring role to resolve the agency conflicts resulting from the separation of ownership and control that positively influences the quality of financial information (Fodio et al., 2013; Iraya et al., 2015). Likewise, the results indicate a

**Table 4** GLS regression results

Variables	Model 1 Jones	Pakistan Model 2 Dechow	Model 3 Kothari	Model 1 Jones	UK Model 2 Dechow	Model 3 Kothari
BSIZE	-0.00102** (0.000)	0.00002 (0.000)	-0.00870*** (0.003)	-0.00689*** (0.001)	-0.00663*** (0.001)	-0.00659*** (0.001)
BIND	0.01728** (0.008)	0.00485** (0.002)	0.00510* (0.003)	0.00838 (0.016)	0.00918 (0.015)	0.00846 (0.015)
BGD	-0.01221 (0.008)	0.00083 (0.002)	-0.00027 (0.000)	-0.06741*** (0.018)	-0.06624*** (0.017)	-0.06597*** (0.017)
BMEET	-0.00063** (0.000)	-0.00013* (0.000)	-0.00026** (0.000)	0.00043 (0.001)	0.00042 (0.001)	0.00047 (0.001)
COWN	-0.00696 (0.007)	-0.00171 (0.001)	-0.00163 (0.003)	-0.02567* (0.015)	-0.02707* (0.015)	-0.03040** (0.015)
IOWN	0.00482 (0.006)	0.00180 (0.001)	0.00046 (0.002)	-0.00185 (0.009)	-0.00140 (0.009)	-0.00168 (0.009)
MOWN	0.00262 (0.004)	0.00233 (0.002)	0.00435 (0.004)	0.09508** (0.039)	0.09425** (0.039)	0.09459** (0.039)
FOWN	0.01597* (0.009)	0.00147** (0.001)	0.00031 (0.002)	0.04528*** (0.012)	0.04363*** (0.011)	0.04311*** (0.011)
AUDS	0.00081 (0.001)	-0.00005 (0.000)	0.00018 (0.000)	0.00213 (0.002)	0.00199 (0.002)	0.00203 (0.002)
AUDI	-0.00845** (0.004)	-0.00230** (0.001)	-0.00375** (0.002)	0.00972 (0.031)	0.00990 (0.030)	0.01116 (0.030)
BIG4	0.00086 (0.002)	0.00017 (0.000)	-0.00039 (0.001)	-0.04523 (0.028)	-0.04455 (0.027)	-0.04513* (0.027)
SIZE	0.00836*** (0.001)	0.00006 (0.000)	0.00309*** (0.000)	0.02663*** (0.003)	0.02610*** (0.003)	0.02569*** (0.003)
ROA	-0.03315*** (0.007)	-0.00800*** (0.002)	-0.02826*** (0.003)	-0.04413** (0.021)	-0.04079** (0.021)	-0.05786*** (0.021)
LIQ	0.00121 (0.001)	0.00049** (0.000)	0.00114*** (0.000)	-0.00412* (0.002)	-0.00392* (0.002)	-0.00385* (0.002)
MTB	0.00029** (0.000)	0.00005 (0.000)	0.00009 (0.000)	0.00115*** (0.000)	0.00109*** (0.000)	0.00114*** (0.000)
FCF	0.00123** (0.001)	0.00017 (0.000)	0.00037* (0.000)	0.00025 (0.001)	0.00040 (0.001)	0.00062 (0.001)
LEV	-0.00509 (0.005)	-0.00171 (0.001)	-0.00147 (0.002)	0.00421 (0.005)	0.00386 (0.005)	0.00234 (0.005)
AGE	0.00088 (0.002)	-0.00018 (0.000)	0.00176** (0.001)	-0.00439 (0.004)	-0.00406 (0.004)	-0.00389 (0.004)
Constant	-0.11066*** (0.012)	-0.01664*** (0.002)	-0.05488*** (0.005)	-0.34045*** (0.060)	-0.33595*** (0.059)	-0.32770*** (0.059)
$R^2$	0.0919	0.0427	0.175	0.281	0.276	0.275
Wald $\chi^2$	208.0	49.68	269.5	211.8	209.3	212.2
$N$	780	780	780	770	770	770
$n$	78	78	78	77	77	77
$T$	10	10	10	10	10	10

Notes: Standard errors in parentheses \*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*  $p < 0.1$

negative association between board meetings frequency and FRQ of Pakistani firms. It signals that board meetings frequency is an indication of corporate board response to business challenges instead of oversight responsibility for financial reporting (Cumming *et al.*, 2015; González and García-Meca, 2014). However, BIND and BMEET are not relevant from the UK perspective. In contrast to predictions, the study presents that BGD has a negative impact on FRQ of UK firms. These findings suggest that female directors are more likely to be considered as tokens on boards to meet the social or legal expectations, which reduces the cohesion and negatively influences the information environment (Arioglu, 2020; Arun *et al.*, 2015).

The regression results indicate that ownership concentration is negatively linked to the FRQ of UK firms. COWN provokes agency problems owing to potential conflict of interest between the majority and minority shareholders, so has a negative impact on FRQ (Arioglu, 2020; Yasser *et al.*, 2017). The study reveals that managerial ownership is positively linked to FRQ of the UK firms. It provides direct economic incentives for managers to engage in adequate monitoring and aligns their interest with those of shareholders (Aygün *et al.*, 2014; Klai and Omri, 2011). However, concentrated and managerial ownership have no impact from the Pakistan's context. Empirical literature explains this variation in corporate governance structures between a developed and an emerging economy (González and García-Meca, 2014; Yasser *et al.*, 2017). The results also show that foreign ownership is positively associated with FRQ of UK and Pakistani firms. The findings emphasise that foreign investors enhance the monitoring capacity of corporate board and strengthen the credibility of the financial reporting process (Fang *et al.*, 2015; Lei, 2019). These results support hypothesis 8 and are consistent with prior studies (An, 2015; Beuselinck *et al.*, 2017).

Table 4 reveals that AUDS and IOWN have no impact on the FRQ of UK and Pakistani firms. The potential justification is that the effectiveness of audit committees is limited by the bounded rationality of its members, potential conflicts of interest and coordination difficulties (Peasnell, *et al.*, 2005; Soliman and Ragab, 2014). On the other hand, an increase in institutional ownership strengthens the association between institutional investors and firm managers which reduces their monitoring effectiveness (Aldhamari *et al.*, 2017; Yasser *et al.*, 2017). One of the most surprising findings of this study is the association between AUDI and FRQ of Pakistani firms, which is negative and significant. The reasons being that the independent directors in Pakistan are not fairly independent as controlling shareholders still dominate. However, these results are consistent with Dar *et al.* (2011) using Pakistan data, Aldhamari *et al.* (2017) using Malaysian data and Fodio *et al.* (2013) using the Nigerian data. The empirical literature suggests that audit committees are effective only when these are fully independent (Woidtke and Yeh, 2013). In contrast, the Pakistan Code of Corporate Governance requires at least one independent director to be a member of the audit committee (ROSC, 2018).

Regarding the control variables, the present study finds that firm size and growth opportunities positively, whereas firm performance negatively, influences FRQ of UK and Pakistani firms. In addition, firm liquidity and financial capacity have a positive impact on FRQ of Pakistan's firms, while liquidity has a negative impact on FRQ for UK firms. On the other hand, BIG4 auditors, leverage and firm age have no impact on FRQ for UK and Pakistani firms.

#### 4.4 Additional analysis

We performed additional tests to compare the regression coefficients between the UK and Pakistan. The model is run over a combined sample, following Wright *et al.* (2006). It is an extension of equation (4) and includes a Country variable and an interaction term for each explanatory variable. Country equals "1" for Pakistani firms and "0" for UK firms. The interaction term consists of multiplication of the dummy variable "Country" with an

explanatory variable (Grotenhuis and Thijs, 2015). The significance of an interaction coefficient indicates that the effects of respective explanatory variable vary across countries, UK and Pakistan. The results substantiate the main results presented above.

To ensure that the results of this study are robust in the various model specifications, two-stage least squares (2SLS) regression is performed for both the UK and Pakistan data. Following Coles *et al.* (2008) and McKnight and Weir (2009), the lagged values of the endogenous variables are used as instruments. All the board composition, ownership structure and audit committee attributes are treated as endogenous (Habbash, 2010). The 2SLS regression results are consistent with the GLS results as reported earlier. Some of the variables exhibit either more or less statistical significance, but the direction and overall significance are almost similar. Therefore, the results are robust to various model specifications, as endogeneity does not seem to influence the results of this study unduly.

## 5. Conclusion

Globalisation influences the country level corporate governance systems and facilitates their convergence to bring about international harmonisation of corporate governance practices (Fang *et al.*, 2015). Board composition, ownership structure and audit committee are the essential governance practices that influence the quality of the financial information (Cohen *et al.*, 2004). The literature provides relatively conflicting results about the association between corporate governance attributes and FRQ for developed and developing economies (Yasser *et al.*, 2017). Therefore, this study embraces agency perspective to explore the association between corporate governance and FRQ from the context of a developed and an emerging economy, UK and Pakistan.

The results indicate that UK boards are larger, more independent, have greater women representation and are more active as compared to Pakistani boards. UK firms have lesser block holdings, lower managerial ownership, a higher degree of institutional and foreign ownership. Likewise, UK firms have larger audit committees that are more independent than the Pakistani firms. The empirical results suggest that FRQ of Pakistani firms is significantly lower than that of UK firms. In terms of the impact of corporate governance on FRQ, we find that board size has a negative impact on FRQ while foreign ownership has a positive impact for Pakistani and UK firms. We also find that board independence has a positive impact on FRQ of Pakistani firms, while board meetings frequency and audit committee independence have a negative impact. We make no such observation for UK firms. Finally, we find that board gender diversity and ownership concentration negatively affect FRQ of UK firms. We make no such observation for Pakistani firms.

To conclude, not all the corporate governance variables of this study support the stated hypotheses. The results are also robust to various model specifications. Our findings support the significant role of corporate governance practices in motivating UK firms to report a higher quality of financial information than Pakistani firms. The results also support the World Bank report (ROSC, 2018) which emphasizes that corporate governance practices adopted by listed companies in Pakistan have improved, as differences between the regression coefficients of the UK and Pakistani firms for corporate governance attributes are not significantly different to a large extent. However, Pakistan needs a more proactive approach to fully implement the OECD principles (OECD, 2015).

The study uses multiple governance attributes that provide valuable insight into the robustness of the relationship between corporate governance and FRQ. The findings suggest that the impact of board composition on FRQ of both the UK and Pakistani firms is weak, it is strong for ownership structure, while mixed for audit committee characteristics. Therefore, the study calls for strengthening the role of the corporate boards and does not support their present monitoring and control mechanism for both, the UK and Pakistan. The results indicate that board gender diversity and audit committee independence have negative impact on FRQ of the UK and Pakistani firms, respectively, which induces

rethinking among the regulators to make these governance attributes rigorous and effective. The findings also suggest that the firms operating in developed and emerging economies can improve their FRQ by attracting foreign investors.

While this research has several strengths, a number of potential limitations can be identified. In spite of the use of alternative accrual quality models, the results of this study are comparative, but not free of any bias. The study data belongs to a period after the global financial crisis, 2008 and may be driven by the aftermath of this crisis. Moreover, the results suggest that caution should be exercised to interpret the results of studies that examine the association between corporate governance and FRQ due to the presence of potential endogeneity. While these inherent limitations are recognised, the strengths and the importance of the findings are not diminished. The limitations of this study unlock the opportunities for future research. The researchers may explore this relationship with a relatively large sample size, which can probably lead to different results. Further studies are required to investigate this association from the context of other emerging and developed economies. The qualitative research methods may also help to do an in-depth evaluation of the role of audit committees.

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