

Article

How Does Internal Governance Improve the Financial Reporting Quality of Banking Institutions?

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Abstract

This study examines the influence of board attributes on the financial reporting quality (FRQ) of Saudi commercial banks using panel data covering the period 2013–2025 via pooled OLS, fixed-effects, and random-effects models. The findings show that board independence and board meeting frequency are positively associated with FRQ, highlighting the importance of active board oversight in promoting reporting transparency. In contrast, board size and board diversity exhibit negative associations with FRQ. The negative effect of board size may reflect coordination and communication challenges, while the influence of board diversity appears limited within the Saudi banking context. Unlike most previous studies that rely on accrual-based proxies, this study assesses FRQ through qualitative characteristics, providing new evidence from the Saudi banking sector.

Keywords: financial reporting quality; corporate governance; board attributes; agency theory; resource dependence theory; Saudi banks

1. Introduction

Financial reporting quality (FRQ) is widely regarded as a cornerstone of corporate transparency and an essential mechanism for reducing information asymmetry between managers and stakeholders (Jonas & Blanchet, 2000; Dechow et al., 2010). High-quality financial reporting enables investors, creditors, and regulators to make informed economic decisions by providing relevant, reliable, and understandable information about a firm's financial position and performance (van Beest et al., 2009). Conversely, poor-quality reporting may obscure a firm's underlying economic reality, weaken stakeholder confidence, and reduce the effectiveness of monitoring mechanisms designed to protect investors' interests. Consequently, enhancing financial reporting quality has become a central objective of accounting standards, regulatory frameworks, and corporate governance systems worldwide. Accordingly, FRQ continues to receive considerable attention in accounting and corporate governance research, particularly in sectors where stakeholders rely heavily on credible and timely financial information to assess organisational performance and risk (Sahi et al., 2022).

Among all economic sectors, the banking industry occupies a particularly important position because banks perform a critical financial intermediation role, facilitate capital allocation, and contribute to economic growth and financial stability (Levine, 2004; Beck et al., 2000). Unlike many non-financial firms, banks operate with high levels of leverage, manage substantial public deposits, and are closely interconnected with the broader financial system. These characteristics make banks particularly important to the stability of financial markets and the wider economy (Marie et al., 2021). Consequently, the quality of



Academic Editors: Sami Keskek and Abdullah Kumas

Received: 30 May 2026

Revised: 2 July 2026

Accepted: 3 July 2026

Published: 7 July 2026

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financial reporting in banks is of particular importance to investors, regulators, and other stakeholders who rely on transparent and credible information to assess financial stability and risk exposure. Prior evidence from MENA banking markets also suggests that the quality and timeliness of financial reporting influence the usefulness of financial information provided to stakeholders (Attia et al., 2019). As a result, maintaining high-quality financial reporting has become a key concern for regulators and policymakers seeking to strengthen transparency, accountability, and trust within the banking sector (Nguyen et al., 2022; Marie et al., 2021).

Corporate governance plays an important role in shaping managerial behaviour, strengthening monitoring effectiveness, and enhancing reporting practices (Fama & Jensen, 1983). From an agency theory perspective, effective governance structures help reduce conflicts of interest between managers and shareholders by improving oversight and accountability. In particular, the board of directors serves as the primary internal governance mechanism responsible for monitoring managerial decisions and safeguarding stakeholders' interests (Jensen, 1993; Adams & Mehran, 2012). Consequently, board characteristics such as size, independence, meeting frequency, and diversity may influence the quality of financial reporting, as they affect the board's effectiveness in overseeing the financial reporting process. While prior banking studies have extensively examined the role of governance mechanisms in relation to bank performance, stability, and risk-taking, comparatively less attention has been devoted to understanding how board attributes influence financial reporting quality within banking institutions (Marie et al., 2021; Nguyen et al., 2022).

More recent accounting studies have examined the role of governance mechanisms in improving reporting practices and disclosure quality among non-financial firms (Al-Matari, 2022; Alshammari, 2024, 2025; Amanamah, 2024; Chaudhry et al., 2020; Ha, 2022; Sulimany, 2023; Porter & Sherwood, 2023; Truong & Nguyen, 2024). Within the banking literature, however, governance mechanisms have been more commonly associated with organisational outcomes such as bank performance, risk-taking, and financial stability (Adams & Mehran, 2012; Anginer et al., 2018; Diab, 2023; El-Chaarani et al., 2022; Marie et al., 2021; Nguyen et al., 2022). Furthermore, financial reporting quality research frequently relies on accrual-based measures and earnings-management proxies, which capture only specific aspects of reporting quality. Consequently, review studies continue to call for further evidence from different institutional settings and alternative approaches when measuring financial reporting quality (Sahi et al., 2022; Tsalavoutas et al., 2020).

van Beest et al. (2009) argue that financial reporting quality should be evaluated through the qualitative characteristics that determine the usefulness of financial information for decision-making, including relevance, faithful representation, understandability, and comparability. Compared with traditional accrual-based measures, which primarily capture specific reporting outcomes such as earnings management, this approach provides a more comprehensive assessment of financial reporting quality by evaluating multiple dimensions of financial information usefulness to stakeholders. Accordingly, this study adopts the qualitative financial reporting quality framework developed by van Beest et al. (2009) to examine the relationship between board attributes and financial reporting quality in Saudi commercial banks.

Saudi Arabia provides an important setting for examining the relationship between board attributes and financial reporting quality. Under Saudi Vision 2030, the Kingdom has implemented significant governance and regulatory reforms designed to enhance transparency, accountability, and corporate disclosure. These developments, together with Saudi Arabia's increasing integration into global capital markets, have intensified the need for effective corporate governance and high-quality financial reporting. Consequently, Saudi commercial banks offer a valuable context for examining how board attributes

influence financial reporting quality within an emerging economy undergoing substantial institutional transformation ([Capital Market Authority, 2017](#); [Financial Sector Development Program, 2023](#)).

Against this background, this study examines the relationship between board attributes and financial reporting quality among Saudi commercial banks over the period 2013–2025. Specifically, the analysis focuses on board size, independence, meeting frequency, and diversity. Using panel data analysis and a qualitative measure of financial reporting quality developed by [van Beest et al. \(2009\)](#), we investigate whether board characteristics influence the quality of financial reporting within the Saudi banking sector.

This study contributes to the literature in several ways. First, it extends the growing body of research on corporate governance and financial reporting quality by providing evidence from the commercial banking sector, an industry characterised by heightened regulatory oversight and systemic importance. Second, unlike many previous studies that rely on accrual-based measures or earnings-management proxies, this study employs a qualitative measure of financial reporting quality based on the framework developed by [van Beest et al. \(2009\)](#), thereby providing a more comprehensive assessment of reporting quality. Third, it contributes to the limited evidence from emerging economies by examining Saudi commercial banks during a period of significant governance and transparency reforms associated with Saudi Vision 2030. Collectively, these contributions provide new evidence on the role of board governance in enhancing financial reporting quality in Saudi commercial banks.

The remainder of this paper is organised as follows: Sections 2 and 3 review the relevant literature, theoretical foundations, and hypotheses developed. Section 4 describes the research methodology and variable measurement. Section 5 presents and discusses the empirical findings, while Section 6 reports the robustness analysis. Finally, Section 7 concludes this study, highlights its implications, and suggests directions for future research.

2. Literature Review

2.1. Corporate Governance and Financial Reporting Quality

Corporate governance plays a fundamental role in enhancing the quality of financial reporting by strengthening oversight mechanisms and reducing information asymmetry between managers and stakeholders. Effective governance structures are expected to promote transparency, accountability, and the credibility of financial disclosures, thereby improving stakeholders' confidence in financial information. Consequently, the relationship between corporate governance and financial reporting quality has received considerable attention within the accounting and governance literature.

A growing body of empirical research suggests that governance mechanisms contribute to higher-quality reporting outcomes. Prior studies report that effective governance structures can improve the timeliness of financial reporting, enhance the relevance and reliability of financial information, and strengthen overall disclosure quality ([Agyei-Mensah, 2022](#); [Alshammari, 2024, 2025](#); [Amanamah, 2024](#)). More recent evidence also suggests that board independence and board oversight mechanisms contribute to higher reporting quality and greater transparency in financial disclosures ([Porter & Sherwood, 2023](#); [Truong & Nguyen, 2024](#)).

Despite these contributions, the existing literature provides mixed evidence regarding the effectiveness of specific governance mechanisms in improving financial reporting quality. Differences in institutional environments, governance structures, and measurement approaches have produced inconsistent findings across studies. Consequently, further research remains necessary to better understand how individual governance attributes influence financial reporting quality across different organisational settings.

2.2. Evidence from Non-Financial Firms

A substantial body of research has examined the relationship between corporate governance mechanisms and financial reporting quality within non-financial firms. Prior studies generally suggest that effective governance structures improve monitoring effectiveness, strengthen managerial accountability, and enhance the credibility of financial reporting.

Empirical evidence largely supports the importance of governance mechanisms in promoting higher-quality financial reporting. For example, [Agyei-Mensah \(2022\)](#) reported that audit committee attributes positively influence financial reporting quality and reporting timeliness. Similarly, [Alshammari \(2024\)](#) found that governance mechanisms contribute to improving the qualitative characteristics of financial reporting, while [Alshammari \(2025\)](#) documented a positive relationship between audit committee effectiveness and financial reporting quality among Saudi-listed firms. [Amanamah \(2024\)](#) and other recent studies also provide evidence that governance structures enhance transparency and disclosure quality by strengthening oversight and monitoring activities.

Despite these findings, the empirical evidence remains mixed. While many studies report positive associations between governance mechanisms and financial reporting quality, others find weak, insignificant, or context-dependent relationships. These inconsistencies may arise from differences in governance environments, institutional settings, sample characteristics, and the measures used to capture financial reporting quality. Consequently, the effectiveness of specific governance mechanisms in enhancing financial reporting quality remains an important area of investigation.

2.3. Evidence from Banking Institutions

Corporate governance has attracted considerable attention within the banking literature because banks play a critical role in maintaining financial stability and supporting economic development. Due to their high leverage, extensive regulatory oversight, and systemic importance, effective governance mechanisms are considered essential for ensuring sound decision-making and organisational performance. Consequently, several studies have examined the influence of board attributes on various banking outcomes.

Existing banking research has primarily focused on the relationship between board attributes and organisational outcomes such as bank performance, financial stability, and risk-taking. For example, [Adams and Mehran \(2012\)](#) highlighted the importance of board structures in influencing banking performance and governance effectiveness. Similarly, [Anginer et al. \(2018\)](#), [Marie et al. \(2021\)](#), [Nguyen et al. \(2022\)](#), and [El-Chaarani et al. \(2022\)](#) reported that board characteristics, including board size, independence, meeting frequency, and diversity, are associated with important banking outcomes. More recently, [Diab \(2023\)](#) provided further evidence regarding the role of governance mechanisms in shaping organisational performance within banking institutions. However, relatively limited evidence has examined how board attributes influence financial reporting quality within banking institutions, particularly in emerging markets.

Despite the growing banking governance literature, most studies focus on performance, stability, and risk-related outcomes rather than financial reporting quality. This limitation is particularly important because high-quality financial reporting represents a key mechanism through which banks maintain transparency, accountability, and stakeholder confidence.

2.4. Unresolved Issues and Research Gap

Although prior studies provide valuable insights into the relationship between corporate governance and financial reporting quality, several unresolved issues remain. First, the existing literature reports mixed findings regarding the effectiveness of governance

mechanisms in enhancing reporting quality. While many studies document positive associations between governance attributes and financial reporting quality, others report insignificant or context-dependent relationships. These inconsistencies suggest that the governance–reporting quality relationship may vary across institutional settings and governance environments.

Second, much of the financial reporting quality literature relies on accrual-based measures, earnings-management proxies, and other quantitative indicators of reporting quality. Although these measures provide useful insights, they primarily capture specific aspects of reporting quality rather than the broader concept from a financial perspective. Consequently, relatively limited attention has been devoted to qualitative approaches that evaluate reporting quality through characteristics such as relevance, faithful representation, understandability, and comparability (van Beest et al., 2009).

Third, despite the extensive governance literature within the banking sector, relatively few studies have examined how board attributes influence qualitative financial reporting quality. Existing banking research has largely concentrated on organisational outcomes such as performance, stability, and risk-taking, while reporting quality has received comparatively less attention. Furthermore, empirical evidence from Saudi commercial banks remains limited despite the increasing emphasis on transparency, accountability, and corporate governance reforms within the Kingdom.

These limitations suggest the need for further research examining the relationship between board attributes and qualitative financial reporting quality within banking institutions. Accordingly, to address these limitations, this study investigates how board size, independence, meeting frequency, and diversity influence financial reporting quality among Saudi commercial banks using the qualitative framework developed by van Beest et al. (2009).

3. Theoretical Foundation and Hypothesis Development

3.1. Theoretical Foundation

The relationship between board attributes and financial reporting quality can be explained through agency theory and resource dependence theory. Agency theory argues that conflicts of interest arise when managers possess information advantages over shareholders and other stakeholders (Jensen & Meckling, 1976). In such situations, effective governance mechanisms are required to reduce information asymmetry, limit opportunistic managerial behaviour, and enhance the credibility of financial reporting. Boards of directors play a central monitoring role by overseeing managerial decisions and ensuring that financial information is prepared and disclosed in a transparent and reliable manner (Fama & Jensen, 1983). Consequently, board attributes such as board size, independence, meeting frequency, and diversity may influence the board's ability to monitor management and improve financial reporting quality.

Resource dependence theory (RDT) provides a complementary perspective by viewing board members as providers of valuable organisational resources, including expertise, knowledge, professional experience, legitimacy, and external networks (Pfeffer & Salancik, 1978). For example, Hillman et al. (2000) and Hillman and Dalziel (2003) argue that directors contribute critical resources that enhance organisational effectiveness and governance outcomes. More recent research also highlights the role of board members in providing strategic advice, access to external resources, and specialised expertise that improve organisational transparency and decision-making (Arora & Sharma, 2016; Naciti, 2019). From this perspective, board attributes may enhance these factors by increasing the diversity of skills and resources available to the board. Larger and more diverse boards may provide broader expertise and perspectives, while independent directors may contribute objective

judgement and external knowledge. These resources can strengthen governance effectiveness, improve oversight of the financial reporting process, and contribute to higher-quality financial information. Accordingly, both agency theory and resource dependence theory suggest that board attributes may play an important role in enhancing financial reporting quality within banking institutions.

3.2. Hypothesis Development

Board size is widely recognised as an important governance attribute that may influence financial reporting quality. From an agency theory perspective, larger boards may enhance monitoring effectiveness through greater oversight and a broader pool of expertise, thereby reducing managerial opportunism and information asymmetry (Fama & Jensen, 1983). However, excessively large boards may create coordination and communication difficulties that weaken governance effectiveness (Jensen, 1993). Empirical evidence remains mixed, as some studies suggest that larger boards strengthen governance oversight and improve organisational outcomes (Adams & Mehran, 2012; Marie et al., 2021; Nguyen et al., 2022), while others argue that large boards may reduce governance effectiveness due to coordination challenges (Jensen, 1993; Diab, 2023). Given these competing arguments and findings, the relationship between board size and financial reporting quality remains an empirical issue. Therefore, the following hypothesis is proposed:

H1. *There is a significant relationship between board size and financial reporting quality.*

Board independence is widely recognised as an important governance attribute that may influence financial reporting quality. Independent directors are generally expected to provide objective oversight of managerial decisions, thereby reducing information asymmetry and enhancing transparency within financial reporting practices (Jensen & Meckling, 1976; Fama & Jensen, 1983). In addition, independent directors may contribute valuable expertise and external perspectives that strengthen governance effectiveness and disclosure quality (Hillman et al., 2000; Hillman & Dalziel, 2003). Prior studies generally suggest that board independence enhances governance oversight and reporting credibility through improved monitoring effectiveness and regulatory compliance (Diab, 2023; Marie et al., 2021; Nguyen et al., 2022). Nevertheless, the effectiveness of independent directors may vary across institutional settings and governance environments. Accordingly, the following hypothesis is proposed:

H2. *There is a significant relationship between board independence and financial reporting quality.*

Board meeting frequency reflects the level of board activity and monitoring effectiveness within corporate governance practices. From an agency theory perspective, frequent board meetings may strengthen oversight by increasing directors' involvement in monitoring managerial decisions and reviewing reporting practices (Vafeas, 1999). Within banking institutions, regular board meetings may be particularly important given the complexity of banking operations and reporting requirements (Diab, 2023; Marie et al., 2021; Nguyen et al., 2022). Nevertheless, the effectiveness of board meetings may depend on the quality of board deliberations and the governance environment in which they operate. Based on the above discussion, the following hypothesis is proposed:

H3. *There is a significant relationship between board meeting frequency and financial reporting quality.*

Board diversity is increasingly recognised as an important governance attribute that may influence financial reporting quality. Resource dependence theory suggests that diverse boards provide broader expertise, perspectives, and professional experience, which may enhance board effectiveness and improve disclosure practices (Hillman et al., 2000; Hillman & Dalziel, 2003). From this perspective, board diversity may contribute to more transparent and informative financial reporting by strengthening board oversight and decision-making processes.

Empirical evidence regarding the relationship between board diversity and reporting outcomes remains mixed. Some studies suggest that board diversity enhances governance effectiveness and disclosure quality, while others report insignificant or context-dependent relationships (Adams & Mehran, 2012; García-Meca et al., 2015). In emerging markets, the influence of board diversity may vary across institutional and regulatory environments, particularly where female representation on corporate boards remains relatively limited (Diab, 2023; Issa et al., 2021; Nguyen et al., 2022). Consequently, the relationship between board diversity and financial reporting quality remains an empirical issue within Saudi commercial banks. In light of these arguments, the following hypothesis is proposed:

H4. *There is a significant relationship between board diversity and financial reporting quality.*

4. Methodology

4.1. Sample Selection and Data Sources

This study collected governance and financial data from the annual reports of Saudi-listed commercial banks covering the period from 2013 to 2025. This period was selected to provide a sufficiently long time horizon for examining variations in board governance practices and financial reporting quality within Saudi commercial banks. Governance data were manually extracted from annual reports and the Saudi Exchange (Tadawul), while financial data were obtained from published financial statements and related disclosures. The sample includes all 10 Saudi-listed commercial banks operating during the study period, and no mergers, acquisitions, delistings, or missing observations affected the final balanced panel dataset.

This study employed a census approach by including all Saudi-listed commercial banks operating during the study period. Given the relatively small number of listed commercial banks in Saudi Arabia, the final sample reflects the entire banking population within the Saudi capital market rather than a subset of firms. Consequently, the final sample consisted of a balanced panel dataset comprising 130 bank-year observations covering the period from 2013 to 2025.

4.2. Variable Measurements

This study examines the relationship between board attributes and financial reporting quality (FRQ), using board governance attributes as the main explanatory variables and selected bank-specific characteristics as control variables. FRQ is the dependent variable and is measured using a financial reporting quality index (FRQI) based on the qualitative characteristics of financial information, following van Beest et al. (2009) and Agyei-Mensah (2022). The FRQI consists of 20 disclosure items covering relevance, faithful representation, understandability, and comparability. Each item is scored on a five-point scale ranging from 0 to 1, where 1, 0.75, 0.5, 0.25, and 0 indicate extensive disclosure, mostly disclosed, balanced disclosure, partial disclosure, and no disclosure, respectively. The final FRQ score

is calculated as the average score across the 20 disclosure items, and the complete FRQI instrument is presented in Appendix A.

$$FRQ_{i,t} = \frac{\sum_{j=1}^{20} Score_{i,t,j}}{20}$$

where

$FRQ_{i,t}$ represents the financial reporting quality score for bank i in year t .

$Score_{i,t,j}$ represents the assigned score for disclosure item j .

20 represents the total number of disclosure items included in the index.

Table 1 presents the definitions, measurements, and sources of all variables employed in the study.

Table 1. Variable definitions and measurements.

Variable	Abbr.	Measurement	Source
Financial Reporting Quality	FRQ	Financial reporting quality index (FRQI) based on 20 qualitative disclosure items covering relevance, faithful representation, understandability, and comparability	van Beest et al. (2009); Agyei-Mensah (2022)
Board Size	BS	Total number of directors on the board	Adams and Mehran (2012)
Board Independence	BIND	Independent directors ÷ total directors	Adams and Mehran (2012)
Board Meetings	BMT	Number of board meetings per year	Vafeas (1999)
Board Diversity	BD	Female directors ÷ total directors	García-Meca et al. (2015)
Bank Size	BSZ	Natural logarithm of total assets	Adams and Mehran (2012)
Institutional Ownership	INSO	Institutional shares ÷ total shares outstanding	Nguyen et al. (2022)
Audit Committee Size	ACS	Number of audit committee members	Abbott et al. (2004)
Audit Committee Meetings	ACM	Number of audit committee meetings per year	Abbott et al. (2004)
Profitability	ROA	Net income ÷ total assets	Pathan (2009)

Notes: The FRQI is measured using the scoring procedure developed by van Beest et al. (2009) and adapted by Agyei-Mensah (2022), and the complete FRQI instrument is presented in Appendix A.

4.3. Estimation Model

This study uses panel data analysis to examine the relationship between board attributes and FRQ among Saudi commercial banks. Panel data techniques help control for unobservable differences across banks and improve estimation efficiency (Baltagi, 2005; Hsiao, 2003), and pooled ordinary least-squares (OLS), fixed-effects (FE), and random-effects (RE) models are employed for the analysis (Hausman, 1978).

This study also employs pooled OLS, fixed-effects, and random-effects estimators, and the Hausman specification test was used to identify the most appropriate model, with the results supporting the fixed-effects estimator for the main analysis.

The baseline models are presented as follows:

Pooled OLS

$$Y_{it} = \alpha_0 + \beta X_{it} + \varepsilon_{it}$$

Fixed-Effects Model (FEM)

$$Y_{it} = \alpha_0 + \beta X_{it} + \mu_i + \varepsilon_{it}$$

Random-Effects Model (REM)

$$Y_{it} = \alpha_0 + \beta X_{it} + \omega_{it}$$

where

Y_{it} represents financial reporting quality for bank i in year t .

α_0 represents the intercept term.

X_{it} represents the vector of explanatory variables included in the model.

μ_i captures the unobserved bank-specific effects within the fixed-effects framework.

ω_{it} represents the composite error term within the random-effects model, incorporating both cross-sectional and time-series error components

ε_{it} represents the regression error term.

Based on the study variables and model specification, the following empirical regression model was developed:

$$FRQ_{i,t} = \alpha + \beta_1 BS_{i,t} + \beta_2 BIND_{i,t} + \beta_3 BMT_{i,t} + \beta_4 BD_{i,t} + \beta_5 BSZ_{i,t} + \beta_6 INSO_{i,t} + \beta_7 ACS_{i,t} + \beta_8 ACM_{i,t} + \beta_9 ROA_{i,t} + \mu_i + \eta_t + \varepsilon_{i,t}$$

where

FRQ represents financial reporting quality.

BS represents board size.

$BIND$ represents board independence.

BMT represents board meeting frequency.

BD represents board diversity.

BSZ represents bank size.

$INSO$ represents institutional ownership.

ACS represents audit committee size.

ACM represents the number of audit committee meetings.

ROA represents profitability.

μ_i captures unobserved bank-specific effects.

η_t captures time-specific effects.

$\varepsilon_{i,t}$ represents the regression error term.

5. Results and Discussion

This section presents the empirical findings. It begins with the descriptive statistics, followed by the Pearson correlation analysis and variance inflation factor (VIF) results. The regression results are then reported using pooled OLS, fixed-effects, and random-effects estimators. Finally, the Hausman specification test is presented to identify the most appropriate estimation model.

Table 2 presents the descriptive statistics for the study variables. The results indicate that financial reporting quality (FRQ) has a mean value of 0.831, with values ranging from 0.700 to 0.930, suggesting a relatively high level of reporting quality among Saudi commercial banks during the study period. The sample consists of 130 bank-year observations. On average, boards comprise approximately nine directors, with independent directors representing 44.2% of board membership and boards meeting approximately six times per year. Board diversity remains relatively limited, with a mean value of 1.2% and a median value of zero, indicating that female representation on bank boards was generally low during the study period. Overall, the descriptive statistics indicate sufficient variation across the study variables to support subsequent regression analysis.

Table 2. Descriptive statistics.

Variable	Minimum	Maximum	Mean	Median	Std. Dev.	Observations
FRQ	0.700	0.930	0.831	0.830	0.059	130
BS	4.000	12.000	9.400	10.000	1.543	130
BIND	0.222	0.777	0.442	0.444	0.111	130
BMT	3.000	11.000	5.946	6.000	1.843	130
BD	0.000	0.200	0.012	0.000	0.036	130
BSZ	24.315	27.821	26.001	25.961	0.753	130
INSO	0.056	0.700	0.367	0.370	0.208	130
ACS	3.000	7.000	4.269	5.000	1.025	130
ACM	3.000	11.000	6.530	6.000	1.889	130
ROA	0.000	0.028	0.018	0.018	0.005	130

Notes: FRQ = financial reporting quality; BS = board size; BIND = Board independence; BMT = board meeting frequency; BD = board diversity; BSZ = bank size; INSO = institutional ownership; ACS = audit committee size; ACM = audit committee meeting; ROA = return on assets.

Having discussed the descriptive statistics, we now turn to the Pearson correlation matrix and variance inflation factor (VIF) results presented in Table 3.

Table 3. Pearson correlation analysis and variance inflation factors.

Variable	FRQ	BS	BIND	BMT	BD	BSZ	INSO	ACS	ACM	ROA	VIF
FRQ	1.000										
BS	−0.229 **	1.000									1.632
BIND	0.496 ***	−0.136	1.000								1.128
BMT	0.397 ***	0.307 ***	0.142	1.000							1.352
BD	−0.117	−0.098	−0.120	0.003	1.000						1.314
BSZ	0.093	0.198 **	−0.068	0.289 ***	0.365 ***	1.000					1.982
INSO	−0.114	0.263 ***	0.010	0.028	−0.065	0.005	1.000				1.133
ACS	0.209 **	0.157	0.155	0.397 ***	−0.049	0.420 ***	0.136	1.000			1.518
ACM	−0.135	0.480 ***	−0.042	0.220 **	0.166	0.302 ***	0.192 **	0.046	1.000		1.482
ROA	−0.039	0.306 ***	0.055	0.219 **	0.047	0.499 ***	−0.003	0.284 ***	0.266 ***	1.000	1.482

Notes: FRQ = financial reporting quality; BS = board size; BIND = board independence; BMT = board meeting frequency; BD = board diversity; BSZ = bank size; INSO = institutional ownership; ACS = audit committee size; ACM = audit committee meeting; ROA = return on assets. **, and *** indicate statistical significance at the 5%, and 1% levels, respectively.

Table 3 reports the Pearson correlation coefficients and the variance inflation factor (VIF) statistics for the study variables. The results indicate that the correlation coefficients among the explanatory variables remain below the commonly accepted threshold of 0.80, suggesting that multicollinearity is unlikely to be a serious concern (Gujarati & Porter, 2009). The highest correlation is observed between profitability (ROA) and bank size (BSZ) at 0.499, which remains well below the critical threshold. As an additional diagnostic test, VIF values were calculated and ranged from 1.128 to 1.982, substantially below the recommended threshold of 10. Therefore, the findings confirm the absence of serious multicollinearity among the explanatory variables, supporting the reliability of the regression estimates.

Table 4 presents the regression results examining the relationship between board attributes and financial reporting quality using pooled OLS, fixed-effects, and random-effects estimators. In addition, the Hausman specification test is conducted to determine the most appropriate estimation model (Table 5).

The choice between the fixed-effects and random-effects estimators was determined using the Hausman specification test, which produced a statistically significant result ($\chi^2 = 24.770$, $p = 0.003$), indicating that the fixed-effects model is more appropriate than the latter for the present analysis. Accordingly, the fixed-effects estimator was adopted as the primary model for hypothesis testing and result interpretation.

Table 4. Regression results.

Variable	Pooled OLS	Fixed Effects	Random Effects
Constant	0.366 ** (0.178)	−0.031 (0.314)	0.365 ** (0.168)
BS	−0.010 *** (0.003)	−0.009 ** (0.004)	−0.010 *** (0.003)
BIND	0.217 *** (0.037)	0.180 *** (0.048)	0.216 *** (0.035)
BMT	0.014 *** (0.002)	0.010 *** (0.002)	0.014 *** (0.002)
BD	−0.259 ** (0.122)	−0.372 *** (0.128)	−0.259 ** (0.114)
BSZ	0.017 ** (0.007)	0.034 *** (0.012)	0.017 ** (0.006)
INSO	−0.016 (0.020)	−0.052 (0.039)	−0.015 (0.018)
ACS	−0.001 (0.005)	−0.009 (0.006)	−0.001 (0.004)
ACM	−0.002 (0.003)	−0.001 (0.003)	−0.002 (0.002)
ROA	−1.621 * (0.881)	−0.959 (1.057)	−1.621 * (0.828)
R-squared	0.483	0.577	0.483
Adjusted R-squared	0.444	0.539	0.444
F-statistic	12.461	8.425	12.461
Prob(F-statistic)	0.000	0.000	0.000
N	130	130	130

Notes: N = 130 bank-year observations. BS = board size; BIND = board independence; BMT = board meeting frequency; BD = board diversity; BSZ = bank size; INSO = institutional ownership; ACS = audit committee size; ACM = audit committee meeting; ROA = return on assets. Values in parentheses are standard errors, and ***, **, and * indicate statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 5. Hausman's specification test.

Statistic	Value
Chi-square statistic (χ^2)	24.770
Degrees of freedom (d.f.)	9
p-value	0.003

Notes: A statistically significant Hausman test indicates that the fixed-effects estimator is preferred over the random-effects estimator.

The negative association between board size and financial reporting quality suggests that larger boards may face coordination and communication difficulties that weaken their monitoring effectiveness. Accordingly, H1 is supported. This result suggests that larger boards may face coordination and communication difficulties that weaken their monitoring effectiveness and reduce financial reporting quality. This interpretation is consistent with that by Jensen (1993) and Yermack (1996), who argue that larger boards may be less effective in performing their monitoring role. Empirically, this finding is consistent with prior banking studies (Adams & Mehran, 2012; Marie et al., 2021; Nguyen et al., 2022) and is further supported by evidence from Nigerian commercial banks, as reported by Ogbuide et al. (2021). The finding is also inconsistent with the resource dependence

perspective, which suggests that larger boards may provide broader expertise and external resources that enhance governance effectiveness (Hillman et al., 2000; Hillman & Dalziel, 2003). However, the results indicate that the potential costs of coordination outweigh these benefits within Saudi commercial banks.

The positive association between board independence and financial reporting quality indicates that independent directors strengthen oversight of the financial reporting process and help safeguard stakeholders' interests. Accordingly, H2 is supported. This finding suggests that independent directors play an important role in overseeing the financial reporting process and safeguarding the interests of stakeholders. Their presence on the board may enhance the quality of monitoring and reduce information asymmetry between management and external users of financial reports. As a result, banks with more independent boards are more likely to provide higher-quality financial reporting. This finding is consistent with agency theory and is broadly in line with previous banking governance studies that highlight the importance of board independence in promoting transparency and effective governance practices (Adams & Mehran, 2012; Marie et al., 2021; Nguyen et al., 2022). The finding is also consistent with resource dependence theory, as independent directors may contribute valuable expertise, external knowledge, and professional networks that strengthen board oversight and improve reporting quality (Hillman et al., 2000; Hillman & Dalziel, 2003).

The findings suggest that boards meeting more frequently are better able to monitor management and oversee the financial reporting process, thereby supporting H3. Regular meetings may also enhance communication among directors and facilitate timely discussions on reporting issues, thereby ultimately contributing to higher-quality financial reporting. The result is consistent with agency theory and aligns with previous governance studies highlighting the importance of active board engagement in improving reporting outcomes (Vafeas, 1999; Marie et al., 2021). From a resource dependence perspective, frequent board meetings may also facilitate the exchange of knowledge and expertise among directors, thereby enhancing governance effectiveness and financial reporting quality.

The negative association between board diversity and financial reporting quality does not necessarily imply that female directors reduce reporting quality. Instead, it appears to reflect the institutional context of Saudi commercial banks, where female board representation remained extremely limited during the study period. Accordingly, H4 is supported. Although this finding is not consistent with the predictions of resource dependence theory, a more plausible explanation is that female representation averaged only 1.2%, with a median value of zero, indicating that female directors may not have been sufficiently represented to exert a meaningful influence on board decisions, reporting oversight, and disclosure practices. Therefore, the finding appears to reflect the institutional context of the Saudi banking sector rather than the effectiveness of female directors themselves. Similar context-dependent results have been reported in prior studies examining board diversity in emerging markets (Diab, 2023; Issa et al., 2021). In terms of the control variables, bank size (BSZ) shows a positive and significant relationship with FRQ, indicating that larger banks may be better positioned to maintain high reporting quality. A possible explanation is that larger institutions face greater regulatory oversight, stakeholder scrutiny, and disclosure requirements. In contrast, institutional ownership (INSO), audit committee size (ACS), audit committee meetings (ACMs), and profitability (ROA) do not exhibit statistically significant relationships with FRQ. The insignificant findings for ACS and ACMs suggest that audit committee effectiveness may depend more on qualitative attributes, such as financial expertise, independence, and the quality of oversight, than on the number of committee members or meetings alone. Consequently, increasing the audit committee size or meeting frequency may not necessarily lead to improvements in the qualitative

characteristics of financial reporting. This finding may also reflect the highly regulated nature of the Saudi banking sector, where governance and reporting practices are subject to extensive oversight, potentially reducing the incremental influence of audit committee size and meeting frequency on financial reporting quality.

6. Robustness Check

To examine whether the COVID-19 period affected the results, the analysis was repeated after excluding the years 2020–2021. The results, reported in Table 6, remain broadly consistent with the baseline estimations. In particular, board size (BS), board independence (BIND), and board meeting frequency (BMT) retained both their direction and statistical significance, while bank size (BSZ) remained positively associated with financial reporting quality. However, board diversity (BD) was no longer statistically significant after excluding the COVID-19 period, although the coefficient remained negative. This suggests that the association between board diversity and financial reporting quality may be sensitive to the pandemic period and should therefore be interpreted with caution. The remaining control variables continued to exhibit no statistically significant relationships. Overall, the robustness analysis supports the stability of the main findings, indicating that the reported relationships are not materially driven by the exceptional circumstances associated with the COVID-19 period.

Table 6. Sensitivity analysis excluding the COVID-19 period (2020–2021).

Variable	Baseline FE	Excluding COVID-19
BS	−0.010 ***	−0.010 ***
BIND	0.181 ***	0.221 ***
BMT	0.010 ***	0.014 ***
BD	−0.372 ***	−0.225
BSZ	0.035 ***	0.018 **
INSO	−0.053	−0.007
ACS	−0.010	−0.003
ACM	−0.002	−0.003
ROA	−0.959	−1.292
R-squared	0.577	0.507

Notes: Baseline FE refers to the fixed-effects model reported in Table 4, and the second model excludes the COVID-19 period (2020–2021). *** and ** indicate statistical significance at the 1% and 5% levels, respectively.

7. Conclusions

This study examined the influence of board attributes on financial reporting quality (FRQ) among Saudi commercial banks over the period 2013–2025. The findings highlight the importance of effective board oversight in enhancing financial reporting quality within Saudi commercial banks. Overall, the results provide stronger support for agency theory than for resource dependence theory, suggesting that board monitoring mechanisms are particularly important in explaining financial reporting quality within the Saudi banking sector.

This study contributes to the corporate governance literature by examining FRQ through the qualitative characteristic framework developed by [van Beest et al. \(2009\)](#), rather than relying solely on traditional accrual-based measures. From a theoretical perspective, the findings extend the corporate governance literature by providing evidence that board monitoring mechanisms play a central role in enhancing qualitative financial reporting quality within commercial banking institutions.

This study is subject to several limitations. First, the analysis focuses exclusively on Saudi commercial banks and a selected set of board attributes, which may limit the generalisability of the findings to other sectors and institutional settings. Second, although

panel data techniques were employed to control for unobserved firm-specific effects, no empirical endogeneity tests were conducted. Consequently, the possibility that board attributes and financial reporting quality are jointly determined or influenced by omitted variables cannot be completely ruled out.

Future research may examine additional governance mechanisms, alternative measures of financial reporting quality, and comparative evidence from other sectors and institutional settings. Future studies may also employ dynamic panel estimators, such as system GMM, instrumental variable approaches, or lagged governance variables to further address potential endogeneity concerns and strengthen causal inference. In addition, future research may extend FRQI by incorporating additional qualitative characteristics, such as timeliness and verifiability, and examining their implications for financial reporting quality.

Funding: This research received no external funding.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Data Availability Statement: The data supporting the findings of this study are available from the author upon reasonable request.

Acknowledgments: The author used ChatGPT (GPT-5.5) to assist with language editing and grammatical refinement. The author takes full responsibility for the content, interpretation, and conclusions presented in this study.

Conflicts of Interest: The author declares no conflicts of interest.

Appendix A. Financial Reporting Quality Index (FRQI)

Table A1. Financial Reporting Quality Index (FRQI) Measurement Instrument.

Item	Description	Extensive (1.00)	Mostly (0.75)	Balanced (0.50)	Partly (0.25)	No Disclosure (0.00)
Relevance						
R1	The annual report discloses forward-looking information.	1	0.75	0.50	0.25	0
R2	The annual report discloses information on business opportunities and risks.	1	0.75	0.50	0.25	0
R3	The company uses fair value as a measurement basis.	1	0.75	0.50	0.25	0
R4	The annual report provides feedback on how market events and significant transactions affected the company.	1	0.75	0.50	0.25	0
Faithful Representation						
F1	The annual report clearly explains assumptions and estimates.	1	0.75	0.50	0.25	0
F2	The annual report clearly explains the choice of accounting principles.	1	0.75	0.50	0.25	0

Table A1. Cont.

Item	Description	Extensive (1.00)	Mostly (0.75)	Balanced (0.50)	Partly (0.25)	No Disclosure (0.00)
F3	The annual report presents positive and negative events in a balanced manner when discussing annual results.	1	0.75	0.50	0.25	0
F4	The annual report includes an unqualified auditor's report.	1	0.75	0.50	0.25	0
F5	The annual report extensively discloses information on corporate governance issues.	1	0.75	0.50	0.25	0
Understandability						
U1	The annual report is well organised.	1	0.75	0.50	0.25	0
U2	The notes to the balance sheet and income statement are clear.	1	0.75	0.50	0.25	0
U3	Graphs and tables clarify the information presented.	1	0.75	0.50	0.25	0
U4	The use of language and technical terminology is easy to follow.	1	0.75	0.50	0.25	0
U5	The annual report includes a comprehensive glossary.	1	0.75	0.50	0.25	0
Comparability						
C1	The notes to changes in accounting policies explain the implications of the change.	1	0.75	0.50	0.25	0
C2	The notes to revisions in accounting estimates and judgements explain the implications of the revision.	1	0.75	0.50	0.25	0
C3	Previous-period figures are adjusted for changes in accounting policies or revisions in accounting estimates.	1	0.75	0.50	0.25	0
C4	Current-period results are compared with those of previous accounting periods.	1	0.75	0.50	0.25	0
C5	Information in the annual report is comparable with information provided by other organisations.	1	0.75	0.50	0.25	0
C6	The annual report presents financial ratios and performance indicators.	1	0.75	0.50	0.25	0

Source: Adapted from [van Beest et al. \(2009\)](#) and [Agyei-Mensah \(2022\)](#).

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