

The impact of administrative practices on financial performance: Evidence from Saudi Arabian banks

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Abstract

The quality of administrative practice among those charged with governance has become a necessary requirement for its impact on financial performance in the banking sector. Despite growing attention to corporate governance reforms in emerging economies, empirical evidence on how administrative governance traits affect financial institutions in Saudi Arabia remains limited. This study addresses this gap by examining the impact of governance-related administrative practices on the financial performance of Saudi banks. Using a balanced panel dataset covering all Saudi banks listed in the financial market from 2010 to 2021, the study employs ordinary least squares (OLS) and feasible generalized least squares (FGLS) to ensure robust results and address heteroskedasticity and serial correlation. Financial performance is measured using return on assets (ROA) and return on equity (ROE). Results from both techniques are consistent: board size positively affects ROE but negatively affects ROA, while board independence shows a negative impact on both. Board meetings improve ROA, and leverage and firm size significantly enhance performance. The study contributes to theory and practice by highlighting how governance structures strengthen financial performance and offers insights for regulators seeking to improve governance quality and promote sustainability in the Saudi banking sector.

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1. Introduction

Corporate governance has emerged as a key concept in contemporary organizational discourse and an essential mechanism for ensuring moral, obvious, and accountable organizational conduct [1]. It is regarded now not as a handiest legal framework but also as a moral responsibility that promotes compliance with both the letter and spirit of the law [2, 3]. Weak company governance systems, specifically inside the board of administrators and internal audit structures, often lead to manipulation of economic statements and fraudulent financial reporting [4, 5]. Hence, corporate governance serves as a protection against opposition to managerial opportunism and a

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way to protect shareholders and other stakeholders [6]. Its most important targets include ensuring duty, shielding the integrity of monetary reports, and enhancing organizational value [7]. To beautify governance practices globally, the International Auditing and Assurance Standards Board (IAASB) issued worldwide auditing standards requiring auditors to communicate governance-related matters to those charged with governance [8]. Auditors are hence predicted to evaluate the effectiveness of an entity's control surroundings by way of comparing the roles and duties of the board of administrators and audit committee, which represent a valuable governance mechanism [9].

In the Saudi Arabian context, company governance has received increasing prominence since the issuance of the Corporate Governance Regulations in 2006, reflecting the Kingdom's dedication to improving transparency, stakeholder protection, and institutional duty in step with Vision 2030 goals [10]. In the Saudi Arabian context, business enterprise governance has acquired growing prominence since the issuance of the Corporate Governance Regulations in 2006, reflecting the Kingdom's commitment to improving transparency, stakeholder safety, and institutional duty in line with Vision 2030 dreams [3, 11, 12]. These inconsistent outcomes spotlight an essential studies hole concerning the role of governance high-quality—in particular, the qualitative characteristics of administrative practices among those charged with governance (i.e., the board of administrators and audit committee)—in influencing economic performance within the Saudi banking sector. While preceding research has examined company governance and monetary reporting, confined interest has been paid to how administrative exceptional traits (inclusive of board length, independence, and financial information) affect banks' economic results, especially in a rising market setting with evolving institutional frameworks [13].

Accordingly, this aims to have a look at the connection between the fine of administrative practices of those charged with governance and the economic performance of Saudi banks over the period 2010–2021. By integrating perspectives from company idea, stakeholder idea, and useful resource dependence concept, the study conceptualizes governance as both a monitoring and value-improving mechanism that aligns managerial behavior with shareholder interests, guarantees powerful useful resource usage, and promotes long-time period economic sustainability. The anticipated contributions of this are threefold. First, it provides empirical proof on how the qualitative traits of governance-associated administrative practices impact economic performance in Saudi banks. Second, it contributes to theoretical development by way of bridging governance and performance through a couple of theoretical lenses. Third, it offers sensible implications for policymakers, regulators, and economic institution executives attempting to find to beautify governance frameworks and enhance financial efficiency and accountability within the Saudi banking sector.

2. Literature review

This blanket theoretical and empirical evaluation underscores that the exquisite of administrative practices amongst those charged with governance, especially the board of directors and audit committee, performs a pivotal role in shaping the economic ordinary performance of Saudi banks [14, 15]. By combining agency, stewardship, and useful resource dependence theories, the test gives a complete framework for understanding how effective governance complements transparency, duty, and profitability within the Saudi banking location [16]. Corporate governance literature gives a couple of theoretical perspectives that designate how governance mechanisms affect monetary performance. Three dominant theories—enterprise organization principle, stewardship principle, and useful resource dependence concept—at the same time shape the inspiration for records on how the first rate of the diverse administrative practices charged with governance impacts financial effects in companies. According to the employer principle [17], conflicts of interest get up while managers (dealers) act in strategies that do not align with the pursuits of shareholders (principals). In this view, robust governance systems, including a lively and independent board of directors and an organized audit committee, are characterized by crucial tracking mechanisms that lower corporate costs and ensure managerial responsibility. Stewardship principle [18] gives a contrasting, however complementary thoughts-set, assuming that managers act as responsible stewards who intend to benefit organizational desires consistent with those of

shareholders. From this viewpoint, governance mechanisms are designed no longer to govern but to empower executives, fostering acceptance, cooperation, and dedication to long-term achievement.

Resource dependence concept [19] provides each special layer through the usage of emphasizing that governance of our bodies provides get right of entry to outside belongings, information, legitimacy, and strategic connections, which might be essential for organizational common standard performance and sustainability. Integrating those three theories offers a holistic explanation of the way governance remarkably influences economic basic performance overall [20]. Agency principle highlights tracking and control, the stewardship concept emphasizes collaboration and motivation, and the useful resource dependence precept underscores the strategic characteristic of governance systems in aid acquisition and utilization [21]. The interplay amongst these perspectives is especially relevant in the banking sector, wherein governance is affecting economic balance, transparency, and profitability. Basic financial performance represents a corporation's capability to utilize its assets effectively to generate sustainable profits [22, 23]. It serves as a key indicator of effective control practices and may be measured through profitability signs and symptoms, collectively with return on assets (ROA) and return on equity (ROE) [24]. In banks, monetary standard performance no longer shows operational common overall performance but also suggests how effectively governance systems mitigate dangers, allocate capital, and ensure compliance with regulatory and moral requirements [25].

The board of administrators, as one of the number one governance mechanisms, plays a crucial role in overseeing control selections and ensuring accountability [26]. Board size has been extensively tested in the literature, yielding blended effects. Some research suggests that large boards enhance economic performance by offering various views, understanding, and sources that enhance strategic decision-making [27, 28]. This aligns with the useful resource dependence idea, which views larger forums as a supply of broader connections and records. Conversely, the employer idea argues that smaller forums are more powerful because they enhance communication, coordination, and management, thereby enhancing performance [29]. Other studies report a non-linear courting, suggesting that performance improves with large forums, however, declines beyond a certain threshold because of coordination problems [30]. Hence, board size is anticipated to definitely affect the financial performance of Saudi banks, despite the fact that the connection may also rely on contextual elements [31].

Board independence is another vital characteristic that influences overall performance. Independent directors are predicted to provide objective oversight, lessen conflicts of interest, and make decisions nicely [32, 33]. Agency theory helps the belief that independence mitigates opportunistic conduct, while the stewardship concept highlights its position in maintaining integrity and moral decision-making. Independence also strengthens the credibility and transparency of governance choices, which, in line with the aid dependence principle, can enhance a company's reputation and gain entry to resources [34]. Several studies verify that board independence reduces business enterprise prices and definitely impacts performance [35, 36]. Even though some studies argue that immoderate independence may additionally weaken strategic cohesion [37, 38]. Therefore, board independence is usually anticipated to have a high-quality effect on bank performance [39].

The frequency of board meetings is often taken into consideration as an indicator of board activity and diligence. Regular conferences provide opportunities for directors to talk about strategic problems, reveal control movements, and respond to emerging dangers [40, 41]. This attitude aligns with both organization and stewardship theories, in which common interaction enhances tracking effectiveness and supports collaborative decision-making. However, empirical effects are blended; whilst a few studies find a fine relationship between meeting frequency and overall performance, others advocate that too many meetings might also suggest inefficiency or crisis management [42]. Overall, it is predicted that more board meetings contribute to improved economic performance in Saudi banks.

The audit committee, as a specialised governance shape, performs an essential position in overseeing financial reporting and internal manipulate structures. Its size, meeting frequency, and economic knowledge are key signs of its effectiveness. A properly-installed audit committee can enhance transparency and responsibility by

making correct and reliable economic statements [43, 44]. Studies have shown that a correctly sized audit committee offers the important property and variety of data to expose financial reporting successfully [45, 46]. Even excessively large committees can also face coordination-demanding situations that lessen overall performance [47]. Consequently, audit committee length is expected to have an effective impact on the overall financial performance.

The frequency of audit committee meetings is an important aspect of governance, regardless of an organization's size. Frequent conferences enhance monitoring ability and decrease the danger of fraudulent reports [6, 48]. This aligns with the business enterprise principle's emphasis on vigilance and the stewardship concept's emphasis on engagement. Nonetheless, some research reports that assembly frequency may not usually translate into better overall performance, relying on the exception of discussions and follow-up actions [49]. Thus, audit committee conferences are hypothesized to positively impact the overall economic performance of Saudi banks [50].

Finally, the monetary expertise of audit committee contributors is broadly recognized as a vital determinant of governance effectiveness. Members with accounting and financial backgrounds are better equipped to interpret complicated economic facts, locate irregularities, and ensure accurate reporting [51, 52]. Agency principle suggests that such know-how reduces information asymmetry and boundaries earnings manipulation, at the same time as the resource dependence idea highlights its value in improving decision-making and investor confidence. Empirical research usually helps determine the influence of audit committee knowledge on corporate performance [53]. Based on the combined proof in the literature and the combination of those theoretical perspectives, the prevailing observation develops the following hypotheses:

H1: Board size positively impacts the monetary performance of Saudi banks.

H2: Board independence undoubtedly affects economic performance.

H3: The frequency of board conferences has a high-quality effect on economic performance.

H4: Audit committee size definitely influences overall economic performance.

H5: The frequency of audit committee meetings positively influences monetary performance.

H6: The monetary and accounting information of audit committee individuals positively affects the overall economic performance of Saudi banks.

3. Research method

3.1. Data collection

The study examines data collected from several sources, including information on the board of directors, the audit committee, and organizational performance indicators such as return on assets (ROA) and return on equity (ROE). The data were obtained from the annual reports of financial institutions available in the online database of the Saudi Arabian Stock Market. Accounting measures are a reliable method for assessing a company's profitability [54]. The study uses a sample consisting of a distinct group of financial institutions—specifically banks—for which data from 2010 to 2021 were available.

3.2. Model specification

The records were analyzed for the usage of the FGLS method, and the consequences are displayed in Table 4. The models encompassed all corporate governance (CG) variables and sought to have a look at the linear correlation among the variables of Saudi indexed corporations, with a specific emphasis on CG approaches and financial performance (FP).

$$ROA_{it} = \beta_0 + \beta_1 BODS_{it} + \beta_2 ODI_R_{it} + \beta_3 BODM_{it} + \beta_4 ACS_{it} + \beta_5 ACM_{it} + \beta_6 ACEXR_{it} + \beta_7 Leverage_{it} + \beta_8 firmsize_{it} + \beta_9 Firmage_{it} + \epsilon_i \dots \dots \dots (1)$$

Model 2 is utilized to observe the additional dimension of a few parameters related to company governance and financial performance.

$$ROE_{it} = \beta_0 + \beta_1 BODS_{it} + \beta_2 ODI_R_{it} + \beta_3 BODM_{it} + \beta_4 ACS_{it} + \beta_5 ACM_{it} + \beta_6 ACEXR_{it} + \beta_7 Leverage_{it} + \beta_8 firmsize_{it} + \beta_9 Firmage_{it} + \epsilon_i \dots \dots \dots (2)$$

3.3. Measurement of the variables

This section analyzes the measurements of the dependent, independent, and control variables.

Table 1. Concise description of how the study variables were defined and measured

ROA	=	The return on assets (ROA) is determined by dividing a company's earnings before taxes by its total assets [55].
ROE	=	The return on equity is determined by the net profits allocated to the shareholders' equity [56].
BODS	=	The Board of Directors' size is indicative of the total number of board members and corresponds to [57].
ODI_Rit	=	The percentage of non-executive board members, which is denominated by the total number of directors on the board, is referred to as the "Non-executive board" [58].
BODM	=	Board meetings (number) represent the frequency of board meetings held annually [59].
ACS	=	The size of an audit committee refers to the number of its members [57].
ACM	=	The percentage of audit committee independence is denoted by the number of non-executive members on the audit committee [58].
ACEXR	=	It displays the audit committee's years of experience [60].
Firmsize	=	The size of a firm can be determined by logging the total assets of the firm [61].
Leverage	=	Leverage is determined by dividing total debts by total assets [62].
Firmage	=	Understanding a company's duration of existence is necessary to calculate its firm age [63].

Source: Authors' creation

4. Results

4.1. Descriptive analysis

The data from Table 2 is displayed as mean values, maximum values, and minimum values. The descriptive analysis was constrained by its failure to consider the interrelationships among the independent variables. Next, the calculation of the variance inflation factor (VIF) is performed, and the results are presented in Table 2. A VIF value exceeding 10 shows the presence of multicollinearity, as stated by [64]. Nevertheless, the VIF values in this particular situation varied between 1.21 and 4.07, suggesting that there is no presence of the mentioned problem.

Table 2. Descriptive statistics and variance inflation factor

Variable	Mean	Std. Dev.	Min	Max	Variable VIF	1/VIF
ROA	0.0284	0.0328	0.001	0.189	-	-
ROE	0.1186	0.0493	0.001	0.225	-	-
BODS	9.8646	0.7897	9.000	11.000	2.34	0.427249
BODI_R	0.4656	0.1420	0.200	0.700	1.92	0.521277
BODM	5.9583	1.7163	4.000	11.000	1.7	0.587742
ACS	4.1667	0.9138	3.000	5.000	3.8	0.26339
ACM	6.2872	2.0194	3.000	12.000	1.53	0.653224

Variable	Mean	Std. Dev.	Min	Max	Variable VIF	1/VIF
ACEXR	0.4125	0.1460	0.100	0.600	4.04	0.24738
Leverage	0.8419	0.0617	0.416	0.907	1.21	0.825824
Firmsize	8.1110	0.3824	7.325	8.961	4.07	0.245674
Firmage	42.3750	24.9552	5.000	91.000	2.72	0.367498
Mean VIF						2.59

Source: Authors' creation

According to [64], the statistical correlation coefficients study, which shows correlation matrix coefficients with a value of 0.9 or above, suggests a serious collinearity issue. Table 3 shows that there is no multicollinearity because there are no variables whose correlations are greater than 0.9. Since every correlation was less than 0.900, it seems likely that there is no problem with multicollinearity.

Table 3. Pearson correlation for a continuous variable

Variable	ROA	BODS	BODI_R	BODM	ACS	ACM	ACEX R	Leverage	Firm size	Firm age
Panel A										
ROA	1.000									
BODS	-0.309***	1.000								
BODI_R	-0.330***	0.501***	1.000							
BODM	-0.079	0.072	0.100	1.000						
ACS	-0.227**	0.229	-0.118	0.441***	1.000					
ACM	-0.242**	0.350***	0.189**	0.067	0.064	1.000				
ACEXR	-0.013	-0.160	-0.311**	0.261**	0.623**	-0.298**	1.000			
Leverage	0.265**	0.198**	-0.078	0.056	0.241**	0.161	0.128	1.000		
Firmsize	-0.146	-0.052	-0.356***	0.529***	0.751***	0.029	0.606***	0.252***	1.000	
Firmage	-0.001	-0.226**	-0.315**	-0.034	0.056	0.358**	-0.316**	0.182**	0.210**	1.000
Panel B										
Variable	ROE	BODS	BODI_R	BODM	ACS	ACM	ACEXR	Leverage	Firm size	Firm age
ROE	1.000									
BODS	0.308***	1.000								
BODI_R	-0.171**	0.501***	1.000							
BODM	0.144	0.072	0.100	1.000						
ACS	0.375***	0.229**	-0.118	0.441***	1.000					
ACM	0.108	0.350***	0.189**	0.067	0.064	1.000				
ACEXR	0.112	-0.160	-0.311***	0.261**	0.623***	-0.298***	1.000			
Leverage	0.419***	0.198**	-0.078	0.056	0.241**	0.161	0.128	1.000		
Firmsize	0.433***	-0.052	-0.356***	0.529***	0.751***	0.029	0.606***	0.252***	1.000	
Firmage	0.166	-0.226**	-0.315***	-0.034	0.056	0.358**	-0.316**	0.182**	0.210**	1.000

Note: all variables are described in Table 1; significant level as follows: (*) $p < 0.10$; (**) $p < 0.05$, and (***) $p < 0.01$, respectively.

Source: Authors' creation

4.2. Regression results

The Breusch-Pagan LM test is conducted to determine whether to use the pooled estimates or the random effects model. Table 4 demonstrates that the Prob > chibar2 result is below 0.05, suggesting that the random effects model is more appropriate than the pooled OLS model. In order to deal with the problem of heteroscedasticity

in the data, this study utilizes a cross-sectional time-series FGLS regression, as presented in Table 4. This methodology aligns with previous research conducted by [65] and [66], who employed the feasible generalized least squares (FGLS) method to examine the correlation between independent and dependent variables. Due to the unique characteristics of the data, it is necessary to concentrate on a distinct group of financial sectors, where the analysis is restricted to a specific behavior. Consequently, FGLS was determined to be the suitable approach.

Tables 4. Detailed results

Breusch and Pagan Lagrangian Multiplier Test		Breusch-Pagan / Cook-Weisberg test for heteroskedasticity Test	
chibar2(01)	0.00	chibar2(1)	47.23
Prob > chibar2	1.0000	Prob > chibar2	0.0000

Table 5. Linear regression

Linear regression- Model (1)- ROA				Linear regression- Model (2)- ROE			
Variable	Coef.	t	P>t	Variable	Coef.	t	P>t
BODS	-0.010	-1.95**	0.06	BODS	0.024	3.050***	0.003
BODI_R	-0.094	-3.27***	0.00	BODI_R	-0.076	-1.990**	0.050
BODM	0.004	2.42**	0.02	BODM	-0.002	-0.680	0.496
ACS	-0.002	-0.19	0.85	ACS	0.002	0.270	0.788
ACM	-0.002	-1.75*	0.08	ACM	-0.003	-1.080	0.284
ACEXR	-0.026	-0.73	0.47	ACEXR	-0.088	-1.630*	0.107
Leverage	0.234	4.17***	0.00	Leverage	0.197	2.800***	0.006
Firm size	-0.034	-2.21**	0.03	Firm size	0.062	2.920***	0.004
Firm age	0.000	-1.24	0.22	Firm age	0.000	-0.130	0.900
_cons	0.260	2.12**	0.04	_cons	-0.694	-4.380***	0.000
Prob > F	0.01			Prob > F	0.000		
R-squared	0.40			R-squared	0.433		
Root MSE	0.03			Root MSE	.0382		

Note: all variables are described in Table 1; significant level as follows: (*) $p < 0.10$; (**) $p < 0.05$, and (***) $p < 0.01$, respectively.

Source: Authors' creation

4.3. Further analysis

In order to deal with the problem of heteroscedasticity in the data, this study utilizes a cross-sectional time-series FGLS regression, as presented in Table 4. The contemporary takes a look at hiring the possible generalized least squares (FGLS) technique as an additional analysis to verify the robustness and statistical balance of the effects. As effects are regarded in Table 4. This approach is one of the most efficient strategies for studying panel-sectional time collection information, particularly in the presence of econometric issues, which include heterogeneity of variance, autocorrelation, and pass-dependency, which are common traits of banking statistics [67, 68]. While the ordinary least squares (OLS) version presents impartial estimates, the resulting trend deviations can be inaccurate in the presence of those problems, leading to weak reliability in statistical inference. [69]. FGLS, but re-estimates the covariance-covariance matrix of the residuals, allowing for extra correct coefficients and reliable standard deviations [70]. Given the massive variation amongst Saudi banks in terms of size, ownership structure, and nature of interest (Islamic or traditional), the usage of FGLS is suitable for interpreting the connection between the exceptional governance practices and monetary performance. Recent research has supported the usage of this approach in governance and banking overall performance research to enhance the robustness and reliability of findings in emerging markets [71, 72].

Table 6. FGLS regression

Cross-sectional time-series FGLS regression- Model (1)				Cross-sectional time-series FGLS regression- Model (2)			
Variable	Coef.	z	P>z	Coef.	z	P>z	
BODS	-0.010	-2.52**	0.01	0.021	3.470***	0.001	
BODI_R	-0.103	-5.63***	0.00	-0.081	-2.910***	0.004	
BODM	0.005	3.52***	0.00	-0.003	-1.420	0.156	
ACS	0.007	1.63*	0.10	0.000	0.020	0.981	
ACM	-0.002	-1.72*	0.09	-0.001	-0.610	0.540	
ACEXR	-0.052	-1.91*	0.06	-0.090	-2.080**	0.038	
Leverage	0.212	6.72***	0.00	0.225	3.860***	0.000	
Firm size	-0.048	-4.62***	0.00	0.073	4.620***	0.000	
Firmage	0.000	-2.08**	0.04	0.000	-0.510	0.608	
_cons	0.369	4.90***	0.00	-0.767	-6.220***	0.000	
Wald chi2(9)			106.69	117.29			
Prob > chi2			0.000	0.000			
Coefficients:	generalized least squares			generalized least squares			
Panels:	heteroskedastic			heteroskedastic			
Correlation:	no autocorrelation			no autocorrelation			

Note: all variables are described in Table 1; significant level as follows: (*) $p < 0.10$; (**) $p < 0.05$, and (***) $p < 0.01$, respectively.

Source: Authors' creation

5. Discussion

Table 4 gives the regression outcomes for Model 1, where monetary overall performance is measured through each ROA and ROE. The coefficients and t-facts are pronounced with significance tiers indicated through one, two, or three stars, similar to 10%, 5%, and 1% significance degrees, respectively. The effects reveal that certain qualitative characteristics of those charged with governance extensively have an effect on the overall economic performance of Saudi banks, while others do not. This section discusses those findings in light of previous research and applicable theoretical perspectives. The findings suggest that board size (BODS) has a statistically significant negative impact on ROA (-1.95**). However, a fine and exceptionally big effect on ROE (3.05***). Economically, this indicates that huge boards may lessen operational performance and asset utilization due to the coordination of stressful situations and slower decision-making [73]. However, huge boards can also beautify strategic oversight, useful resource get right of entry to, and capital allocation performance, therefore improving returns to shareholders [74]. This dual impact aligns with the resource dependence principle, which emphasizes that larger forums' growth leads to access to information, and outside legitimacy, thereby enhancing the firm normal overall performance [28, 75, 76]. At the same time, the results contradict business enterprise precept, which posits that smaller boards are greater powerful in tracking management and decreasing coordination costs. In the Saudi banking context, wherein the regulatory environment prioritizes compliance and transparency, large forums seem to beautify governance exceptionally by way of the usage of combining managerial know-how with effective oversight, assisting long-time period institutional stability.

Regarding board independence (BODI_R), the outcomes display a terrible relationship with every ROA (-3.27***) and ROE (-1.99**). While this locating seems opposite to the standard predictions of company theory, which attributes fine overall performance results to the tracking function of unbiased administrators [77], it may additionally replicate contextual realities. In Saudi banks, impartial directors are frequently subject to regulatory and procedural obligations that limit managerial flexibility and risk-taking, thereby constraining short-term

profitability. Nonetheless, preceding studies [29, 78] have decided that independence complements transparency and responsibility, especially in superior and rising markets. Thus, independence may still support long-term governance, even if its short-term financial impact appears negative. In contrast, board meeting frequency (BODM) shows a positive and significant association with ROA (2.40 **), suggesting that more frequent meetings improve monitoring effectiveness and operational decision-making.

However, its effect on ROE is insignificant, suggesting that procedural interest does not necessarily translate into advanced returns to shareholders. These final results, in part, help the stewardship thought-set, in which energetic engagement may additionally enhance control, but excessive conferences can also result in inefficiency. The combined outcomes reflect the findings of [42] and [79], who argued that commonplace conferences sometimes replicate reactive responses to internal problems in the choice of proactive strategic oversight. In the Saudi context, in which compliance conferences are often mandated, the quality and reputation of discussions seem to be forgotten more than their frequency. With respect to audit committee characteristics, the results show that audit committee size (ACS) and meeting frequency (ACM) have negative but weakly significant associations with overall performance. This suggests that larger or more frequent audit committee meetings do not necessarily improve efficiency; instead, they may introduce bureaucratic delays and increase procedural costs [80]. These findings are consistent with those of [47] but differ from [81] and [82], which reported positive associations. From a theoretical perspective, this outcome implies that the stewardship theory may have limited explanatory power in this context, as larger committees do not automatically enhance cooperation or oversight. Rather, effectiveness depends more on the competence and engagement of members than on the number of participants.

Interestingly, audit committee information (ACEXR) has a horrible, however enormous impact on ROE (–1.63*), which also suggests that participants with financial backgrounds emphasize compliance and threat mitigation over profit maximization. Nevertheless, the literature generally enables an excellent position for monetary know-how in improving governance effectiveness [51, 53]. From an employer concept perspective, monetary expertise helps mitigate data asymmetry and managerial opportunism, at the same time as resource dependence concept posits that professional contributors support analytical and advisory capacity. Hence, this blended give up end result might also replicate the conservative orientation of Saudi banks, wherein monetary professionals prioritize regulatory adherence over competitive profitability.

Regarding manipulated variables, leverage demonstrates a strong, great, and huge correlation with every ROA (4.17***) and ROE (2.80***), confirming that better economic leverage complements profitability while being controlled prudently. Conversely, organization duration is negatively associated with ROA (–2.21**) but positively associated with ROE (2.92***), implying that huge banks revel in declining asset productivity; however, they benefit from economies of scale and more potent equity returns. Firm age remains insignificant for both performance measures, suggesting that organizational maturity does not have a meaningful impact on overall performance. Taken together, these findings indicate that governance structures influence financial performance asymmetrically, depending on the performance indicator used. Structural features such as board size, independence, and expertise play a more decisive role than procedural factors like meeting frequency. This pattern underscores that quality—not quantity—is what defines effective governance. In summary, the study provides evidence that effective governance practices are anchored in independence, diversity, and informed decision-making.

However, mere formal compliance with governance codes no longer assures fulfillment; the proper determinant lies in the substance and effectiveness of administrative practices. Future studies should find out moderating variables which encompass virtual transformation, chance way of lifestyles, and business enterprise social responsibility to deepen the theoretical and practical knowledge of governance—usual performance dynamics in emerging markets.

To confirm the robustness and consistency of the findings, a similar regression assessment changed into conducted the use of the feasible generalized least squares (FGLS) approach. The effects, furnished in Table 5,

are absolutely regular with the ones of the primary analysis, confirming the steadiness of the relationships identified in advance. Specifically, board duration (BODS) keeps to reveal a great, horrible impact on ROA (-2.52^{**}) and a robust, powerful impact on ROE (3.47^{***}), even as board independence (BODI_R) continues its bad association with each ROA (-5.63^{***}) and ROE (-2.91^{***}). Board assembly frequency (BODM) is undoubtedly and appreciably related to ROA (3.52^{***}), supporting the view that common meetings enhance monitoring average overall performance.

Similarly, audit committee size (ACS) and meeting frequency (ACM) show weak but consistent relationships with overall performance, while audit committee expertise (ACEXR) maintains its negative association with ROE (-2.08^{**}). Among the control variables, leverage and firm size continue to exhibit significant positive effects on ROE and mixed effects on ROA, indicating that capital structure and scale remain key determinants of profitability. Overall, the FGLS results confirm the robustness of the main model, as both analyses yield similar signs, magnitudes, and significance levels. This consistency strengthens confidence in the empirical conclusions and demonstrates that the study's findings are not sensitive to estimation technique or model specification.

6. Conclusion and implications of the study

This study examined the relationship between key qualitative characteristics of governance practices and the overall financial performance of Saudi banks during the period 2010–2021. The results confirmed that precise governance attributes—particularly board length, board independence, and the economic information of the audit committee—have a significant and massive effect on overall economic performance. In the assessment, board assembly frequency and audit committee length exhibited a negative or insignificant correlation with financial results, emphasizing that high-quality governance relies no longer on structural features but also on the effectiveness of managerial oversight and decision-making.

From a theoretical angle, the examination contributes to the company governance literature by integrating qualitative governance variables into an empirical model of financial performance in the banking sector. By combining the company idea, stewardship idea, and useful resource dependence precept, it gives a complete framework for expertise on how governance structures each manipulate and empower control, enhance monitoring performance, and optimize the use of organizational assets. This theoretical integration deepens the know-how of the manner governance tremendously contributes to sustainable monetary performance in emerging markets, which encompass Saudi Arabia. The findings additionally have large managerial and regulatory implications. For bank executives, the outcomes underscore the importance of strengthening the independence and composition of the board of directors, enhancing the economic and accounting expertise of audit committees, and making sure that board and committee conferences are performed with strategic purpose in the desire for procedural formality. For regulators and policymakers, the evidence highlights the need to put into effect and refine governance codes that sell duty, transparency, and competence, a few of the ones charged with governance, in line with the goals of Saudi Vision 2030 and the broader timetable for economic sector reform.

Despite its contributions, the study acknowledges several limitations. The analysis is confined to the banking sector, which may limit the generalizability of the findings to other industries. Additionally, financial performance was measured using only two indicators—ROA and ROE—which capture profitability but overlook other important dimensions such as risk management, operational efficiency, or market value. Future research should broaden the scope by including non-financial sectors, more comprehensive performance measures, and comparative analyses across Gulf Cooperation Council (GCC) countries to account for institutional and regulatory differences. Moreover, future studies should incorporate mediating or moderating variables—such as risk culture, digital transformation, or corporate social responsibility (CSR)—to better understand the mechanisms through which governance quality affects financial outcomes. In conclusion, this study underscores that the quality of governance practices remains a cornerstone of financial sustainability and

institutional credibility in Saudi banks. Enhancing governance effectiveness, through greater independence, expertise, and accountability, not only boosts profitability but also strengthens the resilience and transparency of the broader financial system.

Declaration of competing interest

The authors declare no competing interests.

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Author contribution

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