



# Corporate Governance Mechanism and Financial Performance in Pakistan Commercial Banks: Moderating Role of Credit Risk Management

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## ABSTRACT

**Aim:** This research aims to investigate the impact of corporate governance on the financial performance of Pakistan commercial banks. Moderating role of credit risk management in this relationship is also intended to assess.

**Methodology:** Panel data techniques are employed to analyze annual data from 17 Pakistan banks spanning from 2015 to 2022. Various proxies are utilized to assess corporate governance, while bank performance is evaluated through metrics such as return on assets, return on equity, earnings per share, and net profit margin.

**Key Findings:** The study reveals that corporate governance proxies significantly influence bank performance. It also demonstrates that credit risk management, specifically measured by non-performing loans, significantly moderates the relationship between corporate governance and bank performance.

**Implications:** These findings hold significance for policymakers and stakeholders, offering insights that can inform the development of initiatives aimed at enhancing the financial and overall performance of banks. Investors and owners are encouraged to assess bank performance based on the effectiveness of corporate governance and risk management committees. The research contributes to understanding the effectiveness of governance structures in the context of Pakistan's banking sector, shedding light on their impact on performance and offering implications for regulatory frameworks and governance practices.

**Keywords:** Corporate governance mechanism, bank performance, credit risk management.

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## 1. INTRODUCTION

The banking industry is crucial in encouraging domestic economic growth. Nonetheless, the advent of the Global Financial Crisis has highlighted significant flaws in the financial industry. These occurrences are undoubtedly the consequence of several factors, including poor governance, flaws in regulatory and supervisory frameworks, insufficient managerial oversight, and a lack or breakdown of internal control systems. Furthermore, the dual role of individuals responsible for both audit and accounting functions, financial data and statement manipulation, non-compliance with international standards and national policies

and regulations, conflicts of interest, and information disparities between principals and agents, all contribute significantly to these scandals (Wahyudin & Solikhah, 2017).

Investigating the impact of the aforementioned components on shareholder interests and wealth via their impact on various performance measures inside banks is an important research subject. Such frameworks include the Committee of Sponsoring Organizations Framework (1992), the Criteria of Control Framework (1995) for Internal Controls, and the Cadbury Report in the United Kingdom. Moreover, the Sarbanes-Oxley Act was enacted in reaction to the recurrence of crises (Tripathi, 2008), providing a compelling push for policymakers to emphasize the upgrading of governance in both public and commercial enterprises at all levels. Primary goals of the strong governance mechanisms are to protect shareholders' interests, address and manage agency-related challenges, advocate for the separation of board and control functions, and establish various supervisory committees to enhance the performance of firms (Mollah *et al.*, 2021).

### Identifying Research Gap

Ullah *et al.* (2020), Zaid *et al.* (2020), and Athar *et al.* (2023) have investigated the impact of factors such as board size (BS), duality, and gender diversity (G\_DIV) on BP, particularly using accounting and market-based measures. Ullah (2020) utilized an index of CG as an explanatory factor to assess its impact on BP. These studies, however, have limits in terms of scope and aims, and they are hampered by a variety of technical and statistical difficulties. These flaws include the use of poor proxies to assess success, the dependence on a CG index rather than analyzing the influence of each component individually, a restricted focus on profitability and financial performance, and a limited dataset. Past research has missed the moderating role of credit risk management (CRM), which is an important component in Pakistan's present economic situation, which is marked by high levels of debt, inflation, and slow growth rates. As emphasized in the study by Rehman *et al.* (2020), good CRM is critical in resolving these difficulties and improving financial institutions' performance. Neglecting CRM might result in a drop in BP. As a result, prioritizing efficient CRM aligns the interests of all stakeholders, eventually leading to greater BP, as highlighted by Abdullah *et al.* (2017). The aforementioned limitations and research gaps provide compelling impetus for our comprehensive investigation into how various dimensions of CG influence various financial and tangible measures of BP, as well as whether CRM acts as a moderating factor in the relationship between CG and BP.

### Rationale

The selection of Pakistan as the primary focus of empirical research is motivated by the country's status as one of the most densely populated places in South Asia, as well as the vast range of challenges it faces. In Pakistan, the legal system is coping with issues such as poor institutional and regulatory frameworks, flaws in accountability systems, and several other challenges. Problems include corruption, security issues, a huge excess of cases, prolonged delays in high court verdicts about corruption circumstances, and major claims of bribery, coercion, cronyism, favoritism, scam, and embezzlement against legislators and officials. Furthermore, there is extensive governmental or political intervention in the financial sector, which stifles capital markets. In addition, Pakistan is a male-dominated country with no mandated gender diversification laws. Furthermore, in recent decades, Pakistan's financial industry, which comprises private local banks, government-owned institutions, and international banks, has risen tremendously. These many characteristics provide compelling grounds for doing extensive empirical study aimed at explaining the role of governance in the background of a growing economy.

## Theoretical Background

Many theories have been established to explain the link between various aspects of governance and organizational effectiveness. These ideas prominently include the agency theory, stewardship theory, and information asymmetry theory.

The agency theory examines the interplay among principal and agent, arguing that both sides should prioritize protecting their interests. When their interests and expectations are mismatched, agents may engage in opportunistic behavior to defend their profits over the principals'. This idea advocates for the separation of ownership and control since concentrating these powers on a single person might lead to conflicts of interest (Jensen & Meckling, 2019; Krause *et al.*, 2014).

According to the stewardship theory (Donaldson & Davis, 1991; Nicholson & Kiel, 2007), most managers are essentially honest and reliable persons who always act in the best interests of the organization. Proponents of this strategy argue that consolidating both qualities in one person allows for strong, united leadership, swift decision-making, and effective monitoring.

Disparities in information between banks and other stakeholders, according to the information asymmetry hypothesis (Akerlof, 1978), can hurt corporate performance. The existing empirical literature has mostly focused on governance studies in industrialized countries, with little attention paid to emerging and developing economies. Several experts believe that strong governance systems, which include controls and authorizations, improve performance of firms (Farag *et al.*, 2018). Nonetheless, the results of this research have been inconsistent, with some demonstrating favorable impacts, others revealing negative outcomes, and still others having no detectable influence.

## 2. LITERATURE REVIEW

### Board Size and Performance

According to Jensen (2019), BS, that represents the total board of directors, is a vital indication of CG and plays a crucial role in supervising and directing corporate operations. Previous studies into the influence of BS on BP have yielded conflicting results. Smaller BS, according to proponents, can be more successful than bigger ones, citing a negative association between BS and performance. They show that smaller boards encourage better communication, coordination, and decision-making abilities (Salem, 2019). Yasser *et al.* (2017) even contend that a few directors boost bank value. According to Zabri *et al.* (2016), smaller boards promote better decision-making due to greater coordination among board members, resulting in increased operational efficiency and, as a result, higher BP.

The agency theory, on the other hand, supports the view that bigger BS improves bank efficacy and value. Larger boards, according to this notion, bring more variety in experience, abilities, and ideas, as well as possibilities for networking and access to resources, eventually enhancing bank performance (Waheed & Malik, 2021). Furthermore, some research has shown that larger boards allow for more judicious monitoring of management performance and tasks, which leads to improved bank performance (Abdullah *et al.*, 2017). Numerous studies, including those by Gerged and Agwili (2020), Mishra and Kapil (2018), and Noja *et al.* (2021) have originated a strong and satisfactory affiliation between BS and banking sector performance.

Opponents argue that larger boards hurt BP because of factors such as poor communication, an increased presence of free riders, higher agency costs, and a misalignment of members' interests with firm objectives (Noguera, 2020). According to Pavić and Miletić, (2022), larger boards have less effective interactions, limiting members' capacity to achieve effective choices and resulting in higher expenditures and ineffective boardroom discussions. Detthamrong *et al.* (2017), instead, discovered that BS did not influence BP. Based on

the findings, we expect an affirmative correlation between BS and BP, leading to the formulation of the following hypothesis:

**H1:** Board size has a significant effect on the performance of Pakistani Banks.

### **Board Independence and Performance**

A majority of external directors on an independent board have no links with the company's senior executives and have had little or no commercial dealings with the organization. According to Pavić and Miletić, (2022), this structure is intended to reduce any conflicts of interest. The existence of autonomous directors on a board is a critical component of CG. The information asymmetry theory, according to Salem *et al.* (2019), argues that autonomous directors have a favorable influence on BP via two unique paths. For starters, autonomous directors play a significant role in managing and overseeing management, cutting agency expenses and thereby favorably impacting BP. Furthermore, external persons are considered as a link between the bank and its external surroundings, possibly assisting managers in attaining the organization's various objectives (Arosa *et al.*, 2013).

Numerous studies have been conducted to investigate the association between BI and BP. (Apochi *et al.*, 2022) contend that a board with a substantial number of autonomous directors may successfully avoid unscrupulous management conduct, safeguard shareholder interests, and eventually enhance BP. According to Khan *et al.* (2019) and Wu (2021), a larger number of independent directors gives a favorable signal to investors and shareholders, indicating effective monitoring and building public trust, resulting in enhanced bank performance. Similarly, Khan *et al.* (2022) discovered that organizations with more independent directors tend to bridge the gap between managerial and shareholder objectives, enhancing operational efficiency and, as a result, bank performance.

According to Ahmad and Sallau (2018), the existence of autonomous directors has a substantial influence on the correct dissemination of information within the financial industry, with a larger share of external directors on the board related with enhanced BP. Similarly, Pavi and Mileti (2022) observe that corporate governance efficacy, notably through BI, benefits BP by improving the board's ability to supervise management and counteract fraudulent financial activities. Mweta and Mungai (2018) also establish an optimistic relationship among the occurrence of autonomous directors and BP. Mukhtaruddin *et al.* (2019) and Asante-Darko *et al.* (2018), notwithstanding these findings, discover no significant association between BI and BP. Based on the facts, we construct the following hypothesis.

**H2:** Board independence has a significant effect on the performance of Pakistani Banks.

### **Gender Diversity and Performance**

In the literature, two contradictory views on G\_DIV have emerged. More female board involvement, according to the positive approach, is crucial for decreasing agency costs, enhancing decision-making procedures, and eventually enhancing performance of firms (Rao *et al.*, 2016). Additionally, according to the agency hypothesis, greater diversity on boards leads to more effective management oversight, which increases company performance.

Opponents argue that having only a few women on boards hampers performance. This viewpoint is congruent with tokenism theory, which claims that three types of dread might exist for women: isolation, assimilation, and a lack of recognition for their voices and efforts. These concerns may impede women's active participation in organizational activities (Kanter, 1977).

A range of results have been obtained from empirical studies on the influence of G\_DIV on performance (Riyadh *et al.*, 2019). Green and Homroy (2018), for example, revealed that G\_DIV, particularly female board involvement, enhances corporate profitability in EU enterprises. According to Wallgren and Andersson (2018), more female board representation increases company performance. According to Alqatamin (2018), female involvement in committees improves firm performance in Jordan. Increasing female board presence increases organizational performance in non-family enterprises but has little impact on family businesses, according to Adhikary *et al.* (2021). Ullah *et al.* (2021) discovered that female CEOs and more board presence significantly increased business value in Pakistan from 2010 to 2017. However, Aslam and Haron (2021) discovered a substantial unfavorable association between female CEOs and bank performance.

These diverse findings demand more inquiry, and the goal of our work is to contribute to that ongoing investigation. According to the agency hypothesis, a diverse board increases management supervision and, as a result, corporate success. However, Ghosh (2017), Detthamrong *et al.* (2017), and Noguera (2020) feel that G\_DIV, as assessed by the number of females on boards, has no significant impact on BP. The following hypothesis is formulated for this study:

**H3:** Board gender diversity has a significant effect on the performance of Pakistani Banks.

### CEO Duality and Performance

The link between CEO\_D, in which an individual serves as both CEO and chairman at the same time, and performance is a hot issue in financial literature. However, the findings of research on this issue are equivocal, giving rise to two dominant opinions in the literature.

According to empirical research, having a dual function as CEO is connected with lower performance. Duru *et al.* (2016) discovered that CEO\_D had a detrimental influence on the performance of US enterprises. Similarly, Farag *et al.* (2018) used panel regression to reveal a substantial undesirable impact of CEO\_D on business performance. Sarkar and Sarkar (2018) found that the impact of CEO\_D on performance differs depending on the kind or category of bank in the Indian setting. They discovered a favorable impact on public sector company performance but an undesirable effect on private sector business performance. Adeabah *et al.* (2019) found that CEO\_D has a detrimental influence on company performance in Ghana. Aslam and Haron (2021) observed, instead, that CEO\_D considerably improves corporate performance. Furthermore, Noguera (2020) discovered that CEO\_D enhanced corporate performance in the United States between 1999 and 2019. However, several research, such as those by Arora and Sharma (2016), and Detthamrong *et al.* (2017), indicated that CEO duality did not affect performance. According to this research, duality is impacted by individual attributes like as personality, leadership, views, attitudes, values, priorities, and principles, in addition to splitting the positions of CEO and chairman. Hence, the following hypothesis is formulated for this study:

**H4:** CEO duality has a negative and significant effect on the performance of Pakistani Banks.

### Moderating Role of Credit Risk Management

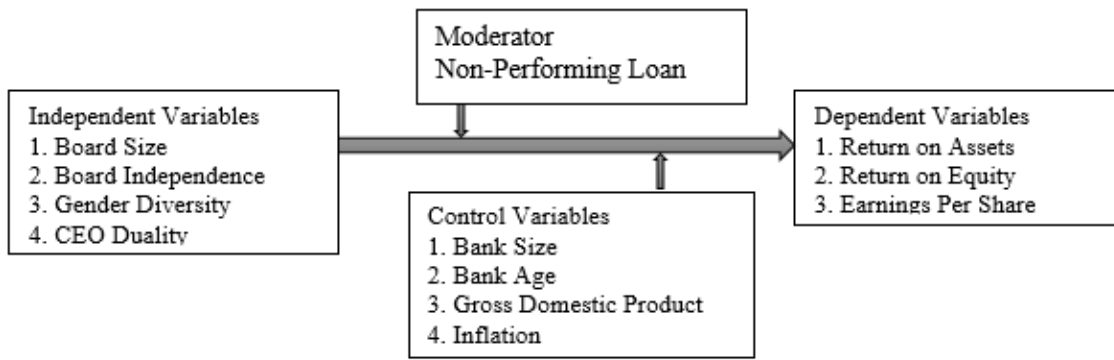
In the past decade, CRM has witnessed a remarkable ascent from relative obscurity to global prominence (Murtaza *et al.*, 2023). Although its adoption remains somewhat limited, CRM is steadily gaining popularity (Seetharaman *et al.*, 2017). Saleh *et al.* (2020) categorize CRM as an integral component of CG mechanisms. CRM typically comprises a committee composed of members who receive directives from the board and work towards enhancing the performance of banks, as emphasized by Qureshi and Lamarque (2023).

However, the integration of CG through CRM results in the redirection of resources toward more creditworthy customers compared to shadow banks, ultimately leading to the provision of superior financial services (Ali *et al.*, 2019). CRM is primarily employed to mitigate the risk associated with banks (Agaba, 2022). The implementation of CG has the potential to enhance risk management and, specifically, credit risk management within banks. CG practices enable banks to fortify their governance and control mechanisms, reducing credit risk. Furthermore, CG aids banks in diversifying their portfolios and refining their business models to minimize exposure to credit risk (Mahmoudi *et al.*, 2020). Thus we hypothesize it as follows.

**H5:** Credit Risk Management moderates the relationship between Corporate Governance Mechanism and performance of Pakistan Banks.

**Conceptual Framework**

Based on the literature, we develop a conceptual framework as shown in Figure 1.



**Figure 1.** Conceptual Framework

**3. METHODOLOGY**

**Research Design**

According to statistics from the State Bank of Pakistan (SBP), the research covers the whole banking industry in Pakistan. There are 38 banks in this sector, divided into 5 public sector banks, 22 local private sector banks, 4 specialized banks, and 4 overseas banks. This research focuses solely on commercial banks to preserve consistency in operational and funding operations. The study focuses on 17 commercial banks in this category, which includes both private and public sector banks. These 17 banks were chosen using a simple sampling procedure that covered the period from 2015 to 2022. The exclusion of specialized, foreign, and some private sector banks is due to the variety of services they provide or the lack of data relevant to the research variables. Data and information for the study were obtained from the selected banks' annual reports and websites. The empirical analysis, which includes a regression model was carried out using STATA-16 software.

**Variables Measurement**

Variables measurements are shown in Table 1.

**Table 1. Variables Measurement.**

Sr.	Types	Variables	Measures	Abbreviation	References
<b>Dependent Variables</b>					
2	Bank Performance	Return on Assets	Net Profit/ total assets	ROA	Ali, <i>et al.</i> , 2022

Sr.	Types	Variables	Measures	Abbreviation	References
3		Return on Equity	Total income / Shareholder's Equity	ROE	Liew & Devi, (2021); Ali <i>et al.</i> , (2022)
4		Earnings per Share	Net Income / No. of shares outstanding	EPS	Ali, <i>et al.</i> , 2022
<b>Independent Variables</b>					
5	Corporate Governance	Board Size	Log of total board members	BS	Nepal and Deb, (2024)
6		Board Independence	Percentage of independent directors to total number of board members	BI	Khan <i>et al.</i> (2017)
7		Gender Diversity	Measured by % of women directors on the board	G_DIV	Rahman and Saima, 2018
8		CEO Duality	Measured in dummy form. If duality exist than assign 1 number otherwise 0	CEO_D	Farooq and Ahmad, (2023)
<b>Moderator</b>					
9	Credit Risk Management	Non-Performing Loan	NPL is measured as non-performing loans to total gross loans	NPL	Rehman <i>et al.</i> (2020)
<b>Control Variable</b>					
10	Bank Characteristics	Bank Size	Log of total asset	Size	Ali <i>et al.</i> (2022)
11		Bank Age	Log of number of years of commencement of business	Age	Ali <i>et al.</i> (2022)
12		Gross Domestic Product		GDP	Rehman <i>et al.</i> (2020)
13		Inflation		INFL	Rehman <i>et al.</i> (2020)

### Model Specification

To assess how certain CG variables, affect BP, researchers constructed the following multiple regression model as shown in below Equation:

$$BP = \alpha_0 + \alpha_1 BS_{it} + \alpha_2 BI_{it} + \alpha_3 G\_DIV_{it} + \alpha_4 CEO\_D_{it} + \alpha_5 Size_{it} + \alpha_6 Age_{it} + \alpha_7 GDP_{it} + \alpha_8 INFL_{it}$$

### Moderation Effect

$$BP = \alpha_0 + \alpha_1 BS_{it} + \alpha_2 BI_{it} + \alpha_3 G\_DIV_{it} + \alpha_4 CEO\_D_{it} + \alpha_4 NPL + \alpha_5 BS_{it} NPL_{it} + \alpha_6 BI_{it} NPL_{it} + \alpha_7 G\_DIV_{it} NPL_{it} + \alpha_8 CEO\_D_{it} NPL_{it} + \alpha_9 Size_{it} + \alpha_{10} Age_{it} + \alpha_{11} GDP_{it} + \alpha_{12} INFL_{it}$$

Whereas

BPit = Financial Performance for bank i for time t;

BSit= Board Size for bank i for time t;

BIit= Board Independence for bank i for time t;

G\_DIVit= Gender Diversity for bank i for time t;

CEO\_Dit= CEO Duality for bank i for time t;

NPLit= Non Performing Loan for bank i for time t;

Sizeit = Bank Size for bank i for time t

Ageit = Age of bank for bank i for time t

GDPit = Gross Domestic Product for bank i for time t

INFLit = Inflation for bank i for time t

$\alpha_0$  = Intercept for bank i for time t

## 4. RESULTS & DISCUSSION

### Descriptive Result

As Zimon & Tarighi (2021), and Salehi *et al.* (2022) note, descriptive results are a crucial tool for understanding the key features of study data. Table 2 provides a detailed breakdown of descriptive statistics.

**Table 2. Descriptive Test.**

Variable	Obs	Mean	Std. Dev.	Min	Max
BS	136	8.794	1.415	7	13
BI	136	.351	.257	.02	.93
G_DIV	136	.114	.087	0	.33
CEO_D	136	.926	.262	0	1
CRM	136	.12	.074	.02	.52
ROA	136	.012	.007	0	.03
ROE	136	.156	.061	-.03	.29
EPS	136	8.865	7.568	-.42	31.9
Size	136	15.208	1.01	12.789	17.052
Age	136	44.559	34.285	8	159
GDP	136	.044	.013	.02	.06
INFL	136	.077	.038	.03	.14

### Correlation Result

It is common practise in many research investigations to accompany the presentation of descriptive statistics with a correlation matrix table. Correlation coefficients are employed in research by Afyouni *et al.* (2022) and Dashtbayaz *et al.* (2023) to measure the strength and direction of linear correlations between variables. Depending on the measurement scale and the nature of each variable, researchers often select from a variety of correlation coefficients such as Pearson, Spearman, and Kendall. In Table 3, we chose to employ the Pearson correlation coefficient in our analysis. When the Pearson correlation coefficient approaches 0, it suggests that the two variables have a weak or insignificant linear connection. If, on the other hand, this coefficient approaches or equals 1, it indicates a strong linear connection between the variables. Correlations are often classified as "very strong" in numerous research when their strength falls between the ranges of 0.8 to 1, as shown by Moradi *et al.* (2021). Lastly, because they reflect the correlation of a variable with itself, the oblique fundamentals of the correlation matrix are continuously equivalent to one.



**Table 3. Correlation Matrix.**

Variables	BS	BI	G_DIV	CEO_D	CRM	ROA	ROE	EPS	Size	Age	GDP	INFL
BS	1	-	-	-	-	-	-	-	-	-	-	-
BI	-0.081	1	-	-	-	-	-	-	-	-	-	-
G_DIV	-0.145	-0.103	1	-	-	-	-	-	-	-	-	-
CEO_D	0.019	0.019	0.148	1	-	-	-	-	-	-	-	-
CRM	-0.093	0.192	-0.028	-0.014	1	-	-	-	-	-	-	-
ROA	0.07	-0.185	0.259	0.074	0.161	1	-	-	-	-	-	-
ROE	0.136	0.023	0.103	-0.008	0.019	0.659	1	-	-	-	-	-
EPS	0.205	0.097	0.034	-0.026	-0.121	0.426	0.42	1	-	-	-	-
Size	0.111	0.185	-0.054	0.026	-0.164	0.204	0.305	0.729	1	-	-	-
Age	-0.175	-0.012	0.372	0.035	0.042	0.524	0.142	0.325	0.431	1	-	-
GDP	-0.002	0.073	0.049	0.102	-0.31	-0.169	-0.066	0.133	0.253	0.065	1	-
INFL	-0.001	-0.062	-0.037	-0.071	0.299	0.144	0.06	-0.133	-0.247	-0.064	-0.939	1

BS: Board Size, BI: Board Independence, G\_DIV: Gender Diversity, CEO\_D: CEO Duality, CRM: Customer Relationship Management, ROA : Return on Assets, ROE: Return on Equity, Size: Bank Size, Age: Bank Age, EPS: Earnings per Share, GDP: Gross Domestic Product, INFL: Inflation

### Regression Result

The Regression analysis is shown in Table 4.

**Table 4. Regression Analysis.**

Variables	ROA	ROE	EPS
	REM	FEM	FEM
BS	0.000106 (0.000)	-0.00271 (0.004)	-0.246 (0.402)
BI	-0.00299* (0.002)	-0.00882 (0.017)	-2.937* (1.586)
G_DIV	-0.00457 (0.006)	-0.0564 (0.061)	-9.944* (5.542)
CEO_D	0.00208 (0.001)	0.0212 (0.013)	2.876** (1.196)
Size	-0.00138 (0.001)	-0.0601*** (0.020)	-1.363 (1.835)
Age	0.000127*** (0.000)	0.0349*** (0.007)	2.920*** (0.599)
GDP	-0.138** (0.064)	-3.534*** (0.899)	-273.2*** (81.950)
INFL	-0.0227 (0.022)	0.572** (0.245)	43.79* (22.330)
Constant	0.0335* (0.018)	-0.361 (0.334)	-90.30*** (30.460)
Observations	136.00	136.00	136.00
R-squared	0.35	0.24	0.31
Wald Chi2(2)	31.51	-	-
Prob>chi2	0.00	-	-
F-statistic	-	4.36	6.30
Prob> F	-	0.00	0.00
Number of bankid	17.00	17.00	17.00

Note: Standard errors in parentheses. \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$

Following the results of multiple statistical tests in the preceding sections, it was evident that our research models needed to be estimated using the panel data technique, which included the Hausman test. As a consequence, we analyzed ROE and EPS using a FEM, but ROA was better suited for REM. In addition, the p-values calculated for the F-statistics associated with both models were found to be less than 0.05. The overall model's relevance has been assessed at a 5% margin of error.

Determining what defines a "good" R-squared score in research is situational. An R-squared value greater than 0.4 is considered to suggest a reasonably strong connection in finance and accounting studies. Moradi *et al.* (2021) and Tarighi *et al.* (2022) discovered the R-squared value. In our analysis, for example, the R-squared values for the first model were 0.35 for ROA, 0.24 for ROE, and 0.31 for EPS. These numbers suggest that the model's input variables can explain around one-third of the observed variance, indicating that our research model has strong predictive potential.

The data reported in this paper are consistent with our assumptions, indicating that the BS does not influence ROA, ROE, or EPS. This suggests that larger boards incur more costs, resulting in lower performance. These findings contradict earlier research that found banks with larger boards to perform better (Khan *et al.*, 2019). Furthermore, non-executive BI was discovered to have a detrimental and substantial influence on BP. This negative effect is linked to a situation in which non-executive directors prioritize their interests over the firm, resulting in agency difficulties that negatively influence performance. Previous research papers (Asante-Darko *et al.*, 2018; Kumar & Singh, 2012) support these findings.

Our findings refute the concept that banks with a superior share of external directors perform well, contradicting both the agency theory and the information asymmetry hypothesis. The negative association and importance of the G\_DIV variable coefficient can be linked to a lack of faith in the competence of women in Pakistani banks. This is in line with global statistics that show a low representation of women in executive positions. To promote G\_DIV and mitigate gender bias in the Pakistani market, it is suggested that legislators consider measures to mandate the presence of women on corporate boards, as advocated by Sepasi and Abdoli (2016).

Additionally, our findings reveal an optimistic connotation between CEO\_D and BP, which aligns with the agency theory. This indicates that when CEO and chairman roles are held by the same individual (duality), there is a heightened motivation to monitor the bank's actions to protect shareholders' interests and reputation. Lastly, control variables also exert significant effects on BP. Factors such as BAG, BSize, GDP, and INFL were observed to influence bank performance positively. Over time, banks tend to improve their performance, and economic factors play a substantial role in shaping their performance outcomes.

## Moderation Result

**Table 5. Regression Analysis for Moderation Analysis.**

Variables	ROA	ROE	EPS
	REM	FEM	FEM
CRM	-0.0309 (0.063)	-0.717 (0.599)	-38.64 (55.680)
BS	0.000291 (0.001)	-0.00582 (0.007)	-0.23 (0.607)
BS*CRM	-0.00138 (0.006)	0.0274 (0.058)	-0.339 (5.418)
BI	-0.00506* (0.003)	-0.0555* (0.029)	-5.304* (2.721)
BI*CRM	0.0101 (0.018)	0.282* (0.164)	14.91 (15.240)

Variables	ROA	ROE	EPS
	REM	FEM	FEM
G_DIV	-8.28E-05	-0.0112	-13.2
	(0.011)	(0.107)	(9.927)
G_DIV*CRM	-0.0286	-0.231	25.58
	(0.069)	(0.662)	(61.520)
CEO_D	-0.0018	0.00299	-0.149
	(0.004)	(0.039)	(3.598)
CEO_D*CRM	0.0344	0.173	27.15
	(0.034)	(0.318)	(29.580)
Size	-0.00108	-0.0676***	-1.504
	(0.001)	(0.021)	(1.921)
Age	0.000121***	0.0322***	2.886***
	(0.000)	(0.007)	(0.617)
GDP	-0.152**	-3.436***	-271.3***
	(0.067)	(0.895)	(83.240)
INFL	-0.0197	0.543**	45.43**
	(0.023)	(0.246)	(22.830)
Constant	0.0330*	-0.0456	-82.03**
	(0.018)	(0.365)	(33.960)
Observations	136	136	136
R-squared	0.3549	0.283	0.326
Wald Chi2(2)	34.64	-	-
Prob>chi2	0.0010	-	-
F-statistic	-	3.23	3.95
Prob> F	-	0.0001	0.0000
Number of bankid	17	17	17

**“Note: Standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1”**

To investigate our hypothesis H5, we conducted a regression analysis with CRM as the moderator variable, and the results are presented in Table 5. These moderation results aimed to enhance our understanding of the relationships between CG characteristics (BS, BI, G\_DIV, and CEO\_D) and BP in the presence of CRM as a moderator. The results revealed that H5 was partially supported, as we observed significant relationships in most cases. We argued that effective CRM plays a crucial role in a bank's ability to enhance its performance. Additionally, we contended that the presence of independent directors on the corporate board might be perceived as a signal of non-transparency, making it challenging for external parties to monitor effectively. Moreover, assigning responsibility for CRM to directors could increase their workload, potentially leading to adverse effects on BP. However, it's noteworthy that the moderating effect of other independent variables did not yield significant results.

### Robustness Result

**Table 6. Robustness Test**

NPM	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
BS	-.004	.007	-0.67	.504	-.018	.009	-
BI	.028	.026	1.09	.279	-.023	.08	-
G_DIV	.01	.091	0.11	.914	-.171	.191	-
CEO_D	-.04	.02	-2.04	.044	-.079	-.001	**
Size	.029	.03	0.96	.34	-.031	.089	-

Age	-.041	.01	-4.12	0	-.06	-.021	***
GDP	4.513	1.349	3.35	.001	1.84	7.185	***
INFL	-.698	.367	-1.90	.06	-1.426	.03	*
Constant	1.399	.501	2.79	.006	.405	2.392	***
Mean dependent var	0.108		SD dependent var		0.081		
R-squared	0.165		Number of obs		136		
F-test	2.736		Prob > F		0.000		
Akaike crit. (AIC)	-457.326		Bayesian crit. (BIC)		-431.112		
*** $p < .01$ , ** $p < .05$ , * $p < .1$							

To ensure the reliability and robustness of our findings, we employed a different approach known as NPM to assess our model. Table 6 presents the outcomes related to the influence of CG on bank performance through the lens of NPM. Remarkably, our analysis revealed a noteworthy relationship between CEO\_D and NPM. Furthermore, in line with our previous discoveries, we observed a significant effect of CEO\_D on the overall nexus, reaffirming the consistency of these findings.

## 5. CONCLUSION

In the realm of research literature, the inability or unintentional neglect of CRM and its impact on BP, particularly during financial crises, has been a recurring factor leading to the collapse of financial institutions. This issue has been underscored in studies by Kumari and Pattanayak (2017), and Zimon *et al.* (2021). Notably, in the wake of high-profile corporate collapses, SOX was enacted in 2002 to bolster stakeholder rights and safeguard against opportunistic managerial behavior. This regulatory development has been discussed in studies by Li *et al.* (2020) and Zimon *et al.* (2021).

Given the difficult economic conditions and rigorous financial sanctions imposed on the Pakistani market over the previous decade, Pakistani bank executives have frequently pursued opportunistic goals. Manipulation of financial statements has occurred to provide a more favorable image of their financial performance, as demonstrated by studies by Moradi *et al.* (2021), Zimon *et al.* (2021), and Salehi *et al.* (2022). As a result, the major goal of our research is to examine the influence of CG mechanisms on BP in the Pakistani context, with a particular emphasis on the moderating role of CRM. To accomplish this study goal, we examined commercial banks listed on the PSX between 2015 and 2022.

In alignment with findings from earlier studies by Nguyen (2022) and Shen *et al.* (2020), our results confirm that effective CRM contributes positively to BP, particularly when directors prioritize this aspect. Nevertheless, it is essential to acknowledge that the board of directors serves as the central body overseeing all aspects of a bank's operations. If the board functions efficiently, it can focus on CRM and contribute to the bank's sustainability.

### Implications

The outcomes of this research hold relevance and implications for various stakeholders in the market. Firstly, policymakers and regulators are cautioned to reevaluate their CG policies, recognizing that the effectiveness of these mechanisms can significantly influence BP. Establishing independent risk-management committees, shielded from political and social pressures, can assist banks in effectively managing risks and enhancing performance. These findings emphasize the need for prioritizing 'stakeholder' interests and reinforcing nationalist and resilient CG structures to safeguard against substantial losses.

Moreover, the research underscores the importance of investors exercising vigilance and discernment in their investments. Evaluating the CG mechanisms and the CRM committee within a bank can help investors avoid potential heavy losses. It is noteworthy that countries with weak CG systems, particularly those lacking support

for minority shareholders, are more vulnerable to significant losses during crises, as evident in studies by Jabbouri and Almustafa (2021), and Jebran and Chen (2023). Therefore, legislators and policymakers in emerging markets like Pakistan have the opportunity to signal CG progress and build investor trust by protecting minority shareholders' interests.

### Limitations

This research carries certain limitations, including the use of performance proxies such as ROA, ROE, and EPS, which may vary in their calculation compared to other studies. Researchers should exercise caution when generalizing or comparing results in light of these differences. Additionally, the diverse nature of the study sample in terms of size, organizational structure, and product types suggests a need for caution in extending the findings. Future research avenues could explore the impact of CG on BP with CRM moderation under normal and crisis conditions. Examining how monetary policies interact with CG mechanisms to affect BP is another area worth exploring. Furthermore, conducting similar research simultaneously in developed and developing markets would provide valuable insights into CG quality based on market-specific characteristics.

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