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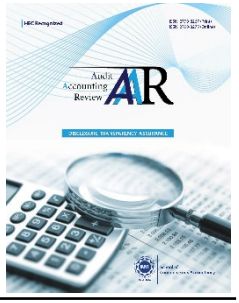

Title: **Corporate Governance and Performance in Islamic and Conventional Financial Institutions: Moderating Role of Institutional Quality**

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Corporate Governance and Performance in Islamic and Conventional Financial Institutions: Moderating Role of Institutional Quality

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Abstract

This study explores the impact of corporate governance (CG) indicators on the financial performance of Islamic and conventional financial institutions. It also scrutinizes the impact of institutional quality (IQ) as a moderator in the nexus between corporate governance and performance. The study also examines a panel dataset of Pakistani financial institutions for the period 2006-2017. The estimation of a two-step system GMM signifies that CG significantly contributes towards improving the overall performance of financial institutions (FIs). However, the results display differential effects of CG on the performance of Islamic financial institutions (IFIs) and conventional financial institutions (CFIs). Moreover, institutional quality (IQ) significantly moderates and shapes the impact of CG on the performance of both types of FIs. Hence, institutional quality is an important element in strengthening the contributions of CG in increasing the performance of FIs. The study provides important suggestions to policymakers to improve the quality of institutions by implementing the rule of law and controlling corruption. This may enhance the effectiveness of CG and consequently institutional performance.

***Keywords*:** conventional financial institutions (CFIs), corporate governance (CG), institutional quality (IQ), Islamic financial institutions (IFIs), performance

JEL Codes: G34; L25; G23; F65; B52

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Introduction

Financial sector makes a vital contribution as an intermediary in economic development. It comprises different types of entities that provide financial services to commercial sectors and retail users (Trinh & Thao, 2015). Financial institutions are indispensable to a successful financial system and play a vital role towards socioeconomic development (Haini, 2019; Jarrett et al., 2019). They effectively link lenders with borrowers by mitigating asymmetric information problems (Levine, 1997). Undoubtedly, financial sector performs efficiently only by adopting modern practices of corporate governance (CG). Indeed, CG is at the heart of prosperous organizations (Basel, 2015).

The performance of the financial sector is very important for sustainability and for the fueling of the economy. Financial sector performance and efficiency have a direct relationship with economic growth (Bekele & Degu, 2023). Pakistan is an emerging economy and for such type of an economy, a sound financial sector is imperative. This is because economic growth is stimulated with the availability of finance through different financial intermediaries (Basha et al., 2023). The performance of financial sector is also associated with CG (Nawaz & Ohlrogge, 2023).

CG refers to the provision of authorities and tasks by which business operations are performed in accordance to the wishes of the Board of Directors (BOD) and higher management. It includes strategic objectives, human resource management, control functions, routine operations, protection of stakeholders' interest, and compliance of laws and regulations (Basel, 2015). The primary goal of CG rests with the protection of the interest of all stakeholders and public at large. Therefore, to attain and maintain public and investor confidence and trust in financial institutions, effective CG is very important (Barton et al., 2004).

There are a number of theories that support the connection between CG and the performance of various financial institutions (Haris et al, 2019). These include (i) the agency theory developed by Jensen and Meckling (1976), (ii) the resource-dependent theory (Pfeer & Salancik, 1978), and (iii) the stewardship theory (Donaldson & Davis, 1991). CG is critical for the financial sector of both developed and emerging economies. However, its importance is paramount for emerging economies like Pakistan.

The role of institutions that implement rules, laws, and regulations is very important in shaping the behavior of economic agents (Rashid & Intartaglia, 2017). Institutions transform social technologies into economic activities. In fact, poor enforcement of rules, lack of transparency, undefined property rights, and a high level of corruption lead economic markets to failure. Arslan et al. (2019) and Arslan and Alqatan (2020) were of the view that institutional determinants are essential to regulate CG practices in developing economies. Reliable institutional, regulatory, and political systems are very important for good corporate governance (Organisation for Economic Co-operation and Development [OECD], 2004). Moreover, the failure of institutions may have several adverse impacts on firm performance (Salti, 2015).

In Pakistan, except a few studies including Aslam et al. (2021), the researchers have mainly focused on the non-financial sector. Hence, the nexus of CG and the performance of the Islamic financial sector has not been explored adequately (Haris et al., 2019; Mollah et al., 2017). Some empirical studies such as Aslam et al. (2019) explored the role of both corporate and *Shari'ah* governance frameworks to enhance the performance of Islamic banks (IBs) operating in Pakistan. This study is conducted to examine the effect of CG on the performance of both Islamic financial institutions (IFIs) and conventional financial institutions (CFIs) in Pakistan. Additionally, the role of institutional quality (IQ) as a moderator in determining the impact of CG attributes on the performance of IFIs is observed.

The remaining study is organized in the following way. Section 2 provides a detailed overview of the related literature. Research methodology is presented in Section 3, followed by Section 4 which contains results and discussion. Lastly, Section 5 states the conclusion and policy recommendations.

Literature Review

Corporate Governance (CG) and Performance

The nexus between CG and performance has gained much traction in recent years. Gafoor et al. (2018) and Basha et al. (2023) reported the positive influence of various attributes of CG (board independence, board size, CEO duality) on the financial performance of banks. Similarly, while examining a sample of US financial institutions (FIs), Bhagat and Bolton

(2019) argued that CG makes significant contributions in enhancing performance. Furthermore, Mollah et al. (2017) stated that governance structure plays a more effective role in stimulating performance in case of Islamic banks (IBs) than conventional banks (CBs). Likewise, in the context of Pakistani IBs, Aslam et al. (2021) found a positive nexus between board independence, board size, and performance.

There is also empirical evidence available suggesting that the proportion of outside directors and financial performance of institutions are positively and significantly correlated (Cornett et al., 2009). Another study by Nawaz (2019) concluded that CEO power and board size (BSIZ) both have a positive contribution in enhancing FIs' performance.

There are also divergent opinions over BSIZ because large boards often suffer from the lack of coordination as well as the burden of higher incentives, which may adversely affect performance (Mollah & Zaman, 2015). Similarly, the agency theory assumes that BSIZ and performance are inversely related. Whereas, the stewardship theory and the resource dependence theory both presume its positive impact on institutional performance. Furthermore, Mollah and Zaman (2015) and Boachie (2023) documented a positive impact of independent directors on institutional performance. They considered them adept for monitoring and controlling managers. Given the empirical evidence in the existing literature, the following alternate hypotheses are tested in this research paper.

H_1: BSIZ has a positive impact on the performance of FIs.

H_2: Independent directors have a positive effect on the performance of FIs.

The discussion regarding the impact of ownership concentration (OWNC) on performance is inclusive in the literature. Some studies found positive, whereas others reported a negative association. For example, Fatma and Chouaibi (2023) found an inverse relationship between OWNC and performance. Alternatively, the empirical results of Sheikh and Kareem (2015) reported a significant and positive effect of OWNC on performance.

Guerrero-Villegas et al. (2018) suggested that the concentration of ownership might increase the performance of institutions. However, highly concentrated ownership may have an inverse relationship with

performance, mainly due to the "expropriation effect".[1] This effect may give rise to the principal-principal conflict which, in turn, adversely affects performance (Abdullah et al., 2019). Nevertheless, Jensen and Meckling (1976) expressed an opinion that controlling shareholders is more effective in monitoring management. Shareholders fully utilize their power to force managers to perform in their best interest. Consequently, it improves the profitability of institutions and the value of minority shareholders. Hence, the positive nexus between OWNC and the performance of institutions is hypothesized as follows:

H_3: Ownership concentration has a positive impact on the performance of FIs.

CEO duality means that CEO assumes the position of both CEO as well as the Chairman of the BOD. There is also the possibility that the CEO might use this power to optimize personal benefits at the expense of shareholders (Yusoff & Alhaji, 2012). Moreover, CEO power may diminish the boards' independence and minimize its role. Therefore, this might lead to adverse performance of institutions (Mollah & Zaman, 2015; Qadorah & Fadzil, 2018). Hence, the testable hypothesis can be expressed as follows:

H_4: CEO duality has a negative role in determining the performance of FIs.

It is suggested that short-termism in pay for performance is one of the reasons for economic and financial crises all over the world (Fahlenbrach & Stulz, 2011). Directors' behavior is normally shaped by their remuneration. Moreover, attractive packages are important to retain the relevant talent (Razali et al., 2018). Remuneration policy is considered an important factor in the success of any organization. Sheikh and Kareem (2015) found a positive nexus between CEO remuneration and the performance of the banking sector in Pakistan. This finding suggests that a well-rewarded and motivated workforce is in shareholders' best interest and reduces the agency problem (Cerasi et al., 2020). Given these arguments, the following hypothesis is tested in this study.

H_5: CEO remuneration has a positive impact on the performance of FIs.

Prior studies conducted in the context of IBs focused on issues regarding efficiency, profitability, and stability. Studies which focused on the

[1] Drawing benefit on expense of minority shareholders by large shareholders.

governance of IFIs are very limited, both in their scope and time. *Shari'ah* supervision is also an imperative element for IFIs. Therefore, the effectiveness of *Shari'ah* supervision would be worth exploring. Mollah and Zaman (2015) investigated the CG of IBs *versus* CBs and found that SSB had a positive but negligible influence on IBs' performance. However, Rahman and Haron (2019) reported a negative association between *Shari'ah* Supervisory Board (SSB) and performance. SSB offers a very important direction to the management and the BOD. Furthermore, Rahman and Haron (2019) concluded that SSB ensures the provision of *Shariah*-compliant products to the customers, which could have a positive association with the performance of Indonesian IBs. An increase in the size of SSB would improve its supervisory and oversight function and subsequently, can increase performance (Tashkandi, 2023). Therefore, the following hypothesis is proposed.

H_6: The size of SSB is positively related to the performance of FIs.

Haider et al. (2015) inferred that the CG framework has a positive effect on performance. Particularly, board size and the performance of IFIs operating in Pakistan are positively related. In addition, Molla et al. (2023) argued that CG attributes have a positive and notable effect on the efficiency of various CBs in Pakistan. For Pakistan, the authors documented a positive impact of CG on both ROE and EPS. Moreover, efficient and effective CG leads to progress in the financial sector (Inam & Mukhtar, 2014). Keeping in view the above, the testable hypothesis can be expressed as follows:

H_7: CG has a positive impact on the performance of FIs

Role of Institutional Quality (IQ)

A significant amount of empirical literature is available regarding the effective role of institutional quality (IQ) (rule, regulation, and legal laws) in shaping the performance of different institutions (Khan et al., 2020; Rashid et al., 2024). There are many aspects of low institutional quality, such as a culture of corruption, poor property rights, frequent vicissitudes in rules and regulations, as well as their weak execution. Due to weak rules and regulations in the country, uncertainty increases and the market does not perform properly (Rashid & Intartaglia, 2017).

Winful et al. (2016) investigated the association of institutional quality and the performance of FIs for 41 emerging economies and determined that these variables are positively related. Further, they noted that institutions

played a vital role in the materialization of human and physical capital for the growth of the economy.

Institutional quality plays a very significant and crucial role in the growth of the financial sector of emerging economies (Khan et al., 2020). Wasike (2017) found that financial regulation moderated the effect of CG on the performance of the financial sector of Kenya. Therefore, the following hypothesis is tested in this paper.

H_8: Institutional quality plays an imporatnt role in shaping the effect of CG on the performance of FIs.

While reviewing the existing literature, it was observed that there is limited evidence of the effect of CG on institutional performance in the financial sector of Pakistan. Moreover, the study of the Islamic financial sector has been ignored with few exceptions of Haris et al. (2019), Bashir et al. (2018), Sheikh and Kareem (2015), and Rehmans and Mangla (2010). Likewise, it is difficult to find literature on the same topic for insurance, Takaful, and Modarba companies.[2]

Regarding the monitoring role of SSB, no study was found that explored the relationship between the role of SSB and the performance of IFIs in Pakistan. Yet, there is some empirical evidence for the banking sector (Mollah, 2017; Mollah & Zaman, 2015; Rehmans & Mangla, 2010). Thus, it would be worth exploring how *Shariah* supervision is related to performance. Furthermore, it was observed that although some researchers have worked on the impact of institutional quality on the performance and soundness of financial institutions (Nosheen & Rashid, 2020); however, it is limited to the banking sector only, particularly in the context of Pakistan.

Research Design

Data Description

The financial sector of Pakistan includes commercial banks, non-banking financial institutions (NBFIs), and insurance and *Takaful* companies. According to the State Bank of Pakistan (SBP), there are 32 banks (including six (06) full fledge IBs) which hold PKR 36185 billion, where IBs hold 19.4% of asset share of the total banking sector (State Bank

[2] *Muḍārabah* is unique model in the world, practices in Pakistan only. SECP allowed *Mudarba* companies to offer *Shari'ah* compliant products and businesses. Investments are made in project financing, stock market and in halal commodities.

of Pakistan, 2023). Furthermore, there are 11 microfinance banks holding PKR 373.6 billion (Finance Division, Government of Pakistan, 2020). Moreover, 49 insurance companies including *Takaful* companies with an asset size of PKR 1464.6 billion are operating in Pakistan (IAP, 2019). The financial sector also includes 355 NBFIs with total assets of PKR 1568 billion (SECP, 2021).

The aforementioned financial institutions constitute the entire population for the current study. However, the microfinance banks and NBFIs were not included due to the unavailability of data. Only *Mudaraba* companies were included to enrich the IFIs sample. The final sample included 18 banks (including both conventional and Islamic banks), 20 *Mudaraba* companies, 14 insurance firms, and 5 *Takaful* companies. The data regarding variables and financial institutions were thoroughly collected over the period 2006-2017 from the databases of SBP, SECP, Ministry of Finance, and Insurance Association of Pakistan.

Variables Description

Measures of Corporate Governance (CG)

CG is explained through different variables for different business environments. In this study, the most relevant variables of CG were used to attain the study objective. The attributes of CG consisted of CEO duality, board size, CEO remuneration, board composition, and ownership concentration.

The role of directors towards effective management has been emphasized and recognized in the literature (Boachie, 2023). Likewise, BOD structure also affects the performance of the entity (Fatma & Chouaibi, 2023). In addition to the main components of CG, the role of *Shari'ah* Supervisory Board (SSB) is included in the case of IFIs. The purpose of SSB is to guarantee and certify the *Shari'ah* compliance of their overall operations and functions (Shah et al., 2018). Accordingly, the *Shari'ah* governance framework implemented by SSB differentiates IFIs from CFIs.

Table 1
Variables for Corporate Governance Index

Variables	Proxies and Description
Board Size (BSIZ)	Log of board size (total number of included in the board of directors)
Board Composition (BCOM)	Percentage of independent directors in board size. Independent directors are from the outside and have no material relationship with the institution.
Ownership Concentration (OWNC)	Percentage of shares held by 5 largest shareholders to total common shares
CEO Remuneration (CEOR)	Ratio of CEO remuneration to net profit.
CEO Duality (CEOD)	CEO holds the position of CEO and Board Chairman
Shari'ah Board Size (SBS)	Total number of Islamic scholars present in the *Shari'ah* Board

Institutional Quality (IQ) Measurement

The role of institutional quality (IQ) is vital for the smooth functioning of an institution because it ascertains the restrictions that can be enforced on the institution's stakeholders. In addition, legal regulations within a country hold manager accountable and protect the rights of shareholders. Consequently, the accountability of managers makes the CG function more effective (Himaj, 2014). For measuring the institutional quality variable, the data of Worldwide Governance Indicators (WGI) maintained by the World Bank was used in this study. It categorizes the intuitional quality of an institution into three types based on political, legal, and economic aspects.

Table 2
Institutional Proxies

Variables	Proxy	Description
Legal Institutions	Rule of Law (ROL)	Reflects perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property

Variables	Proxy	Description
		rights, the police and the courts, as well as the likelihood of crime and violence.
Political Institutions	Control of Corruption (COC)	Reflects perception of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.
Economic Institutions	Regulatory Quality (RQ)	Reflects perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Measuring Performance

Previous studies measured the performance of the financial sector by using several tools. The most well-known performance indicators, that is, return on equity (ROE) and return on asset (ROA) were used to compute the accounting performance of the financial sector (Molla et al., 2023; Sheikh & Kareem, 2015). The cost-to-income ratio was also used to measure efficiency (Rashid & Intartaglia, 2017). To quantify the market performance of institutions in financial and non-financial sectors, Tobin's Q was broadly used in previous studies (Mollah & Zaman, 2015). Based on the above studies, this study utilizes these variables to quantify the accounting performance of institutions. The details are given below in Table 3.

Table 3
Variables for Institutional Performance

Variables	Description	Proxies
Return on Asset (ROA)	It shows the ability of the institution to earn profit by utilizing its assets.	Net Income/Total Asset
Return on Equity (ROE)	It shows the ability of the institution to earn profit by utilizing its assets.	Net Income/Total Equity

Variables	Description	Proxies
Cost to Income (CTI)	It is an efficiency measure. It describes how efficiently resources are utilized to earn income.	Operating expenses divided by Operating income
Tobin's Q (TQ)	It measures the value of both tangible and intangible assets.	Tobin's Q Ratio= Equity Market Value/Equity Book Value
Institution-Specific and Macroeconomic Control Variables		
Institution Size (ISIZ)	It represents the institution's size in terms of assets. The size of an institution has an advantage in terms of contribution to performance.	Log of the total assets
Capital Buffer (EQTA)	It measures the institutional level of protection.	The ratio of equity to total asset = EQ/TA
Net Advances to Total Asset (NATA)	It represents the institution's capability to utilize its resources efficiently for investment.	Ratio of net advances/total assets
Gross Domestic Product (GDP)	It is the total domestic product produced within a country.	Log of GDP
Consumer Price Index	It is a criterion to gauge fluctuation in the price of goods and services.	Log of yearly data on inflation in the country.
Karachi Interbank Offered Rate (KIBOR)	It is the benchmarking rate used for granting financing/loans.	Yearly value of the KIBOR

Besides these main variables, several institution-specific and macroeconomic control variables have been used in the analysis. Institution-specific variables include size, capitalization, and advances to total asset. These variables have been extensively used by many researchers to explain institutional performance and efficiency (Tashkandi, 2023).

Empirical Model

To check the differential impacts of CG on the performance of Islamic and conventional institutions, the following equation 1 is estimated,

$$E_{i,t} = \beta_0 + \beta_1 E_{i,t-1} D^{IFI} + \beta_2 E_{i,t-1} D^{CFI} + \beta_3 CGC_{i,t} D^{IFI} + \beta_4 CGC_{i,t} D^{CFI} + X_{i,t}\,\lambda + e_{i,t} \quad (1)$$

where $E_{i,t} = [ROA_{it}, ROE_{it}, TQ_{it}, CTI_{i,t}]$ is a measure of performance, $CGC_{i,t} = [BSIZ_{it}, BCOM_{it}, OWNC_{it}, CEOR_{it}, CEOD_{it}, SBS_{it}]$ is the corporate governance proxy, $X_{i,t}$ is the vector of control variables including both macroeconomic and institution-specific variables. The macroeconomic variables include GDP, inflation (CPI), and KIBOR, while institution-specific variables include institutional size, resource utilization, and capital buffer. Further, β_1 is the slope intercept, λ signifies the vector of coefficients, and $e_{i,t}$ denotes the error term. Moreover, D^{CFI} and D^{IFI} are the dummy variables used for computing the differential effect of CG on the performance of CFIs and IFIs, respectively. $D^{IFI}(D^{CFI})$ assumes the value of 1 for Islamic (conventional) institutions and 0 otherwise.

In order to determine the function of institutional quality as a moderator in the nexus of CG and the performance of both types of institutions, equation 1 is augmented in the following way:

$$E_{i,t} = \beta_0 + \beta_1 E_{i,t-1} D^{IFI} + \beta_2 E_{i,t-1} D^{CFI} + \beta_3 CGI_{i,t} D^{IFI} + \beta_4 CGI_{i,t} D^{CFI} + \beta_5 CGI_{i,t} D^{IFI} \times IQ_{i,t} + \beta_6 CGI_{i,t} D^{CFI} \times IQ_{i,t} + \beta_7 IQ_{i,t} + X_{i,t}\,\lambda + e_{i,t} \quad (2)$$

In equation 2 all other terms are the same except $IQ_{i,t}$, which represents the index of institutional quality for institute i at time t. The index of IQ includes the control of corruption (COC), rule of law (ROL), and regulatory quality (RQ). Furthermore, the indexes of CG and IQ are developed by using the principal component analysis (PCA), where PCA computes the weight of each variable to enlighten the variance as much as possible. The equation of PCA is given below.

$$F_j = \sum_{i=1}^{n} {a_{ij}}^k x_i, \text{ where i,j=1,2….n} \quad (3)$$

The choice of a linear combination of independent variables is not arbitrary but strictly defined, that is, the purpose of PCA is the linear

transformation of n characters $(x_1, x_2, \ldots, x_n)$ into a new set of K independent random variables $(F_1, F_2, \ldots\ldots, x_k)$. These are arranged in way of decreasing influence keeping in view the aggregate influence of original data.

Estimation Technique

The econometric model in this study is dynamic in nature. In a dynamic model, the chance of endogeneity should not be ignored. Endogeneity problem arises due to the correlation between dependent variables and error term. To overcome the issue of endogeneity, this study uses the two-step system GMM which has several advantages over traditional econometric techniques, such as OLS and GLS. Besides two-step system GMM, Arellano and Bond's (1991) AR (2) is also run to observe whether serial correlation exists in residuals. Additionally, *J*-test developed by Hansen (1982) has been employed to check orthogonal to the estimated residuals of the instruments.

Empirical Results and Discussion

Corporate Governance (CG) and Performance

Table 4 presents the estimates of models and the results of diagnostic tests. The significant coefficient of the lagged dependent variable validates the dynamic nature of the estimated models. The dynamic behavior of the models is also confirmed by the existence of first-order autocorrelation in the estimated residuals, as shown by AR (1) test. The *p*-value provided by the J-test validates that the instruments applied to control the issue of endogeneity are not correlated with the estimated residuals.

The estimation regarding the explanatory variable shows that in the case of both IFIs and CFIs, BSIZ has a positive and significant relationship with ROE and ROA. Furthermore, operational efficiency (CTI[3]) is also positively and significantly influenced by BSIZ. However, Tobin's Q is negatively related to BSIZ. Since Tobin's Q is a market-based measure, investors might be reluctant to invest in an institution with a large BSIZ. These findings confirm the first hypothesis. Further, the empirical results are partially in line with earlier studies (Fatima & Chouaibi, 2023; Sheikh & Kareem, 2015). The magnitude of the estimated coefficient suggests that

[3] The positive relationship shows that as the size of board increase the efficiency of the institution increases and vice versa.

both favorable and adverse effects of BSIZ are higher for CFIs than IFIs.

Overall, the results of CFIs are contradictory to those of IFIs. Furthermore, based on the coefficient, the relationship of CG is stronger for CFIs as compared to IFIs. The difference between IFIs and CFIs with regard to BCOM might be due to the different business nature and models of these institutions.

Table 4

Impact of Corporate Governance (CG) on Performance

Variables	ROE	ROA	CTI	TQ
$BSIZ \times D^{IFI}$	0.865**	0.0544***	-0.102***	-0.231***
	(0.397)	(0.0174)	(0.033)	(0.085)
$BSIZ \times D^{CFI}$	1.698***	0.0872***	-0.534*	-0.214***
	(0.128)	(0.0323)	(0.289)	(0.0014)
$BCOM \times D^{IFI}$	-0.130**	-0.158***	0.163***	0.166***
	(0.0541)	(0.00586)	(0.00686)	(0.0476)
$BCOM \times D^{CFI}$	0.623***	0.587***	-0.649***	-0.266***
	(0.0395)	(0.0797)	(0.140)	(0.0195)
$OWNC \times D^{IFI}$	0.112	0.102***	0.565***	-0.225***
	(0.105)	(0.0145)	(0.0205)	(0.0441)
$OWNC \times D^{CFI}$	-0.195***	-0.134***	0.138***	-0.985***
	(0.00841)	(0.0247)	(0.0157)	(0.0122)
$CEOR \times D^{IFI}$	0.232	-0.000032	0.153***	0.743
	(0.389)	(0.000097)	(0.00521)	(0.265)
$CEOR \times D^{CFI}$	0.507**	0.113***	-0.454***	0.118***
	(0.231)	(0.00430)	(0.0358)	(0.0164)
$CEOD \times D^{IFI}$	0.200***	0.0166	-0.583***	0.0696
	(0.0740)	(0.0120)	(0.0519)	(0.158)
$CEOD \times D^{CFI}$	-0.223	-0.490	0.292**	-0.248***
	(0.729)	(0.842)	(0.121)	(0.00792)
SB^{IFI}	-0.0395**	-0.0137***	0.631*	0.573***
	(0.0455)	(0.00251)	(0.324)	(0.0864)
ISIZ	-0.735***	-0.838***	0.126***	0.232***
	(0.0642)	(0.0920)	(0.0048)	(0.00961)
CAB	-0.131***	-0.00163	0.908***	-0.0600***
	(0.0229)	(0.00194)	(0.298)	(0.0191)
NATA	-0.00153	0.109***	-0.104***	0.0660***

Variables	ROE	ROA	CTI	TQ
	(0.0161)	(0.0192)	(0.00173)	(0.0242)
GDP	0.888***	0.953***	-0.141***	0.536***
	(0.0782)	(0.0645)	(0.0396)	(0.00758)
CPI	-0.570***	-0.146***	0.143***	0.0211
	(0.0686)	(0.00823)	(0.00359)	(0.132)
KIBOR	6.45e-05	-0.415**	0.141***	-0.123***
	(0.00147)	(0.176)	(0.00139)	(0.00307)
LAG-ROE	0.227***			
	(0.00510)			
LAG-ROA		0.00721***		
		(0.000311)		
LAG-CTI			-0.0109***	
			(0.000120)	
LAG-TOQ				0.367***
				(0.00182)
CONSTANT	-4.941***	-0.227***	126.0***	65.39***
	(1.124)	(0.0397)	(6.749)	(0.882)
Diagnostic Tests				
Observations	564	564	566	508
# of Institutions	57	57	57	51
# of Instruments	42	47	46	44
AR (1)	-2.047	-2.469	-2.074	-2.443
	(0.041)	(0.0139)	(0.038)	(0.014)
AR (2)	1.532	-0.196	-1.85	-1.723
	(0.125)	(0.884)	(0.277)	(0.084)
Hansen (p-value)	0.955	0.785	0.472	0.722

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

The results of OWNC and performance are very different for IFIs and CFIs. The empirical evidence regarding the negative impact of OWNC on the three (03) performance measures of CFIs supports the importance of CG. This finding also suggests that concentrated ownership may have a significant influence on the BODs, inclining them to make biased decisions for certain groups. Since, the BODs do not remain in a position to perform their vital role in decision-making impartially, hence the performance of institutions is negatively affected by concentrated ownership. Similarly, there is a negative and significant impact of OWNC of IFIs on Tobin's Q.

These findings partially match with the studies of Arif and Syed (2015) and Zeineb and Mensi (2018). Further, OWNC has a positive and significant nexus with both ROA and CTI for IFIs. However, it is adversely related to Tobin's Q. Overall, it was observed that the empirical results of IFIs support the null hypothesis, whereas that of CFIs reject the null hypothesis. The results are different due to the nature and working of the business model.

The results also concluded that the influence of CEO's remuneration on performance is different across CFIs and IFIs. Regarding CFIs, CEOR and performance are associated positively with three (03) out of four (04) proxies used for measuring performance. This finding suggests that well-rewarded and motivated CEOs work hard for shareholders' best interest and enhance the performance of the institutions. These results validate and support the constructed hypothesis. On the other hand, the role of CEOR appears statistically insignificant in explaining ROA, ROE, and Tobin's Q for IFIs.

The results of CEOD coefficient designate that it has a positive and vital impact on only ROA, whereas it displays a significant and negative effect on the operating performance of IFIs. Interestingly, CEOD appears an important factor in improving cost-efficiency in the case of CFIs. IFIs are relatively young and may need to make quick decisions and CEO duality helps in this regard. Therefore, CEO power is interrelated positively with the performance of IFIs. This finding supports the findings reported in the literature (Galal, 2017).

Shari'ah governance is critical for IFIs to oversee and certify the compliance of functions and operations with Islamic law. Hence, the *Shari'ah* board dummy was inserted in the model to determine its marginal effect on the performance of IFIs. The coefficient value validates the significant and negative effect on performance indicators, namely ROE and ROA. On the other side, *Shari'ah* governance plays a vital role in the improvement of market value and cost-efficiency of IFIs. This suggests that it may not perform an effective role in increasing IFIs' accounting performance. Moreover, the *Shari'ah* board outlines the *Shari'ah* principles and certifies its implementation, consequently increasing the investors' confidence in IFIs' operations.

Role of Institutional Quality (IQ)

Table 5 summarizes the empirical results of the role of institutional

quality as a moderator in the nexus of CG and the performance of both IFIs and CFIs. Instead of individual characteristics of CG, an index for CG is developed and multiplied by institutional quality index. This set of results fulfils two objectives. Firstly, it allows to scrutinize the combined effects of different indicators of CG on the different indicators of financial institutions. Secondly, it allows to observe the role of institutional quality as a moderator.

The estimated coefficients in Table 5 indicate that the index of CG positively affects both ROA and ROE. This suggests that an effective CG system significantly enhances financial performance. Further, the coefficient value denotes that higher levels of CG result in low operating costs, suggesting that good governance helps to enhance cost-efficiency. The same results have been calculated for CFIs except Tobin's Q, since the CG index is negatively associated with it. The reason might be that the investors are not confident with the structure of CG or might be affected because of the overall unstable political environment of a country. The evidence regarding the effects of CG on different performance indicators of both categories of financial institutions is generally consistent with the hypotheses constructed for this paper.

Table 5

Impact of Corporate Governance (CG) along with Institutional Quality (IQ) on Performance

Variables	ROE	ROA	CTI	TQ
CGC^{IFI}	0.130***	0.00413***	-0.1993***	0.0954
	(0.0136)	(0.00120)	(0.00338)	(0.0927)
CGC^{CFI}	0.0782***	0.00599***	-0.2270***	-0.2170***
	(0.0151)	(0.00227)	(0.0114)	(0.000348)
CGC^{IFI}_IQ	0.0727***	0.00608***	-0.861***	0.351***
	(0.00526)	(0.000213)	(0.00658)	(0.0354)
CGC^{CFI}_IQ	0.114***	0.00261***	-0.915***	-0.452***
	(0.00536)	(0.000830)	(0.0294)	(0.00199)
IQ	0.0491***	0.00450***	-0.413***	0.419***
	(0.00489)	(0.000284)	(0.0253)	(0.00241)
ISIZ	-0.868***	-0.0800***	0.1229***	0.2079***
	(0.0462)	(0.00411)	(0.00133)	(0.000477)
CAB	-0.179***	0.00015	0.904***	0.0556***
	(0.0123)	(0.000934)	(0.101)	(0.000918)

Variables	ROE	ROA	CTI	TQ
NATA	-0.0106	0.0109***	-1.118***	0.0121***
	(0.00839)	(0.00116)	(0.0162)	(0.00139)
GDP	1.157***	0.0792***	-0.1472***	4.721***
	(0.0541)	(0.00326)	(0.00366)	(0.0130)
CPI	-0.798***	-0.144***	0.1023***	-0.130***
	(0.0428)	(0.00535)	(0.00194)	(0.00876)
KIBOR	0.00931***	-0.00120***	0.1775***	-0.0842***
	(0.00191)	(0.000096)	(0.00107)	(0.000331)
LAG-ROE	0.238***			
	(0.00331)			
LAG-ROA		0.00926***		
		(0.000314)		
LAG-CTI			-0.0073***	
			(0.000074)	
LAG-TQ				0.379***
				(0.000124)
Constant	-0.6320***	-0.0136	1.325***	0.5015***
	(0.0600)	(0.0287)	(0.0588)	(0.00118)
Diagnostic Tests				
# Of Observations	564	564	566	508
# of Institutions	57	57	57	51
# of Instruments	47	49	52	48
AR (1)	-2.005	-2.456	-1.885	-2.133
	(0.159)	(0.014)	(0.059)	(0.032)
AR(2)	1.405	0.225	-1.089	-0.864
	(0.159)	(0.812)	(0.275)	(0.387)
p-value (Sargan)	0.485	0.712	0.377	0.636

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

The results show that institutional quality is significantly and positively related with all the indicators of performance. This finding implies that a quality institutional environment is crucial to increase the performance of financial institutions.

Observing the direct impact of the indexes of CG and IQ, the current study further describes the role of institutional quality as a moderator in connection with CG and performance. The coefficient value of the interaction term depicts that institutional quality significantly contributes as

a moderator in establishing the impact of CG on the performance of both IFIs and CFIs. Precisely, it further strengthens the positive role of CG in enhancing all performance indicators, namely Tobin's Q, ROA, and ROE. This fact recommends that good institutional quality is essential for a strong impact of CG on the market, as well as on the accounting performance of both types of financial institutions. These findings also suggest that over and above the good quality governance practices at corporate level, the authorities should focus on enhancing the governance mechanism at country level.

Conclusion

The current study scrutinized the effect of corporate governance (CG) attributes and index on the various performance indicators of both IFIs and CFIs operating in Pakistan. Additionally, the study also observed the role of institutional quality (IQ) as a moderator in establishing the impact of CG on both types of FIs. The findings exhibit that various CG attributes have significant differential effects on the performance of both CFIs and IFIs. However, the CG indicators showed different responses to the different performance indicators. The difference in response to CG indicators may be due to the diverse financing and business models and the nature of CFIs and IFIs. Additionally, both types of FIs are different in terms of mutual obligation, agency cost, legal impacts, and accounting treatment of activities, which may be the main reasons for the notable different effects. The results also advocate that *Shari'ah* governance is also imperative for the improvement of the financial performance of IFIs. This finding implies that overall good governance helps financial institutions to enhance their cost-efficiency.

The results regarding the interaction term suggest that institutional quality significantly acts as a moderator in the relationship between CG and performance. Specifically, the findings indicate that the performance-enhancing effect of CG significantly increases with institutional quality.

Recommendations

The results provide several important policy recommendations for different stakeholders. These findings help to understand the role of the diverse indicators of CG in explaining different indicators of accounting and market performance of the financial institutions of Pakistan. Further, the findings are important to understand how different CG indicators are

important in determining the operating costs of both types of institutions. They indicate that to harvest the full benefits of good governance at corporate level, it is very important to enhance the governance mechanism at country level. Thus, this study recommends the legislators of the country to improve the quality of institutions by working on the rule of law, controlling corruption, and improving the regulatory quality in order to achieve the efficient performance of financial institutions in the country.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study will be provided by the corresponding author upon request.

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