

# Influence of Corporate Governance Mechanisms on Financial Risk and Financial Performance: Evidence from Refinitiv ESG Database

ALMUATASIM MUSABAH SAIF AL MUTAIRI  
College of Graduate Studies,  
Universiti Tenaga Nasional,  
Jalan Ikram-Uniten 43000 Kajang, Selangor,  
MALAYSIA

SUZAIDA BTE. BAKAR  
College of Business Management and Accounting,  
Universiti Tenaga Nasional,  
Jalan Ikram-Uniten 43000 Kajang, Selangor,  
MALAYSIA

*Abstract:* - The present study investigates the relationship between corporate governance (CG) mechanisms and the financial risk and performance of the companies enlisted in the Refinitiv ESG Database. The study drew on the agency theory of CG. It evaluated the effect of board diversity (BD), board independence (BI), CEO duality (CEOD), and gender diversity (GD) on financial risk (FR), comprising of credit (CR) and liquidity risk (LR) and financial performance (FP) measured by returns on asset (ROA) while controlling for firm size, age, and tangible assets. Data is obtained from 2009 to 2019 for panel data regression analysis. The study utilized the Hausman test for model specification. The findings specify that the size of the board positively and significantly impacts FR and FP. Gender diversity negatively and significantly affects credit risk and FP. Board independence positively and significantly influenced FP. The study provides significant implications for scholars and practitioners.

*Key-Words:* - Agency Theory, Corporate governance, Financial Risk, Financial Performance, Refinitiv ESG Database, Panel Regression

Received: August 25, 2022. Revised: July 27, 2023. Accepted: August 28, 2023. Published: September 21, 2023.

## 1 Introduction

Corporate governance in recent decades has gained massive attention due to its effective governance system and principles. Since the financial crisis of 2008, concerns have been raised by financial and non-financial institutions regarding financial stress and unpredictability, [1]. The governance mechanism and the complexities of corporate governance came to the surface in the monetary research stream. With the extension of businesses on a global scale, the firms have extended shareholders, which requires a legal working framework and governing principles to ensure their institutional and financial performance. The recent financial fluctuations during the pandemic again raised questions on the effectiveness of corporate governance and the responses it generates. However, the collected evidence revealed that corporate governance is an efficient governing

mechanism for risk management, [2]. The governance attributes supported by corporate governance, i.e., ownership concentration, independent directors, board diversity, and dual roles of the CEO, proved crucial in obtaining a broader perspective of governance mechanisms in times of financial instability. In the context of the recent crisis, mainstream corporate governance leads the debate towards corporate law, board composition, policy process, and governance codes, which impact companies' financial growth and performance, [3]. The unprecedented financial periods thus brought out numerous interpretations of the linkage between corporate governance and financial performance including financial risk, which direct the ways in the post-pandemic world.

Recently, corporate governance has become a popular debate in the governance structure of non-

financial institutions. Due to its financial benefits in the respective firms, the corporate governance bodies proved their potential to boost financial growth, [4]. The monetary policy changes and transmission channels' unreliability bring forth the corporate governance that offered a balanced medium for investors and the public. Concerning government financial regulations, the potential effectiveness of corporate governance is marked by corporate transparency and accountability, which gives leverage to non-financial companies, [5]. Although corporate governance reduces the concerns about compliance and control, the shareholders' value rights and financial duties have remained under the critiques, which require wider perspectives and solutions. The previous studies dealt with the board characteristics, the authority concentration, and the guiding policies corporate governance generates for the stakeholders to achieve long-term business objectives, [6], [7]. However, corporate sector financial performance and risk remained a concern due to shared assets and financial values. An abundance of literature is present in the context of financial institutions. However, non-financial companies have paid little attention to this relationship.

In modern business, corporate governance is perceived as good governance practices strengthened by strategic financial plans. The failure of corporate governance is directly associated with financial disasters, which implies that the presence of policies barely makes an impact unless they are regulated and executed by strong directors and executives, [6], [8]. In today's corporate businesses, non-financial companies contribute to the country's economic well-being. Due to their role in the present-day economic and business sphere, it is necessary to analyze the impact of board composition, size, diversity, and functions in determining financial performance and risk. The gap is identified in the previous literature, which motivated the primary concern for the present study. According to previous surveys and studies, [9], [10], corporate governance in non-financial institutes needs further development to ensure financial advantages in corporate business.

The unpredictability in managing finance raises concerns about the role of the board and their management regarding corporate governance and financial performance. The topic has remained the central point of many scholarly discussions. Different opinions were produced regarding the board

formation, size, nature, and functioning in association with corporate governance. The insights obtained from these studies revealed the role of board members in determining the financial success and failure of the corporate sector. Corporate transparency and accountability is considered significant while on the other hand, the board size and gender diversity remained controversial in term of their influence on corporate governance and financial risk management.

Drawing on corporate governance mechanisms and agency theory, the present study aims to analyze the impact of corporate governance of non-financial companies on their financial performance and risk. For measuring the effectiveness of corporate governance, the selected factors include the board characteristics i.e. size, board independence, gender diversity, and the duality of CEO roles. The individual impact of each factor is examined in relation to financial performance and risk. The financial risk is assessed in terms of liquidity risk and credit risk. Firm size, age, and tangibility of assets are selected as control variables. For the study, data is collected from the Refinitiv ESG database of the non-financial firms having corporate governance data from 2009-2019. Through panel data analysis, the fixed and random effects are compared to demonstrate the impact of corporate governance on financial performance. The paper is organized methodically, with the second section as a theoretical review followed by research methodology, results, discussion, conclusion, and implications of the paper.

## 2 Literature Review

### 2.1 Theoretical Framework

The debate on corporate governance mechanism in literature drew attention to the major theoretical lens that provides a sharp perspective on the governance structure, impacts, and objectives in relation to the stakeholders and financial factors. Most of the theoretical concepts of corporate governance are embedded in the agency theory, transaction cost theory, stewardship, and stakeholder theories, [11]. Agency theory has solid theoretical grounds which propose that corporations are mainly the agents of stakeholders, [12]. The theory had its roots in the early 70s when the relationship between owners and shareholders molded into a proper form. The theoretical concepts are driven by the theory of the

firm proposed by, [13], leading the agent debate on the level of business management and governance. Therefore, the potential conflict between stakeholders and management polished the governance principles and directed a strategic way to pursue the interest by managing the third agents. To maximize the business profit, agency theory therefore provides a balanced way fulfilling interest of the shared parties. Agency theory implies that the corporate governance can be a mark of success if it works on a legal framework that converge the interest in diverse decision making settings, [14].

## **2.2 Corporate Governance and Financial Risk**

The existing governance standards posit that the companies primarily focus on internal control and financial risk indicators to assess their financial position. The operational status of risk government thus reduces the default of non-financial institutions. The previous literature on the association between corporate governance and financial risk reveals that corporate governance is positively related to financial efficiency. The authors in, [15], identified the impact of corporate governance on corporate risk disclosure. The data from the non-financial companies of Indonesia revealed no association between board size and financial risk in any way. In, [16], the authors demonstrated that well-governed non-financial firms are less exposed to default risk. The narrow board size and the poor governance increase the information asymmetries between owners and shareholders, which puts the company at financial risk. According to, [17], the authors highlighted the significance of the company's and board size in determining the financial risk. The board's composition decides the policies and manages the risk, which either puts the company at a competitive advantage or brings it to financial collapse.

The previous literature also found a strong association between the financial crisis and corporate governance policies in terms of board independence and subservience to the third actors. As the board members, their policies and successful execution are the keys to escaping financial collapse; the interdependence of the corporate board raised a question on the authority and functionality of the board members. According to, [18], non-financial companies with independent boards are less likely to go financially default status. This implies that independent boards ensure financial security and

reduce the risk in non-financial firms. The board characteristics, therefore, determine the success of the decision and policy-making process that regulates corporate financial growth. The study, [19], suggested the corporate governance of non-financial companies for risk information and disclosure. The board size and the board gender both influence the financial risk. With the upsurge in contemporary gender roles, gender diversity and its relation with corporate governance and financial risk are highlighted by numerous contemporary scholars like, [20], who reported that gender diversity in board composition is significantly related to financial risk disclosure in corporate sectors. The gender diversity in corporate governance thus found significant in leveraging FRD.

Corporate governance practices entail certain standards that directly impact corporate performance and structure. Besides the board characteristics, the ownership and managerial structure does have an impact on the financial risks. The study, [21], highlighted that CEO dual roles in non-financial companies have a minimum impact on financial risk perception and financial performance. However, it is also highlighted that ownership concentration in any format strengthens the CG structure and positively impacts financial performance. However, the clash between the duties can result in disoriented information, which can signify poor growth and financial performance. The position of CEO duality is appreciated in respective of all-inclusive board composition and functions, [22].

*H1: Board Size significantly negatively affects the financial risk of non-financial companies.*

*H2: Board Independence has a significant positive impact on the financial risk of non-financial companies.*

*H3: CEO Duality has a significant positive impact on the financial risk of non-financial companies.*

*H4: Gender diversity has a significant positive impact on the financial risk of non-financial companies.*

## **2.3 Corporate Governance and Financial Performance**

The shared assets and property in corporate governance drew attention to the ownership and shareholder coordination working under the same principles. Previous researchers have developed numerous interpretations and evidence regarding the impact of corporate governance and firms' financial

performance. In, [23], the authors highlighted the significance of good corporate governance in optimizing financial achievement. The international corporate governance run by board nature and characteristics influences the shareholders and thus directs the path for growth for both parties. According to, [24], corporate governance is positively related to financial performance in terms of board size and gender. The study, [25], reported that the board size and nature determine the governance quality, indirectly impacting the companies' financial resilience and growth. The board features form the higher government index depicting high-quality governance and improved financial performance.

The previous literature yielded dual results in terms of board size and significance in determining financial performance. The confusion lies within the nature of firms, their financial status along with other board composition factors. In, [26], the authors found that the number of board members has no significant impact on financial performance. However, the extended executive members tend to deteriorate financial growth in the context of external directors' inclusion. Most of the evidence found in the previous literature remained neutral with respect to board size; however, in non-financial firms, the presence of more than the required members is negatively associated with financial strength. Board independence, however, is prioritized in comparison with the board size. The authors in, [27], concluded that an independent, autonomous, credible board structure characterizes the right corporate mechanism. These members regulate the policies that keep the company on the financial track. The authors in, [28], also advocated that board independence and corporate social responsibility positively impact the firm's financial performance.

Gender diversity in leadership positions caught the attention of business analysts and scholars to analyze the difference that gender diversity makes in corporate business. Most of the previous literature supports the inclusion of gender executives in leading companies because of the financial gains it yields. The study, [29], provided that diverse gender roles in financial and non-financial institutions positively impact the firm's financial performance. In, [30], the authors also supported the proposition that including female leadership in executive roles increases the probability of financial wins. Board gender diversity is also related to finance quality, as indicated by, [31],

that board gender diversity is effective in constraining finance management. In, [32], the authors further pointed out the factors, i.e., females' age and education, which mark and impact their performance as a board member, indirectly relating it with the firm's growth and performance.

*H5: Board size has a significant and positive impact on the financial performance of non-financial firms.*

*H6: Board independence has a significant and positive impact on the financial performance of non-financial firms.*

*H7: CEO duality has a significant and negative impact on the financial performance of non-financial firms.*

*H8: Gender diversity has a significant positive impact on the financial performance of non-financial firms.*

### 3 Study Methods

#### 3.1 Sample and Data

The current research uses a deductive methodology to analyze the influence of corporate governance (CG) mechanisms on financial risks (FR) and performance (FP) by adopting a quantitative approach. The present study relies on secondary data sources. The Refinitiv ESG database has data for over 15,000 global companies; therefore, it was utilized to obtain data for non-financial firms, excluding financial institutions due to their unique regulatory requirements. A period of 11 years was selected from 2009 to 2019, excluding 2020-2022, due to the atypical influence of the Covid-19 pandemic. The study relies on the Refinitiv ESG database, and publicly available annual reports, as accessing reliable financial and corporate governance data for unlisted and inaccessible firms was challenging.

#### 3.2 Variables Measurement

##### 3.2.1 Dependent Variable

The study aims to gauge financial risk and financial performance. For this purpose, financial risk is assessed using two variables, namely liquidity and credit risk. Credit risk refers to the ratio of total liabilities compared to the entire assets. Liquidity risk, on the other hand, is assessed using the current assets-to-liabilities ratio, [33]. FP is measured using return on assets (ROA). ROA is a financial metric

that evaluates a company's ability to generate earnings before taxes are accounted for relative to its total net assets, [34].

### 3.2.2 Independent and Control Variables

The CG factors are utilized as independent variables, as shown in Table 1, to examine their influence on financial risk and performance. The variables' operationalization is summarized in Table 1.

Table 1. Description of the Variables

Variable		Type	Measurement
<b>Credit Risk</b>	CR	Dependent	"Total liabilities divided by total assets"
<b>Liquidity Risk</b>	LR	Dependent	"Current assets divided by current liabilities"
<b>Return on Assets</b>	FP	Dependent	"The ratio of net income (before depreciation) to total assets"
<b>Board Size</b>	BS	Independent	"Total number of directors on the board of the company."
<b>Board Independence</b>	BI	Independent	"% of non-executive directors of a board."
<b>CEO Duality</b>	CEOD	Independent	A dummy variable is utilized, with a value of "1" indicating that the CEO serves as both CEO and chairperson and a value of "0" otherwise.
<b>Gender Diversity</b>	GENDER	Independent	"% of female directors on board."
<b>Firm size</b>	FS	Control	The log of total assets
<b>Firm age</b>	FA	Control	Number of years a company has operated
<b>Tangibility of assets</b>	TAR	Control	"Share of fixed assets to the total assets of the firms"

### 3.3 Data Analysis

The research employs panel data regression analysis as the analytical approach which allows researchers to account for both cross-sectional and time-series variations in the data, [35]. The specification test introduced by Hausman is the most widely recognized method for choosing the appropriate test in panel data analysis, [36]. This test compares fixed and random effect regressions to determine the most suitable model. The fixed effect model investigates variations in intercepts among individual groups or entities while assuming consistent slopes and constant variance across these groups, [37]. Estimation of the fixed effect model is conducted through Least Square Dummy Variable (LSDV) regression, involving ordinary least squares along with a set of dummy variables, and incorporates fixed effect within estimates. Conversely, the random effect model presumes that the error term of an entity is independent of the predictors, permitting time-invariant variables to function as explanatory factors, [38]. The econometric methods employed in the present study have been utilized in prior studies, [39]. Additionally, the regression equations presented in Equations 1, 2, and 3 express the relationships between the dependent and independent variables in the present study. The coefficients ( $\beta$ ) in these equations represent the estimated effects of the independent variables on the dependent variable. The error term ( $\epsilon$ ) captures the unobservable factors that contribute to the variability of the dependent variable. The effect of the CG mechanism on credit risk is shown in Equation 1, followed by the impact on liquidity in Equation 2. Equation 3 represents the influence of the CG mechanism on ROA. The fixed effect was deemed appropriate for models 1 and 2, whereas panel data regression using cross-section weight was utilized for model 3.

$$CR_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 BI_{i,t} + \beta_3 CEOD_{i,t} + \beta_4 GENDER_{i,t} + \beta_5 FS_{i,t} + \beta_6 FA_{i,t} + \beta_7 TAR_{i,t} + \epsilon_{i,t} \quad (1)$$

$$LR_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 BI_{i,t} + \beta_3 CEOD_{i,t} + \beta_4 GENDER_{i,t} + \beta_5 FS_{i,t} + \beta_6 FA_{i,t} + \beta_7 TAR_{i,t} + \epsilon_{i,t} \quad (2)$$

$$FP_{i,t} = \beta_0 + \beta_1 BS_{i,t} + \beta_2 BI_{i,t} + \beta_3 CEOD_{i,t} + \beta_4 GENDER_{i,t} + \beta_5 FS_{i,t} + \beta_6 FA_{i,t} + \beta_7 TAR_{i,t} + \epsilon_{i,t} \quad (3)$$

Where  $\epsilon_{i,t}$  represents the error term.

## 4 Results

To assess the stationarity of the variables in the current study, a unit root test was carried out. The

results are displayed in Table 2, where the “Levin-Lin-Chu” test and the “Augmented Dickey-Fuller” test are shown. According to the null hypothesis, the unit root is present, whereas the alternative hypothesis suggests the stationarity of the data. The results indicate the non-stationarity of the variables at the level for both LLC and ADF tests. Similarly, at the first difference, the results imply the absence of unit root as the results were significant at 1% and 5% significance levels.

Table 2. Unit Root Test

	LLC		ADF	
	Level	First difference	Level	First difference
<b>CEO</b>	-	-81.8752	1484.22	3926.83
	12.8707			
<b>BS</b>	38.3188	-283.089	1.453.6	28573.5
<b>BI</b>	-	-14.3286	33.1562	67.4936
	7.52063			
<b>GENDER</b>	-	-81.8752	1484.22	3926.83
	12.8707			
<b>CR</b>	-	-1193.07	19573.7	36541.7
	0.08529			
<b>LR</b>	0.45105	-1722.71	14116.7	31128.6
<b>FP</b>	0.95480	-29.4643	479.676	860.553
<b>FS</b>	148.907	85.0976	17832.6	30943.8
<b>FA</b>	-	-458.423	47592.6	82386.0
	496.855			
<b>TAR</b>	0.40480	-236089.	12254.8	27847.7

CEO duality was excluded from the three models due to its low variance in the model. Removing CEO duality improved the overall variance of the model. Table 3 exhibits the random effects model for the dependent variable, credit risk, where the predictors explain only 4.4% of the variation in CR.

Table 3. Random Effects Model for Credit Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.
<b>C</b>	13.081	3.21137	4.07361	0.000
	88	0	3	0
<b>LOG_BOARD_SIZ</b>	2.2169	0.25579	8.66706	0.000
<b>E</b>	80	4	3	0
<b>GENDER</b>	-	0.08662	-	0.968
	0.0033	8	0.03900	9
	79		8	
<b>IND_BOARD</b>	0.3517	7.04052	0.04995	0.960
	00	5	4	2
<b>TANGIBLEASSET</b>	3.1860	0.07735	41.1860	0.000
<b>S_RATIO</b>	70	8	3	0
<b>LOG_FIRM_AGE</b>	-	0.03968	-	0.000
	0.2350	1	5.92417	0
	75		6	
<b>FIRMSIZE</b>	-	0.13341	-	0.000
	6.9171	6	51.8465	0
	74		7	
<b>R-squared</b>	0.0442	Adjusted R-squared	0.044	
	50		189	

Therefore, the researcher utilized the Hausman test to decide the suitability of the models. The results presented in Table 4 indicate that the alternate hypothesis is supported with  $p < 0.05$ , suggesting the absence of random effects (RE) in the dataset for Model 1. This implies that employing panel regression with fixed effects (FE) will yield robust results and is an appropriate model.

Table 4. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
<b>Cross-section random</b>	687.4110	6	0.0000
	99		

Table 5 shows the results of the fixed effect model for CR, and it can be seen that board size and gender size significantly impact CR. An increase in board size increases credit risk, whereas increasing gender diversity reduces credit risk. Independent board directors have an insignificant effect on CR, with a p-value of 0.9. Regarding the control variables, it can be deduced that tangible assets and firm size have a significant effect, whereas firm age is insignificant with a p-value exceeding 0.05. Furthermore, the findings indicate that the model accounts for 47% of the variation in CR.

Table 5. Fixed Effect Model for Credit Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	190.756	19.73347	9.666626	0.0000
LOG_BOARD_SIZE	1.665230	0.304644	5.466158	0.0000
GENDER	-38.9442	4.286512	-9.085291	0.0000
IND_BOARD	0.281130	7.077198	0.039723	0.9683
TANGIBLEASSETS_RATIO	3.404313	0.094534	36.01146	0.0000
LOG_FIRM_AGE	-0.04978	0.043931	-1.133154	0.2572
FIRMSIZE	-7.187849	0.154767	-46.44297	0.0000
R-squared	0.517360	Adjusted R-squared		0.469065

Table 6 presents the random effects model for the dependent variable, liquidity risk. The model exhibits a low R-squared value, indicating that the inputs explain only 1.96% of the movement in LR.

Table 6. Random Effects Model for Liquidity Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.155398	2.164679	4.229448	0.0000
LOG_BOARD_SIZE	1.114955	0.177628	6.276920	0.0000
GENDER	0.091742	0.066736	1.374695	0.1692
IND_BOARD	0.300333	4.731783	0.063471	0.9494
TANGIBLEASSETS_RATIO	-0.094296	0.053955	-1.747677	0.0805
LOG_FIRM_AGE	-0.165225	0.027241	-6.065209	0.0000
FIRMSIZE	-3.894931	0.092103	-42.28889	0.0000
R-squared	0.019612	Adjusted R-squared		0.019550

The Hausman specification test confirmed that the RE model is unsuitable for Model 2, and the FE model has superiority over the RE model with  $p < 0.05$  (Table 7).

Table 7. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	422.127876	6	0.0000

Table 8 demonstrates the outcomes of the FE model for LR. The size of the board significantly and positively influences LR with a p-value less than 0.05. However, it was found that while gender and board independence positively affect LR, the results were insignificant, with a p-value surpassing 0.1. Firm size and tangible assets have a significant effect on LR. The R-squared value in the table exhibits that the model explains 55% of the variability in LR.

Table 8. Fixed Effect Model for Liquidity Risk

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.226766	13.24591	-0.319100	0.7497
LOG_BOARD_SIZE	0.475747	0.204489	2.326516	0.0200
GENDER	2.941833	2.877281	1.022435	0.3066
IND_BOARD	0.331590	4.750503	0.069801	0.9444
TANGIBLEASSETS_RATIO	-0.195432	0.063455	-3.079841	0.0021
LOG_FIRM_AGE	-0.031566	0.029488	-1.070454	0.2844
FIRMSIZE	-3.480840	0.103886	-33.50633	0.0000
Effects Specification				
R-squared	0.591158	Adjusted R-squared		0.550248

For the third model, panel data regression with cross-section weights is performed as the random effects model did not yield significant results. The results confirmed that a positive and significant association exists between board size and FP. Gender diversity negatively affects FP, and the result is significant at a 1% significance level. Board independence positively impacts FP, and the result is supported at a 1% significance level. Similarly, it can be seen that the control variables, tangible assets, firm age, and size, have a significant effect on the explained variable, FP. The results indicate that credit

risk is negatively but significantly associated with FP, whereas liquidity risk was insignificantly related to FP. Table 9 results show that the model accounts for 67.8% of the movement in FP.

Table 9. Panel Regression with Cross-Section Weights for Financial Performance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_BOARD_SIZE	0.18445	0.019046	9.684671	0.0000
GENDER	-0.17692	0.005478	-32.29584	0.0000
IND_BOARD	1.05914	0.067760	15.63073	0.0000
TANGIBLEASSETS_RATIO	0.13525	0.007074	19.11889	0.0000
LOG_FIRM_AGE	0.00929	0.001695	5.483305	0.0000
FIRMSIZE	0.28219	0.013194	21.38847	0.0000
CREDIT_RISK	-0.00322	0.000339	-9.493908	0.0000
LIQUIDITY_RISK	-4.65E-06	0.000586	-0.007932	0.9937
Weighted Statistics				
R-squared	0.67923	Mean dependent var	2.286428	
Adjusted R-squared	0.67835	S.D. dependent var	4.227238	
S.E. of regression	0.24243	Sum squared resid	149.9922	
Durbin-Watson stat	0.14437			

## 5 Discussion

The present study draws on the agency theory to examine the influence of CG mechanisms on financial risk and performance. Using credit and liquidity risks as financial risk indicators, the research evaluated the effect of board size, independence of board, CEO duality, and gender diversity in non-financial companies. The findings showed that board size significantly but positively influenced credit and liquidity risks; therefore, the first hypothesis was not supported. The positive association of the size of the board with financial risk aligns with a previous study where board size positively influenced credit risk in Indonesian banks,

[40], however, other studies have found that a large board is related to improved credit assessment, [36]. The second hypothesis of the present study presumed that board independence positively and significantly impacts financial risk; however, the results yielded an insignificant effect. Contrary to the finding, previous research has stated that independent directors are associated with reduced risks and encourage stability, [41]. Moreover, it also enhances responsibility and accountability which is essential in taking innovative steps and managing bold business operations. While the third hypothesis proposed the positive impact of CEO duality, the variable was excluded from the three models due to low variance. As per the fourth hypothesis, gender diversity was said to impact financial risk positively and significantly. The findings revealed that gender diversity negatively and significantly impacted credit risk. The result aligns with previous studies, as it has been revealed that credit risks are significantly reduced with increasing the number of women on the board, [42]. It implies that gender diversity in the boardroom is positively associated with lower credit risk. The presence of women on board not only reduces the credit risk but also impacts financial regulation and risk management.

Conversely, the influence of gender diversity on liquidity risk was positive but insignificant. A study found that board gender diversity was associated with lower liquidity risk, indicating that women directors were more inclined toward rigorous monitoring, [43]. In addition, the findings demonstrated that firm size and tangible assets which were included as control variables, have a significant influence on financial risk in non-financial firms while firm age yielded an insignificant influence on CR and LR.

The current study assessed whether corporate governance mechanisms affect financial performance, and the fifth hypothesis assumed that board size significantly impacts the financial performance of the firms. Using returns-on-assets as the proxy, the finding supported the hypothesis with a positive relationship between board size and ROA. The outcome aligns with previous studies, as a positive relationship is reported between board size and financial performance, which may be accounted for by increased monitoring and more experience, [44]. The small board size does not hold the capacity to manage the financial risk. The board composition in association with its size is significant in determining the chances of risk and management.



The sixth hypothesis presumed that board independence and financial performance have a significant association. The results validated the hypothesis and revealed a positive association between the two. In, [45], the authors revealed that board independence positively influences corporate performance. The ability of the board to exercise their duties without external constraints allows them to progress in a direct way. On the other hand, the unchecked independence of the board members negatively impacts corporate performance. It is evident by the previous studies as, [46], observed that board independence insignificantly influences ROA, while board size was a significant predictor of ROA. Prior studies have contradictory findings on the effect of CEO duality, where some studies have found a negative influence on firm performance, [47], [48]. In contrast, others have not found a significant association between the two, [49]. The present study excluded CEO duality due to low variance.

Regarding the last hypothesis, it was anticipated gender diversity positively influences financial performance. However, the findings showed a significant but negative effect of gender diversity on ROA. In contrast to the finding, prior studies have reported that gender diversity has a positive impact on financial performance, where increasing the number of female directors on board improves return on assets, [32]. These results project another perception that gender diversity without specified gender roles is insignificant in improving financial management and performance. Concerning the control variables, the present research revealed that tangible assets, firm size, and age significantly affect financial performance, as previously shown in studies, [50].

In conclusion, this research study intended to evaluate the impact of CG mechanisms on financial risk and financial performance of non-financial firms and obtained data from secondary sources to analyze the proposed associations using fixed effects and panel data regressions. The present findings contributed significantly to understanding the association between CG mechanism, financial risk, and financial performance. The research extended previous knowledge and provided practical implications, benefiting regulators, stakeholders, and scholars, as discussed below.

## 5.1 Theoretical Contributions

Firstly, this research offers a comprehensive understanding of the importance of corporate governance mechanisms. Secondly, the theoretical contribution of the present study is that it extends and supports the agency theory, which advocates that board characteristics and corporate governance play a crucial role in safeguarding shareholders' interests. In addition, the study builds on previous findings by providing further empirical evidence linking corporate governance mechanisms to financial risk and financial performance.

## 5.2 Practical Implications

The outcomes and results of the current research provide practical implications for various stakeholders on how CG mechanisms can support financial performance and risk handling. The results of the analysis presented that the size of the board is positively linked to financial performance; therefore, board directors, leaders, and decision-makers in non-financial firms must focus on appropriate board sizes to capitalize on the expertise and experience of the board members. Secondly, the study highlighted the importance of board independence for improving financial performance. Policymakers and regulators can utilize the findings to emphasize the inclusion of independent non-executive board directors for enhancing monitoring and improving returns on assets. A fair selection of independent board members must be considered. While gender diversity was found to impact financial performance negatively, it was found to affect credit risk as well negatively. Hence, gender diversity must be assessed as per the firm characteristics, and the study provides practical contribution for regulators and scholars to further build on the association to capitalize on board gender diversity. Hence, important implications can be drawn for practitioners, scholars, and policymakers to consider the various board characteristics for increasing financial stability and performance.

## 5.3 Limitations and Future Research

Although this research adds to the existing research body on the association between corporate governance and financial risks and performance, it is important to acknowledge its limitations. Firstly, the study focused on non-financial firms only, so the findings cannot be generalized to other companies. The study was limited to four variables: board size,

independence, CEO duality, and gender diversity. Hence, some key variables, such as CEO and board tenure, CEO and board compensation, and board process, such as the number of meetings, were not included in this study. Future research should strive to incorporate these variables to provide a more thorough examination of the association between CG mechanism and firm performance.

Additionally, the present study relied solely on agency theory. Therefore, in future research, scholars can delve into alternative theories such as stakeholder theory and shareholder theory. Additional variables such as board diligence or CEO tenure can be introduced and considered by incorporating these theories. This broader approach would enable a more comprehensive understanding of the complex dynamics between CG mechanisms that influence financial performance.

#### 5.4 Conclusion

The examination thoroughly studied the effect of corporate governance mechanisms on performance in non-financial firms and financial risk. The results showed both anticipated and unanticipated outcomes. A negative association was presumed between board size and financial risk; however, the link of board size to liquidity risks and credit showed a positive relationship. Board independence's assumed positive effect on financial risk was not held up. The impact of gender diversity on performance and financial risk was significant where the effect on financial performance showed a negative trend while the effect on risk was insignificant.

The methodological approach of the study made the analysis of the CG mechanism's effect more thorough. A more detailed examination of both time-series and cross-sectional variations was allowed by leveraging the panel data regression. The accuracy of the results was enhanced by Hausman's specification test as it ensured the appropriateness of the selected model. To cater to the pressing need to assess the financial risk and performance within firms, the entity-specific intercept variations of fixed effect models were applied. Hence, the chosen approach for the study offered advantages in investigating the relationships under inspection. The regression of the panel data allowed for an in-depth assessment of how CG mechanisms impact performance and financial risk over a period, apprehending systematic variations as well as variations specific to the firms. Fixed effect models minimized potential bias from

unobserved variables while keeping the slopes constant and accounting for entity-specific intercept selection. To improve the accuracy of the analysis, Hausman's specification test made sure that model selection was appropriate. To further enhance the reliability of the findings, cross-section weights in regression addressed heteroskedasticity.

#### References:

- [1] Jiang F., K.A. Kim *Corporate governance in China: A survey*. Review of Finance, 2020. 24(4): p. 733-772.
- [2] Jebran K., S. Chen, *Can we learn lessons from the past? COVID-19 crisis and corporate governance responses*. International Journal of Finance & Economics, 2023. 28(1): p. 421-429.
- [3] Zattoni A., A. Pugliese, *Corporate governance research in the wake of a systemic crisis: lessons and opportunities from the COVID-19 pandemic*. Journal of Management Studies, 2021. 58(5): p. 1405-1410.
- [4] Alabdullah T.T.Y., E.R. Ahmed, M. Muneerali, *Effect of board size and duality on corporate social responsibility: what has improved in corporate governance in Asia?* Journal of Accounting Science, 2019. 3(2): p. 121-135.
- [5] Nicolò G., Zampone G., Sannino G., De Lorio S., *Sustainable corporate governance and non-financial disclosure in Europe: does the gender diversity matter?* Journal of Applied Accounting Research, 2021. 23(1): p. 227-249.
- [6] Bhagat S., B. Bolton, *Corporate governance and firm performance: The sequel*. Journal of Corporate Finance, 2019. 58: p. 142-168.
- [7] Fernández-Temprano M.A., F. Tejerina-Gaite, *Types of director, board diversity and firm performance*. Corporate Governance: The International Journal of Business in Society, 2020.
- [8] Zhou M., K. Li, Z. Chen, *Corporate governance quality and financial leverage: Evidence from China*. International Review of Financial Analysis, 2021. 73: p. 101652.
- [9] Mbir D.E.G., Agyemang O.S., Tackie G., Abeka M.J., Ntim C.G., *IFRS compliance, corporate governance and financial reporting quality of GSE-listed non-financial firms*. Cogent Business & Management, 2020. 7(1): p. 1759856.

- [10] Gerged A.M., A. Agwili, *How corporate governance affect firm value and profitability? Evidence from Saudi financial and non-financial listed firms*. International Journal of Business Governance and Ethics, 2020. 14(2): p. 144-165.
- [11] Yusoff W.F.W., I.A. Alhaji, *Insight of corporate governance theories*. Journal of Business & Management, 2012. 1(1): p. 52-63.
- [12] Bonazzi L., S.M. Islam, *Agency theory and corporate governance: A study of the effectiveness of board in their monitoring of the CEO*. Journal of modelling in management, 2007. 2(1): p. 7-23.
- [13] Alchian A.A., H. Demsetz, *Production, information costs, and economic organization*. The American economic review, 1972. 62(5): p. 777-795.
- [14] Kultys J., *Controversies about agency theory as theoretical basis for corporate governance*. Oeconomia Copernicana, 2016. 7(4): p. 613-634.
- [15] Kurniawanto H., D. Suhardjanto, S.W. Agustiniingsih, *Corporate governance and corporate risk disclosure: Empirical evidence of non-financial companies listed in Indonesia stock exchange*. Review of Integrative Business and Economics Research, 2017. 6(4): p. 255.
- [16] Ali S., B. Liu, J.J. Su, *Does corporate governance quality affect default risk? The role of growth opportunities and stock liquidity*. International Review of Economics & Finance, 2018. 58: p. 422-448.
- [17] Ahmad A., M. Muhammad, D. Narullia, *Corporate Risk Disclosure: The Effect Of Corporate Governance*. Journal of Applied Managerial Accounting, 2021. 5(1): p. 101-113.
- [18] Switzer L.N., J. Wang, Y. Zhang, *Effect of corporate governance on default risk in financial versus nonfinancial firms: Canadian evidence*. Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration, 2018. 35(2): p. 313-328.
- [19] Kiflee A.K.R., M.N.A. Ali Khan, *The effect of performance and corporate governance to risk disclosure among listed companies in Malaysia*. Asia-Pacific Management Accounting Journal (APMAJ), 2021. 16(1): p. 119-161.
- [20] Bufarwa I.M., Elamer A.A., Ntim C.G., Alhares, A., *Gender diversity, corporate governance and financial risk disclosure in the UK*. International Journal of Law and Management, 2020. 62(6): p. 521-538.
- [21] Rahman H.U., Rafique M., Akbar, Z.A., Aidoo E.S., *Impact of corporate governance practices on financial performance: evidence from non-financial sector of Pakistan*. International Journal of Electronic Finance, 2020. 10(1-2): p. 1-22.
- [22] Alves S., *The Impact of Conservatism Accounting on Audit Fees: Evidence From Portugal and Spain*, in *Transforming Corporate Governance and Developing Models for Board Effectiveness*. 2021, IGI Global. p. 253-280.
- [23] Ciftci I., Tatoglu E., Wood G., Demirbag M., Zaim S., *Corporate governance and firm performance in emerging markets: Evidence from Turkey*. International Business Review, 2019. 28(1): p. 90-103.
- [24] Saini N., M. Singhania, *Corporate governance, globalization and firm performance in emerging economies: Evidence from India*. International Journal of Productivity and Performance Management, 2018.
- [25] Farooq M., A. Noor, S. Ali, *Corporate governance and firm performance: empirical evidence from Pakistan*. Corporate Governance: The International Journal of Business in Society, 2022. 22(1): p. 42-66.
- [26] Adeusi S.O., Israel A.N., Olugbenga A.F., Adebisi O.S., *Corporate Governance and Firm Financial Performance: Do Ownership and Board Size Matter?* Academic Journal of Interdisciplinary Studies, 2013. 2(3): p. 251.
- [27] Kyere M., M. Ausloos, *Corporate governance and firms financial performance in the United Kingdom*. International Journal of Finance & Economics, 2021. 26(2): p. 1871-1885.
- [28] Kabir R., H.M. Thai, *Does corporate governance shape the relationship between corporate social responsibility and financial performance?* Pacific Accounting Review, 2017. 29(2): p. 227-258.
- [29] Pekovic S., S. Vogt, *The fit between corporate social responsibility and corporate governance: the impact on a firm's financial performance*. Review of Managerial Science, 2021. 15: p. 1095-1125.

- [30] Hakimah Y., Pratama I., Fitri H., Sulbahri R.A., *Impact of Intrinsic Corporate Governance on Financial Performance of Indonesian SMEs*. International Journal of Innovation, Creativity and Change Vol, 2019. 7(1): p. 32-51.
- [31] Orazalin N., *Board gender diversity, corporate governance, and earnings management: Evidence from an emerging market*. Gender in Management: An International Journal, 2020.
- [32] Brahma S., C. Nwafor, A. Boateng, *Board gender diversity and firm performance: The UK evidence*. International Journal of Finance & Economics, 2021. 26(4): p. 5704-5719.
- [33] Dang H.T., *Determinants of liquidity of listed enterprises: Evidence from Vietnam*. The Journal of Asian Finance, Economics and Business (JAFEB), 2020. 7(11): p. 67-73.
- [34] Buallay A., *Corporate governance, Sharia'ah governance and performance: A cross-country comparison in MENA region*. International Journal of Islamic and Middle Eastern Finance and Management, 2019.
- [35] Hassan R., M. Marimuthu, *Corporate governance, board diversity, and firm value: Examining large companies using panel data approach*. 2016.
- [36] Manurung E., E. Effrida, A.J. Gondowonto, *Effect of financial performance, good corporate governance and corporate size on corporate value in food and beverages*. International Journal of Economics and Financial Issues, 2019. 9(6): p. 100.
- [37] Kyereboah-coleman A., N. Biekpe, *Corporate governance and financing choices of firms: A panel data analysis*. South African Journal of Economics, 2006. 74(4): p. 670-681.
- [38] Shrivastav S.M., A. Kalsie, *The relationship between CEO duality and firm performance: An analysis using panel data approach*. IUP Journal of Corporate Governance, 2016. 15(2).
- [39] Bayrakdaroglu A., E. Ersoy, L. Citak, *Is there a relationship between corporate governance and value-based financial performance measures? A Study of Turkey as an Emerging Market*. Asia-Pacific Journal of Financial Studies, 2012. 41(2): p. 224-239.
- [40] Nugraheni P., R. Muhammad, *Board of directors and credit risk: An empirical study of Indonesian Islamic banks*. Jurnal Keuangan dan Perbankan, 2019. 23(4): p. 503-513.
- [41] Karkowska R., J. Acedański, *The effect of corporate board attributes on bank stability*. Portuguese Economic Journal, 2020. 19(2): p. 99-137.
- [42] Kinateder H., Choudhury, T., Zaman, R., Scagnelli, S.D., Sohel, N., *Does boardroom gender diversity decrease credit risk in the financial sector? Worldwide evidence*. Journal of International Financial Markets, Institutions and Money, 2021. 73: p. 101347.
- [43] Sarang A.A.A., N. Aubert, X. Hollandts, *Board Gender Diversity and Corporate Cash Holdings I*. Finance, 2021. 42(1): p. 7-49.
- [44] Alqatan D.A., I. Chbib, K. Hussainey, *How does board structure impact on firm performance in the UK? Corporate Board: Role, Duties & Composition*, 2019. 15(2).
- [45] Uribe-Bohorquez M.-V., J. Martínez-Ferrero, I.-M. García-Sánchez, *Board independence and firm performance: The moderating effect of institutional context*. Journal of Business Research, 2018. 88: p. 28-43.
- [46] Rashid A., *Board independence and firm performance: Evidence from Bangladesh*. Future Business Journal, 2018. 4(1): p. 34-49.
- [47] Qadorah A.A.M., F.H.B. Fadzil, *The relationship between board size and CEO duality and firm performance: Evidence from Jordan*. International Journal of Accounting, Finance and Risk Management, 2018. 3(3): p. 16-20.
- [48] Hsu S., Lin S.W., Chen W.P., Huang J.W., *CEO duality, information costs, and firm performance*. The North American Journal of Economics and Finance, 2021. 55: p. 101011.
- [49] da Cost Y.C.L., O.S. Martins, *CEO duality and corporate performance: evidence in the Brazilian capital market*. Revista de Administração da Universidade Federal de Santa Maria, 2019. 12(3): p. 403-417.
- [50] Sarpong-Danquah B., Gyimah P., Afriyie R.O., Asiama A., *Corporate governance and firm performance: An empirical analysis of manufacturing listed firms in Ghana*. Accounting and Finance Research, 2018. 7(3): p. 111-118.

**Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)**

The authors equally contributed in the present research, at all stages from the formulation of the problem to the final findings and solution.

**Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself**

No funding was received for conducting this study.

**Conflict of Interest**

The authors have no conflict of interest to declare.

**Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)**

This article is published under the terms of the Creative Commons Attribution License 4.0

[https://creativecommons.org/licenses/by/4.0/deed.en\\_US](https://creativecommons.org/licenses/by/4.0/deed.en_US)