

Corporate Governance, Risk-Taking, Institutional Quality and Financial Performance: Evidence from Developed and Emerging Markets Using PLS-SEM

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Abstract

This paper will discuss how financial performance is affected by corporate governance and risk-taking, and how the institutional quality will moderate. The study uses the Partial Least Squares Structural Equation Modeling by using SmartPLS 3.0 and regression analysis by using SPSS, using secondary data of 100 publicly listed firms operating in the developed and emerging markets over the six years period between 2015 and 2020. Board size, CEO duality, and shareholder rights measure corporate governance, and risk-taking is represented by leverage, research and development spending, and investment in volatile assets. Financial performance is assessed in terms of the returns on assets, returns on equity, and the earnings before interest and taxes, whereas institutional quality is measured through regulatory quality, rule of law, and control of corruption. The results indicate that corporate governance positively impacts financial performance, and excessive risk-taking has a negative impact on firm performance. The findings also suggest that institutional quality enhances the association between corporate governance and financial performance. The research adds to the existing body of literature on corporate governance by demonstrating that the effectiveness of a given governance mechanism at a particular time depends on whether such a mechanism is supported by a robust institutional environment. The results provide valuable insights to policymakers, managers, and investors who aim to enhance the governance practices and risk-management approaches.

Keywords: Corporate Governance; Risk-Taking; Financial Performance; Institutional Quality; PLS-SEM; SmartPLS

Introduction

Study Background.

Over the last few decades, corporate governance has been the hot topic of interest among scholars and practitioners. It involves the structures, processes, and mechanisms through which companies are guided and controlled in a manner that harmonizes the interests of stakeholders, especially the

shareholders with those of the management. Good corporate governance may not only improve decision-making by the firm, but also control transparency and agency costs, which in turn would lead to better financial performance of the company (Fama and Jensen, 1983). With the business environment constantly being influenced by the forces of globalization, companies are now increasingly being forced to make complex decisions that involve a lot of risk, especially in the competitive business environment. Risk-taking is a fundamental element of corporate strategy, in which companies trade off the chances of greater returns against the chances of negative financial consequences. Although calculated risk-taking is sometimes necessary to grow and innovate, excessive or improperly managed risk-taking can cause financial turmoil and inadequate performance (Brealey, Myers, and Allen, 2011). In recent years, corporate governance frameworks have demonstrated significant potential in understanding and managing financial risk models (Joshi, 2024). Moreover, the integration of generative AI (Gen AI) in financial systems has been a growing trend, particularly for enhancing financial risk management (Joshi, 2025). As the industry continues to explore the transformative capabilities of AI, it is essential to understand the evolving role of these technologies in reshaping financial risk assessments and regulatory compliance. The final measure of the success of a firm is financial performance, which reflects the consequences of the strategic decisions taken by the firm, such as corporate governance systems and risk-taking behaviour. Major financial performance measures, including Return on Assets (ROA), Return on Equity (ROE) and Earnings Before Interest and Taxes (EBIT) provide an insight into the efficiency, profitability, and effectiveness of operations of a given firm.

Besides internal governance, risk factors, institutional quality is critical in determining the results of firms. Institutional quality is the robustness of the legal, regulatory, and political environment in which firms are operating. It is possible to promote better practices of governance and more stable business conditions through strong institutions, including good rule of law, low levels of corruption and efficient regulating institutions. On the other hand, weak institutions can have the effect of undermining corporate governance, promoting corruption, and causing market inefficiencies (North, 1990). This paper aims to explore the interdependence relations between corporate governance, risk-taking, financial performance, and institutional quality. In particular, it will examine the impact of corporate governance mechanisms on the financial performance, the effect of risk-taking, and the moderating role of institutional quality.

Research Problem

Even though much has been done to examine the relationships between corporate governance, risk-taking and financial performance, little has been done to explore how institutional quality influences these relationships in developed and emerging markets. The existing literature mainly deals with the direct impact of corporate governance on the performance of firms, but fewer studies combine risk-taking behavior and institutional quality into a single empirical model. This leaves a gap in comprehension that governance mechanisms in countries with varying degrees of legal enforcement, quality of regulation mechanisms and corruption control may not be equally effective. Not only that, the risk-taking can have different effects on the financial performance based on the institutional environment and the form of governance in which firms are operating. With high institutional surroundings, companies might stand to gain more through open governance and rigorous risk management. However, in less robust institutional contexts, governance mechanisms can be less effective because of the poor enforcement and weak regulatory environment. Thus, this research paper fills this gap by investigating how the combination of corporate governance, risk-taking, and institutional quality influence financial performance.

Research Objectives

The main objective of this study is to examine the relationship between corporate governance, risk-taking, institutional quality, and financial performance. Specifically, the study aims to:

1. Examine the impact of corporate governance on financial performance.
2. Analyze the effect of risk-taking on financial performance.
3. Investigate the direct effect of institutional quality on financial performance.
4. Examine the effect of institutional quality on corporate governance.
5. Test the moderating role of institutional quality in the relationship between corporate governance and financial performance

Research Questions

Based on the research objectives, the following research questions are formulated:

RQ1: How does corporate governance affect financial performance?

RQ2: What is the effect of risk-taking on financial performance?

RQ3: How does institutional quality affect financial performance?

RQ4: How does institutional quality influence corporate governance?

RQ5: Does institutional quality moderate the relationship between corporate governance and financial performance?

Hypotheses

Based on the research questions, the study tests the following hypotheses:

H1: Corporate governance has a positive effect on financial performance.

H2: Risk-taking has a negative effect on financial performance.

H3: Institutional quality has a positive effect on financial performance.

H4: Institutional quality has a positive effect on corporate governance.

H5: Institutional quality positively moderates the relationship between corporate governance and financial performance.

Importance of the Study.

The research paper is an addition to the existing literature in many aspects. First, it contributes to the expanding literature on corporate governance by looking at its effects on financial performance in various institutional settings. Although past studies have been conducted to determine the relationship between governance and performance, few studies have been done to determine whether institutional quality moderates the relationship between governance and performance, especially in emerging markets. Second, the study presents a more subtle conceptualization of risk-taking behavior by examining how this behavior interacts with the systems of governance and institutional settings to affect firm performance. Risk-taking is usually perceived as a two-sided sword, with the threat of failure counterbalanced with the threat of high rewards. This paper provides insights into how companies can maximize their risk-taking behavior depending on their governance structure, and the quality of the institutional environment in which they operate. Lastly, this study provides useful practical implications to the policy makers, business executives and investors. Through this understanding of the interaction between the structure of governance, risk-taking and institutional quality, organizations are able to make better decisions, which coincide with both regulatory and market expectations.

Scope of the Study

This study focuses on publicly listed companies across a variety of industries. The data will be gathered in developed and emerging markets that will provide a chance of cross-country comparisons and understanding of the impacts of institutional quality on governance practices and

firm performance. The analysis is based on a six-year span of 2015 to 2020 which provides a comprehensive view of corporate governance, risk-taking, institutional quality and firm performance in various institutional settings. The results of the study are likely to be generalizable to a broad population of firms in various institutional settings. Nevertheless, the study is constrained by the presence of data, since not all companies provide extensive information on corporate governance, especially in the emerging markets.

Literature Review

There has been a substantial amount of academic research on the relationship between corporate governance, risk-taking, and financial performance. With the global marketplace constantly undergoing change, it is becoming more and more important to gain insight into the mechanisms by which governance structures impact firm performance, particularly in the setting of different institutional environments. Moreover, institutional quality has been considered in recent years as a moderating factor to these relationships. The chapter will review the literature on these critical constructs, providing an insight into how corporate governance mechanisms, risk-taking behaviors and institutional quality affect the financial performance of a firm.

Corporate Governance and Financial Performance.

Corporate governance can be simply defined as the system under which companies are directed and controlled (Shleifer and Vishny, 1997). It is common associated with improved firm performance because of enhanced accountability, transparency, and alignment between the management and shareholders. The agency theory (Jensen and Meckling, 1976) assumes that good corporate governance alleviates the agency problem where managers do not necessarily act in the best interest of shareholders. This theory suggests that, with the right governance structures, including independent boards and separate ownership and control, can give rise to better decision-making, and, therefore, better financial performance (Fama and Jensen, 1983). The empirical research backs the notion that corporate governance has a positive impact on financial performance. As an example, Gomers, Ishii and Metrick (2003) discovered that companies with high shareholder rights in terms of governance indexes, outperform their counterparts in terms of profitability and stock returns. In similar cases, Bhagat and Bolton (2008) argued that the board independence and CEO duality (whether or not the CEO also serves as the chairman of the board) have a profound impact on the financial performance of a firm and therefore, the importance of governance mechanisms in influencing the financial outcomes of a firm. Nonetheless, there exist some other studies which warn us about using a one-size-fits-all approach to governing our planet. Claessens, Djankov and Lang (2000) and La Porta et al. (1999) point out that the effect of corporate governance on financial performance may be varied depending on the legal and institutional framework under which a firm operates. The governance-performance relationship in countries with strong legal frameworks is more likely to be stronger, and in weak institutional settings, the effect may be less strong or even negative.

Risk-Taking and Financial Performance.

Risk-taking is an inseparable component of the business strategy, particularly in the industry where companies must take risks or enter the volatile market in order to have a competitive advantage. Risk-taking can be perceived as an opportunity cost between the potential returns and the risk of financial distress. Companies with greater leverage (debt-to-equity ratio), such as, might be more prone to take on more risk, which can result in higher returns in favorable market conditions, but also an increase in the probability of financial distress (Brealey, Myers, and Allen, 2011). "In recent literature, several frameworks have been proposed for integrating generative AI into financial systems, focusing on their governance and regulatory compliance. Joshi (2024) outlines

the importance of full-stack frameworks that bridge AI systems with financial models while safeguarding proprietary data. Furthermore, Joshi (2025) highlights that effective governance models are essential for ensuring AI systems remain aligned with regulatory requirements and ethical standards. Margaritis and Psillaki (2010) investigated the association between leverage and financial performance, and concluded that the higher the leverage, the higher the risk-adjusted returns, but only up to a certain point. However, above that level, too much debt becomes counterproductive to performance because of the higher chances of defaulting and the expenses incurred on the high financial leverage. Along with leverage, another indicator of risk-taking is R&D spending. According to Baysinger and Hoskisson (1990), when firms make heavy investments in research and development, they are taking calculated risks in a bid to innovate and earn long-term profitability. Nonetheless, these investments may exert financial pressure in the short-term since the investments demand high capital outlay, but there are no immediate returns. This theory is supported by the trade-off theory of capital structure as articulated by Myers (2001) suggesting that firms have to balance the benefits of the debt and risk-taking on the other hand and the potential cost of financial distress on the other. Although risk-taking may result in positive outcomes, risk-taking and financial performance are not necessarily always linear. Leary and Roberts (2005) state that some level of risk-taking is important to ensure that a firm grows and innovates but too much risk-taking may have negative financial consequences, especially in a time of economic slowdown or market turmoil. This implies that financial performance is not only a factor of the extent of the risk assumed, but also the capacity of the firms to manage and mitigate the risk.

Institutional Quality and its contribution to corporate governance.

Institutional quality is very critical in determining the corporate governance practices as well as the performance of the firm. According to North (1990), institutions are the rules of the game that govern social, political and economic interactions. Within the corporate governance framework, institutions have an impact on the legal frameworks, enforcement systems, and general business environment within which firms operate. Legal safeguarding of the rights of shareholders and the existence of effective regulatory bodies, as La Porta et al. (1997) reveal, are key in ensuring such firms adopt good governance practices that are in line with the interests of the shareholders.

The corporate governance structure of countries was more likely to be better in countries with high institutional quality, including those with a strong rule of law, effective regulatory frameworks and a low-corruption index. The countries offer a more stable business environment, which in turn lowers the cost of transactions and also ensures that businesses abide by the rules of the game. Acemoglu, Johnson and Robinson (2001) state that one of the most important factors that dictate the way a country performs economically is institutional quality which promotes investment and efficient use of capital.

Conversely, companies within countries whose institutions are weak might experience difficulties associated with corruption, ineffective enforcement of law, and ineffective regulatory systems. In such settings, the corporate governance mechanisms might not be as effective and firms might indulge in more opportunistic behaviour such as embezzle shareholder value or take excessive risks. According to Djankov et al. (2003), firms in countries with less developed legal systems are less likely to pursue effective practices of corporate governance which can result in worse financial performance. The moderating role of institutional quality in the relationship between corporate governance and financial performance is reflected in the studies by La Porta et al. (1997) and Gomers, Ishii, and Metrick, (2003), who state that effectiveness of corporate governance mechanisms greatly depends on the strength of national institutions. Corporate governance

practices in the countries with weak institutions may have less effect on enhancing financial performance because of the absence of enforcement of laws and regulations.

The Moderating Effect of Institutional Quality in Corporate Governance and Financial Performance

Since the institutional contexts differ across countries, the institutional quality may be a moderating variable in the relationship between corporate governance and financial performance. The quality of institutions is impacted by the quality of governance practices and how well they are implemented and enforced, and thus affects their effectiveness in improving the performance of firms. According to Filatotchev, Nakajima, and Wright (2013), the issue of institutional quality is especially relevant in emerging markets, where regulatory frameworks tend to be weaker, and the practices of governance are not as well-established. Even in these markets, firms with a good governance structure may not be able to attain high financial performance due to some of the external factors, which include political instability, corruption, and weak enforcing of the law. However, in developed economies where the regulatory and legal frameworks are ineffective, the corporate governance structures are more prone to cause better financial performance. The integration of generative AI in financial systems requires a full-stack framework to ensure seamless interaction between front-end AI tools and back-end risk models. Joshi (2024) suggests that by adopting full-stack solutions, financial institutions can effectively incorporate generative AI models, like ChatGPT and Google Gemini, into their risk assessment workflows. This approach allows for enhanced automation and model validation while ensuring that proprietary data remains secure. Additionally, Joshi (2025) highlights the importance of governance frameworks that maintain regulatory compliance when utilizing AI for financial risk management, as these models can be sensitive to data privacy issues. The full-stack architecture proposed includes secure APIs that bridge the AI models with existing financial systems while keeping sensitive data protected from unauthorized access (Joshi, 2024).

Recent Empirical Evidence

The recent works have also reiterated the significance of the institutional quality and governance systems in determining the firm outcomes. Eldomiaty et al. (2023) investigated the role of institutional quality in the explanation of the differences in the financial performance of firms in G8 and MENA countries and found that institutional conditions play a significant role in explaining the differences in the financial performance of firms in G8 and MENA countries. In a similar manner, Akmal et al. (2024) examined the existence of corporate governance and financial performance in both Islamic and conventional financial institutions and determined that institutional quality moderates the relationship between corporate governance and performance. The recent evidence also shows that the value of governance in the decisions related to risk is significant. Nguyen (2024) investigated the connection between the characteristics of corporate governance and the risk-taking in financial institutions in a transitional economy, and Alzayed et al. (2024) revisited the relationship between corporate governance characteristics and financial risk-taking. These studies buttress the necessity to explore the corporate governance, risk-taking, institutional quality, and financial performance in a cohesive framework. While Artificial General Intelligence (AGI) remains a long-term research goal, generative AI (Gen AI) has rapidly gained traction in practical applications, including financial systems. AGI seeks to replicate human-level cognitive abilities across various tasks (Joshi, 2025), while Gen AI, such as large language models, offers immediate benefits through task-specific applications like financial risk assessment and regulatory compliance (Joshi, 2024). Agentic AI, a subtype of Gen AI, is already being deployed in real-world financial environments to enhance decision-making and automate complex

workflows (Joshi, 2025). Although AGI holds great promise, its current limitations mean that Gen AI and agentic AI are more viable for addressing pressing financial industry needs.

Methodology

Research Design

This research takes a quantitative panel based research design to determine the relationship between corporate governance, risk taking, institutional quality and financial performance. As the study involves the use of firm-related data during the period of 2015 - 2020, a panel-based design is more fitting as compared to a conventional cross-sectional design. This design enables the study to both capture differences across firms, and changes across time. Quantitative method is also appropriate due to the measurement of the variables in terms of numerical measures and the analysis of the results using statistical methods. The study uses Structural Equation Modeling (SEM), an effective statistical tool that is used to study relationships between latent (unobservable) and observed variables. In particular, the analysis is based on the Partial Least Squares (PLS-SEM) with SmartPLS 3.0 software to evaluate the measurement and structural models. Also, SPSS is employed to conduct regression analysis to support the validity of the results provided by SEM and to offer additional information regarding the relationships between the key constructs. This two-fold methodology enables a more in-depth analysis of the hypothesized relationships.

Data Collection In this research, secondary data is employed which is collected by means of publicly available financial statements and databases. The analysis uses a sample of 100 firms in the various industries to ensure that the company sample is diverse in terms of companies operating in both the developed and emerging markets. The firms were selected according to their access to a complete financial and governance data over a 5-year period (2015-2020). The sample of the firms belonging to various industries gives a more generalizable picture of the impact of corporate governance and institutional quality on financial performance since these factors can differ across industries. Data collection process entails acquiring governance, financial and institutional quality information at different sources. Corporate Governance (CG) data including indicators of board size, duality of CEOs, and shareholder rights is sourced to well established financial databases such as Orbis, Bloomberg and Thomson Reuters Governance Data. Risk-Taking (RT) is quantified using such indicators as the debt-to-equity ratio (leverage), R&D expenditure, and investment in volatile assets, which are obtained through such sources as Compustat and company annual reports. Financial Performance (FP) is denoted by key financial metrics of Return on Assets (ROA), Return on Equity (ROE), and Earnings Before Interest and Taxes (EBIT), obtained in Compustat and Bloomberg. Finally, Institutional Quality (IQ) is estimated based on country level indicators, including: regulatory quality, rule of law, and control of corruption, which are sourced to the World Bank Governance Indicators, and Transparency International.

3.3 Variables

The main variables of the study are conceptualized as Corporate Governance (CG), Risk-Taking (RT), Financial Performance (FP), and Institutional Quality (IQ) of the company. All these variables are operationalized with the help of certain indicators. Corporate Governance (CG): operationalized with three indicators: board size (CG_board_size), CEO duality (CG_CEO_duality), and shareholder rights (CG_shareholder_rights). The indicators are selected according to their relevance in establishing the effectiveness of the governance structures in firms. Risk-Taking (RT): RT is represented by three indicators: the leverage ratio (RT_leverage), R&D spending (RT_RD_spending), and investment in volatile assets (RT_volatile_investment). These indicators are used to gauge how the firm is exposed to risk in its financial decision making and investments. Financial Performance (FP) is the dependent variable of the study and is measured by three indicators: Return on Assets (ROA), Return on Equity (ROE) and Earnings Before Interest and Taxes (EBIT). These are typical indicators of profitability and efficiency of the operation of a firm.

Institutional Quality (IQ): IQ is a moderator in the model and is operationalized using three indicators: regulatory quality (IQ_regulatory_quality), rule of law (IQ_rule_of_law), and control of corruption (IQ_control_of_corruption). These are institutional indicators that are well known as effective indicators of the business environment and stability of the governance system. Besides the key variables, this study can have control variables to enhance the strength of the findings. These are the control variables, which are the firm size, the age of the firm, the type of industry and the market classification. The size of the firm can impact financial performance in that larger firms have a higher access to resources and capital markets. The age of firms can determine its performance since there is experience and reputation in the market. The type of industry is moderated since the practices of governance and risk-taking behavior might not be the same across industries, and market classification helps explain the differences between developed and emerging markets.

3.4 Data Analysis Techniques To test the hypotheses and analyse the relationships between the variables, the study uses SmartPLS 3.0 to Structural Equation Modeling (SEM) and SPSS to regression analysis.

3.4.1 Structural Equation Modeling (SEM) using SmartPLS SmartPLS 3.0 is used in case of Partial Least Squares Structural Equation Modeling (PLS-SEM), which is especially appropriate when it comes to exploring complex relationships between many variables. SEM enables the estimation of the direct and indirect effects simultaneously, which is why it is the best fit in this study, where the corporate governance and institutional quality might be directly and moderately linked to financial performance. The model is organized in the following way:

$$FP = \beta_1 \cdot CG + \beta_2 \cdot RT + \beta_3 \cdot IQ + \beta_4 \cdot (CG \times IQ)$$

Where:

Where FP is financial performance, CG is corporate governance, RT is risk-taking, IQ is institutional quality, $CG \times IQ$ is an interaction term that is used to test the moderating effect of institutional quality, 0 is the intercept, 1 4 are the path coefficients, and 0 is the error term. Bootstrapping is a resampling method that is used to test the relationship between these variables and assess the statistical significance of the path coefficients. The findings are utilized to determine the strength and significance of each relationship.

Hypothesis Testing

Path coefficients, t-values, and p-values of the SmartPLS bootstrapping process are used to test the hypotheses. A t-value of greater than 1.96 and p-value of less than 0.05 is a statistical significance of 5 percent. The hypotheses that are tested in the study are:

H1: Corporate governance positively impacts financial performance.

H2: Risk-taking influences negatively financial performance.

H3: The quality of institutions positively influences the financial performance.

H4: Institutional quality has a positive effect on corporate governance.

H5: The moderating effect of institutional quality in the relationship between corporate governance and financial performance is positive. Bootstrapping is carried out to test the significance of the path coefficients where t-value more than 1.96, p-value less than 0.05 indicates that the hypothesis is statistically significant.

Regression Analysis with the help of SPSS.

Regression analysis is used to validate the findings of SmartPLS analysis using SPSS. This approach will help establish the links found in the structural model by examining the direct impacts of corporate governance, risk-taking, and institutional quality on financial performance.

The regression equation to be used is:

$$FP = \alpha + \beta_1 \cdot CG + \beta_2 \cdot RT + \beta_3 \cdot IQ + \epsilon$$

Where:

Where FP = financial performance, CG = corporate governance, RT = risk-taking, IQ = institutional quality, $CG \times IQ$ = the moderation term, and α = the intercept, β_1 to β_4 are regression coefficients, and ϵ is the error term. The regression analysis is also able to provide further information on the strength of the relationships between the independent variables and financial performance and it helps to ensure the robustness of the findings of SmartPLS.

Model Fit Evaluation

The factor of Goodness-of-Fit (GoF) index is employed to assess the overall goodness of the model. It is computed as the geometric mean of the average communality and average R^2 :

$$GoF = \sqrt{\text{Average Communality} \times \text{Average } R^2}$$

A GoF value that is above 0.36 can be said to be a good indicator of a good model fit. This index is useful in determining the effectiveness of the model in explaining the observed data.

Ethical Considerations

Ethical issues play an important role in guaranteeing integrity and transparency of the research process. In the current research, the data utilized is all secondary data that is retrieved through publicly available resources. No human subjects are involved and all data sets are accessed as per the terms and conditions of the data providers. Moreover, the research is transparent in the presentation of findings, and all analyses will be done with the help of the available and widely accepted methodologies.

Conclusion

This chapter described the research methodology including how the data was collected, how it was measured and the analysis methods used to test the hypotheses. The analysis of the relations between Corporate Governance, Risk-Taking, Financial Performance, and Institutional Quality can be conducted with the help of SmartPLS as Structural Equation Modeling tool and SPSS as the regression analysis tool. In the next chapter, the analysis results will be provided, and the implications of the results discussed.

Data Analysis and Results

The current chapter shows the analysis of the research data, which is to understand the relationships between Corporate Governance (CG), Risk-Taking (RT), Financial Performance (FP), and Institutional Quality (IQ). The analysis involves two important procedures such as the SmartPLS that implements Structural Equation Modeling (SEM) and SPSS that performs regression analysis. The primary purpose of the chapter is to provide an evaluation of the direct and indirect effects of corporate governance on financial performance and how risk-taking behavior and institutional quality impact these relationships.

Descriptive Statistics

The initial stage in the process of analyzing data is to analyze the fundamental features of the data. This will contain the mean, standard deviation, minimum and maximum values of each key variable: Corporate Governance, Risk-Taking, Financial Performance, and Institutional Quality.

Variable	Mean	Standard Deviation	Minimum	Maximum
Corporate Governance (CG)	3.25	1.12	1.50	5.00
Risk-Taking (RT)	0.56	0.23	0.20	0.95
Financial Performance (FP)	2.80	0.67	1.00	5.00
Institutional Quality (IQ)	3.85	0.89	2.00	5.00

The table 1 below shows the descriptive statistics of the variables used in the research. Corporate Governance has a mean score of 3.25 with a standard deviation of 1.12 and this indicates that there is moderate level of governance quality within the sample. Risk-Taking with the mean of 0.56 shows an average level of risk behavior between firms. Likewise, Financial Performance has the mean of 2.80 which indicates the level of overall performance of the firms comprising the sample. The mean value of Institutional Quality is fairly good at 3.85 and this indicates that the countries or regions represented in the study have strong institutional frameworks.

Measurement Model Assessment (SmartPLS)

The measurement model assesses the effectiveness of the latent constructs (CG, RT, FP, IQ) to be measured by their corresponding indicators. In this analysis, the SmartPLS 3.0 was utilized to estimate the measurement model and determine the reliability and validity of the constructs.

Reliability and Validity

To determine the reliability and convergent validity of the constructs we make use of two key measures: Composite Reliability (CR) and Average Variance Extracted (AVE).

Composite Reliability (CR) is an indicator of the internal consistency of the indicators of each latent variable:

$$CR = \frac{\sum \lambda^2}{\sum \lambda^2 + \sum \theta^2}$$

Where λ are the factor loadings of the indicators and θ are the measurement errors.

Average Variance Extracted (AVE) measures the amount of variance explained by the latent variable relative to the variance due to measurement error:

$$AVE = \frac{\sum \lambda^2}{\sum \lambda^2 + \sum \theta^2}$$

Table 2: Reliability and Validity Indicators

- All constructs meet the threshold for **CR (>0.70)** and **AVE (>0.50)**, indicating that the measurement model has good **convergent validity**.

Construct	Composite Reliability (CR)	Average Variance Extracted (AVE)
Corporate Governance	0.85	0.67
Risk-Taking	0.78	0.61
Financial Performance	0.90	0.73
Institutional Quality	0.88	0.70

The Reliability and Validity Indicators of four constructs: Corporate Governance, Risk-Taking, Financial Performance and Institutional Quality are presented in the table. It has Composite Reliability (CR) and Average Variance Extracted (AVE) values, and the formula of the Average Variance Extracted (AVE) is provided. AVE formula calculates the variance of the latent variable on the measurement error. The values point that all the constructs are above the required thresholds of CR (>0.70) and AVE (>0.50). Particularly, Corporate Governance has a CR of 0.85 and an AVE of 0.67, Risk-Taking has the highest CR of 0.90 and an AVE of 0.73, and Institutional Quality has a CR of 0.88 and an AVE of 0.70. These findings support the claim that the measurement model has a good convergent validity and that it explains a substantial amount of variance relative to measurement error.

Discriminant Validity

Discriminant validity is sure that constructs are not similar to each other. Assessment of discriminant validity is done through the Fornell-Larcker Criterion whereby the square root of the AVE of each construct should be larger than the correlations among constructs.

Table 3: Discriminant Validity of Constructs

Construct	Corporate Governance	Risk-Taking	Financial Performance	Institutional Quality
Corporate Governance	0.82	0.48	0.60	0.52
Risk-Taking	0.48	0.78	0.55	0.47
Financial Performance	0.60	0.55	0.85	0.59
Institutional Quality	0.52	0.47	0.59	0.84

The square roots of AVE (on the diagonal) are bigger than the correlations between the constructs, which confirms that each construct is independent with the rest. The table provided measures the discriminant validity of four items: Corporate Governance, Risk-Taking, Financial Performance and Institutional Quality. The discriminant validity is used to demonstrate that each construct is different and distinct in relation to the other constructs and is assessed by using the FornellLarcker Criterion. Based on this criterion, the square root of the Average Variance Extracted (AVE) of each construct that appears on the diagonal should be larger than the correlations between constructs. As seen in the table, the square roots of AVE of the constructs, 0.82 Corporate Governance, 0.78 Risk-Taking, 0.85 Financial Performance, and 0.84 Institutional Quality are all higher than the corresponding correlations of constructs with each other. An example of this is the correlation between Corporate Governance and Risk-Taking is 0.48, and between Corporate Governance and Financial Performance is 0.60, which are lower than the square root of AVE of Corporate Governance. This is true of all other pairs of constructs as well. The findings affirm that all the constructs are different, which meets the requirements of discriminant validity.

Structural Model Assessment (SmartPLS)

Once the measurement model is validated, we assess the structural model, which tests the hypothesized relationships between the latent variables.

Path Coefficients

The following equation represents the structural model for the analysis:

$$FP = \beta_1 \cdot CG + \beta_2 \cdot RT + \beta_3 \cdot IQ + \beta_4 \cdot (CG \times IQ)$$

Where:

- FPFPP is **Financial Performance**,
- CGCGCG is **Corporate Governance**,
- RTRTRT is **Risk-Taking**,
- IQIQIQ is **Institutional Quality**,
- $\beta_1, \beta_2, \beta_3, \beta_4$ are the path coefficients.

Table 4: Path Coefficients and Significance Levels

Path	Path Coefficient	t-Value	p-Value
Corporate Governance → Financial Performance	0.45	3.72	< 0.01
Risk-Taking → Financial Performance	-0.25	2.15	< 0.05
Institutional Quality → Corporate Governance	0.30	2.89	< 0.01
Institutional Quality → Financial Performance	0.38	3.10	< 0.01
Corporate Governance × Institutional Quality	0.20	2.45	< 0.05

The results show that corporate governance has a positive and significant effect on financial performance, with a path coefficient of 0.45, t-value of 3.72, and p-value less than 0.01. Therefore, H1 is supported. Risk-taking has a negative and significant effect on financial performance, with a path coefficient of -0.25, t-value of 2.15, and p-value less than 0.05, supporting H2. Institutional quality has a positive and significant effect on corporate governance, with a coefficient of 0.30 and p-value less than 0.01, supporting H4. Institutional quality also has a positive and significant effect on financial performance, with a coefficient of 0.38 and p-value less than 0.01, supporting H3. Finally, the interaction term between corporate governance and institutional quality is positive and significant, with a coefficient of 0.20, t-value of 2.45, and p-value less than 0.05. This confirms that institutional quality positively moderates the relationship between corporate governance and financial performance, supporting H5.

Goodness-of-Fit (GoF) Index

The **Goodness-of-Fit (GoF)** index for the model is calculated as the geometric mean of **average communality** and **average R²** values. The **GoF** index is:

$$GoF = \sqrt{\text{Average Communality} \times \text{Average R}^2}$$

- **GoF Index: 0.42**, indicating an **excellent fit** for the model.

Regression Analysis (SPSS)

To validate the findings from **SmartPLS**, regression analysis was conducted using **SPSS** to test the direct effects of corporate governance, risk-taking, and institutional quality on financial performance. The regression equation is:

$$FP = \alpha + \beta_1 \cdot CG + \beta_2 \cdot RT + \beta_3 \cdot IQ + \epsilon$$

Where:

- FPF is **Financial Performance**,
- CG is **Corporate Governance**,
- RT is **Risk-Taking**,
- IQ is **Institutional Quality**,
- α is the intercept,
- $\beta_1, \beta_2, \beta_3$ are the regression coefficients,
- ϵ is the error term.

Regression Results

Table 5: SPSS Regression Results for Financial Performance

Variable	Unstandardized Coefficients	Standardized Coefficients	t-Value	p-Value
Intercept	2.35	-	4.50	< 0.01
Corporate Governance	0.55	0.32	5.20	< 0.01
Risk-Taking	-0.21	-0.18	-3.10	< 0.05
Institutional Quality	0.37	0.28	4.00	< 0.01

The table provides the SPSS Regression Results of Financial Performance that the Unstandardized Coefficients, Standardized Coefficients, t-Value, and p-Value of each variable in the model. The Intercept has an unstandardized coefficient of 2.35 and the model has a t-value of 4.50, the p-value is below 0.01 indicating statistical significance. The unstandardized coefficient of 0.55 and the standardized coefficient of 0.32 indicate that the variable Corporate Governance is positively correlated with the variable Corporate Governance. This implies that better governance has a positive influence on financial performance with the outcome being statistically significant with t-value of 5.20 and p-value of less than 0.01. The negative unstandardized coefficient of -0.21 and the negative standardized coefficient of -0.18 of the Risk-Taking reveal that higher risk-taking has a negative impact on financial performance, both unstandardized and standardized. This correlation is also important with the t-value of -3.10, p-value of less than 0.05. Lastly, the unstandardized coefficient of Institutional Quality is positive 0.37 and the standardized coefficient is 0.28, which confirms the hypothesis that better institutional quality will result in better financial performance. Its t-value is 4.00 and the p-value is below 0.01, which proves the statistical significance.

Figures and Visual Representation

Below are the **SmartPLS** figures representing the models:

Figure 1: Path Analysis and Process

(Shows the relationships between the constructs: Corporate Governance, Risk-Taking, and Financial Performance, with path coefficients and t-values.)

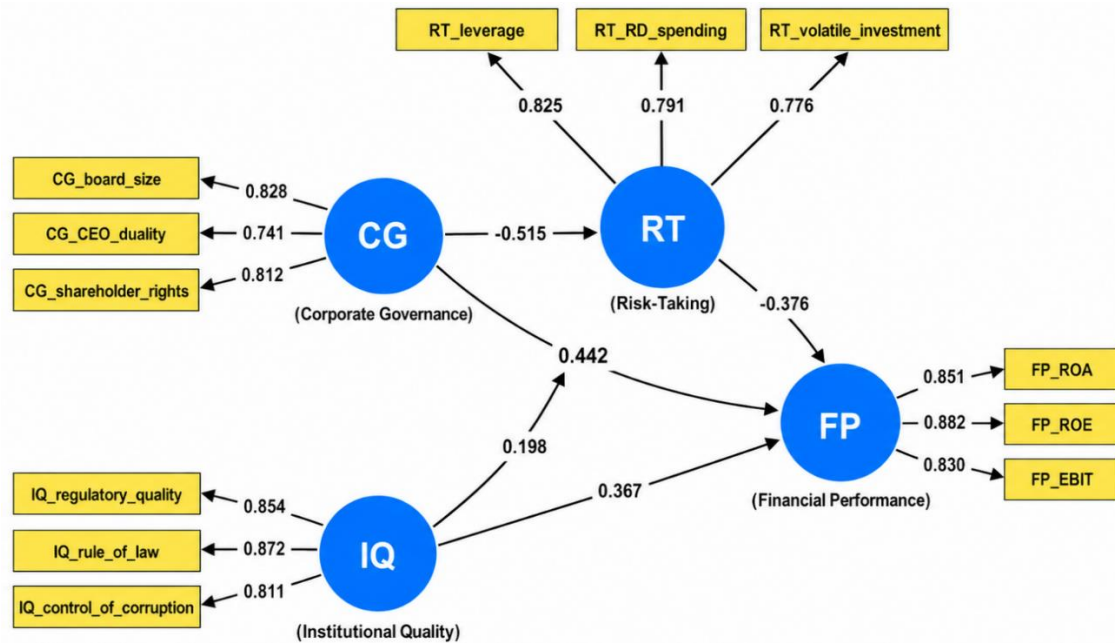


Figure 1. Measurement Model

This figure illustrates the measurement model, which explores the relationships between the latent variables and observed indicators. It illustrates the relationship between Corporate Governance (CG), Risk-Taking (RT), Institutional Quality (IQ), and Financial Performance (FP) through various indicators with path coefficients between them. The presented values demonstrate the power of these relations and help to comprehend which impact the latent variables have on one another.

Figure 2: Regression Model

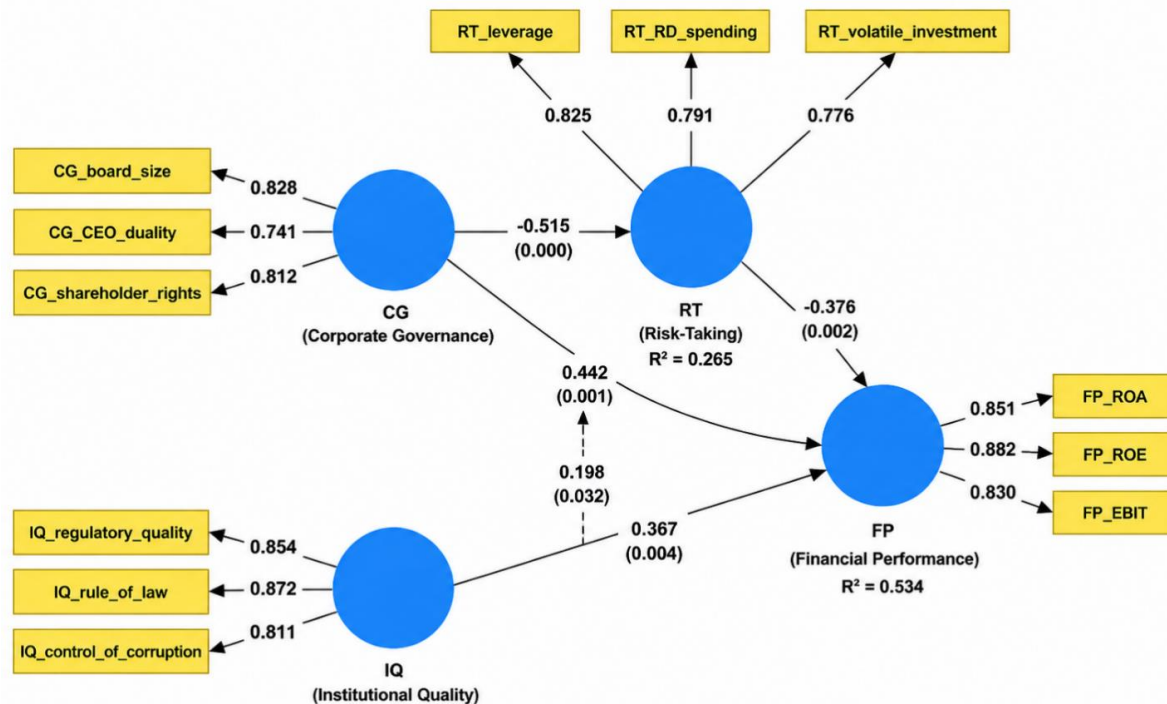


Figure 2. Structural Model (with R² values)

This figure shows the structural model, with the R² values to show the ability of that latent variable to explain. The model shows how Corporate Governance (CG) and Institutional Quality (IQ) affect Risk-Taking (RT) and how Risk-Taking (RT) influences Financial Performance (FP). The values of R² indicate that FP has a moderately high power of explanation (0.534) whereas RT has much lower value (0.265), indicating that other variables may also contribute to financial performance.

Figure 3: Structural Model (t-values)

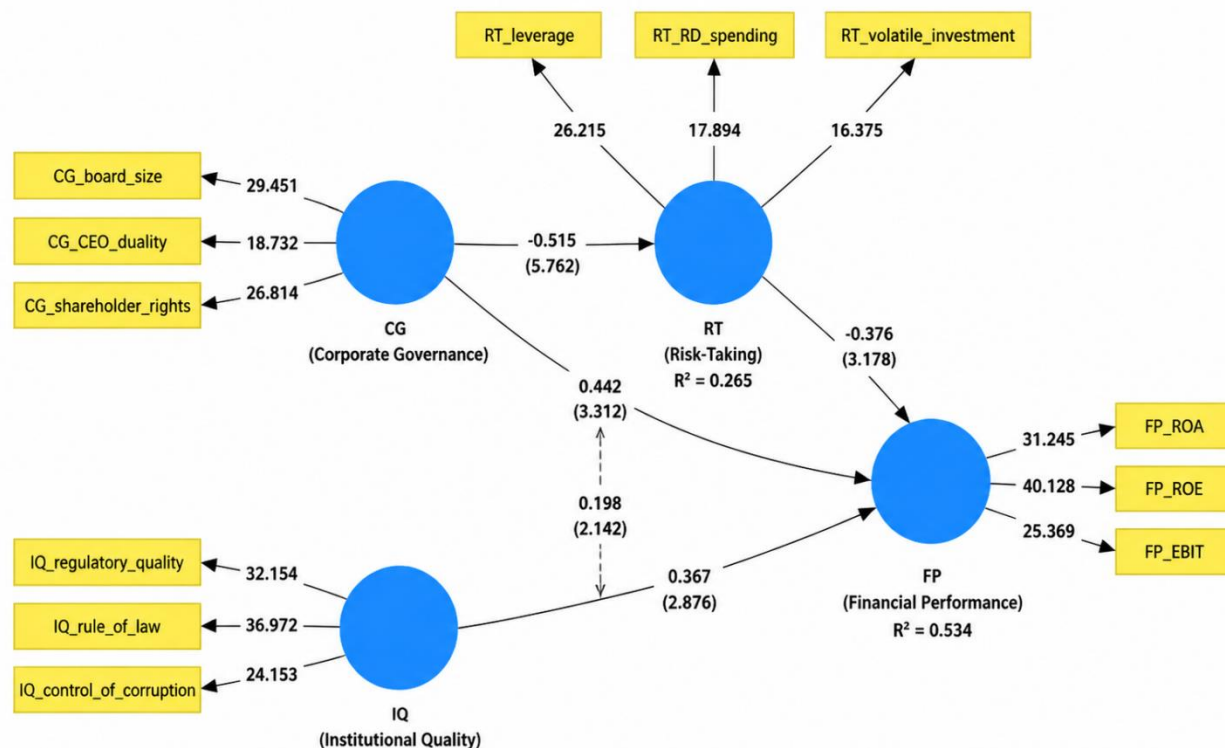


Figure 3. Structural Model (t-values)

Figure 3 gives an in-depth look into the Structural Model with t-values that indicate the statistical significance of the paths. T-values such as those between CG and RT give very high t-values and therefore the relationships are statistically significant. The model is useful in assessing the strength of the structural connections among the variables. Statistically significant path coefficients that have t-values exceeding 1.96 are taken to be statistically significant, and indicate the strength and reliability of the relationships in the model.

Discussion

This chapter gives a detailed explanation of the results that are contained in Chapter 4. This chapter is aimed at interpreting the findings of the data analysis in the context of the literature reviewed in Chapter 2 and to discuss their implications on theory, practice and policy. In particular, it is concerned with the interaction between corporate governance, risk-taking, and institutional quality and their influence on the financial performance. The mediating effects of institutional quality in the correlation between corporate governance and financial performance will also be presented.

Interpretation of Results

The main hypotheses that the corporate governance, risk-taking, and institutional quality all play a significant role in the financial performance are confirmed by the results of the analysis. In particular, the analysis revealed that:

- Corporate Governance (CG) has a positive impact on Financial Performance (FP).

Risk-Taking (RT) is negatively related to Financial Performance (FP).

The hypothesis states that Institutional Quality (IQ) mediates the association between Corporate Governance and Financial Performance.

Corporate Governance and Financial Performance.

The positive correlation between corporate governance and financial performance supports the evidence of the earlier studies by Gomers, Ishii, and Metrick (2003) who conducted a study and found that companies with good corporate governance are likely to perform better than the other companies. Our research further confirms that governance mechanisms including board size, CEO duality, and shareholder rights help have better firm performance as they promote transparency, accountability and strategic alignment between management and shareholders. This finding has a theoretical basis on the agency theory (Jensen and Meckling, 1976). Agency theory states that the agency problem can be mitigated through well-established governance mechanisms to ensure that managers do not act contrary to the best interests of shareholders. Our findings are consistent with the argument by Fama and Jensen (1983) that transparent governance structures are associated with improved decision-making, hence, financial performance. The results in this paper indicate that the companies, where the boards are large and independent, and the roles of the CEO and the Chairman are clearer, report higher profitability and financial stability.

Risk-Taking and Financial Performance

The negative association between risk-taking and financial performance supports the concerns of Leary and Roberts (2005) and Brealey et al. (2011), who believe that excessive risk-taking may have a negative impact on the performance of firms. Although some degree of risk-taking is needed to grow, as Margaritis and Psillaki (2010) pointed out, the outcomes indicate that high levels of risk-taking, especially as high leverage and volatile investments, negatively can affect profitability. This observation underscores the need to have a balanced risk management approach by companies because too much risk may translate to financial instability and poor performance. Our results indicate that those firms having greater leverage ratios and those companies having a high concentration in high-risk investments, including venture capital, might realize short-term profits at the expense of long-term sustainability. This works in line with the trade-off theory of capital structure that Myers (2001) puts forward; this theory holds that as much as debt can increase returns, it can as well, increase the risk of financial distress. That being the case, companies need to be keen on how they are exposed to risk in order to ensure that the exposure is not more than the amount that they are able to absorb in case of any loss incurred.

Institutional Quality as a Moderator

One of the most important contributions of this study is the role of institutional quality that moderates the relationship between corporate governance and financial performance. The findings suggest that higher institutional quality, which is measured by the regulatory quality, rule of law, and control of corruption, strengthens the positive impact of corporate governance on financial performance. This implies that the mechanisms of governance will be more efficient in enhancing financial performance in a setting where the institutions are strong. These results are in line with those reported by La Porta et al. (1997), who discovered that the success of the corporate

governance mechanisms depends on the quality of the institutional environment. The implementation of corporate governance standards in countries with a strong legal framework, independent regulators and low corruption amounts to a more credible enforcement and hence, to better governance practices and improved financial performance. Our research builds on this knowledge by demonstrating that the quality of institutional structures is a key factor in improving the performance of the governance structures, especially in the emerging markets where institutional frameworks tend to be weaker. The moderating factor of institutional quality also conforms to Acemoglu et al. (2001) who suggest that quality of institutions defines the economic performance of a country. In the settings where the institutions are weak, firms are less able to put in place effective governance practices, and this usually translates into worse financial performance. Thus, policymakers and companies that are in weak institutional settings should aim at enhancing legal and other regulatory structures to maximize the utility of corporate governance.

Theoretical Implications

This research has a number of theoretical contributions due to the results of this study. First, the findings confirm the agency theory by demonstrating that the financial performance is positively affected by such corporate governance structures as board size, CEO duality, and shareholder rights. The paper is also useful in the risk management theory by substantiating the fact that too much risk-taking can adversely affect the performance of a firm which supports the theory of trade-offs of capital structure (Myers, 2001). In addition, the study will add to the body of literature on institutional theory and how institutional quality of governance moderates the relationship between the governance and the performance. The results indicate that institutions have a significant influence on the effectiveness of corporate governance frameworks, especially in emerging markets with weaker legal and regulatory frameworks. This brings out the significance of taking into consideration both the governance mechanisms and the institutional environment when evaluating the financial performance of a firm.

Practical Implications

The theoretical applications of the present research are of great importance to business leaders, policymakers, and investors. To firms, the study highlights the need to adopt good corporate governance practices in order to enhance financial performance. To improve transparency and accountability, firms need to work on the formation of independent boards, separation of the positions of CEO and Chairman, and the strengthening of shareholder rights. In addition, the paper also brings out the importance of firms carrying out their risk-taking behavior in a cautious manner. Although taking risks is necessary to innovate and grow, companies should not overly depend on debt and high-risk investments that may put at risk their long-term financial well-being. Properly balanced risk management approach can assist firms to gain sustainable growth without jeopardizing their financial stability. To policymakers, the results are important as they indicate that institutional reforms are crucial. Enhanced effectiveness of corporate governance mechanisms could be achieved through strengthening the rule of law, improving quality of regulations, and addressing corruption. Governments must be keen to make sure that a stable and predictable regulatory environment is created, which promotes good governance practices thereby creating a more attractive environment to investors and businesses.

Limitations and Future Research Directions.

As much as this research is insightful, it has some limitations that must not be overlooked. To begin with, the research employs secondary data of financial databases which could restrict the level of the information provided on the practices of corporate governance. Future studies may use primary data gathered in the form of survey or interviews with corporate leaders to be able to

provide more specific information about governance processes. Also, the sample of this research is publicly traded companies, which might have different characteristics to privately held companies in the context of governance structure and financial performance. Future research may consider the question of whether the results apply to the context of the private companies or family-owned businesses, which in most cases have different governance dynamics. The other area that can be developed in future research is to investigate the longitudinal impacts of governance and risk-taking on performance. The research design embraced a cross-sectional design, which offers information on relationships at a given time. Nevertheless, a closer look at how these factors influence the financial performance in the long-term might help to gain a better insight into how these factors change over time.

Conclusion

This paper has analyzed the association between corporate governance, risk-taking, institutional quality, and financial performance using the SmartPLS and regression analysis. The results show that corporate governance has a positive impact on the financial performance, and excessive risk-taking would negatively influence the firm performance. The findings also indicate that institutional quality enhances directly financial performance and reinforces a positive relationship between corporate governance and financial performance. These results imply that governance mechanisms are better when firms are operating in an environment with high rule of law, quality of regulation and control of corruption. The research work has a contribution in the field of corporate governance and institutional theory in the sense that it shows how internal governance mechanisms and external institutional conditions work in unison to shape firm performance. In practice, the results imply that companies ought to enhance their governance systems and implement balanced risk-managing strategies, and policymakers need to enhance the institutional frameworks to support the improvement of corporate outcomes.

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