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Risk Management in Organizations: An Examination of Audit Committee Determinants and Consequences

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Abstract

As a result of accounting and fraud scandals, the financial crisis, and the dot com bubble, corporate governance has gained popularity. Corporate governance practices' results and corporate governance's determinants are the two primary areas of governance study. Corporate governance is often measured using indicators, specific traits, or a composite index variable. This study looked at 69 non-financial KSE-100 indexed, Karachi Stock Exchange (KSE) listed firms to determine the reasons for and effects of risk management committee and audit committee presence. A statistical program such as STATA is used in this study to calculate the fixed effect and random effect. Hausman test is also applied to the data. Only board independence, leverage, and business size were shown to be significant predictors of the presence of a separate risk management committee. In contrast, firm size was discovered to be a significant predictor of the presence of a separate audit committee. According to the study's findings, businesses should establish a separate risk management committee and strengthen corporate governance standards to safeguard investors' interests. The implications of the audit committee on other accounting and financial results should be the subject of future study.

Keywords: Governance research, Corporate governance, Risk management, Audit Committee

1 Introduction

Due to the Asian financial crisis of the 2000s and the accounting standard assumption, corporate

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governance is a key issue in academic writing. It incorporates a variety of ownership arrangements, including financial and investment decision-making, which is determined by the degree of risk that management firms and owners are willing to accept. Strong corporate governance is required by culture and is a critical component of market discipline. One of the crucial subjects in today's business environment is corporate governance. The effects of different CG changes on corporations have been studied (Saeed et al., 2013). Corporate governance is not a singular concept; rather, it is made up of a variety of responsibilities, commitments, and rights that aid in the management and control of an organization. It distributes these liabilities among stakeholders in the company, including the board of directors, creditors, investors, and regulators. Due to a suitable degree of responsibility and communication, good corporate governance enables the organization to operate simply.

An audit committee is regarded as a unique component of CG and has drawn significant attention on a global scale (Acharya et al., 2022). The SOX statute further solidifies the audit committee's position in accountability. The SOX Act (2002) was put in place to lessen corporate flaws and failures. The main goals of this legislation, according to Linck, Netter, and Yang (2009), are to strengthen corporate governance and the board's and audit committee's independence. From the standpoint of a shareholder, the value of aligning the associates' incentives and the effective policies to support the governance enable it, the use of a stable and secure, provides an acceptable standard of living for work and mitigates the risk. The quality of disclosures and increased investor confidence are two important contributions that audit committees provide to corporate governance. An audit committee is required for the majority of non-public enterprises as well as all publicly traded businesses (Ahmed, 2023). The audit committee is seen as a useful instrument for enhancing the accuracy and transparency of financial data. Agency theory is the predominant paradigm for understanding board composition, duties, and results (Bhatt et al., 2023).

Corporate governance is a framework that offers a method for the control and governance of organizations. It is an example of self-policing and establishes a hierarchy of communication and individual duties. The majority of businesses in Pakistan are owned by families, directors, and executives, as well as by foreign or institutional investors and the government. The governance structure is implemented by private equity companies, and institutional investors, hedge funds, and pension funds are activist investors (Rahayu et al., 2021). The complicated interaction between the laws of nature is governance.

1.1 Corporate Governance and Models

The Simple Finance Model, the Stewardship Model, the Stakeholder Model, and the Political Model are the four corporate control models that the OECD has created. The Simple Finance Model focuses on creating rules or incentives to change the managers' (agents') behaviors to those that are in line with the shareholders' (principals') goals. The Stewardship Model places a strong emphasis on the advancement of management expertise (Almashhadani & Almashhadani, 2023). The Stakeholder Model is centered on generating money or value for the firm's stakeholders. According to the Political Model, the distribution of rights, authority, and wealth is legally liable to the macro system. To comprehend board composition, duties, and results, a multi-theoretic approach is necessary. The study hypotheses are directed by three significant theoretical perspectives, namely agency theory, corporate legitimacy, and signaling theory (Ricardianto et al., 2023).

Understanding organizational processes and designs from a principal-agent viewpoint is based on the theoretical assumption of agency theory. Corporate legitimacy is the process of defending the validity of an organization's existence. The legitimacy theory is a widely used viewpoint for comprehending organizational forms and structures. Information asymmetry issues in the market are addressed using signaling theory. According to signaling theory, it is advantageous for firms to reveal excellent or enhanced corporate governance efforts and practices to foster a positive reputation in the market. According to Cadbury's (2012) analysis, good corporate governance practices include keeping the chairman and chief executive officer separate, selecting independent directors, minimizing conflicts of interest, establishing an independent audit committee, and assessing the efficiency of the company's internal controls.

Board committees can alleviate the workload of the board while also promoting its involvement in governance. These committees are supervised and advised by the board and operate under their own set of tasks, responsibilities, and charters. Business catastrophes like Enron and WorldCom have increased the relevance of auditing. The audit committee administers Sarbanes-Oxley internal controls and auditing concerns. It also oversees risk management and regulatory compliance initiatives, monitors bribery and accounting standards, and gathers external audiences, compliance systems, and risk monitors. The board should establish a separate risk committee with responsibility for overseeing leadership, board composition, compensation, strategy, and finances. The committee should swiftly express its opinion on important risk concerns, engage in discussion about proactive risk management, supervise the audit and enterprise risk assessment, monitor the activities of the various standing committees, and keep an eye on dysfunctional behavior in the workplace culture.

In Pakistan, the regulation of corporate entities is governed by several laws and regulations. The Companies Act of 1984 provides for the establishment and registration of companies in the country. In addition, the Securities and Exchange Commission of Pakistan (SECP) was established under the Securities and Exchange Commission of Pakistan Act of 1997 to regulate the securities market and protect the interests of investors. The SECP has also issued various rules and regulations to ensure compliance with corporate governance standards. To further strengthen corporate governance in the country, the SECP introduced a code of corporate governance in 2002, which sets out principles and guidelines for the transparency, accountability, and protection of stakeholders in Pakistani companies. The SEC has focused on the influence of unions on understanding emergency drills business law.

Due to significant corporate bankruptcies in the early 2000s, business academics have been discussing the characteristics, procedures, and decision-making functions of corporate governance. As businesses build their management systems, such as board composition, audit committee structure, and ownership structure, a crucial question yet goes unaddressed. The objective of this research is to investigate whether various company-specific characteristics such as board size, CEO duality, board independence, leverage risk, financial reporting, and firm size have any impact on the decisions of board committees. The study aims to assess the establishment and presence of separate risk management committees, combined audit committees, and separate audit committees and their association with these characteristics. It also aims to determine whether having a separate risk committee or a combined audit committee is beneficial for enhancing value generation. This research work is divided into four parts: an introduction, a review of the relevant literature, an explanation of the study's design, including its sample period, data collecting procedures, and an assessment technique. The facts and empirical findings were reviewed in the fourth part, and the report's conclusion for the degree is included in the fifth part.

2 Literature Review

Non-executive directors make up audit committees, which are entities that directly report corporate governance issues to the main board of directors. They fulfill a variety of crucial roles, including advising directors, enhancing the independence of auditors and non-executive directors, and boosting public trust in financial statements. The motivations for governance arrangements in insurance organizations, however, have not been well studied. According to Acharya (2022) and Qutaiba et al. (2022), Various contexts including Jordan and Nepal were examined in other studies to examine the relationship between corporate governance mechanisms and firm performance. These studies found conflicting results regarding the effects of board size, board independence, CEO duality, and the presence of female directors on firm performance. Overall, the relationship between firm size and corporate governance is complex and context-dependent, with mixed results across different studies and industries.

2.1 Independent variables - Firm Size

Diverse organizations of varying sizes are likely to have diverse corporate governance practices. According to Mayers (1994), limiting the size of the organization enables policyholders to save money on monitoring costs and better regulate management discretion. More recent studies have shown interest in the connection between business size and corporate governance. According to Saeed (2013), company size moderates the link between corporate governance and business performance, with bigger firms in Pakistan's banking industry having a positive and substantial association between corporate governance and firm performance. Other research has looked at the connection between corporate governance structures and firm performance in a variety of settings, including Jordan and Nepal, and has found conflicting results regarding the effects of board size, board independence, CEO duality, and the presence of female directors on firm performance (Acharya, 2022; Alkhazaleh et al., 2022). Overall, the relationship between firm size and corporate governance is complex and context-dependent, with mixed results across different studies and industries.

2.2 Leverage

There is little recent research on the connection between financial leverage and corporate governance. Saeed et al. (2013) quoted that financial leverage did not moderate the link between corporate governance and business performance, according to a study on the Pakistani banking industry. Financial leverage is a crucial component of choosing a capital structure, according to a review of the financial flexibility literature, but there is conflicting evidence regarding the role of institutional ownership and leverage as internal governance mechanisms that affect agency costs and firm performance (Al-Malkawi et al., 2012). Overall, the body of research indicates that complex interactions between financial leverage and corporate governance measures may occur, and further study is necessary to completely comprehend these interactions.

2.3 CEO Duality

Recent research on the connection between CEO duality and corporate governance yields contradictory results. According to Chau and Grey (2010), an independent chairman can govern a corporation without restrictions. Evidence points to a greater market valuation as a result of the CEO and chairman having separate positions. According to Nance (2009), having a chairman who simultaneously serves as the chief executive might negate the benefit of having independent directors on the board and undermine the board of directors' ability to do its duties. According to research conducted in Bangladesh, CEO duality enhances business success as indicated by return on assets (Habib, 2016). Although CEO duality is one of the mechanisms that has received the most attention in the literature on the relationship between corporate governance systems and business performance, the bulk of the studies revealed a negative correlation between duality and performance (Pintea & Fulop, 2015). (Acharya, 2022) Independent directors are unable to contribute to the development of value, according to a more recent study conducted in Nepal that indicated a substantial positive association between CEO duality and business worth.

2.4 Board Independence

Fama (1980) stated that having INDs on corporate boards would enhance the financial performance of those companies. According to Schellenger et al. (1989), there is a clear connection between INDs and business financial success. Recent research on the connection between corporate governance and board independence leads one to believe that board independence improves company performance and lowers agency costs. According to a study of the literature on board structure, independent directors, educated board members, and board composition, all have a favorable effect on a company's success Agarwal (2020). Another study conducted in Bangladesh discovered that board independence enhances company success as shown by return on assets Habib (2016). Overall, the research points to board independence as a crucial component of corporate governance that may enhance business performance and cut costs for agencies.

2.5 Financial Reporting Risk

There has been little study correlating risk disclosure with governance procedures, according to recent literature on the relationship between financial reporting risk and corporate governance. Khandelwal et al. (2019) suggested that academic research on corporate risk disclosure is scarce, and the majority of researchers have concentrated on a small or single period to study risk disclosure practices, drivers, and company performance, according to a systematic assessment of the literature on financial risk reporting practices (Pintea & Fulop, 2015) quoted that in an examination of corporate governance mechanisms and business performance, it was discovered that several writers started using corporate governance measures that were more complete than just one variable or one governance mechanism, the so-called corporate governance indices. However, the evaluation did not explore the connection between the risk of financial reporting and corporate governance particularly. More study on the connection between financial reporting risk and corporate governance is needed, according to the literature, especially in light of various governance structures and goals.

2.6 Firm Value

According to recent research on the connection between corporate governance and company value, putting corporate governance concepts and rules into practice improves the performance of businesses. According to a review of the literature on corporate governance mechanisms and firm performance, various corporate governance practices—including CEO duality, the board size, the proportion of non-executive directors, board committees, ownership structure and concentration, and managers' compensation and incentive programs—have been examined about the performance of firms (Al-Malkawi et al., 2012; Pintea & Fulop, 2015). Smaller board sizes, the absence of duality, and favorable dividend policies were identified as effective internal governance mechanisms impacting business performance in another assessment on internal mechanisms of corporate governance and firm performance.so, corporate governance mechanisms can contribute to improving firm value and performance.

3 Dependent variables

3.1 Separate Risk Management

SRM: The link between separate risk management committees and corporate governance has only recently received little scholarly attention. Australian research, however, discovered that businesses with independent board chairs and bigger boards are more likely to have risk management committees (Subramaniam et al., 2009). Another study in Saudi Arabia found that audit committees with non-executive independent members, more members on the audit committee, financially expert audit committee members, and diligence are more likely to combine the risk management and audit committee activities (Abdullah et al., 2017; Subramaniam et al., 2009) Another research conducted in Saudi Arabia discovered that diligent audit committees include non-executive independent members, more members, and members who have financial expertise are more likely to combine risk management and audit committee operations. The literature suggests that risk management committees can serve as a key governance support mechanism in the oversight of an organization's risk management strategies, policies, and processes, even though there is little research specifically addressing the relationship between separate risk management committees and corporate governance. A dichotomous variable where 1= the existence of a separate RMC and 0=no separate RMC (i.e. a combined RMC with the audit committee). An organization's financial reporting process is monitored by an audit committee, which also ensures that the organization conforms to all applicable rules and regulations. Separate and combined audit committees are the two different kinds of audit committees.

3.2 Combined Audit Committee

CAC: A combined audit committee, on the other hand, consists of both independent directors and management personnel. This kind of committee is in charge of monitoring the organization's internal control procedures as well as the financial reporting process. While improved communication and cooperation between management and the board may result from a joint audit committee, preserving independence and impartiality in its oversight responsibilities may be difficult.

Recent research on the subject of the connection between combined audit committees and corporate governance is scarce. A study of Nigerian banks, however, revealed that the banks had largely complied with the Central Bank of Nigeria (CBN) Code of Corporate Governance 2006 regarding the makeup of audit committees and that there is a significant positive relationship between audit committee activity and the percentage of non-executive directors on the board. Abdulsaleh (2014) suggested that the role of audit committees has expanded from traditional accounting areas to include responsibilities for financial reporting, audit planning, promoting the independence of internal and external auditors, serving as a conduit for communication between external auditors and the board of directors, reviewing the external audit, and assessing internal control systems. According to a Saudi Arabian study, the amount of voluntary disclosure in Saudi firms' annual reports is positively correlated with the size of the audit committee. Audit committees are essential to good corporate governance and the advancement of openness and accountability within organizations. The variable being used in the study is dichotomous, with a value of 1 indicating the presence of a separate Risk Management Committee (RMC) and a value of 0 indicating the absence of a separate RMC (i.e. having a combined RMC with the audit committee).

3.3 Separate Audit Committee (SAC)

A committee made up of independent directors who are not a member of the organization's management team is known as a separate audit committee. This kind of committee is in charge of reviewing the financial reporting procedure and advising the board of directors only. The independence and objectivity of the audit process are believed to be better protected by the distinct audit committee. Recent research on the subject of the connection between independent audit committees and corporate governance is scarce. However, a study of banks in Nigeria indicated that between 2009 and 2010, the distress of some of those institutions was mainly attributed to the audit committee's inadequate monitoring activities, underscoring the need for audit committees in ensuring good corporate governance (Ugwulali, 2019). Independent audit committees are essential for effective corporate governance (Saibaba et al., 2011). According to a study conducted in Vietnam, the amount of corporate governance transparency is highly correlated with the audit committee's independence and size (Hsiao et al., 2022). Overall, despite the paucity of literature specifically addressing the connection between separate audit committees and corporate governance, the body of research points to the critical role that audit committees play in promoting transparency and accountability in organizations and ensuring effective corporate governance. This is a binary variable in which a value of 1 indicates the presence of a distinct Risk Management Committee, while a value of 0 indicates the absence of a separate RMC and the presence of a combined RMC with the Audit Committee. To put it simply, it is a two-option variable where one option represents the existence of a separate RMC and the other option represents the absence of a separate RMC and a combined RMC with the Audit Committee.

3.4 Hypotheses of Study and Theoretical Framework

Based on the literature discussed earlier literature, the following hypotheses are formulated:

H1: *The nature of RMC existence is significantly and positively determined by board size.*

H2: *The nature of RMC existence is positively significant, determined by the percentage of board independence.*

H3: *The nature of RMC's existence is significantly and positively determined by the use of CEO duality on the board.*

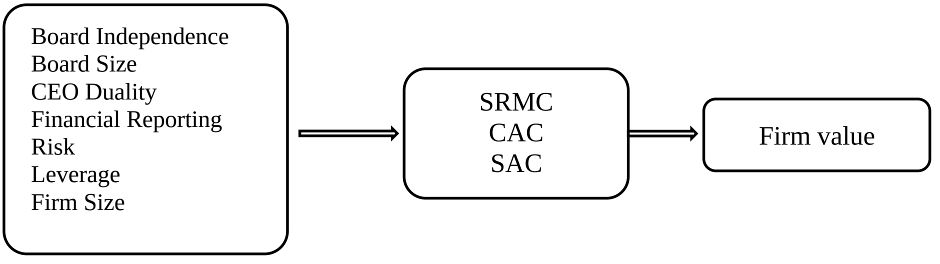
H4: *The nature of RMC existence is significantly and positively determined by financial reporting risk.*

H5: *The nature of RMC existence is significantly and positively determined by the leverage.*

H6: *The nature of RMC existence is significantly and positively determined by firm Size.*

H7: *The firm value is significantly and positively determined by the nature of RMC's existence.*

4 Framework



5 Research Methodology

5.1 Sampling

The study exclusively selects Pakistani non-financial firms that are listed on the Karachi Stock Exchange, which reduces the study's sample size and evaluates the estimated relationships in the theory. This study does not measure financial businesses because of the different legal requirements relating to governance. The study's potential is now constrained. The following table describes the study's population.:

5.2 Data Collection and Sample

There is a total of 800 listed symbols on a particular exchange. However, when we exclude future contracts (162), stock index futures contracts (9), and bonds (41), the remaining number of companies listed on the exchange is 588.

Out of these, there are 25 commercial banks, 39 equity investment companies, 40 financial services companies, 4 life insurance companies, and 29 non-life insurance companies, which altogether make up 137 non-investment/non-operating companies.

Therefore, the number of non-financial companies listed on the exchange is 458, which is obtained by subtracting the above-mentioned 137 companies from the total number of listed companies (588). This information can be helpful to investors and analysts to better understand the composition of the exchange and make informed investment decisions.

To generate conclusions about desired linkages, the firms that are the best representation of the KSE-100 Index of Pakistan are utilized as the study's sample. Even though the sample solely includes non-financial businesses, the index also includes them. This research will cover 10 years, beginning in 2003 and ending in 2012. Finally, information from 69 firms was gathered, albeit some companies' financial data were left out. The sampling has been explained in the following table:

5.3 Data Sample

On a specific stock market index, there are 100 companies listed in total. Out of these, 25 are financial companies, leaving 75 non-financial companies listed on the index. However, out of these 75 companies, there are 6 companies for which the necessary data is missing, leaving 69 sample non-financial companies available for analysis.

This information can be useful for investors and analysts who want to focus on non-financial companies listed on the index. The exclusion of financial companies and companies with missing data allows for a more precise analysis of the performance and trends of the remaining sample non-financial companies on the index.

5.4 Data

The data for this study was collected from a carefully selected sample of firms. Information was gathered from various secondary sources such as financial statement analysis, the website of the Karachi Stock Exchange (KSE), the website of the State Bank of Pakistan (SBP), and annual reports of the selected sample companies. The data set included a total of 690 firm-year observations, which were analyzed using the selected variables discussed in the previous section. The type of data used in this study is a balanced panel, which has the advantage of combining both intra-individual dynamics and inter-individual differences. This allows for a more precise estimation of model parameters compared to cross-sectional and time series data.

Panel data provides more degrees of freedom and sample variability compared to cross-sectional data, which is considered as a panel with T=1, and time series data, which is viewed as a panel with N=1. This makes panel data more effective for econometric estimations such as those conducted by Hsiao, Mountain, and Ho-Illman in 1995. Furthermore, panel data can retain complicated human activity while still requiring less storage space than single cross-section and time series data. In summary, the use of panel data and carefully selected sample firms in this study enhances the accuracy and effectiveness of the analysis conducted.

5.4.1 Econometrics Models

For the study Purpose, the following equations of research are estimated:

Equation 1

$$SRMC_{it}=\alpha_0+\beta_1 BS_{it}+\beta_2 BI_{it}+\beta_3 CD_{it}+\beta_4 LEV_{it}+\beta_5 FRR_{it}+\beta_6 FS_{it}+\epsilon_5$$

Equation 2

$$CAC_{it}=\alpha_0+\beta_1 BS_{it}+\beta_2 BI_{it}+\beta_3 CD_{it}+\beta_4 LEV_{it}+\beta_5 FRR_{it}+\beta_6 FS_{it}+\epsilon_5$$

Equation 3

$$SAC_{it}=\alpha_0+\beta_1 BS_{it}+\beta_2 BI_{it}+\beta_3 CD_{it}+\beta_4 LEV_{it}+\beta_5 FRR_{it}+\beta_6 FS_{it}+\epsilon_5$$

Equation 4

$FV\_it=\alpha\_0+\beta\_1\ SRMC\_it+\beta\_2\ LEV\_it+\beta\_3\ FS\_it+\epsilon\_5$

Equation 5

$FV\_it=\alpha\_0+\beta\_1\ CAC\_it+\beta\_2\ LEV\_it+\beta\_3\ FS\_it+\epsilon\_5$

Equation 6

$FV\_it=\alpha\_0+\beta\_1\ SAC\_it+\beta\_2\ LEV\_it+\beta\_3\ FS\_it+\epsilon\_5$

5.5 Operationalization of Variables

Variables introduced in the study are measured as follows:

Measurement of Variable used in Above Equations

The set of equations provided presents a series of regression models that aim to investigate the correlation between various company attributes and the value of the firm. The equations utilize three different ratios to represent different types of expenses, namely SRMC, CAC, and SAC. Additionally, there are several independent variables used in the models to examine their impact on firm value. These variables include board size (BS), the proportion of outside directors to all directors (BI), the total number of audit committee directors (CD), the ratio of outside directors to total audit committee directors (ACI), managerial ownership (MO), institutional ownership (IO), return on assets (ROA), market to book ratio (MB), debt ratio (DR), the and natural logarithm of total assets (LNTA). Equation 1 examines the relationship between SRMC and firm value, using board size, board independence ratio, audit committee size, audit committee independence, ROA, DR, financial reporting risk (FRR), and firm size (LNTA) as independent variables. Equations 2 and 3 are similar to Equation 1, but they analyze the effect of the same set of independent variables on CAC and SAC, respectively. Equations 4, 5, and 6 aim to determine the impact of SRMC, CAC, and SAC on firm value, with leverage and financial services (FS) included as additional independent variables in each equation.

Overall, these regression models help in evaluating how board composition, audit committee composition, ownership structure, profitability, leverage, financial reporting risk, and firm size influence firm value. The coefficients of each independent variable indicate the size and direction of their impact on the value of the firm.

5.6 Estimations of Models

The main focus of this article is the comparison between the Fixed Effects Method and the Random Effects Method. These two methods are used to analyze data on group-wise heterogeneity, with the choice between them depending on the correlation between the I and Xs. When the I and Xs are uncorrelated, the Random Effects Method is used, whereas when they are correlated, the Fixed Effects Method is employed. To determine which method is appropriate, observations made by Judge et al. can be used as a guide. The crux of this article lies in the two diagnostic tests used to determine the most appropriate method for our empirical selection. The redundant fixed effects test and the Hausman test serve as reliable tools to guide us in making an informed decision. The Hausman test presents both a null and an alternative hypothesis, indicating that random effects would be efficient and consistent under the null hypothesis, and inconsistent under the alternative hypothesis. A critical factor in determining the right approach is the vector's dimension k, which can be analyzed using the chi-square distribution. A large statistic for the Hausman test favors the Fixed Effects Method, while a small statistic suggests the Random Effects Method should be used.

6 Research Analysis and Discussion

The research aimed to investigate the impact of specific corporate governance factors on firm-level measures. Four different approaches were utilized to evaluate the relationship between particular explanatory variables and dependent variables, without determining which variable influences the other. One of the methods used was the LPM, which relies on the ordinary least square estimation of binary data, but it may face issues with estimation. The OLS and LPM methods were used to address challenges such as violation of the probability assumption, questionable R-square and R2 measures for model fitness, non-linear relationship between x and y, and the logit model.

To overcome the challenges associated with analyzing dichotomous-based data, the logit model is utilized to estimate the relationship between the dependent and independent variables. This model possesses several unique features such as the ability for Z to range from negative to positive values, the linear relationship between the log odds and the independent variable, and the inclusion of multiple regressors. Changes in the log natural odds due to a unit change in the independent variable are measured by the slope of the model, and the signs and significance level of the regression coefficients are of utmost importance in interpreting the results of the probability models. Therefore, the logit model is a powerful tool for analyzing binary data and drawing meaningful conclusions regarding the relationship between various factors and the dependent variable.

Table 1: Model 1-SRMC Determinants

Constructs	Coefficient	STD.ERR.	Sign.
BS	-0.008	0.042	0.643
CD	0.042	0.125	0.555
BI	0.246	0.550	0.003
LEV	0.083	0.219	0.007
FRR	0.034	0.443	0.704
FS	0.019	0.022	0.005

“In the logit analysis, a model was fitted to determine the factors that influence the likelihood of a firm having a separate risk management committee (SRMC). The variables considered in the model were board size, board independence, CEO role duality, leverage, financial reporting risk, and firm size. The estimated results show that only board size, firm size, and capital structure significantly impact the likelihood of a firm having an SRMC. The other variables, such as CEO role duality, board independence, and financial reporting risk, do not have enough statistical evidence to prove their influence on the probability of a firm having an SRMC.

The study found a positive relationship between the supported determinants and the likelihood of SRMC's existence. However, the coefficients' values were very small in the case of firm size and capital structure. Only board size showed a strong relationship with a coefficient of 0.0885, which means that a one-unit increase in board size increases the likelihood of SRMC's existence by 8.85%.”

Table 2: Model 2-CAC Determinants

Constructs	Coefficient	STD.ERR.	Sign.
BS	0.255	0.049	0.022
CD	-0.088	0.147	0.518
BI	-0.199	0.642	0.720
LEV	0.085	0.256	0.000
FRR	0.575	0.517	0.253
FS	0.005	0.026	0.000

“The second model analyzed the factors that influence the likelihood of a firm having a combined audit committee (CAC), by considering board size, board independence, CEO role duality, leverage, financial reporting risk, and firm size. The estimated results indicate that only board size, firm size, and capital structure have a significant impact on the probability of a firm having a CAC, while the other variables do not provide sufficient statistical evidence to affect the likelihood of CAC's existence.

Overall, the results of the second model suggest that board size is the most critical determinant in the existence of a CAC. Firms with larger boards are more likely to have a combined audit committee, while the other variables do not significantly affect the probability of CAC's existence. These findings may be useful for firms in their decision-making processes regarding the establishment of a combined audit committee.

Similar to the first model, the coefficients for the supported determinants show a positive relationship with CAC's existence, but the values are relatively small for firm size and capital structure. Only board size demonstrates a strong relationship with a coefficient of 0.254, indicating that an increase of one member on the board increases the probability of CAC's existence by 24%. These findings are consistent with the first model, where the same determinants were found to have an impact on the likelihood of a separate risk management committee's existence."

Table 3: Model 3-SAC Determinants

Constructs	Coefficient	STD.ERR.	Sign.
BS	0.00855	0.0494	0.68685
CD	0.08835	0.14725	0.51775
BI	0.19855	0.6422	0.7201
LEV	0.0684	0.25555	0.2185
FRR	0.57475	0.5168	0.2527
FS	0.00475	0.02565	0.00855

Diagnostic tests were conducted to select the best model for the data. The Hausman test showed that the Random Effects Method was the most suitable for estimating the equation, as it had a p-value of less than .05, rejecting the null hypothesis of the F-Test.

Overall, the third model indicates that firm size is the only significant determinant of SAC's existence. The use of appropriate regression methods is essential to obtain accurate estimations and improve decision-making processes in firms regarding the establishment of separate audit committees. The third model aimed to determine the factors that affect the likelihood of a firm having a separate audit committee (SAC), using the same variables as the first model. The results showed that only firm size had a significant effect on the probability of SAC's existence, while the other variables did not provide sufficient statistical evidence to affect SAC's existence. To estimate the remaining equations, three-panel data regression methods were used: Pooled Ordinary Least Square Method, Fixed Effects Method, and Random Effects Method. The first method did not provide the best estimation since it pooled data from companies of different sizes, ages, and types. The Random Effects Method, on the other hand, was used and considered constants to be random, resulting in a more appropriate estimation."

Table 4: Redundant Fixed Effects Test

Effects Test	Statistic	df.	Prob.
Cross-section F	6.376	-67,616	0.005

The table below displays the Hausman test results for SP and SRMC. The statistical analysis suggests that the null hypothesis cannot be rejected, as the p-value of the Hausman test is better than the selected level of significance of 5%. Therefore, it is advisable to use random effects estimators for this scenario."

Table 5: Correlated Random Effects - Hausman Test

Summary	Chi-Sq. Statistic	df.	Prob.
Cross-section random	0.237	4	0.882

"A random effects regression model was employed to investigate the relationship between SRMC existence and firm value while controlling for the impact of Leverage and Firm size. The results are presented in the table below, with a coefficient of 0.459 indicating a significant positive impact of SRMC on firm value. Specifically, the presence of SRMC leads to an increase in firm value of approximately 45.9%."

Table 6: Random Effect

Constructs	Coefficient	STD.ERR.	Sign.
LEV	0.22325	0	0
FS	0.31255	0.02945	0.0646
SRMC	0.43605	0.0437	0

Note: SP and SRMC

"To determine the appropriate panel regression method for the first equation, we conducted a diagnostic test based on the results of the second equation. The p-value from the first test indicated that pooling the longitudinal data and using OLS regression would not be appropriate, as the null hypothesis was rejected with sufficient statistical evidence suggesting that the groups do not have a common constant. This could be attributed to the presence of a redundant fixed effects test in the first test."

Table 7: Redundant Fixed Effects Test

Effects Test	Statistic	df.	Prob.
Cross-section F	8.143	-67,616	0.01

Note: CAC and SP

"The table below displays the outcomes of the Hausman test. From a statistical standpoint, it may be rejected the null hypothesis since the p-value is less than our chosen level of significance of 5%. Hence, we can conclude that the fixed effects estimators provide the best results in this situation."

Table 8: Correlated Random Effects - Hausman Test

Test Summary	Chi-Sq. Statistic	df.	Prob.
Cross-section random	20.498	4	0.023

Note: CAC and SP

"The regression results obtained using the fixed effects method are presented in the table below. We examined the effect of CAC being on firm value while controlling for the impact of Leverage and Firm size. The coefficient of CAC, which is 0.111, suggests a positive and significant impact on firm value. However, the magnitude of this coefficient is much lower than that of the previous equation where we examined the impact of a separate risk management committee on firm value. This implies that the existence of SRMC presents a stronger positive effect on firm value than a CAC that also includes the function of risk management. The coefficient suggests that the existence of CAC results in an increase in firm value of approximately 11.1%."

Table 9: Fixed effects Regression

Constructs	Coefficient	STD.ERR.	Sign.
LEV	0.22705	0	0
FS	0.1216	0.02945	0.0646
CAC	0.10545	0.0437	0

Note: Regression of SRMS on SP
“Based on the results of the first two equations, we will conduct diagnostic tests to determine the appropriate panel regression method for the second equation. The p-value test suggests that it cannot be a group of the longitudinal data, and therefore, ordinary least squares cannot be used. This is because the null hypothesis, which assumes that groups have a common constant, is rejected due to sufficient statistical evidence. The reason for this is that the first test has a redundant fixed effects test.”

Table 10: Redundant Fixed Effects Test

Effects Test	Statistic	df	Prob.
Cross-section F	2.475	-67,616	0.002

Note: SAC and SP
The table below shows the results of the Hausman test. The statistical analysis suggests that we cannot reject the null hypothesis because the p-value is higher than the selected 5% level of significance. Therefore, this is suitable to adopt that the random effects estimators perform better in this scenario.”

Table 11: Hausman Test - Correlated Random Effects

Test Summary	Chi-Sq. Statistic	df.	Prob.
Cross-section random	3.1025	4	0.0931

Note: SAC and SP
“The impact of the SAC on the firm value was examined in the regression using the random effects method while controlling for Leverage and Firm size. The coefficient of SAC was found to be weak, positive, and statistically insignificant, with a value of 0.009. This indicates The existence of SAC has no impact on the firm value in the presence of CAC. the existence of a separate risk management committee and a combined audit committee positively affect the firm value, the SAC does not appear to have any significant impact on the firm value, as revealed by the regression analysis.”

Table 12: Random Effect Regression Model

Constructs	Coefficient	STD.ERR.	Sign.
LEV	0.20045	0	0.01995
FS	0.3363	0.02945	0.0304
SRMC	0.00855	0.0437	0.32775

Note: Regression of SAC on SP
“The regression of SAC (separate audit committee) on SP (share price) can provide insights into the relationship between the existence of a separate audit committee and the value of the firm. The coefficient of SAC can indicate whether the existence of a separate audit committee has a significant impact on the share price of a firm.”

7 Discussion and Conclusion

The management and direction of companies are governed by a system known as corporate governance, which is overseen and regulated in Pakistan by the Securities and Exchange Commission (SECP) through the Code of Corporate Governance. The code has been enforced as a listing requirement for stock exchanges since 2002, with the aim of improving access to finance, streamlining operations, enhancing decision-making processes, and boosting corporate reputation. Recently, the International Finance Corporation (IFC) and the World Bank conducted a study to evaluate the effectiveness of Pakistan's corporate governance framework and how it compares to other emerging economies. The study identified several areas that require improvement, especially in the state-owned sectors, but also noted that progress has been made in corporate governance in the country. To further support this progress, the newly established Pakistan Institute of Corporate

Governance (PICG) is expected to play a crucial role. The IFC is currently working to assist in the development of the PICG by sharing technology and expertise in corporate governance, as outlined by project manager Kaiser Naseem.

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The study emphasized the importance of making informed decisions when setting up and announcing separate risk management committees (RMCs) and identified key factors such as board size, leverage, and firm size that affect the establishment and structure of RMCs. Policymakers can use these insights to improve the quality of support mechanisms for risk management and corporate governance. The media often reports on corporate governance issues such as fraud, accounting scandals, insider trading, excessive compensation, and other controversies."

8 Conclusion

To summarize, despite some efforts made by the Pakistani government to improve corporate governance, companies in Pakistan still have weaker governance mechanisms compared to those in developed countries, as evidenced by recent corporate scandals such as Taj Company, Crescent Bank Fraud, and PTCL privatization. All stakeholders, including shareholders, creditors, and the state, have a direct or indirect interest in corporate governance, as it affects their returns and tax collection. Corporate governance is still at an evolutionary stage in developing countries, but it is not absent in the developed world, as demonstrated by cases such as Enron. Major issues in corporate governance include ethical dilemmas, window dressing, board composition, and interactions with minority shareholders. Therefore, there is a need for further improvements in corporate governance mechanisms, particularly in the functions of risk management committees and audit committees.

8.1 Future Research Implications

The study suggests the need for further research to explore the reciprocal relationships between the variables studied. To achieve this, researchers can use various research methods such as the simultaneous equation method or two-stage least squares, rather than relying solely on a quantitative research design. Furthermore, the study's limitations include a short time frame, which can be addressed by using a longer period of data. To improve the accuracy of the corporate governance variables, a qualitative survey can be conducted to assign specific weights to each variable based on investor perceptions. This approach can provide a more accurate representation of the target relationships between the variables.

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