

Impact Of Corporate Governance On Credit Risk Management: A Case Of Commercial Banks In Pakistan

Yasir Ali¹, Dr. Muhammad Ilyas², Maryam Jabeen³, Rabia Gulzar⁴, Sayyam⁵, Saqib Shahzad⁶

¹MBA Scholar, Abdul Wali Khan University, Mardan.

²Lecturer, Abdul Wali Khan University, Mardan.

³Lecturer, Institute of Management Sciences, Peshawar.

⁴Demonstrator, Abdul Wali Khan University, Mardan.

⁵Research Assistant, Abdul Wali Khan University, Mardan.

⁶Demonstrator, Abdul Wali Khan University, Mardan.

Abstract

This study aims to investigate the impact of corporate governance on credit risk management in Pakistan's commercial banks. The study focuses on the corporate governance characteristics like board size, board meetings, and CEO compensation. For this purpose collected data from twelve commercial banks randomly selected. The data were gathered from 2012 and 2020 from the annual reports of the banks. The multilevel estimation techniques were applied for analysis. Random effects model was applied to test the hypothesis. The results revealed that board size has positive effect on CRM. The results reported that board meetings have positive significant effect on the Credit Risk Management. While board compensation showed negative significant impact on credit risk management. Similarly, executive compensation showed positive significant impact on the credit risk management. Based on the results the study suggest that banking sector should increase the frequency of their meetings due to its positive connection with credit risk management. Likewise, the think tank in banking sector should make decision about the board compensation and executive compensation.

Key Words: Corporate Governance, Credit Risk Management. Board Size, Board Composition, Board Meeting, Executive Compensation

Introduction

Corporate governance is the study of how corporations are managed and controlled. This will contain a company's best practices that it has devised and follows to guarantee that its activities are above board. CG refers to the procedures for directing, controlling, and holding a company

accountable. This includes contact between stakeholders, who engage directly or indirectly with the organization that is crucial to its operations, including staff, shareholders, creditors and subcontractors (Brownbridge, 2007).

The basic purpose of corporate governance is to assist the company and the larger social, economic, and political environment. In many businesses, efforts to eradicate corruption and other abnormalities can improve management. Companies are responsible with establishing an administrative and corporate governance structure once the appropriate legal framework has been established. Government practices can have a substantial impact on the overall functioning of a company. The Board of Directors, management, and other shareholders are the most important stakeholders. Other actors include staff, providers, customers, banks, regulators, and nearby communities (Knell, 2006).

A company's financial stability is ensured by having the best possible corporate governance (Bhagat & Jefferis, 2002). As a result, the company is now able to secure new financing because its financial health has improved. There are several factors that can affect an organization's direction and long-term viability (Donaldson, 2003). Superior corporate governance systems are a competitive advantage for businesses. A company's financial performance and capital inflows will increase when it implements good governance and a legal framework, making it a better investment for all its stakeholders.

While on other hand, Credit risk management (CRM) can be defined as identifying risks, evaluating them and mitigating them as well as monitoring them, by means of management resources as a systematic technique of uncertainty management. Strategies employed include changing parties, risk prevention, minimizing harmful risk consequences, and taking into consideration some or all specific risks (Santomero, 2007). Financial risk management, on the other hand, concerns controllable hazards using financial instruments traded. The only purpose of risk management is to identify and mitigate different risks associated to an acceptable level of an area of concern (Christen & Pearce, 2005). One of the techniques of credit risk management employed by commercial banks is credit enhancement, which involves continuous reporting of risks to top managing directors and officials.

The link between CRM and corporate governance may be described as complimentary since it is achieved through excellent governance practice in commercial banks where credit risk may be reduced. Proponents of stakeholder theory opine that the only way to achieve sustainability is by addressing the common interest of all stakeholders, which include stockholders, customers, employees and the society.

The opponents of stakeholder theory argue that different parties' interests cannot be grouped together. While this approach is closest to standard theoretical principles, real financial results demonstrate the main purpose of corporate governance as the maximizing of the wealth of shareholders. In other words, the business world broadly agrees that shareholders are the prime aim of a company (Asquith & Wizman, 2010). This study investigate how corporate

governance frameworks impact credit risk management in Pakistan's banking sector due to its significance in credit risk management.

The maximization of shareholders' long-term wealth is the main objective of bank management. The bank's management intends to profit from the company's common shares' current market value. Managers who are unlikely to receive short-term, higher cash flow must examine cash flows on an adjusted risk basis in order to maximize wealth (Maina, 2003). In any company, corporate governance and risk management are intimately linked. Moreover, the durability of company success depends heavily on the decisive role played by both notions. The control aspect is a vital function for corporate governance, while a regulated environment through the risk management process is developed (Knight, 2006). Knight (2006) described corporate governance in this regard as the intermediary to regulate and control an organization in connection to the management of risk in order to achieve fixed objectives. The controlled environment leads to an institution that achieves the defined objectives within a significant risk range. Risk management is a strategy used to minimize adverse risk impacts and combine risk situational advantages (Essinger & Rosen, 1991). Different researches on corporate governance and risk management have been carried out.

Chen (2003) examined the association between risk-taking behavior and the corporate governance in Taiwanese Banking Industry. Likewise, Hollis, Daniel and Ryan (2004) examined the Corporate Governance effects on the Firms' Credit Ratings. Andrew (2012) conducted a study on the connection between insolvency risk and the corporate governance among Liberian commercial banks. Similarly, Truong, Trinh¹, Duyen and Nguyen (2015) investigated Corporate Governance impact on Financial Risk management among Commercial Banks in Vietnam. Seyram, Yakubu and Bawuah (2014) examined the risk management and corporate governance in the Ghanaian banking sector.

There is a dearth of empirical data that demonstrates how corporate governance influences credit risk management in Pakistani banks, it has been discovered. The ability of the economy to mobilize savings depends on banks. They play a significant role in Pakistan's financial system and provide services to a significant segment of the population. Therefore, improved corporate governance would be beneficial for credit risk management in these banks. The current analysis focuses on how corporate governance affects Pakistani commercial banks' capacity to manage credit risk. Therefore, investigate the impact of corporate governance on credit risk management among commercial banks in Pakistan.

Literature Review

The National Association of Corporate Directors (2006) defined corporate governance as the method of governance used by an institution or organization. Systems of good governance can therefore be seen as tools for creating the framework for economic control and ownership. Corporate law and various types of regulation ensure adherence to the current corporate governance systems. A strong legal structure and set of norms are essential in this situation. For instance, the board of directors of a company is legally able to run its business and

activities. Directors and top executives are obligated by law to perform their tasks with care, skill, and attention, and to act in the company's best interests.

Credit risk management (CRM) may be seen as a systematic approach of managerial resource management by identifying the risk, evaluating the risk, mitigating it and monitoring risk. These tactics include party transfers, risk avoidance, detrimental risk mitigation and the adoption of certain or all-risk implications (Santomero, 2007).

Financial risk management, on the other hand, concerns controllable hazards using financial instruments traded. The only purpose for Risk Management is to identify and alleviate different types of risk connected to an acceptable degree of worry (Christen and Pearce, 2005). One of the techniques of credit risk management employed by commercial banks is credit enhancement, which involves continuous reporting of risks to top managing directors and officials. As part of the overall plan, the risk management strategy is included. The technique used must establish a favorable environment for lenders and credit buyers. Risk identification includes the evaluation of risk elements generally based on seriousness, impact or consequences of the dollar. Risk identification and evaluation comprises evaluation and review of risk mitigation and measurement. It is virtually important to classify different risks in relation to an organization's amount of exposure (Fuser, Gleiner & Meier, 1999).

Theories of Corporate Governance

Three Lines of Defense Theory

The three lines of defense model have received a great deal of attention around the world. In order to establish accountability for risk assessment, the top management in a firm must develop an effective internal control system that is viewed as the first line of defense. Boards of managers and management are the major actors serving the defensive lines and are ideally situated to ensure that this model is represented in the risk management and control procedures of the firm. All three lines, irrespective their size or complexity, are essential in some form in all agencies. When there are three distinct lines and in an organization clearly identifiable, risk management will be deemed strong (Hakim & Neamie, 2011).

Credit Risk Theory

Merton (1974) proposed the structural theory of credit risk, commonly known as the credit risk approach. The theory indicated that there were defaults arising from the development of a company asset, shown by a distribution process with permanent characteristics. Merton (1974) highlighted that the model class is known as the structural models, composed of variables linked to a certain issuer. The evolution of this kind is characterized by an asset of models where the default loss is specific. If this happens, a default cannot only happen in the maturity of a corporate bond (Longstaff & Schwartz, 1995).

While the credit risk has been since many years, until the last years it remains well investigated. Pre-1974 credit literature mostly uses standard actuarial methods for credit risk, with the task of relying on previous data. To far there have been three approaches of quantitative credit risk analysis (Crosbie et al., 2003).

Impact of CG on Credit Risk Management

Chen (2003) investigated the connection between corporate governance and risk-taking behavior in the Taiwanese banking industry. He obtained 24 responses from 39 local banks, or 61.54 percent of the total. 13 (54, 1 percent) of the 24 credit unions surveyed claimed that more than 60 percent of their internal audit efforts were risk-focused. 8 out of 24 respondents (33.3 percent) were found to utilize risk-based internal audits (RBIAAs), while domestic banks used a lesser percentage of risk-based audits (RBIAAs) ranging from approximately 21 percent to 40 percent. Additionally, Truong, Trinh, Duyen, and Nguyen examined the corporate governance practices of Vietnamese commercial banks (2015). The Corporate Governance Mechanism was used to investigate the impact of corporate governance on the equity, lending, and liquidity risk of Vietnamese commercial banks. The method isolates the internal and external governance systems from one another. In the 2009 2013 timeframe the empirical study examined 26 joint venture banks. The empirical study revealed that board strength, transparency of information, foreign capital and involvement of stakeholders have important implications for banking system financial risk management. The impacts of corporate governance on company loan ratings have been explored by Hollis, Daniel and Ryan (2004). The study also shows that CEOs in companies with speculative credit ratings are over-compensated with higher ratings than those in companies with investment ratings. In addition, the CEO's participation in increased debt payments connected to worse credit ratings surpasses this over compensation. Wangui (2014), carried out a study on the impact of corporate governance in Kenya on corporate risk in business banks. A cross-sectional study was conducted to fill the research gap.

The primary data were acquired through the method of the questionnaire. For the answer to the study topic individual questionnaires were developed and submitted to internal audit managers. The results show that the sizes of the board, the participation of CRO on the board of directors, as well as the independence of the board, affect the CAMEL rating in active mode while the diversity of the board itself has a negative influence. One of the most visible disadvantages in the study was a low bank response rate, however this was adequate for the study. This limitation has been overcome by issues that produce reliable findings and convince banks to collaborate in the provision of information. The outcomes of the study indicated that the banks' CAMEL rating be consolidated in order to facilitate and easily analyze the Central Bank of Kenya and to allow additional analysis approaches to be applied. It is also recommended that independent management be increased and that the board size be expanded since these components of corporate management were seen to help the corporate risk management of the banks.

Board Composition and CRM

Finkelstein et al. (2009) asserted that the effect of board composition on credit risk is not clear. Adams and Ferreira (2007) argued that outside directors in the board have not more information about the firm that is why more independent directors in the board are not effective in managing risk. Berger et al. (2014) also documented that more independent directors in board cannot manage risk well.

Executive Meetings and CRM

Executive meetings have also an importance for the firm's outcomes. Andrew (2012) argue that board meetings are very important for the firm's uplifting and can help to manage the risk associated area. Similarly, Fonseka (2009) also reported that executive meetings can give new insight over period of time to manage various areas of the organization.

Board size and CRM

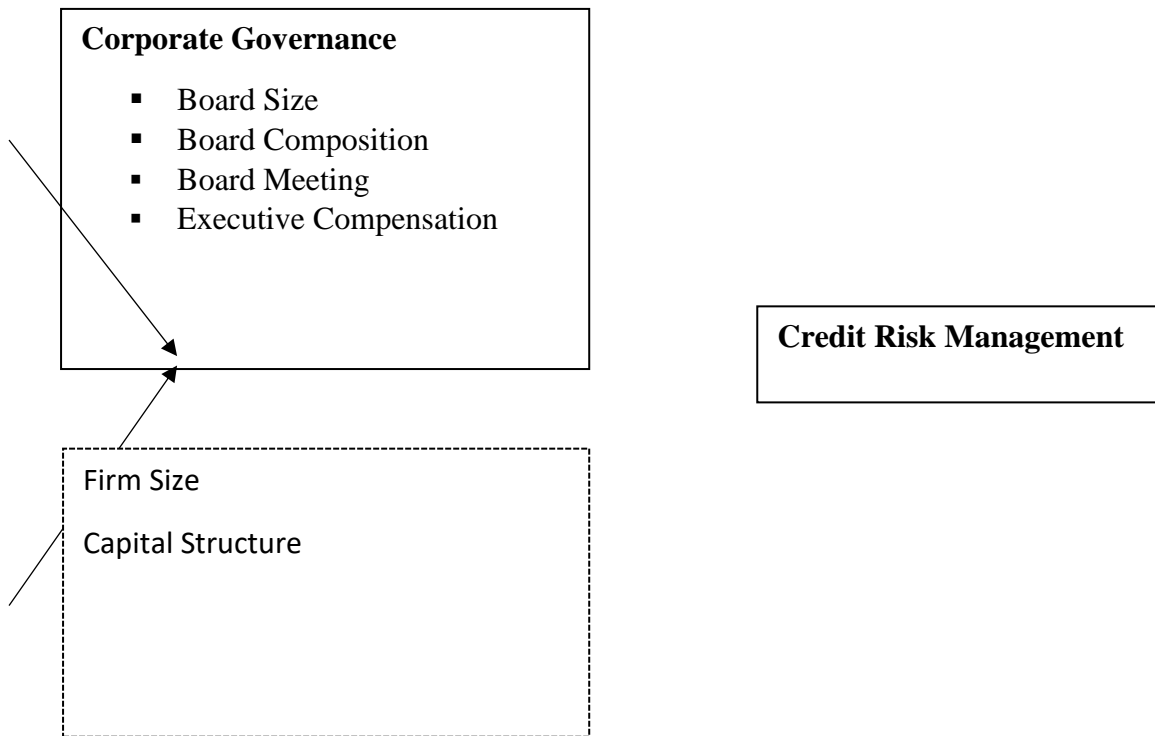
Board size can affect the risk taking decision of the financial institution. Cheng (2008) reported the significance of the board size in managerial decisions. Many studies reported that huge board is effective in decisions while many other consider smaller board as effective in decisions. Cheng (2008) argued that huge board can better manage the risk as many brains can be vital in this regard. Sah and Stiplitz (1991) documented that a smaller board can better manage the financial risk of the firm. Likewise Wang (2012) reported that board whatever its number and composition is helpful for the management of risk.

Executive Compensation and CRM

The executive compensation is vital as it is considered that more paid executives can be prolific to manage decisions. In this regard many studies proved that executive compensation is positively associated with risk management (Erkins et al., 2012;Zhu,2006).

Conceptual Framework

This conceptual model has been drawn using the footprints of many previous studies (Hollis, Daniel and Ryan, 2004; Wangui, 2014).



Research Methodology

This section reports an overview of methods used in this study.

Research Design

Research design refers to the procedures and the techniques that are adopted during study while achieving the objectives of the research (Saunders et al., 2007). Based on the above argument, the current study follows a quantitative approach and descriptive research design.

Population and Sample

Commercial Banks that are listed on Pakistan Stock Exchange have been the target population of the current study. Non-probability sampling technique has been ensured in the current study, where the sample is based on purposive sampling. The sample size is more than five years that is why it supports OLS.

Data Collection

The data were collected from 2012 to 2020 on annual frequency. For current study, data were collected from different sources like state bank of Pakistan, financial statements of the banks and Pakistan Bureau of statistics. The data were collected from the year 2012 to 2020 i.e. a total of 9 years which is considered as adequate for exploring the objectives of the current study.

Variables Definitions and Measurement

The following table shows the measurement proxies for the dependent, independent and control variables of the study. Credit risk management is the dependent variable, board size, board composition, board meeting and executive compensation are independent variables. Firm size and capital structure are control variables.

Table 3.1: Variables Measurement

S. No	Variables	Type of Variable	Definition	Measurement
1	Credit Risk Management	Dependent variable	Credit risk is the possibility of a loss resulting from a borrower's failure to repay a loan or meet contractual obligations	Non-Performing Loans / Total Loans
2	board size	Independent Variable	Board size refers to the total number of directors on the board of each sample firm for each accounting year, including the CEO and Chairman.	Natural log (Ln) of the total number of the directors.
3	board composition	Independent Variable	Board composition is the proportion of non-executive directors to total directors in a company board.	Non-executive/ Total Directors proportion.
4	board meeting	Independent Variable	The total number of board meetings held during a particular accounting period.	Natural log (Ln) of the number of board meetings held during year.
5	executive compensation	Independent Variable	Executive compensation refers to remuneration packages specifically designed for company executives	year on year growth over time (t in years) to be determined from the financial statements of the banks

6	Firm size	Control variable	Firm size of business refers to the scale of organization and operations of a business enterprise	Natural log of total assets
7	Capital structure	Control variable	Capital structure is the specific mix of debt and equity that a company uses to finance its overall operations and expansion.	Total debts / Total Shareholders' equity

Model of the Study

The following is the study model;

$$CRM = \alpha + \beta_1BS + \beta_2BM + \beta_3BC + \beta_4EC + \beta_5FS + \beta_6CS + \varepsilon$$

Where;

CRM is Credit Risk Management

BS is board size

BM is board meeting

BC is board composition

EC is executive compensation

FS is firm size

CS is capital structure

Study Analysis

In order to find the impact of independent variables on dependent variable, this study used different analysis techniques. Descriptive analysis used to find the normality of the data. Correlation analysis and regression analysis used to achieve the objectives of the study. The data was normal hence checked for appropriate model. The model specification test was applied to consider better among OLS and FE and RE. The Lagrangian multiplier test revealed that FE and RE is right techniques. Then Hausman test was applied to check for FE or RE and RE was considered as best.

Diagnostic Tests

The study also checks the normality of the data, multicollinearity, heteroscedasticity, and autocorrelation. In this regard well used tests in literature have been applied.

Results and Discussion

This chapter presents the outcomes of the empirical analysis. In this chapter, descriptive statistics were provided for the data. Also included in this part are the results of the regression and correlation studies. The panel data model is used in regression analysis to test hypotheses and examine the impact of PSX-listed companies.

Descriptive Statistics of the Study

Descriptive analysis of the study was conducted to examine the characteristics of the variables of the study. The below sections present the results of the descriptive analysis that was conducted in the current study.

Table 4.1: Descriptive Analysis

	Mean	Median	Std. Dev.	Max	Min	Skewness	Kurtosis
CRM	.101	.083	.113	.971	.011	0.332	1.341
BS	9.036	9	1.837	13	5	0.437	1.554
BM	3.9	4	.976	6	2	-0.096	1.312
BC	.545	.551	.189	1	.012	-0.404	1.001
EC	4301241	3249866.5	1.4	19876123	366367	0.787	1.146
FS	6.116	5.7	1.024	9.4	3.1	0.518	1.896
CS	.15	.14	.052	.39	.09	0.533	1.889

Above the table 2 is showing results of the descriptive analysis that was conducted in the current study. The table shows that the value of the mean, median and standard deviation of the variables. The reported results highlight that data is normally distributed due to the values of standard deviation, skewness and kurtosis.

Correlations Results

The correlation matrix is used to investigate the relationship between two variables and determine whether they are positively or negatively correlated.

Table 4.2: Correlation analysis

Variables	CRM	BS	BM	BC	EC	FS	CS
CRM	1.000						
BS	0.225	1.000					
BM	0.035	-0.023	1.000				
BC	-0.200	0.380	-0.144	1.000			
EC	-0.005	-0.312	-0.413	-0.152	1.000		
FS	0.154	-0.456	-0.327	-0.227	0.707	1.000	
CS	0.012	-0.054	-0.240	-0.009	0.193	0.258	1.000

Table 3 above displays the correlation coefficient value. The correlation coefficient value indicates the scope and direction of the association. The correlation coefficient between Credit Risk Management and Board Size is 0.225, as shown in the table above. This figure indicates that there is a positive but weak association between Credit Risk Management and Board Size. As a result, CRM tends to increase in the same direction as the size of boards. Similarly, the above table reveals that the correlation coefficient between Credit Risk Management and Board Composition is 0.200. This value indicates that there is a negative and weak relationship between Credit Risk Management and Board Composition, which indicates that as the board composition of a bank changes over time, so will the CRM.

Similarly, the accompanying data reveals that the correlation coefficient between Credit Risk Management and Board Meeting is 0.035, indicating that a positive and significant relationship exists between the two. This demonstrates that when meeting frequency grows, so too does CRM effectiveness. The correlation coefficient between Credit Risk Management and Executive Compensation is -0.005, as shown in the table above. This number indicates that there is a negative and weak association between Credit Risk Management and Executive Compensation.

OLS Assumptions

Since the data are panel-based, panel data techniques are used. The analysis of the study was based on OLS. Panel data techniques are used when heteroscedasticity and autocorrelation are absent.

Normality

The skewness of the data is checked in this study to ensure that it is normal. It is normality that distinguishes the normal distribution, which may be used to describe both dependent and independent variables alike. In Habbash (2013) estimation, normal data have a skewness less than or equal to 1.96. The skewed distribution of the study's data shows that the data were not regularly distributed.

Table 4.3 Normality

	Skewness	Kurtosis
CRM	0.332	1.341
BS	0.437	1.554
BM	-0.096	1.312
BC	-0.404	1.001
EC	0.787	1.146
FS	0.518	1.896
CS	0.533	1.889

Multicollinearity

Multicollinearity is the relationship between two or more independent variables. Using the VIF, we were able to find significant correlations and the resulting multicollinearity amongst the independent variables in our experiment. According to Hair et al. (2009a), a larger correlation between explanatory factors can result in biased estimates.

Table 4.4: Variance Inflation Factor

	VIF	1/VIF
FS	2.814	.355
O	2.727	.367
BM	1.365	.732
BS	1.291	.775
BC	1.28	.781
CS	1.187	.842
Mean VIF	1.777	.

If the mean value of the VIF is greater than 10, multicollinearity is an issue. Gujarati (2003), the absence of a multicollinearity problem with the independent variables is shown by the fact that the VIF values are less than 10.

Heteroscedasticity

This study used a modified Wald test due to the risk of bias caused by heteroscedasticity. The Wald test is utilized to assess the statistical significance of the model's explanatory variables. It is unnecessary to incorporate variables that contribute nothing to the model if they lack statistical significance. As an OLS assumption, the variance of the error component must be constant and uncorrelated, and the model must be uniform (Johnston, 1972).

Table 4.5: Modified Wald Test for Groupwise Heteroskedasticity in Fixed Effect Regression Model

	Coef.
chi2 (11)	4.11
Prob>chi2	0.5000

The data in the table above lack any indication of heteroscedasticity, which shows that the P-value is significant.

Autocorrelation

According to Drukker (2003), a previous connection between the error term and its previous value is erroneous due to the bias created by autocorrelation. Autocorrelation can be identified using the Wooldridge test. The Wooldridge test is more precise since it makes no assumptions regarding the behavior of individual effects. The P-value is insignificant because there is no autocorrelation in the data.

Table 4.6: Wooldridge Test for Autocorrelation in Panel Data

	Coef.
F(1, 10)	9.013
Prob > F	0.2010

The results of all diagnostic tests for the OLS assumptions indicate that OLS is not the optimal method for model analysis.

Model Specification

Because the OLS assumptions are not met, panel data analysis is used to investigate confounding variables. This technique can be used to evaluate pooling, FEM, and REM models. Diagnostic methods such as the Hausman test and the Breusch and Pagan LM test are essential when using OLS panel data methodologies to identify between FEM and REM, as well as Pooled OLS and REM. OLS panel data techniques are among them. Dougherty (2011) states that random sampling can be utilized to pick between FEM and REM using the Hausman test, and between REM and Pooled OLS using the Breusch and Pagan LM test.

Table 4.7: Hausman (1978) Specification Test

	Coef.
Chi-square test value	7.096
P-value	.214

The discrepancies between the FE and RE models were analyzed using the Hausman test, and the results are summarized in the table below. As the P-value is very near to zero, the results indicate that the REM model should be utilized.

Table 4.8: Breusch and Pagan Lagrangian Multiplier Test for Random Effects

	Coef.
chibar2(01)	138.07
Prob > chibar2	0.0000

The results of the Breusch and Pagan LM test for selecting between OLS and REM are displayed in the graph located above. Because the P-value of REM is higher than that of pooled OLS, it is preferable to employ this method for analyzing panel differences.

Regression analysis

Utilizing unit root analysis, one can ascertain the effect of the independent variable on the dependent variable. The OLS findings are presented in the table below.

Table 4.9: Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
----------	-------------	------------	-------------	-------

C	6.193731	3.144412	2.224301	0.0321
Board Size	11.31131	12.14361	2.033161	0.0421
Board Composition	-12.11327	2.345711	-2.123812	0.0081
Board Meeting	46.12730	11.14632	3.133227	0.0016
Executive Compensation	-32.14353	7.111362	-2.143434	0.0061

R-square 0.319, F-value 162.54

The results of the RE analysis of regression are displayed in Table 10 above. R-square demonstrates a value of 0.319321, indicating that all IVS in the CRM are accountable for 31% of the total changes. Due to the fact that the F-value of 162 is much greater than the significance threshold of 4, we can conclude that the model is statistically significant. Due to the statistical significance of the probability values, the data in the table above reveals that board size has a statistically significant positive effect on CRM in the banking industry. Numerous studies all predicted the same results (Wangui, 2014). Similarly, the board meeting had a positive and substantial effect on CRM, as indicated by its T-value being greater than 2 and its associated p-value being significant. The prior published study also corroborated these findings (Wangui, 2014; Donaldson, 2003). Despite the fact that board composition had a significant negative impact on CRM, the p-value indicated that the impact was substantial. It has been stated that the findings of other investigations are equivalent (Wangui, 2014s). The p-value reveals that executive remuneration has a significant impact, both positively and adversely, on CRM. These conclusions are backed by the study cited above (Donaldson, 2003).

Discussions

These findings are also consistent with the previous results. A company's internal operations have an institutional environment defined by the idea of corporate governance. The idea offers a fresh perspective and raises an organization's level of competitiveness. The study's results lead it to the conclusion that good corporate governance is vital to Pakistani commercial banks' growth and performance. Moreover, the findings suggest that the scope and direction of an organization's CRM are contingent on the predictions in the question. Findings show that major corporations' practices, rules, and rights of shareholders improve credit risk management and increase company value. Since excellent corporate governance structure has an impact on CRM, these findings might be seen as evidence that financial institutions should pay attention to their corporate governance structures. As a byproduct of the research, the findings are aimed at improving the policy direction of corporate governance in commercial banks as well as preventing their failure as a consequence of bad corporate governance. According to the findings of this research, risk management procedures should be implemented correctly and backed up by a strong CG, particularly in the very complicated financial industry. The Board of Directors has the primary responsibility for implementing a risk management strategy. We will not be able to improve our effective CG mechanism or oversee our credit risk management policies without the board's full support and direct engagement." There is a big problem in financial systems and economics, according to Kou, Chao Peng, Alsaadi, and Herrera-Viedma

(2019). Researchers using financial market data to identify and react to systemic threats are turning to machine learning technologies. Automated approaches are utilized for analyzing the systemic risk, which is used to improve financial market and industry laws. Using big data, sentiment analysis, and network analysis, this article examines financial systemic risk measuring research and methodology. Banks utilize a combination of machine learning and systematic risk management to limit the total risk associated with hedging the bank's financial instruments (Kou, Chao, Peng, Alsaadi, & Herrera-Viedma, 2019). A study by Kithinji (2010) shows that banks in Kenya are profitable regardless of how they handle credit risk. Kargi (2011), for example, found a positive correlation between CRM (Credit Risk Management) practices and the performance of Nigerian banks from 2004 to 2008. CRM has had a major impact on the financial health of Nepalese banks between 2001 and 2011, according to Poudel (2012). Banks in Nepal are required to keep a capital reserve of 14.3% of their total cash balance, which has been shown to improve their performance by generating greater profit. Several banks have gone down due to their inability to manage credit risk in the past. According to this report, banks should diversify their product and service offerings so that they can provide their clients with a wide range of options.

Conclusion

Corporate governance is a system of procedure that ensures transparency and accountability in the country. Corporate governance to maintain at the highest level would encourage the trust of the investors and will help in the increase of the value of the firm. Corporate governance in the banking sector is very essential as the most of the banks in the world collapsed due to improper credit management. The example includes the Leeman brother that caused huge turmoil in the world and financial meltdown was occurred in the whole world during 2008. This has emerged the area of risk management as one of the hot core area of corporate finance. In respect to Pakistan the gap exist in this area that is why the study was conducted to examine the impact of corporate governance on credit risk management among commercial banks in Pakistan. Corporate governance was analyzed in terms of board size, board composition, board meetings, and executive compensation. The data were examined using a model with random effects. The study's results demonstrated that board composition has a substantial impact on CRM. Better composition of the board would have negative impact on the CRM in Pakistan. Similarly, the results also highlighted the significant contribution of board size that can positively affect the CRM in Pakistan. The study also revealed that board meetings can be vital to deal with the credit risk management and demonstrated that more meetings can be handy to encourage better credit risk management. The study also reported that executive compensation has negative significant effect on the CRM which means that it does not necessary the highly paid executives will better endorsed the credit risk management..

Future Directions

Future studies can compare the banking sector of Pakistan and Bangladesh. Moreover few moderators can also be used in the same study to make it robust.

References

- Adams, R., and H. Mehran. 2003. "Is Corporate Governance Different for Bank Holding Companies?" *Economic Policy Review* 9 (1): 123–142.
- Agrawal, A., and G. N. Mandelker. 1987. "Managerial Incentives and Corporate Investment and Financing Decisions." *The Journal of Finance* 42 (4): 823–837.
- Amihud, Y., and B. Lev. 1981. "Risk Reduction as a Managerial Motive for Conglomerate Mergers." *The Bell Journal of Economics* 12 (2): 605–617.
- Berman, N., and J. Héricourt. 2010. "Financial Factors and the Margins of Trade: Evidence from Cross-Country Firm-Level Data." *Journal of Development Economics* 93 (2): 206–217.
- Bernard, A. B., J. Eaton, J. Bradford Jensen, and S. Kortum. 2003. "Plants and Productivity in International Trade." *American Economic Review* 93 (4): 1268–1290.
- Cadbur, A. 1992. *Report of the Committee on the Financial Aspects of Corporate Governance*. London:
- Doidgea, R., Karolyi, A., & Stulzb, R. (2020). Managerial ownership, corporate governance and firms' exporting decisions: evidence from Chinese listed companies. *The European Journal of Finance*, 1-39.
- Ge. Caggese, A., and V. Cunat. 2013. "Financing Constraints, Firm Dynamics, Export Decisions, and Aggregate Productivity." *Review of Economic Dynamics* 16 (1): 177-193.
- Hammad, D. Sher., A. (2019). Corporate Governance: Decades of Dialogue and Data. *The Academy of Management Review*, 28(3), 371-382.
- Hobdari, B., A. Gregoric, and E. Sinani. 2011. "The Role of Firm Ownership on Internationalization: Evidence from Two Transition Economies." *Journal of Governance and Management* 15 (3): 393–413.
- Li, D., F. Moshirian, P. Nguyen, and L.-W. Tan. 2007. "Corporate Governance or Globalization: What Determines CEO Compensation in China?" *Research in International Business and Finance* 21 (1): 32–49.
- Li, D., F. Moshirian, P. Nguyen, and L.-W. Tan. 2007. "Managerial Ownership and Firm Performance: Evidence from China's Privatizations." *Research in International Business and Finance* 21 (3): 396–413.
- Morck, R., and B. Yeung. 1991. "Why Investors Value Multinationality?" *The Journal of Business* 64 (2): 165–187.
- Park, A., D. Yang, X. Shi, and Y. Jiang. 2010. "Exporting and Firm Performance: Chinese Exporters and the Asian Financial Crisis." *Review of Economics and Statistics* 92 (4): 822–842.
- Peng, M. X. 2019. "Outside Directors and Firm Performance During Institutional Transitions." *Strategic Management Journal* 25 (5): 453–471.
- Qian, Y. 1996. "Enterprise Reform in China: Agency Problems and Political Control." *The Economics of Transition* 4 (2): 427–447.
- Yermack, D. 1996. "Higher Market Valuation of Companies with a Small Board of Directors." *Journal of Financial Economics* 40 (2): 185–211.
- Yuan, R., J. Z. Xiao, and H. Zou. 2008. "Mutual Funds' Ownership and Performance: Evidence from China." *Journal of Banking and Finance* 32 (8): 1552–1565.

Zahra, S. 2003. "International Expansion of US Manufacturing Family Businesses: The Effect of Ownership and Involvement." *Journal of Business Venturing* 18 (4): 495–512.