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Correlation of Board Compensation and Non-performing Loans of Commercial Banks in Western Uganda

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Commercial banks across the globe are significantly impacted by Non-Performing Loans (NPLs) in terms of their profitability, liquidity, and potential insolvency. The presence of persistent NPLs undermines the lending capacity of financial institutions, resulting in a destabilization of finance and halting economic growth. While research has focused on the reasons behind NPLs, scant studies have revealed just how board remuneration functions, particularly in developing markets like Uganda. The issue. To address the gap, this study examines the connection between NPLs and board remuneration in commercial banks, focusing on two sub-constructs: Diversity and Expertise (BD) or Independence and Objectivity (BRb). In this study, descriptive, cross-sectional and correlational research designs were used using mixed-methods approaches. Using Slovin's formula

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and stratified, purposive, and random sampling methods, data was collected from 232 respondents out of a population of approximately 550. To gather the essential information, they conducted systematic questions and interviews, with a pilot study to verify its validity and reliability. Descriptive statistics, Pearson correlation, multiple regression, and Structural Equation Modelling (SEM) were employed for quantitative analysis, while qualitative data was subjected to thematic analysis using Nvivo software. Board independence and objectivity (BRb) were found to be more effective in reducing NPLs than diversity and expertise (BD) (path coefficient = 0.168). The SEM framework was deemed robust by its model fit indices, which were SRMR (0.08) and NFI (>0.90). Such findings also highlight the importance of making independent, unbiased decisions about credit risk reduction. The investigation into the relationship between board remuneration and NPLs in Uganda's banking sector is the first to provide fresh insights into governance factors in a new market. The outcomes offer practical recommendations for financial institutions and policymakers to create efficient compensation structures and governance mechanisms that can improve financial stability.

Keywords: Board compensation; commercial banks; non-performing loans; executive compensation.

1. INTRODUCTION

The global banking sector is primarily responsible for the direct consequences on financial stability, profitability, and the efficient allocation of resources within an economy due to non-performing loans (NPLs). Banks may suffer losses due to delayed loans of 90 days or longer, which are classified as NPLs and indicate poor asset quality (Alnabulsi et al, 2023). During crises or instability, financial institutions can be destabilized, which can lead to higher systemic risk and a slower rate of economic development. Due to the impact of COVID-19, banks have experienced an increase in NPLs due to reduced business operations and ability for loan repayment (CEPR, 2023). This is particularly alarming. The influence of NPLs on corporate governance, particularly board compensation structures, has led to a rise in bank risk-taking behaviors. The board's compensation may be based on short-term financial metrics like profit or loan growth, which can inadvertently drive risky lending by increasing the interest of executives and shareholders. Incentive structures are believed by Business Perspectives to have a negative impact on the quality of loans, which could result in higher NPLs during times of economic stress. However, good governance and risk-adjusted – or pay to account for) policies are linked to better loan portfolio management and lower default rates. This study aims to investigate the impact of board compensation and NPLs in commercial banks on credit risk and asset quality across various governance and incentive structures. Furthermore, the authors highlight significant aspects of these factors. By utilizing both theoretical frameworks and empirical research, it provides a comprehensive overview of how compensation policies can be designed to promote sustainable banking practices. The research emphasizes the difficulties that NPLs pose to policymakers and regulators, particularly in developing countries like Uganda where institutional and economic weaknesses are significant.

NPLs are a significant source of distress for commercial banks, as they hinder their profitability and pose unforeseen risks to financial systems. A significant amount of NPLs is evidence of inefficiency in credit risk management, which is frequently caused by poor governance practices and mismanaged incentive structures. Board pays, which is a fundamental aspect of corporate governance, has been identified as influencing risk-taking behaviors. Overriding the focus on short-term gains in compensation policies may result in reckless risk taking, which can lead to approval of low-quality loans and a subsequent increase in NPLs (Alnabulsi et al, 2023; Shala d'idea de 2022).

While there is a growing body of research on NPLs and governance, we have little understanding of how board compensation affects the performance of loans across banking systems, especially in developing economies like Uganda. The impact of inadequate governance on NPLs in these regions is exacerbated by reduced regulatory systems, limited credit assessment capabilities, and economic risks (Khalil et al, 2023). In addition, due to the economic turmoil caused by COVID-19, it has been emphasized that effective governance systems are necessary for managing non-performing loans (NPLs) during crises (CEPR, 2023). The gap between non-performing loan (NPL) levels and board remuneration structures in commercial banks is explored through research using Uganda as a primary focus. Considering institutional and legal obstacles, the research investigates whether incentive programs increase credit risk or promote responsible lending practices. These insights could help policymakers, banks regulators and financial institutions in formulating compensation packages that strike a balance between long-term financial stability and reward gains in performance.

Financial stability in banks is largely dependent on the management compensation they receive, which affects their ability to manage non-performing loans (NPLs) effectively. Efficiently arranged incentives enable executives to direct their actions towards organizational objectives, leading to effective lending practices and risk management. Fixed pay is a source of certainty, but performance-based incentives prioritize long-term financial health over short term risk-taking, which can lead to higher NPL levels. Independent and objective boards with well-designed remuneration policies can significantly reduce NPL ratios, as evidenced by recent findings that credit quality metrics contribute to greater levels of accountability and decision-making. (Bhatia & Gulati, 2023; Elyasiani et al, 2020) The research presents a valuable theoretical framework, incorporating theories of agency and resource dependency, to better understand the link between governance mechanisms and financial stability. The article emphasizes the importance of implementing practical measures, such as performance-based compensation and diverse board expertise, to mitigate NPLs and enhance economic stability (Clifford Chance; Borio et al.), in recent years. The benefits of these findings extend beyond the scope of researchers and practitioners, as they provide practical solutions and a solid foundation for future research.

2. LITERATURE REVIEW

Board remuneration and non-performing loans (NPLs) in commercial banks can be effectively understood by drawing on agency theory, corporate governance frameworks, and other relevant factors. Jensen and Meckling (1976) identified the principal-agent problem in agency theory as the possibility of board members prioritizing their own personal profit over the interests of shareholders. The concept of a conflict of interest between shareholders and management is explored in agency theory, which proposes that loan approvals may be riskier than those granted under other incentive structures, leading to higher NPLs. According to recent studies, it is crucial to balance board remuneration with performance metrics in order to maintain accountability while reducing agency costs. Boards containing independent directors are linked to lower NPL ratios because their objectivity boosts oversight and decision-making quality (Bhatia & Gulati, 2023; Elyasiani et al, 2020). The diversity in expertise and gender among boards also fosters productive discussions, leading to more effective credit risk assessments and financial stability (Carolina & Madyan, 2024; Borges et al, 2003).

New regulatory systems emphasize enhanced governance mechanisms to tackle NPL issues. The EU's NPL Directive, which was recently introduced, aims to standardize data reporting and disclosure, making loan portfolios more transparent and improving the dynamics of secondary markets. These initiatives emphasize the need for effective data-driven decision-making and systematic monitoring to manage credit risks (Clifford Chance, 2022; Borio et al, 2003). Moreover, the integration of governance principles with customized compensation policies is essential for reducing non-performing loans (NPLs) in both developed and emerging markets, where regulatory and operational arrangements differ significantly.

A number of recent empirical studies have revealed that the impact of board compensation on non-performing loans (NPLs) in commercial banks is substantial. Risk appetite is a key factor in the linking of compensation structures, particularly variable components like bonuses and stock options. Research indicates that if executive pay is heavily influenced by short-term financial performance, it can lead to riskier lending practices, which may increase the probability of NPLs. The accumulation of NPLs was accelerated during economic downturns due to European banks' incentive-driven risk-taking during credit boom periods, as loans with poorly assessed were more likely to default (CEPR, 2023; Alnabulsi et al, 2020).

Setiawan (2022) examines the connection between CEO pay and risk for Indonesian banks. Non-performing loans that are linked to loan risk are a way for banks to quantify their risk. Loan that is not performing is the dependent variable. And an independent variable was the executive compensation. Firm age, size, and capital asset ratio are used as the control variables. Here, the study's findings show that CEO salary, firm age, and the capital asset ratio all negatively affect risk while business size positively affects risk. Islam (2020) examined how board activities and composition affect bank nonperforming loans (NPLs). According to the empirical data, board independence, the separation of the CEO and chairman responsibilities, directors with financial knowledge, and the frequency of committee meetings are all associated negatively with NPLs. Additionally, we discover that, during the 2008–2009 financial crisis, having a sizable board and having female directors on it may have contributed to fewer NPLs. The findings are consistent with the idea that active boards and boards that are shareholder-friendly are better monitors and reduce bank NPLs.

Kim and Trung (2019) evaluated elements influencing non-performing loans incurred throughout the period of 2009 to 2017 when lending to clients in Vietnam's commercial joint stock banks. The study includes the ideas and empirical investigations concerning the macro and micro aspects causing nonperforming loans and also investigated the non-performing loan ratios of certain banks as well as the real credit position of the whole banking sector in Vietnam using both qualitative and quantitative research methods. Additionally, the study models the main influences on non-performing loans using the Generalized Method of Moments (GMM). The final results revealed that it had built two models, with the following results: the first model had six statistically significant variables, whereas the second model only had five statistically significant variables.

Bank The firm Maybank Indonesia is established in Indonesia and primarily works in the banking industry. Three business segments make up the Company's operational activities: Global Banking, which consists of corporate banking, transaction services, and international markets; Community Financial Services (CFS), which combines retail and business banking activities and offers Islamic banking services(Setiawan 2022). Third party funds, business loans, micro, small, and medium-sized business loans, home ownership loans, and other types of loans are all included in CFS(Jahan and Shahidullah Tasfiq 2022). Maintaining the trust and confidence of shareholders and consumers in the banking sector is largely dependent on good corporate governance(Tibiletti et al. 2021). The success of a firm involved in banking is greatly increased by the adoption of sound corporate governance concepts in the bank management system(Khan and Ahmad 2020).

In order to assess the efforts made in addressing the incidence of non-performing loans in micro, small, and medium enterprises at banks, Kim and Trung (2019) identified and analyzed non-performing loans in Micro, Small, and Medium Enterprises s at Banks. Descriptive research techniques with a quantitative approach will be used to conduct this sort of study. The findings demonstrate the use of credit risk management at PT. Maybank Indonesia, which includes active oversight by the board of commissioners and directors, policies, procedures, and limit setting, as well as identification, measurement, monitoring, and credit risk management information systems. Using the findings of this study, banks may retain the independence of their credit personnel and enhance the credit monitoring procedure.

3. METHODOLOGY

By using the Structural Equation Model (SEM) framework, researchers conduct a quantitative research study on how board remuneration affects non-performing loans (NPLs). To evaluate the influence of board remuneration on NPLs, the analysis concentrates on examining two sub-modules: Diversity and Expertise (BR) and Independence and Objectivity (Brb). Structured questionnaires were used to collect information from board members and senior executives of commercial banks. BR1 to BRA5 for Diversity and Expertise, BBR6 for Independence and Objectivity, and NPL performance were measured using validated scales that were used as survey items. A 5-point Likert scale was utilized to receive responses. Through a purposive sampling method, the study included 189 individuals who were knowledgeable about governance and credit risk.

An algorithm that uses Partial Least Squares SEM was implemented in SmartPLS 4. The strength and significance of relationships were determined by analyzing factor loadings, composite reliability (CR), and average variance extracted (AVE) for the measurement model, while the structural model relied on path coefficients as indicators. Additionally, the latter used logarithms to evaluate correlations between paths and tests when selecting random variables. Model fit was confirmed using fitting indices such as the Standardized Root Mean Square Residual (SRMR 0.08) and Normed Fit Index (NFI > 0.90). The. Bootstrapping with 5,000 repetitions proved the strength of the results. By utilizing this approach, it is possible to examine the intricate connections between governance structures and loan outcomes, which can be utilized to decrease NPLs through strategic board composition and compensation policies. Additionally, these methods offer practical applications.

4. RESULTS

The descriptive statistics was used to analyse the level of response by determining how the respondents thought about the statements that were used to measure the study variables using means and standard deviation as follows.

From Table 1, the findings indicate that CEO/Managing Director sits on the compensation committee as shown by high mean of 4.30 and supported by low standard deviation of 0.957 and also the findings reveal that banks have put in place equity ownership guidelines to determine who should be a director in terms of number of shares as indicated by high mean of 4.19 and confirmed by low standard deviation of 0.665. Furthermore, the findings revealed that banks do not operates performance-based compensation when renumerating directors as indicated by high mean of 4.05 and confirmed by low standard deviation of 0.846, also the findings indicate that banks normally disclose the compensation policy to shareholders as shown by high mean of 4.00 and confirmed by low standard deviation of 0.928 and respondents also agreed that there is mixture of board compensation components as indicated by high mean of 4.00 and standard deviation of 1.026.

In the same regard, the findings in Table 2 revealed that goals used to determine incentive awards are aligned with the company's financial goals as indicated by high mean of 3.95 and confirmed by low standard deviation of 0.953. similarly, the findings indicate that there is independence of compensation committee from the directors as shown by high mean of 3.90 and confirmed by low standard deviation of 0.891. Also the finding show that the board members normally receive annual retainer for their services rendered as indicated by high mean of 3.86 and confirmed by standard deviation of 0.835 and the same time, the findings indicate that compensation committee is wholly composed of independent board members as shown by high mean of 3.81 and confirmed by low standard deviation of 0.96 and finally the findings indicates that additional compensation is normally given to directors who chair key board committees as shown by high mean of 3.57 and supported by low standard deviation of 0.906. the overall mean of 3.96 and standard deviation of 0.897 indicates that respondents agreed with the statements that were used to measure board compensation.

Table 1. Descriptive statistics on board compensation

Statements	N	Min.	Max.	Mean	Std. Deviation
CEO/Managing Director sits on the compensation committee	180	2	5	4.30	.957
The bank has put in place equity ownership guidelines to determine who should be a director in terms of number of shares	189	3	5	4.19	.665
The bank does not operate performance-based compensation when renumerating directors	189	2	5	4.05	.846
The Bank normally discloses the compensation policy to shareholders	189	1	5	4.00	.928
There is mixture of board compensation components.	189	2	5	4.00	1.026
Goals used to determine incentive awards are aligned with the company's financial goals	189	2	5	3.95	.953
There is independence of compensation committee from the directors	180	2	5	3.90	.891
The board members normally receive annual retainer for their services rendered	189	2	5	3.86	.835
Compensation committee is wholly composed of independent board members	189	2	5	3.81	.960
Additional compensation is normally given to directors who chair key board committees	189	2	5	3.57	.906
Overall mean and standard deviation	**189**			**3.96**	**0.897**

Primary data 2024

Table 2. Descriptive statistics on Non-performing Loans

Statements	N	Min.	Max.	Mean	Std. Deviation
Non-performing loans are mainly managed through transfers to third parties or by special internal units.	189	2	5	4.19	.796
Banks' organizational structures for managing non-performing loans appear to be diversified.	189	2	5	4.14	.891
Restructuring procedures require a relatively long period of time before achieving recovery	189	2	5	4.10	.752
There is thorough assessment of clients before giving out loans	189	2	5	3.95	.846
Liquidations and restructurings differ in duration and in the average share of loans backed by guarantees	189	2	5	3.95	.846
Most of the loans are guaranteed with valuable items	189	3	5	3.95	.577
Banks pointed out that the main obstacles to efficient credit recovery are the backlogs in the courts and the complexity of procedures.	189	1	5	3.90	1.112
Our bank is managed and run by professionals with high integrity	189	2	5	3.86	.943
There are professional fees and difficulties in coordinating with non-financial creditors	189	1	5	3.81	1.142
The significant impact of managing non-performing loans on banks' costs is also affected by the lack of efficiency of legal procedures.	189	1	5	3.81	1.183
Overall	189			3.97	0.909

Primary data 2024

Table 3. Correlation Results on Board Compensation (BR) and Non-Performing Loans (NP)

		NP	BR
NP	**Pearson Correlation**	1	.792**
	Sig. (2-tailed)		.000
	N	189	189
BR	**Pearson Correlation**	.792**	1
	Sig. (2-tailed)	.000	
	N	189	189

***. Correlation is significant at the 0.05 level (2-tailed)*

From Table 2, most of the respondents agreed that non-performing loans are mainly managed through transfers to third parties or by special internal units as indicated by high mean of 4.19 and with low standard deviation of 0.796 shows that all responses were close to the mean. In the same regard, most respondents agreed that banks' organizational structures for managing non-performing loans appear to be diversified as indicated by high mean of 4.14 and the results were confirmed by low standard deviation of 0.891. Also, the respondents were in agreement that Restructuring procedures require a relatively long period of time before achieving recovery as indicated by high mean of 4.10 and confirmed by low standard deviation of 0.752. The results also indicate that most of the respondents agreed that there is thorough assessment of clients before giving out loans as shown by high mean of 3.95 and confirmed by low standard deviation of 0.846. furthermore, the results indicate that liquidations and restructurings differ in duration and in the average share of loans backed by guarantees as in shown by high mean of 3.95 and supported by low standard deviation of 0.846, In the same regard, the respondents agreed that most of the loans are guaranteed with valuable items and this was confirmed by low standard deviation of 0.577, the results also show that Banks' main obstacles to efficient credit recovery are the backlogs in the courts and the complexity of procedures as indicated by high mean of 3.90 and standard deviation of 1.112 confirmed the results. The results also highlights that banks are managed and run by professionals with high integrity as indicted by high mean of 3.86 and confirmed by low mean of 0.943 and in the same regard, the findings indicate that there are professional fees and difficulties in coordinating with non-financial creditors as indicated by high mean of 3.81 and confirmed by 1.142 and finally the findings also indicate that the respondents agreed that the significant impact of managing non-performing loans on banks' costs is also affected by the lack of efficiency of legal procedures as shown by high mean of 3.81 and confirmed by low standard deviation of 1.183. the overall mean of 3.97 and the standard deviation of 0.909 indicate that respondents agreed with the statements.

From Table 3, the results show that there is strong positive relationship between board compensation and non-performing loans of commercial banks (r=0.792, P=0.00<0.05). the relationship is statistically significant at 0.05, meaning that when members of the board are well renumerated, the non-performing loans of commercial banks reduces and the reverse is true

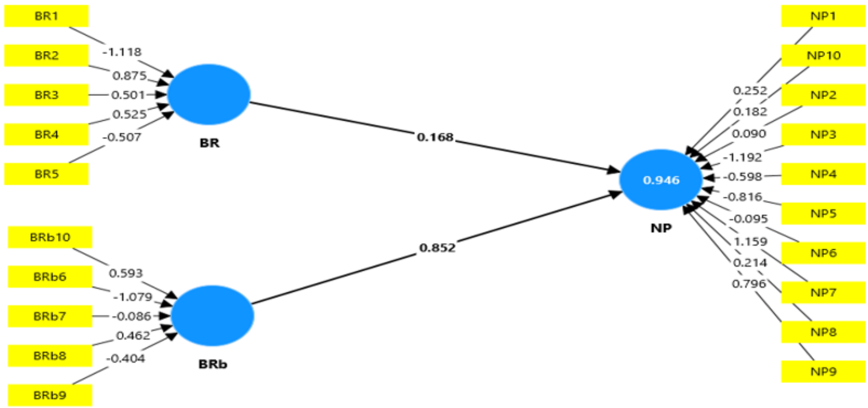
4.1 Unmediated Model for Board Renumeration and Non-performing Loans of Commercial Banks

This study employs the structural equation model (SEM) to investigate three latent variables, namely Diversity and Expertise (BR) and Independence and Objectivity (BRAb), which are sub-constructs of Board Remuneration and Non-performing Loans (NP). Board characteristics are used to analyze the impact of non-performing loans on an organization in this model. By examining these variables, the model endeavors to determine which components of board composition are more influential in determining loan outcomes.

Both Diversity and Expertise (BR) and Independence and Objectivity (BRAb) are employed to gauge the latent construct Non-performing Loans (NP). Path coefficients are used in the model to depict the strength and direction of these predictive relationships. The path coefficient for non-performing loans is 0.168, whereas the path covarict between Independence and Objectivity (BRb) is 0.852. The coefficients indicate that BRb is more influential in predicting Non-performing Loans (NP) than BRA and Diversity and Expertise (BR), suggesting that boards with greater independence and objectivity may be better equipped to manage loan default risks. Specific indicators for each latent variable are included in the SEM model, which are used to operationalize them. Diversity and Expertise (BR) indicators, ranging from BR1 to BD5, identify crucial elements of this sub-construct, such as diversity in professional qualifications among board members. Independence and Objectivity (BRb) is measured by indicators ranging from BRa6 to BD10, which evaluate various aspects such as board member impartiality and freedom from conflicts of interest. The most important factor. Measured by indicators NP1 through PP10, Non-performing Loans (NP) encompass various aspects of loan performance, such as default rates and recovery effectiveness.

Indicator loadings indicate the degree of synchronization between the measured variable (indicator) and its corresponding latent variable. A loading of 0.875 for BR2 on Diversity and Expertise (BR) indicates a positive correlation between this indicator and the latent construct, while 0.796 for an NP9 on Non-performing Loans (NP) suggests inversely but positively. The latent construct can be accurately measured by the indicator, which is typically suggested by higher loadings, indicating the reliability of the measurement model overall. By focusing on board renumeration, the SEM model highlights the importance of diversity in skills and autonomy for non-performing loans. Its path coefficient of Independence and Objectivity (BRb) is higher than that of Diversity and Expertise (Berke).

To evaluate the model in SmartPLS, initiated by arranging the latent variables and their corresponding symbols, then routed paths based on the network's layout. The PLS Algorithm was utilized to generate path coefficients, R2 values, and model fit indices such as SRMR and NFI. The SRMR value was lower than the recommended value of 0.08, and the NFI value above 0.90 was typically considered to be in line with a good model fit. Through bootstrapping, the significance of path coefficients was assessed and the chi-square values were estimated to be 185.315, indicating that the model is in line with the data and latent variables have increased the explanatory power of the system. The conclusion could suggest that board independence may be essential for efficient loan oversight and management, potentially resulting in a decrease in non-performing loans by encouraging more objective decision-making.



CMIN= 185.315

NFI= 0.94>0.90

MRSR= 0.05<0.08

BR=.168, p=.153

BRb=.852, p=.019

Fig. 1. Unmediated model for board renumeration and non-performance

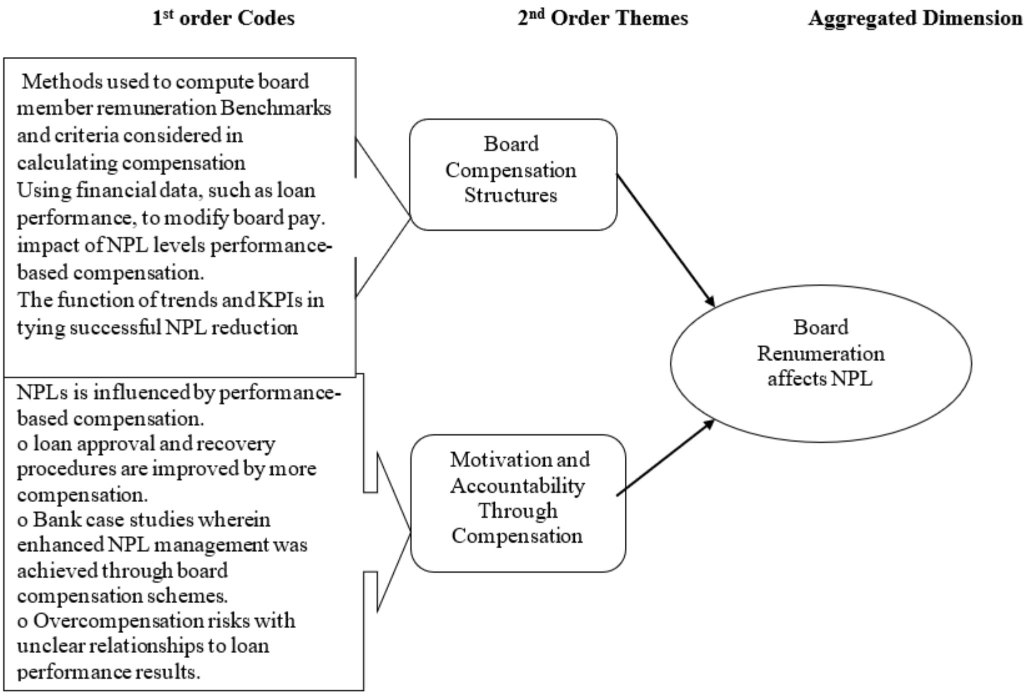


Fig. 2. Reality Radial Diagram on Board Compensation and Non-performing Loans

Table 4. Latent correlation between board renumeration and non-performing loans

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
NP <-> BR	0.736	0.680	0.358	2.057	0.040
NP <-> BRb	0.964	0.870	0.409	2.356	0.019

The Table 4 presents a summary of the correlations between the latent variables, including key statistical measures such as means, standard deviations, T-values, and p-values. A significant finding is the correlation between NP (Non-Performing Loans) and BR (diversity and expertise), which stands at 0.736. With a T-value of 2.057 and a p-value of 0.040, this correlation reveals a statistically significant positive relationship at the 5% level. This implies that as diversity and expertise within the banking sector improve, Non-Performing Loans tend to increase as well, although the strength of this correlation is moderate compared to others in the model. In contrast, the correlation between NP and BRb (independence and objectivity) is substantially stronger, with a correlation of 0.964. This is supported by a T-value of 2.356 and a p-value of 0.019, demonstrating a very strong and statistically significant positive relationship at the 5% level. This suggests that the banking sector's independence and objectivity are closely related to the performance of Non-Performing Loans, with stronger resilience in these areas correlating with a better management of NP.

Overall, all correlations in the model are statistically significant, with the lowest p-value of 0.019 indicating the strongest relationship between NP and BRb. These findings highlight a high degree of interconnection between the variables, with NP showing the most substantial correlation with BRb, followed by BR. This underscores the significant role of banking sector independence and objectivity in influencing the behavior of Non-Performing Loans. This implies that the null hypothesis which stated that there is no statistically significant relationship between board compensation and non-performing loans of commercial banks was rejected meaning that board compensation significantly affects non-performing loans, thus when board members are well compensated, they get motivated to come up with clear policies and strategies to reduce non-performing loans and the reverse is true.

4.2 The Perceived Understanding of Board Compensation and Non-Performing LOANS of Commercial Banks

This section presents the interviewees' perceived understanding of board compensation and non-performing loans of commercial banks. To obtain a clearer picture, the interviewees were asked to answer each of following questions (.1. How do you normally compute the compensation of the board members? 2. In your opinion, do you think compensation of board of directors have any impact on non-performing loans of commercial banks 3. What challenges is the board facing in handling the non-performing loans?) and the themes and sub themes generated were presented in the Fig. 2.

The results reveal that, generally, interviewees perceived board compensation and non-performing loans of commercial banks as board renumeration affects NPL. On analyzing the transcripts from qualitative interviews, it was established that two major sub themes emerged to mean board compensation which are: Board compensation structures and motivation and accountability through compensation.

Board Compensation Structures: After analyzing the transcripts, the findings indicate that board compensation structure has an influence on non-performing loans. The methods used to compute board member compensation benchmarks and criteria considered in calculating compensation, using financial data, such as loan performance, to modify board pay impact of NPL levels performance-based compensation and the function of trends and KPIs in tying successful NPL reduction. All these if done well, non-performing loans of commercial banks reduces.

Motivation and Accountability through Compensation: The findings also revealed that motivation and accountability of the board through compensation, has a significant influence in reducing non-performing loans of commercial banks. NPLs is influenced by performance-based compensation, loan approval and recovery procedures are improved by more compensation, bank case studies wherein enhanced NPL management was achieved through board compensation schemes, overcompensation risks with unclear relationships to loan performance results and situations where increasing NPLs are concomitant with increased.

5. DISCUSSION OF FINDINGS

The study findings revealed a significant relationship between board compensation and non-performing loans of commercial banks meaning that the null hypothesis which stated that there was no statistically significant relationship between board compensation and non-performing loans of commercial banks was rejected implying that when board members are well renumerated, they get motivated to dedicate more time to think and come up with good strategies that can help commercial banks to fight non-performing loans. Finding also discovered that commercial banks have independence of the compensation committee from the directors and normally discloses the compensation policy to shareholders, There is also a mixture of board compensation components and commercial banks have put in place equity ownership guidelines to determine who should be a director in terms of number of shares, the results also found out that goals used to determine incentive awards are aligned with the banks' financial goals, the CEO/Managing Directors were also siting on the compensation committee. the compensation committee was also composed wholly of independent board members, the banks were operating performance-based compensation when renumerating directors and additional compensation were normally provided to directors who chair key board committees and finally the board members were normally receiving an annual retainer for their services rendered.

The structural equation model demonstrates that Diversity and Expertise (BR) has a path coefficient of 0.168 with respect to Non-performing Loans (NP), while Independence and Objectivity (BRb) exhibits a higher path coefficient of 0.852. These values imply that Independence and Objectivity (BRb) has a considerably stronger effect on non-performing loans than Diversity and Expertise (BR). This discrepancy suggests that boards characterized by higher levels of independence and objectivity may play a more substantial role in mitigating or managing loan default risks. A higher path coefficient of 0.852 for Independence and Objectivity (BRb) indicates that board members who maintain impartiality and are free from conflicts of interest can significantly influence loan performance, likely due to their ability to make unbiased decisions that are in the best interest of the organization. Conversely, the lower path coefficient of 0.168 for Diversity and Expertise (BR) implies that while varied expertise and diverse backgrounds among board members contribute to managing non-performing loans, their influence is comparatively limited. This insight suggests that the structural independence of board members may be a critical factor in effective loan oversight and in strategies aimed at reducing non-performing loans.

The study results are in line with those of Kim et Trung (2019), who have researched the influencers of non-performing loans (NPLs) in Vietnam's commercial joint stock banks in the period between 2009 and 2017. Their research covered macroeconomic and microeconomic causes of bad debts thus giving a coherent picture of variables that affect the loan performance in the Vietnamese sector. The combination of qualitative and quantitative methods that the team of Kim and Trung used in examining the NPL ratios in separate banks and the overall credit conditions of Vietnam's banking industry. To model the main causes of NPLs, Kim and Trung applied Generalized Method of Moments (GMM); a complex statistical procedure that can handle the problem of potential biases and endogeneity in dynamic panel data. Their research resulted in the formation of two models: one model had six statistically significant variables that were discovered to be factors influencing NPLs, on the other hand, the second model emerged with five significant variables. These results point out that the causes of NPLs are on one hand manifold and on the other, they bring to the foreground the key role of macro- and micro-level issues in managing credit risk inside bank sector. This study is a high value source also discussing the intricacy of NPL determinants, thus chiming the diversified influences on the loan performance which are context-specific in the Vietnamese economy.

On the other hand, the research failed to agree with Setiawan (2022) who observed the connection between CEO remuneration and the degree of risk for Indonesian banks. Non-performing loans related to loan risk are one of the major indicators that help banks to determine their risk level. The Loan that is not performing is the dependent variable. Besides, the independent variable was the executive remuneration. A number of others, including firm age, size, and capital asset ratio, are used as the control variables of the study and show that the CEO's pay, the firm's age, and the capital asset ratio, are the factors that negatively affect the CEO's pay, the firm's age, and the capital asset ratio. The study was also different from the 2020 study of Islam on the impact of board activities and composition on bank nonperforming loans (NPLs). As per the data, board independence, the splitting of the CEO and chairman positions, directors with financial knowledge, and the number of committee meetings are the other factors that have been found to have a strong but negative effect on the NPLs.

6. CONCLUSION

The study goes on to report that board remuneration structures do in fact reduce non-performing loans of commercial banks. This is because when board members are remunerated well, they are incentivized to perform their roles and tasks of formulating clear policies and strategies to combat non-performing loans. Board compensation structures and motivation and accountability through compensation and the following effects stand out from the empirical findings. Compensation benchmarks was the most resonating aspect of the study. Board compensation structure plays an impact on non-performing loans and this can be achieved by ego and incentive compensation gap, quality of wages perceived by the board ,quality of wages perceived by stress, using financial things including benchmarks and benchmarks values, quality of salary composition ,impact of compensation on financial and non-financial performance indicators of the bank ,effect of extreme compensation values on NPLs most value forming elements informing the bank and relationship between certain values and NPls. If these aspects are well handled, non-performing loans of commercial banks reduces.

Motivation and accountability of the board through compensation has the following effects on board members and of the aspect control out of the use of structure is likely to influence the probabilities of board members and of the aspect leading to the following ,control exertion of the structure (compensation) conditional on the size of board , job rotation , amount in the form of compensations, quality of compensation information shared and control and flexibility in the structure structures, control dominion and performance based structure based on results boards.

7. RECOMMENDATION

The recommendations developed from this research study, based on its findings and conclusion, indicate that it is now time the compensation of the board members be drastically improved, as the evidence shows a positive contribution to the decline in the nonperforming loans portfolio. If board members get generous remuneration, then they have all the motivation to come up with policies and strategies which will help the management be in a position to reduce nonperforming loans. The research additionally suggested that board members should then be held accountable and compensated accordingly.

In view of the study results in respect of the impact of board members' compensation on non-specified business; they stated that "commercial banks should design their board compensation structures to facilitate the development of incentive packages for these members." They have to use proper methods of setting compensation benchmarks and criteria in determining the pay for the board members and also to tune the compensation of board members to the performance of loan pay-offs using financial data to undertake performance corrections based on nonperforming loan levels, etc. Successful reduction of nonperforming loans will ultimately lead to the decrease in NPL and thus if all this is done perfectly and aptly the nonperforming loans profile of the commercial banks will truly be seeing a downward trend.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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