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DOES GOVERNANCE MATTER FOR CREDIT RISK? DIRECT AND MODERATING EFFECTS OF COUNTRY GOVERNANCE INDEX ON NON-PERFORMING LOANS IN BANGLADESH

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ABSTRACT: Non-performing loans (NPLs) continue to pose a significant challenge to the stability of the banking sector in emerging economies, especially in contexts where institutional weaknesses and macroeconomic fluctuations are prevalent. This study delves into how the Country Governance Index (CGI) directly impacts NPLs and how it moderates the relationship between certain macroeconomic factors and NPLs in Bangladesh. Utilizing a quantitative research design, this study analyzes panel data from 34 banks listed on the DSE over the period from 2013 to 2023. A composite CGI is created through Principal Component Analysis (PCA), drawing on six dimensions of the Worldwide Governance Indicators (WGI): Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption. The hypotheses are evaluated using Pooled Ordinary Least Squares (Pooled OLS), Random Effects Model (REM), and Feasible Generalized Least Squares (FGLS) estimations. The results indicate that CGI does not have a significant direct impact on NPLR. However, governance plays

a crucial moderating role in the relationship between GDP growth, inflation, and NPLs. Specifically, the interaction terms CGI*GDP and CGI*INF show significant negative effects on NPLs, suggesting that stronger governance amplifies the positive effects of economic growth while reducing the negative impact of inflation on credit risk. On the other hand, the moderating effects of governance on the relationships between unemployment, lending rates, and NPLs are not statistically significant. Overall, the findings imply that governance acts mainly as a stabilizer that reinforces macroeconomic discipline rather than serving as a direct determinant of NPLs.

Keywords: *Non-performing loans (NPLs); Country Governance Index (CGI); Worldwide Governance Indicators (WGI); Macroeconomic Factors; Principal Component Analysis (PCA).*

1. Introduction

Non perming loans (NPLs) have been a critical challenge for the banking industry of Bangladesh causing impediments to financial stability and effectiveness in credit intermediation. An NPL refers to a loan with interest or principal payments that are 90 days or more past due, thus indicating that the borrower is unable or unwilling to meet its financial obligations (IMF, 2019). NPLs are classified into sub-standard, doubtful, bad or loss in Bangladesh subject to some conditions. Loans for which interest or principal remains unpaid for 3 months or more but less than 9 months are classified substandard; those on which interest or principal remains unpaid for 9 months or more but less than 12 months are classified doubtful; and those on which interest or principal remains unpaid for 12 months or more are classified bad or loss (BRPD Circular, Bangladesh Bank, 2019).

NPLs pose serious threat to the banking industry and the economy itself. This in turn diminishes bankable assets, reducing both lending capacity and the bank's margins (Patwary & Tasneem, 2019). Non-performing loans is liable for the reduction in income and liquidity, and ultimately hampering the ability of financial institutions is compromised due to NPLs and create insolvency in banks (Bellotti et al., 2021). In addition, the build-up of NPLs in the South Asian region is a significant risk for the banking industry, whereas it reduces the banking industry’s lending funds, distorts the credit market, and slows down economic growth (Rahman & Hamid, 2019; Roy et al., 2018). These countries Non-

Performing Loan Ratio (NPLR) frequently exceeds the global standard of 3%, suggesting increased susceptibility (Kumar et al., 2020).

Public choice theory holds that corruption and self-interest behavior have a deflating effect on the efficacy of regulations, and in doing so damages the governance architecture and induces an increase in NPLs (Buchanan and Tullock, 1962). This is closely associated to the WGI control of corruption dimension, which reflects rent-seeking and political interferences that corrupt lending and regulatory enforcement. It is claimed that proven, strong institutions will ensure economic stability, whilst less well-established institutions can fan the flames of crisis (North, 1990). This is consistent with the WGI measures of law and government effectiveness, where the lack of legal enforcement and regulatory problem in Bangladesh has impeded its capacity to deal with NPLs. Likewise, agency theory also emphasizes the role of poor governance and misaligned incentives between the regulator and banks promoting risk and imprudent credit risk behavior (Jensen and Meckling, 1976). This is indicative of weakness in WGI: regulatory quality and accountability, both of which are perennial question marks in Bangladesh. In combination, these theories and governance indicators indicate that the country's weak institutional settings are a critical source credit risk.

NPLs have generated considerable scholarly discourse, with numerous research examining factors that affect NPLs. It's determined by the macroeconomic, bank-specific, and governance factors. Globally, country risk, current account balances, oil price dynamics, business and credit cycles all impact the performance of loans at the macro level. Bank-level factors include credit expansion and credit risk management (Peric and Konjusak, 2017), regulatory capital, bank size, leverage, and efficiency (Karim et al., 2010), while technology breakthroughs such as financial inclusion and fintech usage also matter (Hakimi et al., 2024). Moreover, the literature also underlines the effect of sustainable development and carbon-loaded credit on NPLs (Al-Khazali et al., 2017 and Guan et al., 2017). Collectively, these studies helped to understand the factors that led to the creation of the NPLs in the countries of the sample, which are a combination of the economic, institutional and country governance factors, the banking practices and the environmental issues, through the presence of the interest rates, the exchange rates, the stock prices and the financial inclusion as well.

Meanwhile, relatively scarce attention is given to the effect of poor governance on bank NPLs. Low scores of the World Governance Indicators (WGI), which comprised control of corruption, rule of law, government effectiveness, and regulatory quality where there is weak governance can debilitate institutional monitoring and the effectiveness of juridical enforcement, in which circumstance the banks perform less in a responsible manner (Abedin, 2020 and Fernández & Gonzalez, 2005). Political influence can weaken lending decisions, especially among politically connected banks, because political ties might have enabled lenders to relax lending standards for their own benefit (Chen et al., 2018). Such governance weaknesses contribute to the frequency of bad loans and lead banks to financial crises.

Existing studies on NPLs have primarily focused on bank-specific and corporate governance, with limited attention to country-level governance. Governance challenges, including weak institutions, political interventions, money laundering, aggressive lending, and regulatory deficiencies, can exacerbate NPLs. To address this gap, the present study examines six country governance variables including control of corruption, political stability, voice and accountability, regulatory quality, government effectiveness, and rule of law by constructing a composite governance index (CGI) and assessing its impact on NPLs, including its moderating effect on macroeconomic variables, in Bangladesh, one of South Asia's emerging economies.

2. Literature Review and Hypothesis Development

The drivers of NPLs have been a major focus of banking and financial stability studies. While much earlier work has considered bank-specific and macroeconomic determinants, studies have recently begun to consider the impact of governance and institutional quality on credit risk. This section summarizes the literature on the link between country governance and NPLs and sets the hypotheses on the direct effect of country governance and its moderating effect between macroeconomic factors and NPLs.

2.1. Country Governance and Non-Performing Loans

Country governance has increasingly been recognized as an important determinant of banking sector stability and credit risk management. Good governance structures reinforce regulatory oversight, strengthen institutional accountability, increase transparency and

promote the implementation of financial regulations, leading to better asset quality and lower NPLs. A good governance framework from an institutional perspective helps in minimizing information asymmetry, avoiding agency conflicts, restricting opportunistic lending and discouraging opportunistic behavior, which is critical to banking system's soundness (Ahiase et al. 2024).

The evidence from empirical studies is increasing in support of the negative link between good governance and NPLs. The studies show that better governance increases the regulatory discipline, loan recovery and monitoring, which in turn will lower credit risk. In particular, Ghosh et al. (2025) showed that better governance has a significant negative effect on NPLs using a sample of lower-middle-, upper-middle-, and high-income countries, which suggests that governance is an effective institutional mechanism to address banking sector vulnerabilities. Likewise, Arham et al. (2020) found that governance is an important factor in reducing NPL risks and can mitigate the impacts of macroeconomic shocks on the banking sector. The study by Büyükoglu et al. (2021) revealed governance to be a significant factor driving NPL behavior in emerging markets, indicating that better governance promotes institutional efficiency and diminishes banking sector risk. Likewise, Rehman et al. (2025) found a significant negative impact of Country Governance on NPLs in South Asian countries, concluding that governance quality has a significant impact on ensuring financial stability and lowering credit risk. The results also support this by the findings of Katuka et al. (2024) which indicate that the good governance leads to lower NPLs because it strengthens institutional capacity and enhances financial sector resilience. They reported that good governance is conducive to sound lending practices and contributes to financial institutions' resilience to economic shocks. Similarly, Rahman and Howlader (2024) emphasized that good governance is one of the most economical factors that can lessen NPL ratios, which implies that governance quality is a crucial tool that can support banking sector soundness. Despite this, the literature as a whole suggests that improvements in governance can increase institutional effectiveness and reduce the incidence of NPLs. Based on these theoretical arguments and empirical findings, the following hypothesis is proposed:

H_1: *Country Governance Index (CGI) has a negative and significant impact on NPLs*

2.2. Moderating Effect of CGI between Macroeconomic Factors and NPLs

The direct link between governance and the presence of NPLs has been paid significant attention, but more recent studies indicate that governance can also influence the impact of macroeconomic conditions on the banking sector credit risk. The repayment capacity of borrowers and the quality of bank loan portfolios are affected by macroeconomic variables like GDP growth, inflation, unemployment and lending rates (Hada et al., 2020). However, the magnitude of these effects may depend on the countries governance perspective within which banks operate. The moderating role of country governance in the relationship between macroeconomic variables and NPLs is significant, as evidenced by multiple studies. Arham et al. (2020) found that country governance moderates the relationship between macroeconomic cyclical indicators and NPLs in Emerging Asian economies, indicating that stronger governance reduces the sensitivity of NPLs to economic fluctuations. Likewise, Rahman and Howlader (2024) found that good governance can lower the NPL ratio directly and also have a negative effect on the influence of other risk factors on credit risk. Ghosh et al. (2025) further demonstrated that higher-quality governance exerts a stronger negative effect on NPLs, particularly during periods of economic stress, highlighting the role of governance in enhancing banking sector resilience. Overall, the study findings highlight that government effectiveness has significant impact in reducing NPLs, while also shedding light on the interaction of macroeconomic indicators with country governance in mitigating credit risk. Therefore, the following hypotheses have been assumed:

H_2: *Country Governance Index moderates the relationship between GDP growth and NPLs*

H_3: *Country Governance Index moderates the relationship between unemployment and NPLs*

H_4: *Country Governance Index moderates the relationship between inflation and NPLs*

H_5: *Country Governance Index moderates the relationship between lending rates and NPLs*

Prior studies have shown that firm size, age, and leverage significantly affect banks' risk profile and asset quality; therefore, controlling for these factors helps isolate the direct and moderating effects of the Country Governance Index (CGI) on NPLs (Haq and

Kamruzzaman, 2020; Ghosh, 2005). Bank size, measured as log of total assets, is a measure of a bank's financial strength and resource capacity. The bank age is defined as the number of years since the bank's listing on the Dhaka Stock Exchange (DSE) and leverage is total debt divided by total equity. These variables are included as control variables to account for bank-specific characteristics that may independently influence NPLs.

3. Methodology

3.1. Research Design and Data

This study employs a quantitative ex post facto research design using secondary data to investigate the direct and moderating effects of the CGI on NPLs in Bangladesh. Sample banks are 34 banks listed in the DSE during 2013-2023, which gave a balanced panel data of 374 observations of bank-years. The annual reports of selected banks were used to gather NPLs, whereas governance and macroeconomic data were gathered from the World Bank's Worldwide Governance Indicators (WGI) and World Development Indicators (WDI) database.

3.2 Variable Measurement

The dependent variable is the non-performing loan ratio (NPLR), computed as a percentage of non-performing loans to total loans. The Country Governance Index (CGI) constructed using Principal Component Analysis (PCA) based on six governance dimensions of the Worldwide Governance Indicators (WGI): Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption is the key explanatory variable. Moderating effect was tested by performing interactions between CGI and four macroeconomic variables, namely GDP growth, inflation, unemployment, and lending interest rate.

3.3 Model Specification

To empirically test the proposed hypotheses, this study adopts a baseline panel data model to examine the impact of country governance index on NPLs in Bangladesh. The model is developed following the frameworks of Rahman and Howlader (2024), Ahiase et al. (2024), Arham et al. (2022), and Byükoğlu et al. (2021), while incorporating additional variables identified in the relevant literature to better capture the determinants of NPLs.

The explanatory factors employed in this study are the country governance index, macro-economic factors in interaction with country governance index.

$$NPLR_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 CGI * MEF_{it} + \beta_3 Z_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots (i)$$

In this model, β_0 denotes the intercept, while β_1 to β_3 represent the estimated coefficients of the explanatory variables, ε_{it} is the error term. The dependent variable, $NPLR_{it}$, refers to the non-performing loan ratio of bank i in year t. The principal explanatory variable is the Country Governance Index (CGI) which is analyzed as a direct determinant of NPLs and as a moderator of the relationship between macroeconomic variables and NPLs via interaction terms. The macroeconomic variables used in the study are GDP growth, inflation, unemployment, and lending rate. Furthermore, bank age, bank size and leverage are added as control variables to control for bank-specific characteristics that might affect NPLs.

The panel data model is estimated using the following specific equations:

$$NPLR_{it} = \beta_0 + \beta_1 CGI_{it} + \beta_2 CGI * GDP_{it}$$
$$+ \beta_3 CGI * INF_{it} + \beta_4 CGI * UNEP_{it} + \beta_5 CGI * LR_{it} + \beta_6 Z_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots (ii)$$

4. Results and Discussion

4.1. Descriptive Statistics

Table 1: Descriptive Statistics

Variables	**Mean**	**Std. Dev.**	**VIF**	**1/VIF**
NPLR	5.124	3.846		
CGI	-0.834	0.066	3.790	0.264
CGI*GDP	-5.361	1.018	1.500	0.667
CGI*UNEP	-4.031	0.585	2.370	0.422
CGI*INF	-5.482	1.340	1.840	0.543
CGI*LR	-8.175	2.034	3.890	0.257
Control Variables				
SIZE	21.644	6.389	1.200	0.836
AGE	22.028	12.123	1.870	0.536
LEV	13.226	4.393	2.050	0.489
Note: The number of observations =374				

Source: Researcher's Compilation

Descriptive statistics and multicollinearity diagnostics for the study variables are shown in Table 1, which is based on 374 bank-year observations. The average of the NPLR is 5.124 percent, and the standard deviation is 3.846, which means that there is variation in the level of credit risks among the sampled banks. The CGI shows a relatively small variation in governance quality, with a mean index of –0.834 and a standard deviation of 0.066 during the period of this study. The mean values of the interaction terms CGI*GDP, CGI*UNEP, CGI*INF and CGI*LR are -5.361, -4.031, -5.482 and -8.175, respectively, and the respective standard deviations of such interaction terms are 0.585, 2.034, 2.034 and 2.034. These findings indicate considerable differences in the overall impact of governance and macroeconomic variables on credit risk. The relatively higher negative mean value of the interaction terms suggests that the negative impacts of macroeconomic conditions, particularly unemployment, inflation, and lending rates, may be amplified by weak governance, which may curb the ability of borrowers to repay their loans and increase the risk of NPLs. All the Variance Inflation Factor (VIF) values are between 1.200 and 3.790, which is less than the threshold value of 5 (de Winter, 2025 and Kim, 2019). The results showed that there is no serious multicollinearity between the explanatory variables in the regression models, so the variables are appropriate for the models.

4.2. Pairwise Correlations

Table 2 depicts that, NPLR is strongly correlated with corporate governance index and also with the interaction of corporate governance with inflation and lending rate. The correlation coefficients between the independent variables are all below 0.80, indicating no multicollinearity problems in the dataset (Salmerón-Gómez et al., 2020).

Table 2: Correlation Matrix of NPLR, CGI, Interaction Variables and Control Variables

Variables	NPLR	CGI	CGI*GDP	CGI*UNEP	CGI*INF	CGI*LR	Size	Age	Lev
NPLR	1.000								
CGI	-0.138***	1.000							
	(0.008)								
CGI*GDP	-0.068	0.072	1.000						
	(0.188)	(0.165)							
CGI*UNEP	0.046	-0.545***	-0.066	1.000					
	(0.374)	(0.000)	(0.203)						
CGI*INF	-0.067*	-0.194***	0.125**	0.403***	1.000				
	(0.134)	(0.000)	(0.015)	(0.000)					

CGI*LR	-0.116**	0.714***	0.147***	-0.256***	0.203***	1.000			
	(0.025)	(0.000)	(0.004)	(0.000)	(0.000)				
Size	0.021	0.065	0.000	-0.039	-0.006	0.066	1.000		
	(0.680)	(0.207)	(0.999)	(0.453)	(0.908)	(0.206)			
Age	0.402***	0.222***	0.002	-0.147***	-0.057	0.206***	-0.033	1.000	
	(0.000)	(0.000)	(0.964)	(0.004)	(0.273)	(0.000)	(0.526)		
Lev	0.416***	0.316***	0.003	-0.197***	-0.032	0.320***	-0.009	0.242***	1.000
	(0.000)	(0.000)	(0.950)	(0.000)	(0.539)	(0.000)	(0.862)	(0.000)	
*** p<0.01, ** p<0.05, * p<0.1									

Source: Researcher's Compilation

4.3. Principal Component Analysis (PCA)

Table 3: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.834
Bartlett's Test of Sphericity	Approx. Chi-Square	379.677
	df	15
	Sig.	0.000

Source: Researcher's Compilation

The KMO value (0.834) indicates (Table 3) excellent sampling adequacy for PCA, and Bartlett's Test ($p < 0.001$) confirms significant correlations among variables. This validates the suitability of PCA for dimension reduction.

Table 4: Component Matrix

Component Matrix	
	Component
	1
RQ	0.969
GE	0.965
COC	0.961
RL	0.948
VA	0.897
PS	0.772
a. 1 components extracted.	

Source: Researcher's Compilation

Based on the results (Table 4) of the Principal Component Analysis (PCA), a single component has been extracted, capturing the majority of the variance among the variables. The Component Matrix shows the loadings of each variable on the extracted component RQ (0.969), GE (0.965), COC (0.961), RL (0.948), VA (0.897) and PS (0.772). The results suggest that the extracted component can be used as a single composite index representing country governance, simplifying analysis by reducing the number of independent variables as well solving the problem of multicollinearity.

4.4. Results of Model Fit and Diagnostic Tests

Table 5: Estimations of Model Fit and Diagnostic Tests

Tests	Estimations		Decision
Hausman specification Test	χ^2 =	3.33	Random effects (RE) model is appropriate
Breusch and Pagan Lagrangian multiplier test	χ^2 =	425.35***	RE model is appropriate
Pesaran's Cross-Sectional Dependence (CSD) test	CSD =	-0.900	Residuals do not exhibit statistically significant cross-sectional dependence
White Test for heteroscedasticity	χ^2 =	48.960**	To account for heterogeneity across entities robust regression is required, while this study applies Feasible Generalized Least Squares (FGLS) (Chatha et al., 2025 and Bai et al., 2021)
Breusch–Pagan/ Cook–Weisberg Test heteroscedasticity	χ^2 =	167.620***	
Wald test for heteroscedasticity	χ^2 =	7.94000***	
Breusch–Godfrey LM for Autocorrelation	χ^2 =	156.821***	Autocorrelation exists and thus suggesting FGLS (Chatha et al., 2025 and Bai et al., 2021)
Durbin–Watson test for Autocorrelation	D (17, 374) =	0.7049158	
Wooldridge test for Autocorrelation	F (1, 33) =	20.182***	
*** $p<0.01$, ** $p<0.05$, * $p<0.1$			

Source: Researcher's Compilation

4.5. Regression Results

Table 6: Regression Results of NPLR, CGI and CGI with Macroeconomic Interaction

	Pooled OLS		**REM**		**FGLS**	
NPLR	Coef.	*p*	Coef.	*p*	Statistic	*p*
CGI	-2.554 (4.826)	0.597	-0.253 (3.629)	0.944	2.409 (2.084)	0.248
CGI*GDP	-0.149 (0.180)	0.406	-0.209** (0.101)	0.037	-0.211*** (0.060)	0.000
CGI*UNEP	0.799* (0.428)	0.062	0.527 (0.497)	0.289	0.277 (0.266)	0.299
CGI*INF	-0.149 (0.220)	0.500	-0.174** (0.085)	0.042	-0.187** (0.081)	0.021
CGI*LR	-0.033 (0.199)	0.569	0.059 (0.155)	0.703	0.014 (0.078)	0.862
SIZE	.024 (0.031)	0.437	0.025 (0.073)	.731	0.010 (0.028)	0.720
AGE	.097*** (0.015)	0.000	0.111** (0.046)	.015	0.082*** (0.015)	0.000
LEV	.25*** (0.049)	0.000	0.159*** (0.054)	.003	0.099*** (0.030)	0.001
Constant	-1.408 (2.427)	0.562	-.185 (1.970)	.925	2.114** (1.013)	0.037
Number of obs.	374		374		374	
R^2	0.285		0.374			
F-test	12.780					
Prob > F	0.000					
Chi^2			30.510			
Prob > Chi^2			0.000			
Wald Chi^2					107.82	
Prob > Chi^2					0.000	
*** *p<0.01, ** p<0.05, * p<0.1,*						

Source: Researcher's Compilation

Table 6 presents the regression estimates of the direct effect and moderating effect of CGI on NPLR using Pooled OLS, REM, and FGLS estimations. The results show that CGI does not have a statistically significant direct effect on NPLR based on Pooled OLS (β = − 2.554, p = 0.597), REM (β = − 0.253, p = 0.944), and FGLS (β = 2.409, p = 0.248)

models. Consequently, H_1 is rejected. The insignificant direct effect of CGI on NPLR suggests that better governance alone may not be effective to lower NPLs in commercial banks of Bangladesh without additional support from adequate regulatory and risk-management practices.

When examining moderation, the interactions involving CGI showed a notable negative influence. CGI*GDP negatively and significantly relates to NPLR in both REM (β = -0.209, p = 0.037) and FGLS (β = -0.211, p < 0.01) models, supporting H_2. The implication of this result is that countries with better governance experience greater positive effect of economic growth on reducing credit risk. CGI*INF is negative and significant in both REM (β = -0.174, p = 0.042) and FGLS (β = -0.187, p = 0.021) models, supporting H_4. It indicates that good governance lessens the negative impact of inflation on borrowers' repayment ability and banking sector soundness, support prior studies of Arham et al. (2020); Rahman and Howlader (2024); Byükoğlu et al. (2021) and Ghosh et al. (2025).

However, both CGI*UNEP and CGI*LR are insignificant in the applied models. While CGI*UNEP presents a weak and positive effect in Pooled OLS (β = 0.799, p = 0.062), the coefficient becomes insignificant once estimated in REM (β = 0.527, p = 0.289) and FGLS (β = 0.277, p = 0.299). Similarly, CGI*LR is insignificant under Pooled OLS (β = −0.033, p = 0.569), REM (β = 0.059, p = 0.703) and FGLS (β = 0.014, p = 0.862) estimations. Thus, we reject H_3 and H_5. This suggests that governance does not moderate the impact of unemployment and lending rate shocks on NPLs. The regression results show that the Country Governance Index (CGI) doesn't have a direct and significant impact on non-performing loan ratios (NPLR). However, when it interacts with certain macroeconomic variables, it reveals some important moderating effects. This suggests that governance plays a role in influencing credit risk indirectly by shaping how macroeconomic conditions affect it. In particular, better governance boosts the positive effects of economic growth and helps lessen the negative effects of inflation on NPLs. The explanatory variables together explain 28.5% and 37.4% of the variation in NPLR when using the Pooled OLS and REM models, respectively. Additionally, the significant F-statistic (12.780, p < 0.01), Chi-square statistic (30.510, p < 0.01), and Wald Chi-square statistic (107.82, p < 0.01) all point to the overall strength and reliability of the models.

These findings suggest that the explanatory variables play a crucial role in influencing NPLR among banks listed on the DSE in Bangladesh.

5. Conclusion

Non-performing loans (NPLs) continue to pose a significant threat to the stability of the banking sector, especially in emerging economies where issues like governance quality and macroeconomic fluctuations often coexist. To foster financial stability and ensure sustainable banking performance, it's crucial to grasp how governance and macroeconomic factors impact credit risk. With this in mind, this study delves into the direct and moderating effects of the Country Governance Index (CGI) on the non-performing loan ratio (NPLR) for 34 banks listed on the DSE in Bangladesh, covering the years from 2013 to 2023. The study result shows that CGI doesn't have a major direct effect on NPLR, indicates that just having good governance isn't enough to tackle NPLs in the banking sector. However, moving towards the moderating role, it becomes clear that governance plays a crucial role in how macroeconomic factors influence credit risk. For instance, the relationship between CGI and GDP growth shows a significant negative effect on NPLR, suggesting that better governance can amplify the positive impact of economic growth on reducing credit risk. Likewise, the interaction between CGI and inflation also reveals a significant negative impact, indicating that strong governance can help to lessen the negative effects of inflation on loan quality. On the other side, the moderating effects of governance on the connections between unemployment, lending rates, and NPLR don't show any significant impact. These findings indicate that governance acts more like an institutional stabilizer rather than a direct cause of NPLs. This highlights that by improving governance mechanisms, we can indirectly reduce credit risk, as they strengthen the positive effects of good macroeconomic conditions and lessen the impact of inflationary pressures.

From a policy standpoint, these findings highlight how crucial it is to strengthening the governance frameworks by enhancing transparency, accountability, regulatory effectiveness, and the overall quality of institutions. Implementing these measures can significantly enhance the banking sector's resilience against macroeconomic shocks and help maintain the quality of assets. For bank managers and regulators, weaving governance aspects into risk management and supervisory frameworks could lead to improved

financial stability and more efficient credit-risk management. This study focuses specifically on banks listed on the DSE in Bangladesh, covering the years from 2013 to 2023. It also takes into account certain macroeconomic variables along with a composite governance index. Looking ahead, future research could delve into other institutional factors, expand to different geographical areas, and explore alternative methodologies to gain a deeper understanding of the governance and NPLs nexus.

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