

# An Investigation into indirect effect of NPA on Bank's lending efficiency: A Global Perspective

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## Abstract

**Purpose:** This study aims to examine the impact of the Gross NPA ratio on lending interest rates, bank capital to assets ratio, broad money (M3), and gross capital formation ratio in selected countries.

**Design/Methodology/Approach:** A balanced panel data approach is employed, utilizing data from 25 countries over an 11-year period (2011-2021). Five different models are utilized to assess the influence of non-performing loans on the selected variables.

**Findings:** The findings demonstrate that non-performing loans significantly affect lending rates, real interest rates, and the gross capital formation ratio. The Gross NPA ratio exerts an upward pressure on both lending interest rates and real interest rates as NPAs increase. However, no significant impact is observed on the bank capital to assets ratio and money supply.

**Practical/Research Implications:** The findings of this study underscore the importance of effective NPA management in the banking sector. Policymakers and financial institutions should prioritize strategies that aim to control and reduce NPAs. By doing so, they can help maintain stable and favorable lending interest rates, which are vital for sustaining a healthy economic environment.

**Originality/Value:** This study adds to existing literature by analyzing the influence of Gross NPA ratio on economic variables such as lending interest rates, bank capital to assets ratio, broad money (M3), and gross capital formation ratio. The findings emphasize the significance of efficient NPA management in ensuring stable interest rates and overall economic well-being, carrying practical implications for policymakers and financial institutions.

**Keywords:** Non-Performing Assets, broad money, Panel regression, fixed effect, random effect, interest rates

**Paper type:** Research paper

## 1. Introduction

For the banking sector, the NPA is one of the best health indicators. The non-performing loans are one of the major and daunting challenges that have shaken the economies of many developed and developing countries. Any asset, including a leased asset, becomes a non-performing asset if it stops to generate income for a bank. A non-performing asset (NPA) can be defined as a credit arrangement for which the payment of principal and/or interest payment remains due for an indefinite period. NPAs are inescapable burden on the banking sector; therefore robust methods of NPA management are necessary for the success of banks. The key cause of growing NPAs, is a target-oriented approach that leads to deterioration in the quality of bank assets and thoughtful defaults, and improper management of loan accounts. A healthy banking sector is crucial for growth of economic development. Any fluctuation or collapse of banking sector would have a detrimental impact on other industries as well. The level of NPAs presents the reflection of healthy environment and growth in trade and finance (Sahoo and Majhi, 2022). Thus we can say that NPAs affect not only the banking sector but also the major sectors of economy. It can be said that the interaction between macro-environment of economy and micro-macro environment of banking system is a major determinant of interest rate and its spread. Money supply and capital formation are important determinants of interest rates in the economy. Banking and financial institutions promote to maintain GNPA ratio to deposits, risk pooling and diversification, and the distribution of



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loans by allocating them to different sectors of the economy. They pay interest rates for deposits in this process, and charge interest on loans in an unpredictable climate. Demirguc-Kunt et al. (2003) also discussed the question of how financial intermediation costs are influenced by the market structure, regulatory environment and institutional characteristics. In addition, the pressure from both banks and non-banking institutions on competition has increased. In such a dynamic environment, interest rates play an important role in gaining a substantial share of the banking market. To curb non-performing assets (NPAs), it is crucial to implement a multi-faceted approach. Banks and financial institutions should strengthen their credit assessment procedures, conducting thorough evaluations of borrowers' financial health and repayment capacity. Secondly, timely resolution mechanisms, such as bankruptcy laws and asset reconstruction companies, need to be in place to expedite the recovery of NPAs (Manikyamba and Tyagi, 2022).

Several researchers have talked about the association between interest rates and NPAs, and the impact of interest rates on NPAs. In current study we first try to identify the factors we are important in determining interest rates in the economy and further we have calculated the impact of NPAs on these factors. So the current paper seeks to suit a relationship between NPAs and certain indirect variables that reduce banks' lending performance. These factors include both basic factors for banks and factors for macroeconomic policy. We conclude by drawing policy lessons from this debate and propose some steps that can be taken to deal better with future policy making in order to avoid the vicious trap of interest rates, money supply in the economy, capital formation and NPAs.

The article proceeds as follows: Section 2 motivates the structure of our methodology and analysis of relevant literature. Section 3 explains the data, and its source, and econometric methods. Section 4 introduces the empirical model, explains the variables that are used in the empirical model, and addresses the variables. Section 4 displays the summary and conclusion.

#### *1.1 Theoretical Framework*

In this section, we design a simple framework to define a number of factors that have been taken to demonstrate the effect on commercial banks' lending ability of the Gross NPA ratio (calculated as a percentage of total advances). If interest and/or principal on a loan are not paid more than 90 days, the loan is treated as non-performing loan, while it is categorized as past due if payment is delayed for a shorter period (Selvarajan & Vadivalagan, 2013). In other works we can say that if a loan stops to produce income in the form of interest, commission or any other due, the loan becomes a non-performing asset. Then these NPAs are referred to as sub-standard assets for a period of less than or equal to 12 months. The assets which remain in the category of sub-standard assets for 12 months are again categorized as doubtful assets. According to RBI "Loss assets are deemed to be unrecoverable and of such low value that their continuation as a bankable asset is not justified, while some salvage or recovery value can exist." In addition, we have defined the relationship between NPAs and various variables that affect commercial banks' lending ability.

#### **Non-Performing Asset and Interest Rates**

The interest on a loan can be treated as the price paid by borrower to utilize the borrowed sum. It is calculated as a percentage of the principal. The interest rate that is adjusted against the effect of inflation to disclose the actual cost of borrowed funds by borrower and real yield to the lender (or investor), is called real interest rate. Generally, by attracting more consumers, generous lending requirements and low interest rates help to drive up sales (borrowings). However, this is followed by a greater frequency of bad debt defaults. The effect of interest rates on defaults has been studied by several researchers.

Several studies also confirmed a negative association between risk of payment default and real interest rates (Kaplin, et al., 2009). They suggested that the return on investment (here the interest income) should not be less than cost of capital for the financial soundness of

the company. Therefore, if the interest rate is raised, there is a strong risk of defaults in paying back the additional interest in order to obtain a fair return on investment. On the other hand, if interest rates are low, bank borrowing will rise and the eventual NPAs will further reduce investment returns. So we have tried to evaluate the effect of NPAs on interest rates and real interest rates in this study as they are the most important factor for the profitability of the bank.

#### **Non-Performing Asset and Bank Capital to Asset Ratio**

The ratio of bank capital and reserve to overall assets of the bank is known as the bank capital to asset ratio. The bank capital includes funds, retained profits, reserves and provisions, and valuation adjustments etc. while assets include land, general and specific assets etc. NPA triggers assets and the mismatch in responsibility will broaden. The NPAs are responsible for the loss of benefits and the quality of assets. The Narsimhan Banking Reform Committee emphasized on prudential measures to identify profits, classify assets and need for provision as NPAs are inevitable and alarming for the banks. Capital contains tier 1 capital (paid up equity and common stock) which is a joint feature of all financial structures in all countries, and total regulatory capital. The total regulatory capital includes many distinct forms of subordinated debt instruments that need not to be refunded if the funds are needed to retain minimum level of capital (these include tier 2 and tier 3 capitals). Both non-financial and financial assets constitute total assets.

#### **Non-Performing Asset and Broad Money**

Broad money (M3) includes the total money circulating in the country and liquid money (such as bank deposits, treasury bills, gilts). In India broad money is defined as the sum of total money supply, total assets that households and business circulate in the way of payments and for investments, such as bank account, and near money (on the basis of liquidity). Munib Badar et al. (2013) found that NPAs have a combination co-integration with the supply of money and the interest rate. Growing non-performing assets contribute to low quality of assets. There is a problem for banks as rising non-performing assets call for interest rate increases while corporate demand for interest rate reduction as it affects the decision to invest in capital in addition to their financial results. Money supply is often indirectly influenced by non-performing assets as a significant determinant of the interest rate. More capital offers lower interest rates and borrowing money, leading to more NPAs. The current research is therefore focused on testing this indirect effect that varies from non-performing assets to the money supply in the economy.

#### **Non-Performing Assets and Capital Formation**

The net accumulation of capital for a given economy over an accounting period is the production of capital or capital formation. The term refers to purchases of capital goods such as utilities, machinery, transportation equipment and electricity. More recently, the word 'capital formation' has been used in financial economics in a much wider or more ambiguous context to refer to savings drives, the creation of financial institutions, fiscal policies, public borrowing, the growth of capital markets, the privatization of financial institutions and the growth of secondary markets. In absolutely simple terms it can be termed as mobilization of domestic or household savings into capital or investment.

Indian economy has suffered from a vicious cycle of low capital formation due to the increasing NPA crisis. The cycle of economic activities remains in circulation and grows according to the capital formation and credit facilities in the economy. A developing economy is usually seen to have less capital formation and money supply. In such situations commercial banks provide the solution by becoming source of capital for business houses. If the NPAs in the banks increase, the banks suffer from lack of funds for its operational activities and to solve this banks have to borrow for managing its assets and liability mismatches for a shorter period. Finally the banks have to face increased cost and less profit.

## 2. Review of Literature and Research Gap

This section of the study shows an extensive survey of the literature available on or related to the offered topic for study. Many researches in different countries have been done to find out the major causes of NPAs and its effects (Khemraj & Pasha, 2009; Fofack, 2005; Khan, Siddique, & Sarwar, 2020). Fofack, H.L. (2005) addressed the main causes of NPAs in Sub-Saharan Africa in 1990s when the economy was facing the severe problem of economic and banking crisis while Khemraj & Pasha (2009) conducted similar study for Guyanese banking sector. In their study they concluded the significant positive impact strong currency (change in real effective exchange rate) on non-performing loans. The financial determinants of bad loans at banks in the Indian public sector have also been investigated by Ramesh, K. (2019). He observed that the credit-deposit ratio, loan maturity and ROA had a negative effect on NNPAAs, while the operating expenses and capital adequacy ratio had an insignificant impact on NPAs. The priority sector's lending, collateral rates and non-interest earnings have a positive impact on NNPAAs. Bardhan (2019) also found out determinants of NPA in Indian context. Dimitrios, A., Helen, L., & Mike, T. (2016) identified the main determinants of non-performing loans in the banking sector of the euro area for the period 1990-2015, using GMM estimates. Some studies also investigate into bank specific and macro-economic determinants of NPAs (Bardhan, 2019; Mishra, Jain, Abid, & RL, 2020). Messai, & Jouini (2013) talk about different micro and macro-economic determinants of non-performing assets. (Goyal et al., 2023) study the causes of non-performing assets (NPAs) in emerging nations are investigated. The study's conclusions showed that loan defaults frequently happen at a lower rate during times of rapid economic expansion, which therefore results in lower levels of NPAs. (Nasreen, Samia et al., 2023) used a sample of 309 banks from 15 Asian nations between the years of 2010 and 2020 to analyze the impact of rules, transparency, and corruption on the performance of the banking sector. (Chandra, 2023) developed theoretical connections between the two main variables, NPA and investment, in relation to the rest of the economy.

Several scholars have also investigated the association between different macro-economic variables and non-performing assets (Singh, 2010; Swamy, 2012). Using a dataset from 2007 to 2013, Vatansever, M., & Hepsen, A. (2013) analyzed the relationship between macroeconomic indicators, bank-level variables and non-performing loan ratios in Turkey. In order to shed some light on the nature of the substantial increase in debt accumulated in recent years, Rinaldi, L., & Sanchis-Arellano, A. (2006) the financial fragility of households in a sample of euro-area countries. Sharma, S. et. al. (2019) worked towards assessment and management of NPAs in Indian banking system. Partovi, & Matousek, (2019) studies the efficiency measures in Turkish bank's in handling NPAs and impact of NPAs on the profitability of banks. Several studies also measure the influence of NPAs on banks' operational efficiency, profit making and solvency position (Bawa, Goyal, Mitra, & Basu, 2019; Sharma, Kothari, Rathore, & Prasad, 2020). Bawa, J. K. et. al. (2019) compared and calculated the impact of NPAs on 31 financial ratios of 46 banks. Jayaraman & Bhuyan (2020) analyzed the impact of NPAs and loan write-offs on the profitability of banks. Amin (2019) discussed how the governments handle the emerging problem of non-performing assets in emerging economies with special reference to Bangladesh.

Ozili (2019) in his study has tried to find out the impact of financial development on non-performing assets. The results of Ozili's study indicate that financial growth is positively correlated with non-performing loans (where financial growth is taken as the involvement of foreign banks and financial intermediation). Bank performance, loan loss coverage ratio, competitiveness and stability of the banking system are inversely correlated with NPLs, while banking crises and bank concentration are positively associated with NPLs. NPLs are negatively correlated with regulatory capital and bank liquidity in the regional study, suggesting that less NPLs are encountered in banking sectors with higher regulatory capital and liquidity. The current study presents the opposite angle of Ozili's study where we intend to study the impact of NPAs on the financial and selected variables of the study.

From the conclusive summary of related literature, a wide gap can be seen for study on the offered topic. Most of the researchers discuss the determinants of NPAs, bank specific,

internal and external factors and macro-economic variables causing NPAs. The effect of NPAs on the operating performance and profitability of commercial banks in the country is also being studied in several studies. But we find a gap where we see various variables that have a bidirectional effect on NPAs and create a loop that further increases banks' NPAs. So in current study we have tried to find out the factors that have bidirectional relationship with NPAs.

### 3. Method and Procedure

#### 3.1 Data

We examine the impact of Gross NPA ratio on lending interest rate, real interest rates, bank capital to assets ratio, broad money supply, Gross capital formation (% of GDP). The current study uses the balanced panel data of 25 countries for 11 years extending from 2011 to 2021. The sample countries are developing, developed and the economy in transition phase. The data for current study has been sourced from the official website of the World Bank (The list of selected countries and variables has been attached to appendix-A)

#### 3.2 The Variables

GNPAR: Gross NPA ratio (Gross NPA as a percentage to loan and advances)

LR: lending Rate (lending interest rate running in the country)

RIR: Real interest rate (Interest rate after adjusting for inflation in the economy)

CAR: Bank capital to assets ratio (Ratio of bank's capital and bank's assets)

MS: Broad money Supply (money supply (M3) data as per World Bank)

GCFR: Gross capital formation as a percentage of GDP (the proportion of capital formation in comparison to GDP)

#### 3.3 Econometric Model

To find out the impact of non-performing assets on the selected variables of the study, panel data regression models have been used. Panel data is the data which involves the combination of times series and cross sectional data. In any panel data, there may individual effect or time effect or combination of both. The equation for the panel data regression is expressed below:

$$Y_{it} = X_{it} \beta + \alpha_i + \xi_t + \varepsilon_{it} \dots\dots\dots \text{eq (1)}$$

Where  $Y_{it}$  shows the vector of dependent variable,  $X_{it}$  is vector of an observable regressor,  $\beta$  is unknown coefficient,  $\alpha_i$  is individual effect,  $\xi_t$  is the time effect and  $\varepsilon_{it}$  shows the vector of error term.

There are various estimations models applied in panel data regression; these are pooled ordinary least square (OLS), fixed effect and random effect model, and dynamic models. Pooling of the data means two or more data set of the same type. It means, in this method, all the observations of the data set are pooled ignoring the dual nature of both the nature of data (cross sectional and time series). In fixed effect model,  $\mu_i$  is assumed to be fixed parameter and remainder disturbances stochastic with  $v_{it}$  independent and identically distributed IID (Baltagi, 2008). In Random effect model, intercept is varied between cross-sectional data which avoids loss of degree of freedom compared to fixed effect model. This model helps to investigate the differences in error variances. If individual effect  $u_i$  (cross-sectional or time specific effect) does not exist ( $u_i=0$ ), ordinary least squares (OLS) produces efficient and consistent parameter estimates. So, the first requirement (for model identification) is to check whether all coefficients are constant across time and individuals. Pesaran CD test is used to check individuality of each cross sectional unit. Next, we check time effect with the help of Wald joint test on time dummies. The general additive effects  $\alpha_i + \beta_t$  being a special case of multiple interactive effects appears to be less noticed. But once pointed out, it becomes trivial and obvious (Bai, J. 2009). These additive effects can be removed by the within group transformation (least squares dummy variables).

After applying fixed and random effect models, the Hausman specification test (Hausman, 1978) is applied to compare between them. If the null hypothesis that the individual effects are uncorrelated with the other regressors is not rejected then random effect model is found more suitable and consistent than fixed effect model.

**4. Data Analysis**

*Summary Statistics*

Table 1 shows the summary statistics of independent and dependent variables taken for current study (where GNPARG is regressor and LR, RIR, CAR, MS, and GCFR are dependent variables).

**Table 1.**  
Summary Statistics

Variable	Mean	Median	S.D.	Min	Max
GNPAR	4.90	3.29	4.11	0.0923	21.9
LR	12.6	9.45	11.8	3.29	60.0
RIR	8.54	5.51	10.7	-12.9	52.4
CAR	10.0	9.59	3.38	3.65	21.0
MS	9.65	9.09	5.74	-18.7	26.5
GCFR	24.8	24.0	6.14	12.7	41.1

Source: Authors' calculation

Table 2 shows the results of test conducted to check the common group intercept. The results show that the data is not poolable (reject the hypothesis that the groups have common intercept) so pooled model is not suitable for current data set. If the entire groups are found to have common intercept, ordinary least squares (OLS) produces efficient and consistent parameter estimates.

**Table 2.**  
Testing Group Intercept

Dependent Variable	Test statistic: F(24, 199)	P-value	Decision
Lending interest rate	265.6740	0.00000	Rejected
Real Interest Rate	56.4091	0.00000	Rejected
Bank Capital to Asset Ratio	96.0547	0.00000	Rejected
Broad Money annual growth	3.3916	0.00000	Rejected
Gross capital formation (% of GDP)	33.0025	0.00000	Rejected

Source: Authors' calculation

Table 3 and 4 present the Cross Sectional Dependence or individual effect and time effect respectively. As per the result of Pesaran CD test for cross-sectional independence, the null hypothesis that there is no cross-sectional or individual effect is rejected (p-value < 0.05). So it can be said that there is an individual effect of all the countries (countries are different as panel). The time effect has been tested using Wald Joint test. The results of test reject null hypothesis that there is no time effect. So this makes a specific case where variables have both individual as well as time effect.

**Table 3.**  
Pesaran CD Test

Dependent Variable	Test statistic (GNPAR)	P-value	Decision
Lending interest rate	3.72608	0.00019	Rejected
Real Interest Rate	6.38000	0.00000	Rejected
Bank Capital to Asset Ratio	4.83563	0.00001	Rejected
Broad Money annual growth	6.90839	0.00000	Rejected
Gross capital formation (% of GDP)	2.31184	0.0208	Rejected

Source: Authors' calculation

Dependent Variable	Test statistic (Chi-square)	P-value	Decision
Lending interest rate	16.4809	0.03599	Rejected
Real Interest Rate	38.6721	0.00000	Rejected
Bank Capital to Asset Ratio	26.1417	0.00099	Rejected
Broad Money annual growth	43.1523	0.00000	Rejected
Gross capital formation (% of GDP)	19.2417	0.01361	Rejected

**Table 4.**  
Wald Joint Test for dummies

Source: Authors' calculation

As per table 5 we can see that lending interest rate (LR) is significantly impacted by non-performing asset (GNPAR) at 1% level of significance and the positive association indicates the rise in interest rates with increasing NPAs. Again in case of real interest rate (RIR), the impact of non-performing assets is significant at 1% level of significance. Real interest rate shares positive association with non-performing assets which implies the increase in real interest rate with increasing NPAs. We do not find the significant impact of NPAs (GNPAR) on bank capital to assets ratio (CAR). Broad money (MS) is negatively impacted from non-performing asset at 10% level of significance. This negative association implies decrease in broad money with the increase in NPAs. The Gross capital formation (As a % of GDP) (GCFR) is impacted by non-performing assets at 1% level of significance.

Dependent Variable	Model		Coefficient	Std. error	t-ratio	p-value
LR	Fixed	Const	11.3818	0.42320	26.890	0.0000***
		GNPAR	0.255122	0.08119	3.142	0.0019***
	Random	Const	11.3621	2.41046	4.714	0.0000***
		GNPAR	0.259142	0.08040	3.223	0.0013***
RIR	Fixed	Const	6.63213	0.78268	8.474	0.0000 ***
		GNPAR	0.388984	0.15016	2.590	0.0103**
	Random	Const	6.56591	2.14701	3.058	0.0022 ***
		GNPAR	0.402485	0.14455	2.784	0.0054 ***
CAR	Fixed	Const	9.96847	0.18396	54.190	0.0000 ***
		GNPAR	0.00703025	0.03529	0.199	0.8423
	Random	Const	9.88711	0.63908	15.470	0.0000 ***
		GNPAR	0.0236180	0.03482	0.678	0.4977
MS	Fixed	Const	11.4802	1.00917	11.380	0.0000 ***
		GNPAR	-0.373850	0.19362	-1.931	0.0549
	Random	Const	9.96613	0.88106	11.310	0.0000 ***
		GNPAR	-0.0651508	0.12727	-0.511	0.6087
GCFR	Fixed	Const	26.6064	0.57452	46.310	0.0000***
		GNPAR	-0.373632	0.11023	-3.390	0.0008***
	Random	Const	26.3063	1.24105	21.200	0.0000***
		GNPAR	-0.312438	0.10402	-3.003	0.0027 ***

**Table 5.**  
Fixed and Random effect models

Source: Authors' calculation

Dependent Variable	Rho	Hausman test	
		Chi-square	p-value
LR	0.523347	0.158486	0.690554
RIR	0.248306	0.117452	0.731815
CAR	0.507937	5.1056	0.0238487
MS	0.184918	4.48455	0.0342025
GCFR	0.541198	2.69435	0.100704

**Table 6.**  
Result of rho, Joint and Hausman Test

Source: Authors' calculation

### **5. Findings and Discussion**

The current study unlike existing literature available, explores a different direction of association which studies the impact of NPA on Interest rates. The many researchers have talked about the impacted of interest rates on NPAs (Khemraj & Pasha, 2009; Ng'etich Joseph Collins, 2011; Das & Dey, 2019) while the proposed study has successfully established that there is a bidirectional impacted between NPAs and interest rates. As per the findings the non-performing assets are pushing the interest rates (both lending interest rates and real interest rates) in upward direction with the increase in NPAs. Assuming that NPAs bring decrement in capital and deteriorate assets quality of bank, impact of NPAs on the ratio between bank's capital and reserves (which include owners equity, retained earnings, general and special reserves and provision, and valuation adjustments) and bank's assets was checked. The current research does not disclose any association between NPAs and bank capital to assets ratio. Further money supply is directly linked with lending capacity of a bank and as well as interest rates. More money supply causes decrease in interest rates and increased lending capacity as well as increased borrowings. Several studies explain the bidirectional relationship between NPAs and money supply (Vatansever & Hepsen, 2013; Ng'etich Joseph Collins, 2011). The current study shows that money supply in the economy (broad money-M3) is impacted by non-performing assets in an inverse direction causing decreasing in money supply with the increase in NPAs. Scholars have also investigated the relationship between NPAs and capital formation (Mohnani & Deshmukh, 2013; Arora & Ostwal, 2014). The gross capital formation is not impacted by NPAs as per the findings while gross capital formation as % of GDP is significantly impacted by non-performing assets. The findings of the study are able to serve as literature while impacting the impact of NPAs on variables which are impacting the lending capacity of the banks indirectly.

### **6. Theoretical Implication**

The theoretical implications of this study extend our understanding of the relationship between non-performing assets (NPAs) and various economic variables. By investigating the impact of Gross NPA ratio on lending interest rates, bank capital to assets ratio, broad money (M3), and gross capital formation ratio, this research contributes to theoretical frameworks related to financial stability and macroeconomic dynamics. The study highlights the importance of incorporating NPA management strategies into economic models to accurately capture the interplay between financial health, interest rates, and investment decisions. Overall, the theoretical implications of this study emphasize the need for a holistic understanding of the relationship between NPAs and key economic variables, providing a foundation for future research on financial stability, lending practices, and policy formulation.

### **7. Practical Implication**

The study's practical implications for policymakers and financial institutions include Prioritizing effective NPA management strategies, implementing proactive measures within financial institutions, considering the importance of balanced interest rates when formulating monetary policies to promote sustainable lending practices. Overall, the study provides valuable insights that guide policymakers and financial institutions in managing NPAs, maintaining a healthy economic environment, and fostering sustainable growth.

### **8. Future Directions and Limitations of the study**

The current study provides a scope for cross-country analysis to capture variations across different economies, Comparative analysis of different banking systems, Long-term time-series analysis to observe dynamic effects, Exploration of mediating factors and mechanisms, Assessment of policy measures, and Examination of technological advancements. These directions will enhance understanding of the indirect impact of NPAs on lending efficiency, informing NPA management strategies, lending practices, and financial stability measures.



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