

# The Impact Of Inflation On Loan Repayment In India

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## ABSTRACT

The macroeconomic conditions for non-performing loans are seen as a major driver. Although studies in the past have shown various other reasons responsible for the repayment of loans, the principal objective of this study is to check whether inflation has an impact on the repayment of loans in nationalized Indian commercial banks. This study will be conducted from data collected from SBI and its' associate banks and all the nationalised banks in India. The examination will use essential information sourced mostly from the financial statements of these banks for a range of five years (2014-2019). The inflation figures will be taken from the Reserve Bank of India. The research will be based on an analysis of literature based on this topic and will try to find out the leading intermediate causes which might link these two phenomena. This investigation will lead us to understand the connecting dots between inflationary pressures and non-performing assets of commercial banks thereby guiding policy actions

## Keywords

inflation. Loan repayment

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## Introduction

### Inflation

Inflation is continuous rise in the price of services and goods for a long duration of time. According to [1], inflation refers to price increases which cause a nation's buying power to fall. Inflation may be called natural economic growth as long as the annual percentage stays small but is deemed an inflation problem if it increases above a specified point. The causes of inflation are several, some of the prominent ones are excess printing of money, increment in cost of production, rise in taxes and international grants and national debts.

Inflation leads to slowdown in not only consumption but also in production as people start to consume less goods and services because of their limited income. Banks increase interest rates as inflation increases. Higher interest rates lead to economic slowdowns. It leads to a rise to unemployment, as businesses begin to concentrate on cost cutting and reduce hiring.

Rising inflation drives workers to seek higher compensations to keep up with consumer prices. In turn, rising salaries help in fuelling inflation.

According to [2], inflation has positive effects, which are better savings account rates, higher wages and cheaper to travel abroad.

Inflation decline has a positive effect as it raises citizens' savings and is also good for the banking industry. This functions as a secret tax as inflation increases and reduces the savings. When inflation is high taxes a larger proportion of the total value of the assets. Citizens face additional tax pressures along with secret tax 'inflation'. Because of increased inflation, there are declines in investments and hence declines in FDI inflows, decreases in consumption and demand, decreases in purchasing power. Then unemployment begins to rise as it continued for a long time. Currency is destabilized when inflation rises. It affects the

companies adversely as their liquidity and working capital falls. [3]

Lenders taking a loan and paying a fixed interest rate lose purchasing power but their borrowers benefit. Debt relief is a positive effect of inflation, because the interest rate goes down as the inflation rate rises.

Inflation is undesirable in any economy, owing to the particular economic costs of inflation. Second, with high inflation, it is undesirable to have currency and non-interest - bearing checking accounts because the purchasing power is continuously declining. Furthermore, tax anomalies occur when inflation is high, the real value of such deductions is way lower than it really should be (Ludi and Ground, 2006). In a global economy inflation is one thing that must be dealt with by every country and government. This makes it not only a feared economic phenomenon but also the misunderstood one.

When people are uninformed about the economic impact of inflation or do not understand what actually happens with the prices, they make mistakes in their business transactions which leads to the resources being misallocated. The repayment of loans is affected negatively, as loan charges increase. When the inflation is high, the liquidity available for spending is very small with price rises and some borrowers would possibly have trouble repaying their loans. Loans and loans by banks to consumers range in size from what can be known as micro to macro finance. Some were personal and some were institution loans. In both cases, banks recognized a risk of failure regarding repayments. This does not mean, however, that all bank lending was bad. Because of the non-service of loans and overdrafts that banks get from individuals and businesses, financial institutions lose a lot of money. This lowers the country's net worth because lots of lenders are deprived of their revenue received legitimately.

In India, statistics show inflation has declined during the last few years with a high of 7.66% in 2019, up from 4.86% in 2018. Loans have been very costly as borrowers have

resulted in higher interest rates for remuneration for the reduction in buying power of capital where they must be compensated in the future. Patterns of inflation have been recorded in India, and indicators suggest very high inflation rates characterized the 2000s.

[4] found that the Indian banks were quite badly affected by the indirect impacts of the 2008 inflation crisis. Following the collapse of Lehman Brothers, squeezing funding on foreign markets prompted Indian banks and companies to move their credit demand from international outlets to domestic banking. This move placed a great deal of strain on domestic market liquidity, and abnormally shot up short-term lending levels as a result. This credit crisis, combined with the lack of faith following the Lehman Brothers case, intensified risk aversion among Indian banks and ultimately hurt domestic credit expansion.

Rising inflation translating into high interest rates, strong credit squeeze as banks cashed in on high treasury bill prices and high debt repayment defaults characterized this period. While the principle of inflation is not simple, it remains a problem for all the world's economies, from developed nations to global powers. It has contributed to policy development and ways of handling inflation. Usually the amount of money in the economy is raised during times of inflation. People have more money to offer for the merchandise. If the amount of goods sold increases as much as money goes up, goods' prices generally goes upwards. That is because the more unit currencies are available, each single unit currency is less valuable. The price of the goods will rise not as commodities are scarce but because more money is available.

[5] made an economic analysis on historic inflation rate in India. During the decade of the 2000s and 2010s, the average inflation rate was 5.39 % and 5.23% respectively.

#### *Loan Repayment*

Commercial loans in banking are deemed non-performing if the applicant has paid zero principal and interest payments within 90 days, or is due 90 days before. On a mortgage loan, it is known as a non-performing loan if it is 180 days past due date.

A loan is in arrears when it is late or has missed principal or interest payments. A debt is in default whenever the lender finds the credit arrangement to be violated and the debtor cannot satisfy his obligations.

A debt may in many forms achieve the classification of "non-performing loan." A loan can become a non-performing one when:

- 1) A debt in which 90 days' interest was capitalized, refinanced or postponed owing to an extension or alteration to the initial deal.
- 2) A loan containing payments fewer than 90 days late, but the lender no longer trusts that all contributions can be made by the debtor. This condition may arise due to business of the borrower failing or when the lender realises that the borrower has used the loan amount in a place from which he cannot get profits and recover the amount.
- 3) A debt under which the principal repayment maturity date has arisen but a proportion of the debt exists unpaid.

The loan repayment relates to the overall loans cleared on or before time as set out in the loan agreement. [6] did a factor analysis of the factors which are causes of NPAs in public

sector banks of Karnataka. The reasons of default risk are primarily due to lack of oversight after disbursement resulting in moral hazard and lack of appropriate market and technical preparation. Critics often argue that the lack of discretion over how funds are used after disbursement will result in a situation where a debtor wants to be using the funds for other purposes, instead of investment in new or ways of doing business. Unless the borrowers are using the loans for other purposes than investment in business, they can fail to pay back their loans. The second reason for the default lending is a lack of market awareness. The authors also assert that lack of market-oriented knowledge would lead to unsustainable debts. Lack of proper business skills, such as record keeping, may also trigger payment defaults.

[7] revealed that the key factors impacting the repayment of loans include social obligations such as child care, rent payments, hospital bills and household memberships. The researcher suggests that the banking industry review lending rates, terms of agreement, loan specifications and repayment periods to assist in the timely repayment of available loans. Other guidelines included short-term length, small weekly payments beginning immediately after disbursement of loans, mandatory deposits, inclusive lending and default zero tolerance policies. Indeed, these features are effective in enhancing customer discipline.

Poor and low-income strata have little access to structured loans because borrowers have no ability to track customers, control the use of funds, or impose repayment. Throughout recent years, the majority of funding companies have used cooperative lending to offer loans to certain people. Additionally, group loans help organized borrowers solve the prohibitively high fixed cost of making small loans available. Monitoring and supervision is distinct while it is empirically challenging to differentiate. Monitoring itself is not a money-back guarantee, but it helps a lender decide who to prosecute for failing to repay.

Although a commercial bank could try to evaluate the business and life outcomes of individuals, doing so would be both costly and difficult. Community loan agreements offer opportunities for lenders to track each other and see who can and who cannot pay. Monitoring in various forms, like monitoring of loan repayment, visiting the person's office or house to check if everything is running smoothly, checking receipts of everything bought using the loaned amount, and having a conversation with people who know the loanee.

#### **Inflation and Repayment of Loans**

Loaning is a risky practice, since loan repayment can never be entirely assured. The inability of the lenders to pay back their microcredit loans is a major concern which needs care. Debtors could either pay back their debts, or choose default. Defaults may be intentional or accidental on the borrower. Involuntary losses on loaned funds may be attributed to unexpected conditions that hinder the borrower's capacity to pay back the loan. Unforeseen conditions cover falling company earnings, natural disasters and shareholder sickness. Conversely, the borrower's voluntary default can be linked to morally dangerous behaviour. The creditors in this group have the option to pay back the borrowed amount,

but fail to do so due to the poor level of compliance procedures within the organization.

When the inflation rate rises, banks have to protect themselves by finding higher loan returns from loss of value of their cash reserves. Depositors often demand higher returns on their investments to get profits from their investments. The interest rates must therefore rise in tandem as depositors and lenders seek higher returns to cover the inflation premium. It raises funding costs, and rising prices raise the risk of default, which increases the overall borrowing costs and induces the inflation cycle. There will be a negative correlation between inflation and loan repayments. Loan interest rates decline as inflation rates rise. There is a direct relationship between the loan default and inflation. When inflation rises, borrowers' defaults rise and the repayment rates are lowered.

Inflation and repayment of debt will be negatively correlated. As inflation rates increase, loan repayment rates fall. By default, inflation and loan will be positively correlated. As there is an increase in inflation, borrowers' default loans also increase, thus reducing the rate of repayment of loans.

### Objective of Research

Multiple authors in their research papers have stated factors other than inflation that impact the repayment of loans. The key objective of this study is to assess the impact of inflation as a single factor on loan repayments in the public sector banks of India.

### Significance of the Study

This research gives credit risk information to banks which provide guidance relating to repayment of loans, especially during the period of inflation. The study may also assist banks recognize ways to reduce the magnitude of non-performing loans that could present them a problem. By knowing how the ability of customers to pay is influenced, the bank will introduce a new method of lending to its customers, especially during inflation. In order to stop attaching their properties to repay the loans they have taken; lenders need to realize that they need to control the quantities of loans they receive during inflation. This work contributes to established information regarding debt repayment and inflation levels and gives literature review to the researchers which is essential for further analysis. The study would support government agencies by using research findings to create policies to boost efficiency. India's Reserve Bank, one of the policy-makers, would find it useful in their mandate to promote and preserve banking system stability, soundness, and honesty. They should also take into account the varied needs of the various parties involved in the banking industry.

### Literature Review

Efforts have been made in the past to relate bank profitability and the factors responsible for it.

[8] measured bank profitability and established factors affecting the profitability of Indian banks for the period 2001-2016. The research used various bank productivity

metrics, such as ROA, net assets to gross assets, CAR and non-performing assets, and concluded that banks' profitability responded positively to GDP growth. While Makkar & Hardeep did not cite NPA as a factor affecting the profitability of the banks in the Indian banking industry, [9] discussed the NPA and studied the relationship between banks' profitability and NPA. The analysis suggests an inverse relationship exists between bank profitability and the NPA.

The levels of NPAs are different for public sector banks, private banks and foreign banks. To understand this, various papers have been researched.

[10] researched the reasons that are responsible for the NPLs, and their different behaviour across private, nationalised and international banks. The research concluded that, in public sector banks, the average NPA level is higher followed by private and international banks. The research paper by [11] analyses the 2010–2017 comparison between public and private banks. The report states that the non-performing assets in public sector banks are higher than those in the private sector analyses the comparative comparison between public and private banks between 2010 and 2017.

In their research paper 'A Comparative Study of Non-Performing Assets in Indian Banking Industry,' [12] compared the NPAs of public-sector banks (nationalized banks and the State Bank Group) and private banks clubbed together for the years 2004 to 2010. These groups showed that the share of nationalized banks in advances and NPAs over the period of study is more than the advances of the state bank group and the NPAs. Upon study, it is found that both public and private sector banks' assets increased over the given period, and the NPAs decreased as a percentage of advances to weaker parts from 18.9% to 3% for public sector banks and from 12.15% to 0.5% for private sector banks. A distinction was made between the advances as well as the NPAs provided to new and old public and private sector banks.

[13] studied the year on year growth of NPAs in 19 of 21 private sector banks in India, the State Bank of India and its five associates and in all the 20 nationalized banks in India. An analysis of the growth rate in the NPA level shows that the problem is evident not only with small-sized banks but also with big names in the banking space. An increase in NPA is worrisome for banks as poor asset quality leads to decline in profitability of the banks.

Thus, since multiple researches show that nationalised banks have a higher level of non-performing loans, the study will focus on finding factors effecting non-performing loans in the nationalised banks in India.

There was a need to understand the factors that affect the repayment of loans across the nationalised banks in India. A lot of studies show a variety of reasons. Some of the research papers and their findings are:

The research performed by [14] studied the factors in the Indian banking sector that are responsible for high NPAs. For the period 2010-2017, they analysed the Average NPAs of International Banks, Private Banks, Nationalized Banks and SBI and its Associates and found that per capita income and interest rates were a significant factor affecting NPAs.

[15] showed that the experience of the farmer, the wages, the size of the loan obtained and the collateral value had a

positive impact on the repayment performance while the interest rate, the application cost and the source of the loan negatively impacted on the debtor's debt repayment performance.

[16] their research studied the factors that hinder the repayment of financial loans in commercial banks with evidence from the National Micro Finance Bank (NMB) and it was noticed that the rate of repayment of loans was low and that, by avoiding the payment of loans, the lenders could not follow the requirements laid down in the contract forms. Findings further say that loan defaults are attributed to weak market results, excessive interest rates, investor fraud for lending and insufficient loan monitoring.

[17] clearly indicates that the requirement of non-financial services such as coaching, literacy and medical services have a positive effect on the performance of repayments.

[18] identified the importance of credit reporting on the borrowers' repayment behaviour in the loan market.

Additionally, there are various social, cultural, and structural variables that affect repayment of bank loans. The amount and duration of the debt, the interest rate paid by the lender and the pace of the borrower's repayment all influence the repayment rates.

On the creditor hand, the key considerations include socio-economic characteristics such as age, education level, marital status and family income and social pressure in group-based schemes. Thus it is important to identify and provide research facts on the factors of loan repayment in banks, primarily commercial banks, so that we can better know and understand reasons for successful repayment of loans and therefore have some suggestions to enhance the likelihood of success and good performance of the loan plan (in terms of repayment of loans) pursued by the commercial banks. This research was undertaken to provide an overview into this issue [19].

[20], [21], [22] and [23] in their research paper studied the borrowing and repayment behaviours of the urban and rural households. They discovered that non-repayment of debts may be attributed to natural disasters such as famine or flooding or unproductive investment, work shocks or medical shocks. Failure to repay may, however, also result from moral hazard correlated with easy access to loans. Rich urban households borrowed from the formal sources and the poor households borrowed from the informal sources. If the loans are used for unproductive or purposes other than stated, then repaying that loan become difficult for the household.

[24] found that NPLs in the Spanish banking sector are calculated by the rate of GDP growth, the actual interest rate and tolerant credit terms.

[25] suggested a negative relationship exists between GDP increases and an increase in the NPL ratio. The number of foreign currency loans and the exchange rate are positively connected to the rise in the NPL ratio, and are statistically important in all models.

[26] find that macroeconomic variables, in particular real GDP growth levels, unemployment rates, lending rates and government debt, Has a significant impact on the rates of bad loans.

[27] noted that, during the study period, credit growth for commercial banks in Japan was positively correlated with non-performing loans prior to the start of the global

financial crisis in 2007 and was inversely linked with NPLs shortly after the onset of the global financial crisis in 2007. He empirically stresses that an increase in bank credit growth does not always result in higher non-performing loans.

[28] noted that gross domestic product growth and individual wage gains, levels of unemployment, property price indices and levels of affordability have a major impact on bad loans, highlighting their contractionary character. Thus, it is imperative to reduce non-performing loans to improve the economic health of each state. Finally, a decline in US public debt would help reduce non-performing loans.

[29] noticed that the economic factors, in particular the real gross domestic product growth rate, the rate of inflation and the real loan rate, have an impact on the non-performing loan rates.

[30] stated that annual gross domestic product growth rates, loans and unemployment levels affect non-performing assets in Greek banking.

[31] claimed that all macroeconomic variables, such as real gross domestic product growth rate, rate of unemployment and loan rate, have the potential to influence the amount of non-performing assets and banks with particular variables, such as efficiency and quality of risk management processes or programs, are responsible too for differences in non-performing assets based on panel data.

[32] found that the real income variation was negatively associated with non-performing assets and further demonstrated that high interest rates, effective exchange rates brought very high non-performing assets.

[33] found that economic growth, rate of unemployment, external gross domestic product debt, money supply and construction expenditure investment in conjunction with country (Greek) crisis specific variables influence the credit risk of the banking system on the basis of univariate regression.

[34] concluded that the macroeconomic factors have an impact on the level of NPAs based on auto regressive distributive lag model.

(Reta, F.K. 2011), undertook a report to examine and classify the factors affecting the efficiency of loan repayments. For influencing the borrower's loan repayment performance, age and five types of business (small market, kiosk, services providers, weaving & tailoring and urban agriculture) were important. In addition, gender and business knowledge of the respondents were found to be significant factors in determining of the debt repayment rate

[35] noted that employment, wages, loan monitoring, sustainability repayment duration, alternate sources of loans and livestock significantly affect repayment performance among the banks.

[36] used the logistic regression model to classify the micro credit repayment determinants. The key determinants are reimbursement and repayment methods.

Hence there have been many papers which have cited reasons like GDP, size of loan, literacy, per capita income, gender, level of unemployment, use of the loan, wages etc. for non-performing loans across the globe, none of the papers have cited inflation as a reason.

Thus, this study will focus on inflation as a sole reason which might be a factor influencing the non-performing loans in nationalised banks in India.



## Research Methodology

### Research Design

Research design is the employed methods of analysis and techniques selected by the investigator to carry out the research. The structure enables researchers to focus on research methodology suitable for the topic and establish their successful research projects.

This work has embraced a descriptive study style. A descriptive nature of research explains how things are, and documents them.

This research will use Linear Regression to find the relationship between NPA and inflation. Since many researches have been carried out before which underline many factors responsible for non-performing loans, linear regression has been used to check the trends and establishing a relationship between NPA and inflation. Linear Regression would also help us understand how much variance in the non-performing loans can be explained by inflation.

### Target Population

Population can be defined as a group of individuals with similar measurable features. A large observational set is called a population from which a sample is drawn. This study's target population comprised all 27 of India's commercial banks as of 1 May 2020.

### Sample

A subset of the population drawn to conduct a research is called a sample. The sample size comprised of all the Nationalised Banks which are 18 of total 27 Commercial Banks in India.

### Data Collection

This research took secondary data from the balance sheets of all the nationalised banks in India. The gross NPA percent was sourced from the balance sheets. The inflation statistics for the year 2015-2019 were taken from the publications of the Reserve Bank of India.

### Data Analysis

To analyse the data that was collected, statistical methods and descriptive statistics were used which included using histograms and line charts to illustrate the patterns in non-performing assets and inflation over the study era. For data analysis, R and Microsoft Excel were used. To determine the relationship between NPAs and inflation, a Simple Linear Regression model was used in the statistical software R. In this research, the NPL is the dependent variable, and independent variable is inflation. The simple linear equation with one dependent and one independent variable is as follows:

$$Y = a + bx + e$$

Where,

Y = dependent variable, here loan repayment

a = y intercept

x = independent variable, here inflation

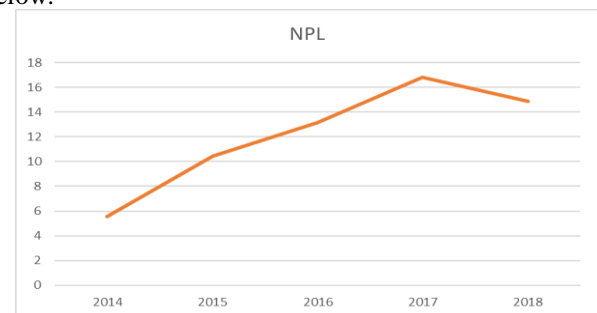
e = error term

## Results and Analysis

### Rate of default for All Banks (5Years)

This research aimed to determine the default rates for the five-year period among the fifteen commercial banks under review, and the findings are as shown in the figure below. This was necessary to establish any unusual trend in the repayment of loans among the nationalised banks in India. As seen from the graph, the default rate has been rising over the years. It reached a high of 16.82% in the financial year 2017-18 and then came down to 14.85% in the year 2018-19.

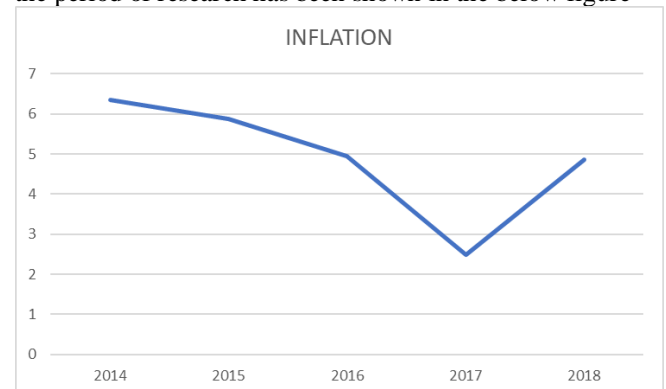
The rate of default is summarised in the line graph as shown below.



### Inflation Rates in India (2014-2018)

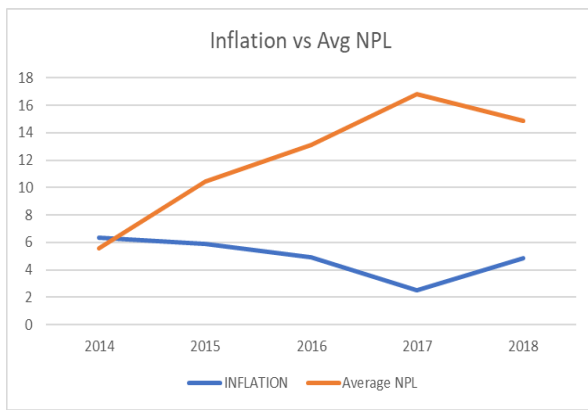
The inflation rates in India have been on a decreasing trend for the period of study. The rate was 6.35% in the year 2014 and came down till 2.49 in the year 2017. The inflation trends for

the period of research has been shown in the below figure



### Inflation Rates vs NPL

The research was performed to assess the average NPL levels and inflation for the estimated nationalized banks, and the findings are as shown in the table. Net NPLs are determined by aggregating non-performing loans for a specified year for all 15 banks.



The above figure indicates an annual non performing lending trend of five years and levels of inflation. The peak inflation rate in 2014 was 6.35%, with the associated loan / credit risk at 5.56%. Nonetheless, the figure shows that the overall loan default rate always increases with different rates as seen over 2014–2017 period, and levels of inflation continued downwards. Just as inflation grows, non-performing loan rates continue to decrease. It refers to an inverse relationship that occurs between debt repayment and inflation.

**Correlation between Average NPLs and Inflation Rate**

	Average Default Rate	Inflation Rate
Average Default Rate	1	-0.86695757
Inflation Rate	-0.866957568	1

The above table shows the correlation between the average rate of default and the rate of inflation over the period of study. The correlation between Average default rates and inflation rate is -0.87. It means that inflation rate and default rate have a strong correlation. As inflation rate decreases, default rate increases and vice versa. This can also be seen in the line chart above which shows the average NPLs and inflation rates.

**Regression Results**

SUMMARY OUTPUT								
<b>Regression Statistics</b>								
Multiple R	0.866957568							
R Square	0.751615424							
Adjusted R Square	0.668820566							
Standard Error	2.519063559							
Observations	5							
<b>ANOVA</b>								
	df	SS	MS	F	Significance F			
Regression	1	57.60637751	57.60637751	9.078044664	0.057076411			
Residual	3	19.03704365	6.345681217					
Total	4	76.64342116						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	24.66333922	4.299986459	5.735678346	0.010522571	10.9788632	38.34781524	10.9788632	38.34781524
X Variable 1	-2.550638129	0.846550148	-3.012979367	0.057076411	-5.244738521	0.143462262	-5.244738521	0.143462262

The table above shows descriptive outcomes for the regression analysis. This is clear that the independent variable will estimate 86.69 per cent of the dependent variable (Loan Repayment) variations. Similarly, the denoted determination coefficient (R2) explains how closely the data follows a regression line or axis that better fits. The

results show that the regression aspect of the data fits / fails 75 per cent of the time. Consequently, the findings suggest that inflation is an important indicator of the default loan rate, as 86.69 per cent of the variance can be justified. The remaining 13.30 per cent could be predicted by certain variables other than inflation. Therefore, more work may be undertaken to examine the other factors affecting Loan Repayment among nationalized banks in India. The study developed a regression method to test the relationship between the independent variable (inflation) and dependent variable (loan repayment) variable. It was done to decide if there is any important link between the two variables. Regression equation can be defined as shown by the coefficients from the regression analysis;

$$Y = 24.66 - 2.55X + \epsilon$$

The above table shows that the correlation of the two variables at  $p < 0.05$  with a P value of 0.01 is significant, and the independent variable is a strong predictor of the dependent variable. The regression model reveals that a unit shift in the independent variable (inflation) would result in a factor adjustment (rate debt repayment) of -0.87 if the other variables were left unchanged.

**Summary**

This study was aimed at evaluating the inflation’s impact on debt repayment in India 's listed commercial bank. The banks studied consisted of 15 nationalised banks. Net un-performing loans for the 15 nationalized banks over the duration of the study period (five-year cycle starting in 2014-2018) and inflation rates over the same duration were analysed. Descriptive study architecture has been used to explain the phenomenon (inflation) and their effect on repayment of debt at nationalized banks in India. This research showed that inflation had an inverse impact on debt repayments. When inflation rates were high, the number of loan defaults were low. When inflation rates were low, the loan defaults for the period were very high in number. The analysis found that inflation has a significant negative correlation with non-performing loans in Indian commercial banks.

Although several studies in the past have shown inflation to have a direct relationship on loan repayment in various countries, it has been an inverse relationship in India for the given period. The reasons for this result may be as follows:

- 1) The economic policies of the Government: In the whole period of study, the government was NDA led in India. The NDA government brought various policies which hampered the economic growth of India.
- 2) Demonetization: Demonetization done by the NDA government on 8th of November, 2016 led to an immediate cash crunch in the country. People stood in long queues to get their notes exchanged, leading to loss of jobs and money for a number of people. This might be one of the reasons for people defaulting on loans despite the inflation rate in the country being very low.
- 3) GST: The objective of implementing the goods and services tax was to remove multiple indirect taxes and to replace them with one tax and thus to improve tax compliance; the result would have led the consumers paying less and multiple taxation would have been removed. Its introduction was also projected to fuel development in India's market and economy. It instead hampered the growth of small and medium enterprises. Due to this hampered

growth, they suffered huge losses in their business, thus leading to default in loans.

4) Big defaulters like Vijay Mallaya and Mehul Choksi had thousands of crores of loans written off as bad debt specifically during the period of study (2014-2018). This led to a sharp increase in the loan default amount.

The results also indicate that although macroeconomic factors influence loan repayments at commercial banks, there is a higher default rate for government-owned financial institutions particularly in comparison to other private sector financial institutions. This discrepancy will arise from lenders, and in particular from politically powerful individuals and related organizations or companies, quickly accessing credit without meeting the requisite due process, resulting in high rates of non-performing assets.

### Conclusion

Internationally, in recent years, the number of researches that aim to link macroeconomic conditions with the banking sector's asset production progressively increased. Tackling the elevated amount of non-performing loans remains a big problem as substantial post-crisis impacts begin to unfold. Commercial banks must adopt reasonable strategies to reduce the increase in non-performing loans and hence the level of default risk. There is an inverse relationship between loan defaults and inflation rate in India. As seen during the period of study in India, the increase or decrease in the non-performing loans also depends on the policies of the government. Thus, the policies must be formulated keeping in mind the long-term impacts on businesses, especially medium and small enterprises.

While this analysis was focused on inflation and its effect on debt payment among nationalized Indian commercial banks, there are many other factors influencing debt payment, such as credit risk to borrowers, which may occur due to the borrower's lending relationship (insider loans). Infringement of confidence that can be propagated by a company's management or administrators will most likely lead to poor and suspicious debts and hence it is critical that financial institutions track insider loans, especially through the credit risk department.

### Recommendations for policy and Practice

Loan costs affect non-performance of assets. The research suggests that nationalized commercial banks in India should evaluate their customers and start charging lending rates accordingly, since ineffective policies can raise interest rates and, therefore, the amount of non-performing assets. Because the form of interest rate paid on loans influences lenders' willingness and capacity to repay loans, the study proposes that nationalized commercial banks implement a fixed interest rate strategy, since this helps the borrower to schedule the repayment accordingly. The credit assessment of all the lenders must be done and it would help commercial banks determine their lenders' default risk level. Banks must also implement successful default risk control strategies to ensure that loans suit the potential to repay and that loan losses are estimated appropriately and that adequate steps are taken to mitigate it. Banks should also

improve regular / periodic tracking of their consumer loans to levels of non-performing assets by risk management. The Reserve Bank of India (RBI), which is at the centre of the financial stability of the nation, should enforce monetary and fiscal policies which help curb inflation. Those strategies would help sustain inflation at reasonable low rates.

### Limitations of the Research

A number of economic variables impact debt payment among India's commercial banks like economic growth, rate of interest and many other factors, this work concentrated solely on rate of inflation and was hence reduced to a particular economic element while other economic and financial factors affect the repayment of loans in Indian nationalized commercial banks. The disadvantage of this study stems from the fact that the sample chosen consisted of just 15 (fifteen) commercial banks, although there are 27 commercial banks in India and this does not reflect the appropriate situation due to generalisation. This analysis picked only business banks that were known and extended the findings to other non-listed commercial banks. The data used were secondary knowledge which could have been provided for other purposes. The techniques which are used can remain subject to the prevalent situation, ranging from one year to another. Inflation figure was used and is highly based on the figures for the base year. This could lead to different results.

### Suggestions for future studies

The impact of financial and economic factors such as inflation on default risk in nationalized Indian commercial banks is a study field in which much research has still not been done and numerous findings have been published on the same topic. Domestic loan as a factor has not been explored in Indian nationalized commercial banks as a factor affecting credit risk and work on it must be considered by the researchers. The research focused on inflation and its effect on loan repayment among Indian nationalized business banks but side-lined the role of other private banks in the Indian commercial banking sector. As such future research should be undertaken to evaluate the effect of the same (inflation) on loan repayment among microcredit institutions in India. Research in this area will be of great importance to all the financial sector stakeholders due to the rapid growth witnessed by the microfinance industry.

Researchers ought to investigate this impact more, utilizing monthly time series data to analyse the influence inflation has on repayment of debts. It was a significant downside of the present research because the duration did not include monthly data collection and thus the usage of these data may increase the precision of results. The analysis of qualitative data on the topic often includes a combination of primary and secondary data, since these approaches have not been studied in this region.

Further research could be done on all the banks (both private and nationalised) taking all the possible factors influencing the loan repayment in India.

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