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A Study on relationship between Return on Assets and Non-Performing Assets of Axis Bank and Union Bank

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Abstract
Individuals, corporations, companies, and industrial concerns benefit greatly from commercial bank loans and advances. Bank funding plays a significant role in the expansion and diversification of corporate activity. Bank loans and advances assist businesses in satisfying their short-term and long-term financial needs. However, the process of lending entails a risk known as credit risk, which emerges from a borrower's failure. Loans that are at risk of default are referred to as non-performing assets. The loan amount is termed a "non-performing asset" The current study focuses on the management of nonperforming assets (NPAs) of Axis Bank and Union Bank. The main objective of the study is to find the relation between ROA and NPA's and to recommend the banks through relationship banking model for improving the NPA status. Coefficient of correlation and T test are used to analyse and validate the data. The data collected for the study is from 2011 to 2021. The data is collected from the selected bank's websites, blogs, international and national research publications. The conclusion is both the banks NPA's are dissonant and there is a positive relationship between NPA's and Banks ROA's.

Keywords
Nonperforming assets, Return on Assets, Coefficient of correlation, Bank loans

INTRODUCTION

Banks' primary responsibility is to provide loans and advances to promote economic growth. Lending by the banking sector is generally favoured since it facilitates the transfer of funds from the system to productive uses, resulting in economic growth.

However, the process of lending entails a risk known as credit risk, which emerges from a borrower's failure. Loans that are at risk of default are referred to as non-performing assets. The loan amount is termed a "non-performing asset" if the borrower has missed 90 days of interest or principal payments. Because financial institutions rely on interest payments for income, non-performing assets (NPAs) are an issue and a danger.

Non-performing assets must be classified further into one of three categories based on the length of time the asset has been non-performing and the realisability of the dues: 1. Sub-standard Assets (assets that have been non-performing for less than or equal to 12 months), 2. Doubtful Assets (assets that have been non-performing for more than 12 months as of March 31, 2005), and 3. Loss Assets (assets that are considered un-collectible).

The current study focuses on the management of NPA's by the Axis and Union bank. The data collected for the study is from 2011 to 2021.

SIGNIFICANCE OF THE STUDY

The study on the level of non-performing assets (NPAs) is the most appropriate study for the soundness of a country's banking system. The goal of this research is to examine the nonperforming assets (NPA) of various banks and analyse their growth patterns in the banking sector from 2011 to 2021. The study will also look into the impact of nonperforming assets (NPAs) on bank profitability. Recent mergers and acquisitions in the banking industry have necessitated a study of the selected bank's nonperforming assets (NPAs). Despite the fact that there have been numerous studies on NPAs, the study aims to determine the bank's performance through NPAs and its relationship with ROA''s from 2011 to 2021.

RESEARCH METHODOLOGY

The study is based on secondary data. A descriptive and explanatory research method is followed. The sample for the study is Axis bank and Union Bank. The data Analysed is from 2011 to 2021.Data is collected from websites of the specified banks, blogs and research publications from national and international authors. Descriptive and inferential statistical methods are used for analysis.

RESEARCH OBJECTIVES

1. To investigate the relationship of NPAs and ROAs through correlation in excel.
2. To make recommendations for the banks to minimise the NPA's and increase profitability through relationship banking model.

REVIEW OF LITERATURE

Bhadrappa, Haralayya (2021). Since 1991, India's banking reforms have mostly been considered in terms of the significant measures that have been implemented in order to create a more vibrant, healthy, stable, and efficient banking system. The impact of a highly regulated banking environment on asset quality, productivity, and bank performance prompted the reform process, which resulted in the adoption of prudential norms for income recognition, asset classification and provisioning, and capital adequacy that are all in line with international best practises. The primary goal of the reform measures was to improve asset quality and reduce non-performing assets. From this perspective, the current study objectively analyses the trend in nonperforming assets movement among public sector banks in India from 2000-01 to 2011-12, allowing for an assessment of NPA management performance in the post-millennium period. This study not only explains the trend in NPA movement but also the moderating and mediating functions of several bank performance and macroeconomic indicators on NPA incidence.

U. Padmavathi (2020). A thriving economy necessitates a healthy banking sector. The demise of the banking sector could have ramifications for other industries. Non-performing assets (NPA) are a key source of worry for Indian banks. NPAs are a reflection of a bank's performance. The occurrence of nonperforming assets (NPAs) has a significant impact on the banks' earning capability and profitability. A high level of nonperforming assets (NPAs) indicates that a substantial number of credit defaults are affecting bank profitability and net value. When it comes to financial operations, public sector banks have outperformed private sector banks. However, when compared to private-sector banks, public-sector banks do not fare as well in the area of non-performing assets (NPAs). This report attempted to examine how well selected public and private sector banks managed their nonperforming assets (NPAs).

Amjad Ali (2020). A strong banking industry is necessary for the expansion of other sectors, as it lends loans to help businesses run efficiently. However, the banking industry is currently saddled with a large number of non-performing assets (NPAs), which affect not only the bank's profitability and liquidity, but also its reputation. The credit stream has been extended to numerous sectors of the economy, including the market, manufacturing, government, and agriculture. However, the non-performing assets (NPAs) in the Indian banking sector have increased. NPAs have a significant impact on a bank's earnings and net value. Banks must take action to reduce non-performing assets. The Gross NPA shows bank lending efficiency, while the Net NPA represents the banks' true burden. This article attempts to concentrate on the trends in Gross NPA, Net NPA, NPA impact, and current policy projections to reduce NPAs.

Disha Shah (2019). The banking industry is immensely important in India's economy. In order for the banking sector to develop, asset quality must be measured and maintained. Asset quality in banks is currently worsening, notably in public sector banks, putting the banking system, regulators, and the Indian economy under undue strain. The goal of this study is to figure out how large non-performing assets (NPAs) are and how they affect bank profitability. The study looked at the gross and net NPAs of ten public and private sector banks from April 2015 to March 2019. During the study's time period, both public and private sector banks' gross and net NPAs gradually increased. The study discovered a significant positive association between public and private sector banks' gross and net nonperforming assets. The study also discovered a substantial negative association between NPA and public and private sector bank returns on assets (ROA). The impact of ownership (public and private sector banks) on gross and net NPA is substantial. Net nonperforming assets (NPAs) have a considerable negative impact on ROA, whereas net nonperforming assets (NPAs) have a positive impact on ROA for both public and private sector banks. As a result, the report advises regulators and bank officials to take the required actions to minimise nonperforming assets (NPAs) and strengthen the recovery mechanism.

Dhananjaya Kadanda & Krishna Raj, (2018). Banking and finance play a significant role in the development of developing economies. Banks in India are dealing with a massive problem of non-performing assets (NPAs). The proximity of NPAs has a significant impact on the banks' acquiring limits and productivity. Despite the fact that non-execution or non-receipt of premium and chief barred banks' cash as assets, which is not available for further use in the saving money business, the banks' net revenue decreases. In this situation, the bank must be aware of the difficulties and follow NPA recovery procedures. As a result, it is critical to reduce NPAs in order to improve the financial health of the holding money system. The goal of this research is to identify the various factors that contribute to the massive NPAs. The NPAs of top banks are also compared year by year. Aside from that, the causes and effects of NPAs are also identified, as well as a few recommendations for reducing the NPAs of the selected banks. The Indian banking sector and the Indian economies also examined in the report. In developing countries like India, the severity of the problem is undeniably considerable. The rapidly expanding problem of nonperforming assets (NPAs) is jeopardising bank profitability and harming the economy as a whole.

Manisha Raj (2018). The banking system of a country's economy is critical to its financial and economic growth. It is at the heart of the financial system, and it is crucial in relaying monetary policy signals throughout the economy. As a result, the banking sector's stability is critical for an economy's development. Individual bank performance must be scrutinised in order to ensure the banking industry's stability. Non-performing assets are a key indicator of a bank's strength today; however, due to rising non-performing assets, banks have become more cautious in extending advances in recent years. This study uses secondary data analysis to analyse and contrast SBI and ICICI Bank's non-performing assets, as well as comment on their individual performances. This research also pinpoints the source of the rise in non-performing assets in banks, as well as makes a few recommendations.

MEMDANI Laila (2017). The major purpose of this study is to discover the causes of nonperforming assets (NPAs) in the Indian banking industry as well as to investigate if these variables differ amongst the three types of bank ownership structures in India: public sector banks (PSBs), private banks (PBs), and foreign banks (FBs). The Reserve Bank of India (RBI), the country's central bank, provided the panel data for all banks from 2005 to 2014. For this, the Fixed Effects model and the Random Effects model are utilised as econometric techniques. According to the findings (PSBs), macroeconomic indicators such as log of precipitate income (LPCY) and inflation (INFN) have a considerable impact on NPLs in public sector banks. LPCY is highly significant in the case of private banks (PBs), while bank-specific factors such as size and total loans to total loans of the banking sector (TLTLBS) are significant at the 10% level. None of the variables were significant for FBs.

Raja kumar Mittal (2017). The level of non-performing assets in a country is the best predictor of its banking industry's health (NPAs). NPAs are a key source of worry for Indian banks. It reflects the performance of financial institutions. Reduced NPAs convey the perception that banks have improved their credit appraisal processes over time, but increased NPAs necessitate the use of provisions, which reduce banks' total profitability. The problem of nonperforming assets (NPAs) affects not only banks but the entire economy. In public sector banks, the magnitude of nonperforming assets (NPA) is higher. NPAs must be decreased and controlled in order for banks to increase their efficiency and profitability. The purpose of this article is to explain the idea of non-performing assets (NPAs), their quantity, the key factors for an account being non-performing, the recovery of NPAS through various channels, and the significant impact of NPAs on India's scheduled commercial banks.

Laveena (2016). A healthy banking sector has always been a critical component of economic growth. When the banking sector fails, it has a detrimental impact on the rest of the economy. Non-performing assets (NPAs) have long been a source of concern in India. The level of nonperforming assets (NPAs) in a bank reflects its performance. The significant number of NPAs erodes the value of any assets held by banks, as well as implies that the number of credit defaults has increased and the banks' net worth has declined. As the number of nonperforming assets rises, so do the levels of provisions that must be set, lowering the value of the company and its profits. The subject of rising non-performing assets has been raised many times around the world. The problem of nonperforming assets (NPA) has an impact on entire economies. This article discusses such NPA difficulties and their causes, as well as the scale and reasons of the NPA crisis during the last three years, as well as its economic impact.

Meenakshi, Rajeev (2010). The issue of non-performing assets (NPA), which was at the heart of the recent global financial crisis, has piqued the interest of policymakers and academics alike. The problem of nonperforming assets (NPAs), which had been overlooked until recently, has received a lot of attention since India's banking industry was liberalised. This exploratory research looks at the trends in NPAs in India from a variety of perspectives and illustrates how simply recognising the problem and self-monitoring has helped to significantly reduce it. It also demonstrates that public sector banks in India, which operate for some welfare reasons, have a similar track record in reducing non-performing assets (NPAs) to their private sector counterparts. The function of joint liability groups (JLGs) or self-help groups (SHGs) in improving debt recovery is also discussed in the study.

DATA ANALYSIS

Table 1 Union Bank NPA's Percentages

NPA Ratios	2011	2012	2013	2014	2015
i) Gross NPA	3,622.82	5,449.86	6,313.83	9,563.72	13,030.87
ii) Net NPA	1,803.44	3,025.03	3,353.38	5,340.08	6,918.97
i) % of Gross NPA	2.37	3.01	2.98	4.08	4.96
ii) % of Net NPA	1.19	1.7	1.61	2.33	2.71
Return on Assets %	1.05	0.79	0.79	0.52	0.49

NPA Ratios	2016	2017	2018	2019	2020	2021
i) Gross NPA	24,170.89	33,712.28	49,369.93	48,729.15	49,085.30	89,788.20
ii) Net NPA	14,025.94	18,832.10	24,326.31	20,332.42	17,303.14	27,280.52
i) % of Gross NPA	8.7	11.17	15.73	14.98	14.15	13.74
ii) % of Net NPA	5.25	6.57	8.42	6.85	5.49	4.62
Return on Assets %	0.35	0.13	-1.07	-0.59	-0.53	0.27

Table 2 Coefficient of correlation for Union Bank

Net NPA	1,803.44	3,025.03	3,353.38	5,340.08	6,918.97	14,025.94	18,832.10	24,326.31	20,332.42	17,303.14
Return on Assets %	1.05	0.79	0.79	0.52	0.49	0.35	0.13	-1.07	-0.59	-0.53
Coefficient of correlation=	-0.93203									

Table 3 t-test for Union Bank

t-Test: Paired Two Sample for Means	Variable 1	Variable 2
Mean	11526.081	0.193
Variance	69720202.92	0.489112222
Observations	10	10
Pearson Correlation	-0.932032658	
Hypothesized Mean Difference	0	
df	9	
t Stat	4.364768072	
P(T<=t) one-tail	0.000905419	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.001810838	
t Critical two-tail	2.262157163	

Interpretation: Table 1 shows the percentage of NPA's from Advances. Table 2 talks about the relationship between NPA's and ROA's. Table 3 talks about the t-test conducted for both the samples.

Both NPA's and ROAs are highly negatively correlated and the p value is less then significance level 0.05, the mean difference between two variables have statistical significance. The conclusion is the union banks NPA's are negatively correlated with ROA's.

Table 4 Axis Banks NPA percentages

NPA Ratios	2011	2012	2013	2014	2015
i) Gross NPA	159.94	1,806.30	2,393.42	3,146.41	4,110.19
ii) Net NPA	41.04	472.64	704.13	1,024.62	1,316.71
i) % of Gross NPA	1.01	0.94	1.06	1.22	1.34
ii) % of Net NPA	0.26	0.25	0.32	0.4	0.44
Return on Assets %	1.68	1.68	1.7	1.78	1.83

NPA Ratios	2016	2017	2018	2019	2020	2021
i) Gross NPA	6,087.51	21,280.48	34,248.64	29,789.44	30,233.82	25,314.84
ii) Net NPA	2,522.14	8,626.55	16,591.71	11,275.60	9,360.41	6,993.52
i) % of Gross NPA	1.67	5.04	6.77	5.26	4.86	3.7
ii) % of Net NPA	0.7	2.11	3.4	2.06	1.56	1.05
Return on Assets %	1.72	0.65	0.04	0.63	0.2	1.11

Table 5 Coefficient of correlation for Axis Bank

ii) Net NPA	41.04	472.64	704.13	1,024.62	1,316.71	2,522.14	8,626.55	16,591.71	11,275.60	9,360.41
Return on Assets %	1.68	1.68	1.7	1.78	1.83	1.72	0.65	0.04	0.63	0.2
Coefficient of correlation: -0.952209428										

Table 6 t-test for Axis bank

t-Test: Paired Two Sample for Means	Variable 1	Variable 2
Mean	5193.555	1.191
Variance	33843792.71	0.520743333
Observations	10	10
Pearson Correlation	-0.952209428	
Hypothesized Mean Difference	0	
df	9	
t Stat	2.822112504	
P(T<=t) one-tail	0.009988993	
t Critical one-tail	1.833112933	
P(T<=t) two-tail	0.019977986	
t Critical two-tail	2.262157163	

Interpretation: Table 4 shows the percentage of NPA's from Advances. Table 5 talks about the relationship between NPA's and ROA's. Table 6 talks about the t-test conducted for both the samples.

Both NPA's and ROAs are highly negatively correlated and the p value is less then significance level 0.05, the mean difference between two variables have statistical significance. The conclusion is the union banks NPA's are negatively correlated with ROA's.

Suggestions to Improve NPA Management

Communication: Being more honest when talking about the bank's products plays an important part in preserving and growing the client connection.

***Better services than expected*:** Bank clients expect the bank to provide high-quality service. The bank must go above and beyond client expectations by providing prompt service, empathy, and a personal approach.

***Feedback*:** The bank has to be able to observe and react in order to sustain and grow partnerships. The banker must determine whether or not their services are up to par, and if there are any problems, they must correct them as soon as possible.

***Consistent relationship*:** The bank must keep a consistent and ongoing interaction with them, informing them of investment earnings and, if necessary, advising them to diversify their assets. This improves the banker-customer relationship's trustworthiness.

At times, the banker must thank the customer for handling their investments. This encourages the buyer to invest more money.

To achieve the goal of building client connections using the methods indicated above, the bank must recruit and educate relationship bankers.

Hiring and Training a Relationship Banker

Nevertheless, a costly affair to maintain a relationship banker for the banks, it is relevant and requisite. Based on (Chris Nicholas 2018)" relationship banking value add pyramid" the banks should follow a relationship banking approach to take a position of financial planner approach with the customers. They also should guide the clients in agreement with their income and risk levels for the investments. In relationship banking model, risk exposure is avoided or mitigated or hedged based on the risk-taking ability of the customer.

The main success factor in relationship banking is the insight and the advice provided by the banker to the customer. For this the bank has to hire a person who has banking expertise. It comes from experience and curiosity to learn new things. Not only hiring training is also important factor. There are different levels of training for a relationship banker.

LEVEL 1: The banker has to understand the basic and general product knowledge of the bank. And at times he also has to understand special products which are offered by the bank.

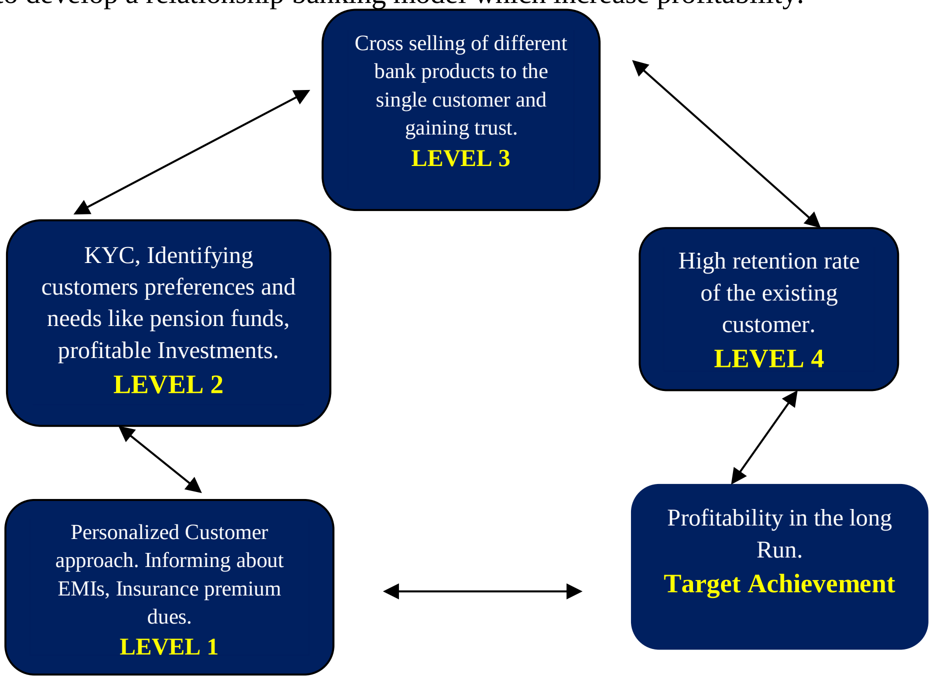
LEVEL 2: Once he acquires the knowledge of bank products then he has to develop his community networks through cold calling, tele calling and Social Media promotion.

LEVEL 3: This level requires specialty business expertise. The banker has to understand several of ways of capital raising, Marketing and operating procedures.

LEVEL 4: This level requires industry experience and finance expertise in Banking, Risk management and Investment management etc.

Relationship Banking Model

The banks also have to develop a relationship banking model which increase profitability.



Source: Geeta, M., & Sivanand, C.N. (2022)

DISCUSSION AND CONCLUSION

From the analysis it is identified that both NPA's and ROAs are highly negatively correlated. The result is if NPA's increases then ROA's will decrease. To manage NPAs both the banks have to follow some relationship banking models so that they can minimise the NPAs in an accounting period. Communication about the lending rates for loan products is mandatory. From this the borrower may decide whether to borrow, or to search some other financing modes which is cheaper and affordable for him. Continuous feedback and information assistance about the EMI's the borrower has to pay may decrease the default in payments.

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