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Npa Affecting The Performance Of Public Sector Banks In India: An Empirical Analysis

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Abstract.
Banks worldwide are facing the problem of rampaging non-performing assets and they are finding difficulty in dealing with it. Popular measures taken by various government in states and at centre compelling the public sectors banks to compromise with standard norms more often, further complicating the woes of these banks who are already facing competition from private sector banks in India. On the other hand, although this problem is of less intensity in private sector banks, private sectors bank in order to inroads into the exclusive customer base, often compromise with the same standard norms and proportion of their NPA is also increasing day-by-day. Performance of the Commercial Banks greatly depends upon the quantity and quality of their lending activity. The quantity of lending indicates the operational outreach of banks clientele and quality shows the proportion of assets that is recoverable by the banks and that cannot be recovered leading to Non-performing Assets. This research paper tried to find out the probable impact of NPA on the financial performances of Public Sector Banks. Regression analysis was done to ascertain the impact of Gross NPA on three profitability ratios namely Return on Capital Employed (ROCE), Return on Equity (ROE) and Return on Assets (ROA) of eight public sector banks: State Bank of India (SBI), Punjab National Bank (PNB), Bank of Baroda (BOB), Canara Bank, Indian Bank, Bank of India, Union Bank of India, and Bank of Maharashtra. The data of Gross NPA of these banks and their profitability ratios from 2019-20 to 2023-24 were analysed using SPSS software. The output of the regression analysis found negative impact of NPA of profitability parameters but the impact was found to be significant only on ROCE in case of Union Bank of India and Bank of Maharashtra, on ROE in case of State Bank of India and on ROA in case of State Bank of India at 95 percent confidence level. This paper also found that although, the proportion of NPA had been reduces to an extent, yet it was still high enough to undermine their profitability. Therefore, it was found that although the problem of NPA has reduced to an extent, the menace is yet to be addressed and it seems to continue troubling the banks particularly public sector banks in future as well.

Keywords:
NPA, Profitability, Financial Performance, PSB, Credit provisioning.
JEL Classification: C33, G21, G11.

Introduction
The role of banking sector can never be underestimated in the economic development of any country. The importance of vibrant banking system has increased many fold particularly after liberalization in India and other third world countries. The governmental welfare schemes are generally implemented through Public Sector Banks and hence the effective implementation of governmental policies depend on efficient and professional approach adopted by Govt,

banks. In order to pursue the welfare measures of government and facilitating the credit provisioning to corporates, Public Sector Banks are facing the challenges of default leading to increase in Non-performing Assets of banks. Technically speaking, when interest payments and the principle repayments remain due for more than ninety days or more, it becomes NPA.

In India, banks specially Public sector banks, are facing this issue since 2008 financial crisis which crippled the economy worldwide. Increased competition and professional rivalry among banks to attract more and more client, compromise with the credit issue norms leading to giving loans to less worthy clients who ultimately default repayment of interest and principle. Popular policy matters and waiving of loans by political parties in power many a times make the matter worse as the borrowers become emboldened not to repay the loans wilfully, further complicate the already worsened situation. Authorities in banks do not do proper due diligence before awarding loans and compliance of risk assessment is not done properly, besides unstable interest rates also contribute towards proliferation of non-performing assets of PSBs.

More often Reserve Bank of India go for Asset Quality Review (AQR) to clean up the balance sheet of banks, but each time ARQ is done some alarming situation is found in terms of volume of stressed assets surpassing the limits. Particularly when the Govt. try to ensure the financial inclusion the proportion of NPA becomes alarmingly high. At the end of financial year it is observed that provisions for bad debt fell far short of the actual bad debt and banks are helpless to deal with it. Default by big corporates have surfaced more often than not in recent days and there is no ending seemed to be there for now.

The NPA impacts the banks efficiency in many ways. Firstly, banks are left with less resources for further credit provisioning to its clients leading to less business. Secondly, banks are forced to keep aside large resources for making provisions for bad debt making it enable to lend to productive sectors and subsequently lead to hampering of the economic growth of the country. Thirdly, it creates bad impression among investors and genuine borrowers who move away from the concerned banks that badly affect the reputation of the concerned bank. Fourthly, banks are forced to be entangled in legal or judicial matters that badly impact the operational efficiency of banks. And lastly, the increasing volume of NPAs creates a dent in the bottom line of the banks and its profitability gets dwindled significantly.

The NPA problem has also necessitated significant government intervention in the form of recapitalization and reforms aimed at strengthening the banking sector. Initiatives such as the Insolvency and Bankruptcy Code (IBC) and the establishment of the National Company Law Tribunal (NCLT) have been instrumental in expediting the resolution of stressed assets. However, the journey towards NPA resolution remains arduous, requiring concerted efforts from all stakeholders – banks, regulators, government, and borrowers.

Taking the overall picture, we can say that growing volume of NPA is posing a unmanageable challenge for banks, particularly PSBs, which requires the overhaul of Govt. approach towards public policy matters on one hand and building and implementing a comprehensive credit provisioning and risk management practices on another so that health of Indian banking sector is improves up to the mark.

As defined by RBI, the NPA constitute that proportion of asset which could not generate the revenue or income for banks within certain specified period. It means to say that if interest and principle component is not recovered within a limited tine span, it is treated as NPA under RBI regulation. However, the criteria mentioned for treating ang unrecoverable amount as NPA are as follows:

1. Term loans interest and instalment of principle thereof not received for 90 days.
2. Bill discounting not paid for more than 90 days.
3. Credit given to farmers is due for more than one cropping season.
4. Loan to farmers not recoverable up to two and half years.

Statement of Problem

With the increase in banking services and operations many cases of default by individuals and corporates are coming to surface. NPA has become a huge challenge for banks specially PSBs. The level and volume of NPA convey to the market about the operational efficiency of banks that causes loss of esteem and reputation on one hand, and adverse impacts on profitability on the other. It has become never ending phenomenon. Banks have started treating it as a regular matter and try to deal with it by managing the level of NPA that the bank can sustain.

Statement of Purpose

There has been two aspects that has become the essential feature of modern day economy. First is that The vibrant banking system is prerequisite for fast economic development of the country, and second, the banks have to deal with NPA. Among the challenges faced by banks, the issue of NPA has become the biggest one. Managing the NPA has become the ticklish problem. If not managed properly, it has the potential to create a dent in profitability which impact the banks efficiency adversely.

Therefore, the this paper aims to investigate the impact of NPA on profitability of sample banks.

Literature Review

According to **Amandeep (1991),** Indian banking sector, specially the public sector banks, had to implement the policy matters of the government related to credit provisioning and lending to the priority sector. Many a times these policy matters become the liability for banks specially PSBs. These liabilities causes burden on banks and their operational responsibilities get hampered. The increased competition and establishment expenditure make the borrowers unviable leading to the enterprise sickness and unwilful default by them. The researcher in the outcome of regression analysis of financial performance found significant adverse impact of NPA on bank performance.

Das and Upal (2021) examined the impact on Non-performing Assets on operational cost and profitability of commercial banks in India. In their study they analysed the secondary data of 39 sample banks constituting both governmental and private sector banks. The study which analysed the relevant data from 2005 to 2019, found the significantly adverse impact of NPAs on profitability of banks. In the same study the researchers also analysed the relationship between operational cost and profitability and found significant increase in operating cost owing to the burden of managing surging NPA. The researchers suggested that banks should give attention to twin aspect of NPA management and reducing the operating cost so that profitability should not be undermined at any cost.

In their study, **Agarwala & Agarwala (2019)** tried to assess the financial health of banking sector and found banking growth greatly undermined by the impact of Non-performing assets of banks. The sample banks of study include both public and private banks and the duration of study was from 2010 to 2017. The relevant financial data was collected from banks reports available on their websites. In the study it was found that the proportion of NPA was comparatively lower in private banks in comparison to public sector banks. Private banks were more efficient in not only disbursement of loans but in recovery of loans as well. The outcome of the study revealed that profitability of banks and their operational efficiency greatly impacted unfavourably because of presence of high proportion of NPA.

On the other hand, **Saha and Gurudas (2001)** in their studies, were convinced that the rise in the level of NPAs was mainly because of wrong business model of lending. The socio-political environment, sectoral positioning of borrowers and mandatory provisioning of credits for priority sector and wrong selection of target borrowers were the some of the factors responsible for rising level of NPAs of banks that adversely impacted the banks performances.

Ahmed (2011) in his research work on management of NPAs of scheduled commercial banks, found that the impact of NPA was significant and seriously denting the revenue generation capabilities of banks who have high proportion of NPAs. The researcher was of the opinion that the serious matter of NPA could be resolves judiciously if the serious attention was given to the credit application monitoring and objective evaluation of borrowers capability and creditworthiness. Post-sanction appraisal and follow-ups help reduce the NPA in a significant way. The quantity of credit to be granted becomes important in case the financial strength and cash-flow of the borrowers is not sound.

Agarwal and Mittal (2012) in their research paper investigated the performances of banks, both public and private, and found mixed results. Punjab National Bank among PSBs and HDFC bank among private bank out of sample banks performed much better in managing their NPA and as a result their efficiency and financial performance were up to mark. Rest of the banks have to bear the brunt owing to rising NPAs. However, the private sector banks were better in terms of managing NPA and their financial performances were better than public sector banks. Since the post-liberalization period all the banks has been making efforts to control NPAs and improve their asset quality and subsequently the profitability.

Selvarajan & Vadivalagan (2013) in his investigation of compounding NPA in banks cited the steps followed by banks to take care of NPA. Different banks have different approach and many were not following the standard approach prescribed by Narshinham committee. The priority sector lending by banks was investigated and it was found that somehow, the banks have learnt to deal with NPA. Data of banks from 2001 to 2010 of sample banks were analysed and it was found that private sector banks were better in terms of performance than public sector banks, but most of Indian banks including private sector banks have not found appropriate ways to deal with NPA. Recovery of loans is still a challenge for them and they found it uncomfortable to deal with. The paper suggested that the banks have to find different but workable strategies to lower the proportion of NPA.

Kandpal and Kavidayal (2015) in their research on NPA of scheduled commercial banks of northern India found creditworthiness of borrowers, no follow-up for recovery,

unstandardised credit appraisal of credit applicants as major factors contributing to high proportion of NPA. The researchers used factor analysis to identify the significant contributors of NPA by collecting responses from higher and middle level executives. Failure of businesses of entrepreneurs was another factor contributing significantly to the alarming level of NPA.

Among the largest problems the banks are facing is the problem of NPA. Despite RBI strict guidelines regarding (**Bajirao Borse, 2016)** control over NPA the problem not only persists but is becoming more and more complex. The researcher in present study analysed the data related to NPA and profitability of 11 big commercial banks (6 PSBs and 5 private banks) in India and found inverse relationship between NPA and ROA. The study also found that proportion of NPA is higher in case of Public sector banks in comparison to private banks. The researcher suggested that RBI should assume the responsibility to ensure strict implementation of credit norms established by it to control the level of NPA.

Gupta and Dongre (2024) in their paper on NPAs impact on profitability, identified NPA as a key challenge banks, specially PSBs are facing. Relevant financial data of sample banks that constitute both public sector and private sector banks from 2018 to 2023 were analysed and the researchers found significant negative impact of NPA on banks profitability, particularly ROA. According to this research PSBs were more badly impacted although the impact was universal. The paper further says that NPA impact has been impacting the economic growth in general. This research highlighted the need of improving the bank performance and liability of the regulatory bodies cannot be underplayed.

According to **Wadhwa & Ramaswamy (2020),** NPA has been a big area of problem that has an impact on financial performance of the banks. Financial data of related variables has been taken for years from 2014 to 2019 for analysis. Correlation and Regression analysis findings reveal that impact of NPA on profitability factors was significant for sample banks (both public and private) and the impact was pore prominent on public sector banks in comparison to private sector banks. The researchers also found ambiguity about calculating NPA and recommended that this ambiguity must be resolved to analyse the real impact. This paper also suggested to include other macro-economic factors to increase the dimensions of NPA.

In his paper on impact of NPA on banks profitability, **Bondu (2022)** analysed the impact of NPA on four banks profitability (two public and two private banks) in India. The outcome was more predictable as public sector banks were badly impacted by growing NPA than private banks. The NPA data and ROA of four years from 2017 to 2021 were analysed. Correlation analysis was conducted the ascertain the relationship between NPA and ROA and it was found that impact was more adverse on public sector banks. Financial data were sourced from money control and RBI sites.

Research Objective

- To analyses the impact of NPA on profitability of public sector banks.

Research Methodology

Research Design

The current study focuses on analysing the impact of non-performing assets (NPAs) on the performance of eight prominent public sector banks: State Bank of India (SBI), Punjab National Bank (PNB), Bank of Baroda (BOB), Canara Bank, Indian Bank, Bank of India,

Union Bank of India, and Bank of Maharashtra. This research investigates the gross NPAs of these banks over a span of five years, ranging from 2019-20 to 2023-24. Secondary data has been sourced from RBI reports and bank financial statements. The selection of the eight public sector banks for this investigation was based on their substantial asset size and logistical convenience. Data collection primarily relied on online sources, including the RBI website and bank portals. By adopting a straightforward approach focused on numerical analysis, the study seeks to offer insights into the dynamics of NPAs and their implications on bank performance.

Research Instruments

The research instrument for this project report primarily consists of secondary data collection tools and analytical techniques. Since the study revolves around analysing the financial performance of public sector banks in India in relation to non-performing assets (NPAs), the following research instruments are used:

- Statistical software SPSS has been employed for data analysis.
- Linear regression has been used to correlation and impact analysis of NPA on profitability of sample banks.

Variables Used.

In this paper, independent variable used is Gross Non-performing Asset (NPA). The impact of NPA on profitability has been analysed. The profitability ratios as dependent variable such as Return on Capital Employed (ROCE), Return on Equity (ROE) and Return on Asset (ROA) have been used.

Return on Capital Employed (ROCE) is the return realized per unit of capital employed. The contributors of the capital are interested in assessing the percentage of return on their capital and compare the return with their expectations. High return keep them invested for long. It is calculated as follows:

$$\text{ROCE \%} = \frac{Operating\ Earning}{Capital\ Employed} * 100$$

Return on Equity (ROE) is the profitability ratio calculated as the return available for equity holders. This return is sensitive as the return realized by them is residual of the profits after paying the debt holders and creditors. High return to equity holders is a good sigh of company`s performance on operating front. It is calculated as follows:

$$\text{ROE \%} = \frac{Net\ Income}{Average\ Shareholder\ equity} * 100$$

Return on Asset (ROA) is the measure of effectiveness and quality of assets possessed by a firm. High return on asset is the indicator of how efficiently the assets of the firm is being utilized in the course of its normal operations. Lower value of ROA indicates that either the quality of assets is not good or the firm is not properly utilizing the assets efficiently. Quality assets possessed by a firm help in sustaining the prolonged high growth and profitability. It is calculated as follows:

$$\text{ROA \%} = \frac{Net\ Income}{Total\ Asset} * 100$$

The only independent variable used in this research work is Gross Non-performing Asset (GNPA). Non-performing Assets has become a challenge for banks particularly the public sector banks. It is the proportion of advances by banks to its customers that is irrecoverable. It is like a dent of the operational efficiency of banks. Higher the proportion, larger the impact on bottom line, bigger is the loss of prestige of banks and confidence of customer. It includes the critically doubtful assets irrecoverable beyond ninety days. Up to some extent,

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government policies are some how responsible for high proportion of NPA in public sector banks. Compulsory priority sector lending and loan waiver by the government emboldened the defaulters, as a result the recovery becomes difficult. The increased competition due the presence of private and foreign banks make the public sector banks compromise with the standard norms leading to creation of sub-standard assets and ultimately it becomes NPA. It is calculated as follows:

$$\text{GNPA } \% = \frac{Total\ Unrecoverable\ Assets}{Total\ Advances} * 100$$

Hypothesis: H0: There is no impact of Non-performing Assets on Profitability of Public Sector banks in India.

Data Analysis.
Table 1.

Result of Regression analysis: Model Summary

Banks	R	R square	Adjusted R squared	F	Sig. Value
SBI	**0.645**	**0.417**	**0.222**	**2.147**	**0.240**
Canara Bank	**0.704**	**0.496**	**0.328**	**2.951**	**0.184**
Bank of Baroda	**0.385**	**0.148**	**-0.136**	**0.522**	**0.522**
Punjab National Bank	**0.748**	**0.560**	**0.413**	**3.813**	**0.146**
Indian Bank	**0.581**	**0.337**	**0.116**	**1.526**	**0.305**
Bank of India	**0.185**	**0.034**	**-0.288**	**0.107**	**0.765**
Union Bank of India	**0.882**	**0.779**	**0.705**	**10.548**	**0.048**
Bank of Maharashtra	**0.988**	**0.977**	**0.969**	**127.576**	**0.001**
Dependent Variable: ROCE					
Independent Variable: GNPA					

Source: Author(s) compilation from SPSS 22 output.

Table 1 shows the modal summary of dependent variable ROCE and independent variable GNPA of eight selected banks. Since R shows the correlation strength between variables, in case of SBI (0.645), Canara Bank (0.704), PNB (0.748) and Indian Bank 0.581) the modal statistics show moderate negative correlation. In case of Bank of Baroda (0.385) and Bank of India (0.185) the correlation were weak. But in case of Union Bank of India 90.882) and Bank of Maharashtra (0.988), the correlation were very strong (negatively). The value of R square shows how much the dependent variable is explained by independent variable. Higher the value of R square, higher the explanation of dependent variable by independent variable. In the above table it is clearly evident that Union Bank of India (0.779) and Bank of Baroda

(0.977) have higher value and therefore, dependent variable ROCE is well explained by GNPA. There is no much difference between the values of Adjusted R square.

Table 2 provides regression coefficient statistics of sample banks. The value of unstandardized coefficient (Beta) provides the value of a in the constant row and the value of b in independent variable GNPA row. Both the values of a and b are needed to form the linear regression equation linking dependent variable with dependent variable which is as follows:
Y = a + b X
Standardized Coefficient (Beta) have all negative value except in case of PNB bank which is positive. It shows that there is negative linkage between dependent variable ROCE and independent variable GNPA. Further t- value in case of Union Bank of India and Bank of Maharashtra are -3.284 and -11.295 respectively and the significance value of these two banks are 0.048 and 0.001 respectively which are less than 0.05 and hence significant at 95 % confidence level. Therefore, in case of UBI and BOM the null hypothesis get rejected. For rest of sample banks the significance values are greater than 0.05 and hence statistical results failed to reject null hypothesis. However, it is clearly evident that gross NPA has dented the return on capital employed (ROCE) of all firms except PNB, but the dent was statistically significant only in case of UBI and BOM.

Table 2.

Regression Coefficient

Banks (Constant)	Unstandardised Coefficient (Beta)	Standardised Coefficient (Beta)	t-value	Sig. Value	H0 Rejected/ Not-rejected
(Constant)	2.586		2.772	0.069	0.240>0.05
GNPASBI	-0.255	-0.645	-1.463	0.240	Not-rejected
(Constant)	2.888		4.254	0.024	0.184>0.05
GNPACB	-0.148	-0.704	-1.718	0.184	Not-rejected
(Constant)	1.857		34.955	0.000	0.522>0.05
GNPABOB	-0.005	-0.385	-0.722	0.522	Not-rejected
(Constant)	1.274		5.668	0.011	0.146>0.05
GNPAPNB	0.034	0.748	1.953	0.146	Not-rejected
(Constant)	2.501		5.950	0.009	0.305>0.05
GNPAIB	-0.067	-0.581	-1.235	0.305	Not-rejected
(Constant)	1.666		4.386	0.033	0.765>0.05
GNPABOI	-0.010	-0.185	-0.327	0.765	Not-rejected
(Constant)	2.494		11.494	0.001	.048<0.05
GNPAUBI	-0.056	-0.882	-3.248	0.048	Rejected
(Constant)	2.477		44.359	0.000	0.001<0.05
GNPABOM	-0.063	-0.988	-11.295	0.001	Rejected
Dependent Variable: ROCE					
Independent Variable: GNPA					

Source: Author(s) compilation from SPSS 22 output.

Table 3 shows the modal summary of dependent variable ROE and independent variable GNPA of eight selected banks. Since R shows the correlation strength between variables, in

case of SBI (0.991), the value is significantly high and thus shows significant negative correlation between dependent variable ROE and independent variable GNPA. For Canara Bank (0.734), PNB (0.590), BOB (0.787), BOI (0.795), UBI (0.813) and BOM (0.794), the modal statistics show moderate to high negative correlation but not significant at 95 % confidence level. In case of Indian Bank (0.309) the correlation was found to be weak. The value of R square shows how much the dependent variable is explained by independent variable. Higher the value of R square, higher the explanation of dependent variable by independent variable. In the above table it is clearly evident that only in case of State Bank of India (0.981) the R square value is much higher. Therefore, the independent value very well defines the dependent value. In case of Canara Bank (0.538), Bank of Baroda (0.619), Bank of India (0.632), Union Bank of India (0.661) and Bank of Maharashtra (0.630) have not much higher values and therefore, dependent variable ROCE is not very well explained by GNPA. In case of Punjab National Bank and Indian Bank, the R square value is low and hence dependent variable is not well defined by independent variable. There is no much difference between the values of Adjusted R square.

Table 3.

Result of Regression analysis: Model Summary

Banks	R	R square	Adjusted R squared	F	Sig. Value
SBI	0.991	0.981	0.975	157.282	0.001
Canara Bank	0.734	0.538	0.384	3.494	0.158
Bank of Baroda	0.787	0.619	0.492	4.875	0.114
Punjab National Bank	0.590	0.349	0.132	1.606	0.294
Indian Bank	0.309	0.095	-0.206	0.316	0.613
Bank of India	0.795	0.632	-0.509	5.147	0.108
Union Bank of India	0.813	0.661	0.548	5.856	0.094
Bank of Maharashtra	0.794	0.630	0.507	5.119	0.109
Dependent Variable: ROE					
Independent Variable: GNPA					

Source: Author(s) compilation from SPSS 22 output.

Table 4.

Regression Coefficient

Banks (Constant)	Unstandardised Coefficient (Beta)	Standardised Coefficient (Beta)	t-value	Sig. Value	H0 Rejected/ Accepted
(Constant)	25.698		18.425	0.000	0.001<0.05
GNPASBI	-3.275	-0.991	-12.541	0.001	Rejected

(Constant) **GNPACB**	**38.659** **-4.326**	**-0.734**	**2.121** **-1.869**	**0.124** **0.158**	**0.158>0.05** **Nor-rejected**
(Constant) **GNPABOB**	**12.299** **-1.131**	**-0.787**	**3.244** **-2.208**	**0.048** **0.114**	**0.114>0.05** **Not-rejected**
(Constant) **GNPAPNB**	**31.122** **-2.645**	**-0.590**	**1.139** **-1.267**	**0.337** **0.294**	**0.294>0.05** **Not-rejected**
(Constant) **GNPAIB**	**0.628** **0.988**	**0.309**	**0.046** **0.562**	**0.966** **0.613**	**0.613>0.05** **Not-rejected**
(Constant) **GNPABOI**	**26.818** **-2.216**	**-0.795**	**2.136** **-2.269**	**0.122** **0.108**	**0.108>0.05** **Not-rejected**
(Constant) **GNPAUBI**	**35.566** **-2.843**	**-0.813**	**2.401** **-2.420**	**0.096** **0.094**	**.094>0.05** **Not Rejected**
(Constant) **GNPABOM**	**46.963** **-7.177**	**-0.794**	**1.470** **-2.262**	**0.238** **0.109**	**0.109>0.05** **Not-rejected**
Dependent Variable: ROE					
Independent Variable: GNPA					

Source: Author(s) compilation from SPSS 22 output.

Table 4 provides regression coefficient statistics of sample banks for dependent variable ROE and independent variable GNPA.. The value of unstandardized coefficient (Beta) provides the value of a in the constant row and the value of b in independent variable GNPA row. Both the values of a and b are needed to form the linear regression equation linking dependent variable with dependent variable which is as follows:

$Y = a + b X$

Standardized Coefficient (Beta) have all negative value except in case of Indian bank (0.309) which is positive. It shows that there is negative linkage between dependent variable ROE and independent variable GNPA. Further t- value in case of State Bank of India is -12.541 and the significance value is 0.001 which is less than 0.05 and hence significant at 95 % confidence level. Therefore, in case of SBI the null hypothesis gets rejected. For rest of sample banks the significance values are greater than 0.05 and hence statistical results failed to reject null hypothesis. However, it is clearly evident that gross NPA has dented the return on equity (ROE) of all firms except Indian Bank, but the dent was statistically significant only in case of SBI.

Table 5.

Result of Regression analysis: Model Summary

Banks	R	R square	Adjusted R squared	F	Sig. Value
SBI	**0.988**	**0.976**	**0.968**	**123.493**	**0.002**
Canara Bank	**0.765**	**0.585**	**0.446**	**4.224**	**0.132**
Bank of Baroda	**0.786**	**0.618**	**0.491**	**4.852**	**0.115**
Punjab National Bank	**0.592**	**0.351**	**0.135**	**1.623**	**0.292**
Indian Bank	**0.003**	**0.000**	**-0.333**	**0.000**	**0.996**

Bank of India	**0.538**	**0.290**	**0.053**	**1.225**	**0.349**
Union Bank of India	**0.817**	**0.667**	**0.556**	**6.007**	**0.092**
Bank of Maharashtra	**0.829**	**0.688**	**0.584**	**6.609**	**0.082**
Dependent Variable: ROA					
Independent Variable: GNPA					

Source: Author(s) compilation from SPSS 22 output.

Table 5 shows the modal summary of dependent variable ROA and independent variable GNPA of eight selected banks. Since R shows the correlation strength between variables, in case of SBI (0.988), the value is significantly high and thus shows significant negative correlation between dependent variable ROA and independent variable GNPA. For Canara Bank (0.765), BOB (0.786), UBI (0.817) and BOM (0.829), PNB (0.592) and BOB (0.538) the modal statistics show moderate to high negative correlation but not significant at 95 % confidence level. In case of Indian Bank (0.003) the correlation was found to be very weak. The value of R square shows how much the dependent variable is explained by independent variable. Higher the value of R square, higher the explanation of dependent variable by independent variable. In the above table it is clearly evident that only in case of State Bank of India (0.976) the R square value is much higher. Therefore, the independent value very well defines the dependent value. In case of Canara Bank (0.585), Bank of Baroda (0.618), Union Bank of India (0.667) and Bank of Maharashtra (0.688), R square values are high and dependent variable is moderately defined. In case of PNB (0.351), Indian Bank (0.000) and Bank of India (0.290), R square values are lower and hence dependent variable (ROA) is not defined by independent variable (GNPA). There is no much difference between the values of Adjusted R square.

Table 6.

Regression Coefficient

Banks (Constant)	**Unstandardised Coefficient (Beta)**	**Standardised Coefficient (Beta)**	**t-value**	**Sig. Value**	**H0 Rejected/ Accepted**
(Constant)	**1.369**		**16.167**	**0.001**	**0.002<0.05**
GNPASBI	**-0.176**	**-0.988**	**-11.113**	**0.002**	**Rejected**
(Constant)	**1.901**		**2.319**	**0.103**	**0.132>0.05**
GNPACB	**-0.214**	**-0.765**	**-2.055**	**0.132**	**Not-rejected**
(Constant)	**0.820**		**3.202**	**0.049**	**0.115>0.05**
GNPABOB	**-0.076**	**-0.786**	**-2.203**	**0.115**	**Not-rejected**
(Constant)	**1.719**		**1.164**	**0.328**	**0.292>0.05**
GNPAPNB	**-0.144**	**-0.592**	**-1.274**	**0.292**	**Not-rejected**
(Constant)	**0.424**		**0.567**	**0.611**	**0.996>0.05**
GNPAIB	**0.001**	**0.003**	**0.006**	**0.996**	**Not-rejected**
(Constant)	**52.201**		**0.800**	**0.482**	**0.349>0.05**
GNPABOI	**-5.616**	**-0.538**	**-1.107**	**0.349**	**Not-rejected**

(Constant) **GNPAUBI**	**1.917** **-0.152**	**-0.817**	**2.456** **-2.451**	**0.091** **0.092**	**.092>0.05** **Not-rejected**
(Constant) **GNPABOM**	**1.169** **-0.217**	**-0.829**	**1.966** **-2.571**	**0.144** **0.082**	**0.082>0.05** **Not-rejected**
Dependent Variable: ROA					
Independent Variable: GNPA					

Source: Author(s) compilation from SPSS 22 output.

Table 6 provides regression coefficient statistics of sample banks for dependent variable ROA and independent variable GNPA.. The value of unstandardized coefficient (Beta) provides the value of (a) in the constant row and the value of (b) in independent variable GNPA row. Both the values of a and b are needed to form the linear regression equation linking dependent variable with dependent variable which is as follows:

$Y = a + b X$

Standardized Coefficient (Beta) have all negative value except in case of Indian bank (0.003) which is positive. It shows that there is negative linkage between dependent variable ROA and independent variable GNPA. Further t- value in case of State Bank of India is -11.113 and the significance value is 0.002 which is less than 0.05 and hence significant at 95 % confidence level. Therefore, in case of SBI the null hypothesis gets rejected. For rest of sample banks the significance values are greater than 0.05 and hence statistical results failed to reject null hypothesis. However, it is clearly evident that gross NPA has dented the return on asset (ROA) of all firms except Indian Bank, but the dent was statistically significant only in case of SBI.

Findings and Recommendations.

NPA in banks has been like a ghost that continue to scare them and impacts the bank`s performance adversely since beginning. Despite RBI`s strict guidelines it continues to exist, although its intensity decreased a bit. Public sector banks are grappling with it more than private banks. Out of eight major PSBs, Union banks of India, State Banks of India and the Bank of Maharashtra find their profitability got dented significantly. Entry of private banks and foreign banks has increased the competition and in order to survive PSBs in India have to maintain and increase their customer base and in doing so they, many a times, compromised with the standard norms that lead to creation of bad assets and NPA. Banks are not strictly implementing Basel norms related to risk management and some times regulatory bodies fail to impose the norms as well. Before extending credit banks should ensure the credit worthiness of clients and their credit history. They should also persistently and seriously follow up their recovery procedures and revisit, if any. Customer friendly IT tools and financial technologies should be used extensively, then only the NPAs could be controlled. Government should also look into matter seriously and should restrict the temptation of freebees in order to minimise the NPA. In recent years, many loans have been written off and this shows the gravity of the problem addressed in this paper.

Declaration.

I, Raghawendra Kumar, along with my co-author of this paper Dr. Asim Ray declare that this work is the original one and has not been presented or publish anywhere else. No funding has been availed from anywhere for this. I have not accessed any unauthorised content from anywhere and every facts and figure included in it is taken from public domain. I have the

record of the data and material used in this paper and could be provided, if required. We, therefore, give our consent to publish it in your esteemed journal

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