

# CONTEMPORARY COMPOSITION AND NPA TREND: A STUDY ON INDIAN COMMERCIAL BANKS

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## Abstract:

Commercial banks play a major role in fostering economic development of a particular country. Financial performance of banking sector has been showing a declining trend owing to rise in NPA. NPA is having a significant impact on the profitability aspects of commercial banks in India as it is a tradeoff between profitability and income. This paper is an attempt to examine the trend, composition and classification of NPA of Scheduled Commercial Banks in India. This particular study is being undertaken to find out the level of impact of NPA on profitability. The period of the study is 12 years i.e., from 2005 to 2016. The present study with the help of secondary data and statistical tools such as, correlation, Regression, moving average has been used for the analysis.

**Key Words:** Non-Performing Assets, Priority sector, Non-Priority Sector, Scheduled Commercial Banks.

## I. INTRODUCTION

The banking system has a very important place in the economic life of a country. The strength of the economy is closely linked to the robustness of the banking system and to a well-structured banking sector. The Indian banking sector underwent several changes in the liberalization process. However, a troubled crisis affecting the banking sector, the Non-Performing Assets (NPA). Non Performing Assets also affect the profitability and efficiency of the banks, thus bringing no new income to the bank. At present, NPAs are becoming problematic assets for all commercial banks in India. In this context, the study tries to analyze the composition and trend of NPA's of scheduled commercial banks in India.

## Definition

The NPA is defined as an advance in which interest payment or principal installment (term credit) or both are not paid for a certain period of time. In India, the definition of NPA changed over time. According to the Narasimham Committee Report (1991), these assets (advances, discounts, advances, cash credits, etc.) with interest for four quarters (91 days) should be accepted as NPA. Subsequently, this period was reduced and the assets for which the interest was not paid for 90 days were accepted as NPA. An NPA is defined as a credit asset that leaves no income for a bank, in the form of interest or principal repayment.

## Classification of NPA

Non-performing assets are divided into three categories, based on the IRAC (Income Recognition and Asset Classification) standards, into the range for which the asset was ineffective and for the recovery of contributions:

**Table 1: Classification of NPA**

Asset Classification	Provisioning Requirements
Standard Assets	Assets that generate income without any signs of illness.
Substandard Assets	Assets that have remained NPA for a period of less than or equal to 12 months.

Doubtful assets	An asset would be considered doubtful if it remained in the subordinate category for a period of 12 months.  (a) Doubtful 1-NPA for a further period of 12 months, d. H. for the first 24 months. (b) Doubtful 2 - NPA for 24 months to 36 months (c) Doubtful 3-NPA for over 36 months
Loss assets	According to RBI, "loss as an asset is uncollectible and of little value so that its existence as a bankable asset is not justified, although there may be some value for salvage or recovery."

NPAs are divided into two categories, namely gross NPA and net NPA.

GNPA: It reflects the quality of bank lending. It is the total of all loan receivables that are classified as NPAs at the balance sheet date. It includes below average, doubtful and loss assets.

NNPA: It reflects the actual burden on banks. It is calculated as follows: NNPA = GNPA- (balance in interest rate suspension account + receivables received + partial instalment received + total provisions held).

In this paper, we attempt to analyze the composition and trend of NPAs under Scheduled Commercial Banks (SCBs), which focus on priority and non-priority banking sectors.

## 2. REVIEW OF RELATED LITERATURE

The literature focused mainly on reviewing the composition and trend of NPA among various commercial banks in India. The review provided a detailed insight into the treatment of NPA in the Indian banking sector over the years. Against this background, various authors / researchers have contributed to the literature on this topic. **Kumar (2005)** has investigated in his article "Non-Performing Assets in Indian Banks" that the size of NPAs in public banks is comparatively higher. To improve efficiency and profitability, NPAs need to be scheduled. The government has taken several steps to reduce the NPA. But at least Indian banks can try to compete with foreign banks to maintain international standards. **Ghosh, D. and Ghosh, S. (2011)** investigated the composition, trend, and management of NPA in PSBs. The results of the study showed increased CRAR and NPA levels during 2009-10. The analysis shared the general view that the NPA is still a significant threat that needs to be addressed to improve the efficiency of the Indian banking sector. **Bhuyan, R. R. and Rath, A.K. (2013)** have shown that the high trend of the NPA is increasing from year to year. Gross NPA to gross advances ratio also increases in PSBs. **Joseph, A. L. (2014)** concerned with the trends in NPA in the banking sector, internal, external and other factors that are mainly contributing to the increase of NPA in the banking sector, and also includes proposals to address the NPAs. **Reddy, K.S & Naidu, M.V. Sivaram (2017)** have done a comprehensive Study on NPAs of Scheduled Commercial Banks and concludes that there is an increasing trend in GNPA of all the SCBs. The standard assets are declining and the provisions are increasing. It is also found from the research that NNPA has direct impact on ROA & ROE.

## III. RESEARCH OBJECTIVES, HYPOTHESIS AND METHODOLOGY

### Objectives

1. To Study the composition and trend of the NPA for scheduled commercial banks in India.
2. To study the relationship between NNPA, ROA & ROE of commercial banks.

### Hypothesis

- 1) H0: There is no significant relationship between the NNPA & ROE.
- 2) H0: There is no significant relationship between the NNPA & ROA.

### Research Methodology

The study is being confined to secondary data only. The document discusses the conceptual framework of the NPA, as well as highlights the trends, status and impact of NPA on the scheduled commercial banks. For this study, various statistical tools were used, such as regression analysis, correlation, trend analysis and percentage. A 3 years moving average has been taken to find out the trend of Gross Non-Performing Assets Ratio (GNPA) of scheduled commercial banks (SCBs).

#### IV SELECTION OF THE SAMPLE

To justify the research title, data have been selected from RBI website for scheduled commercial banks in India only. Due to time constraint, the period of the study is selected for 12 years only.

#### V. SOURCES OF DATA

The data for the above study have been collected from secondary sources like research papers and articles journals, books, periodicals, published annual reports etc. Data for the above report have also been collected from RBI report of trends and progress of banking in India of different years. The source of data base for the aforesaid study has been taken from annual reports on Indian economy and financial statements of commercial banks.

#### VI. PERIOD OF THE STUDY

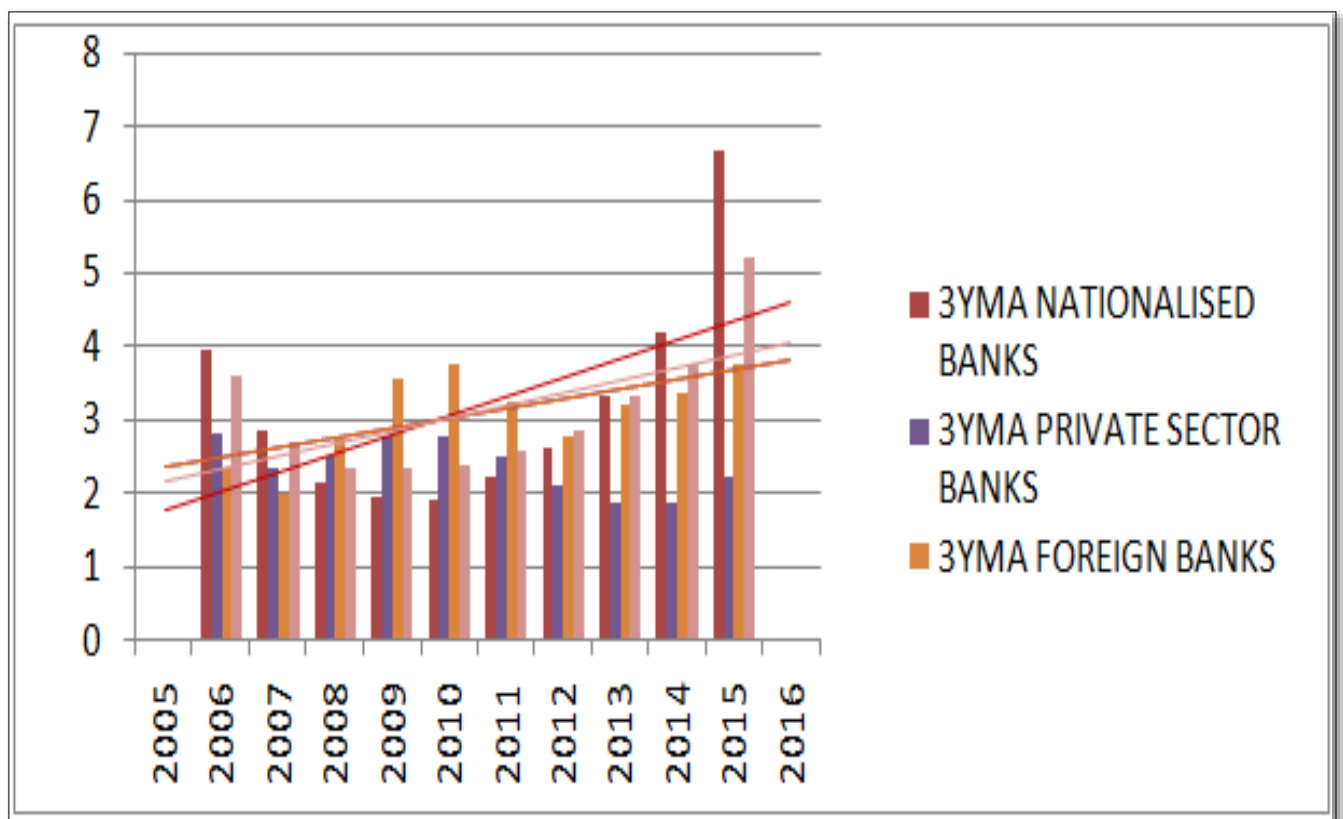
The period of study has been taken from 2005 to 2016. A 12 years study would provide significant input to this particular research process.

#### VII. DATA ANALYSIS

**Table No: 2** - Trend of Gross Non-Performing Assets Ratio (GNPA) of SCBs

Year	Nationalized	3 YMA **	Private	3 YMA	Foreign	3 YMA	SCBs*	3 YMA
2005	5.36	-	3.83	-	3.05	-	4.92	-
2006	3.81	3.95	2.41	2.81	2.12	2.36	3.35	3.6
2007	2.69	2.85	2.19	2.36	1.92	1.99	2.52	2.71
2008	2.06	2.17	2.47	2.53	1.92	2.74	2.26	2.36
2009	1.75	1.95	2.92	2.79	4.37	3.55	2.31	2.36
2010	2.03	1.92	2.99	2.8	4.36	3.78	2.51	2.39
1011	1.97	2.22	2.48	2.52	2.61	3.24	2.35	2.6
2012	2.67	2.63	2.09	2.11	2.76	2.8	2.95	2.84
2013	3.24	3.33	1.77	1.88	3.04	3.22	3.23	3.34
2014	4.09	4.2	1.78	1.88	3.86	3.37	3.83	3.78
2015	5.26	6.68	2.1	2.24	3.2	3.75	4.27	5.2
2016	10.69	-	2.83	-	4.2	-	-	-

[Source: RBI- Database on Indian Economy; \* SCBs = Scheduled Commercial Banks] [\*\*3YMA = Three Year Moving Average]



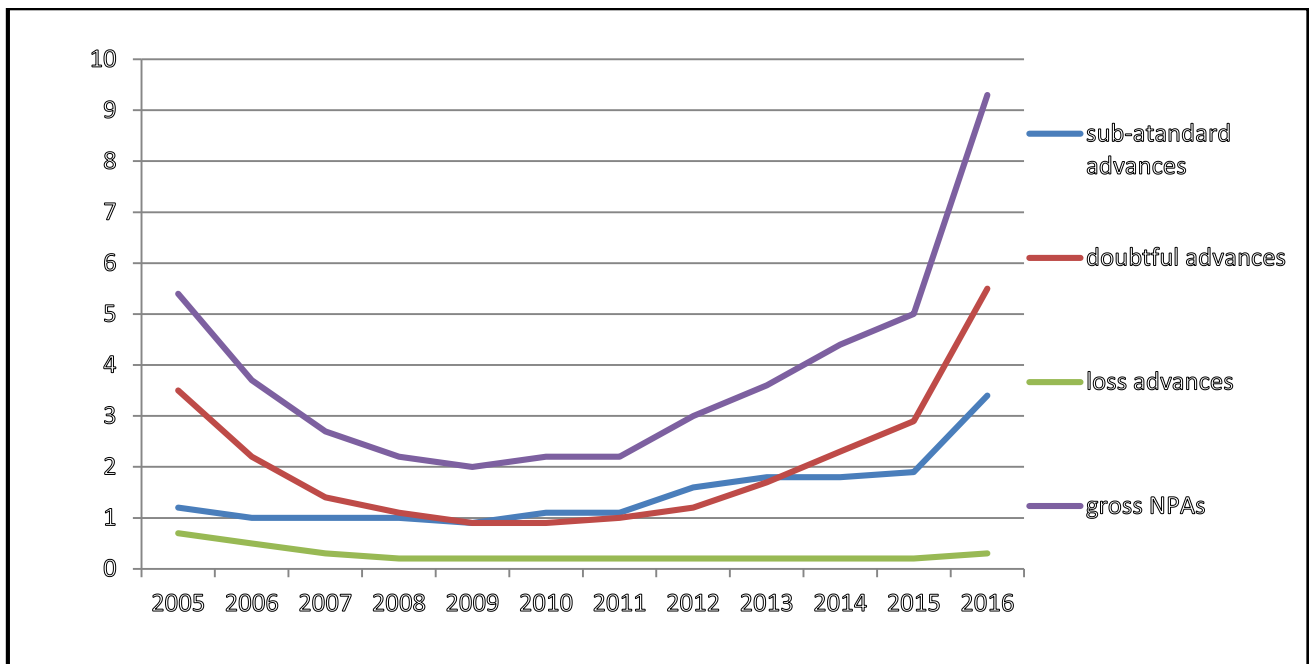
Graph: 1- Trend Analysis

By pointing to the table no (2) and graph (1) above, in the case of nationalized banks a 3-year moving average indicates that the absorption of the NPAs has been declined in 2006-10 and since 2011 they began to grow. In the event of private sector banks, the movements of NPAs have remained stable since 2006 to 2014. But since 2014 there is a growing trend. In case foreign banks have a tendency to change. Interestingly, the NPA ratio of foreign banks is the largest of the private sector banks. The nationalized bank has been governed between 2007-2011 and least the NPA rating between the SCBs. GNPA of SCBs reflects decreasing trend from 2005 to 2009 and increases further.

Table No: 3 - NPA Classification of SCBs (in Billions)

Year	Standard Advances		Sub-Standard Advances		Doubtful Advances		Loss Advances		Gross NPAs		Total Advances
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	
2005	8379	94.6	110	1.2	308	3.5	59	0.7	476	5.4	8856
2006	10926	96.4	113	1	246	2.2	55	0.5	414	3.7	11340
2007	14262	97.4	143	1	198	1.4	48	0.3	389	2.7	14651
2008	17786	97.8	173	1	192	1.1	40	0.2	405	2.2	18191
2009	22378	98	203	0.9	206	0.9	41	0.2	450	2	22828
2010	26735	97.8	288	1.1	254	0.9	58	0.2	599	2.2	27335
2011	32718	97.8	350	1.1	332	1	65	0.2	747	2.2	33465
2012	38255	97	623	1.6	490	1.2	60	0.2	1173	3	39428
2013	43957	96.4	815	1.8	761	1.7	68	0.2	1645	3.6	45601
2014	49887	95.6	958	1.8	1216	2.3	99	0.2	2273	4.4	52159
2015	53382	95	1054	1.9	1630	2.9	100	0.2	2785	5	56167
2016	52875	90.7	2005	3.4	3232	5.5	163	0.3	5400	9.3	58275

[Source: RBI- Database on Indian economy]



Graph: 2- NPA Classification

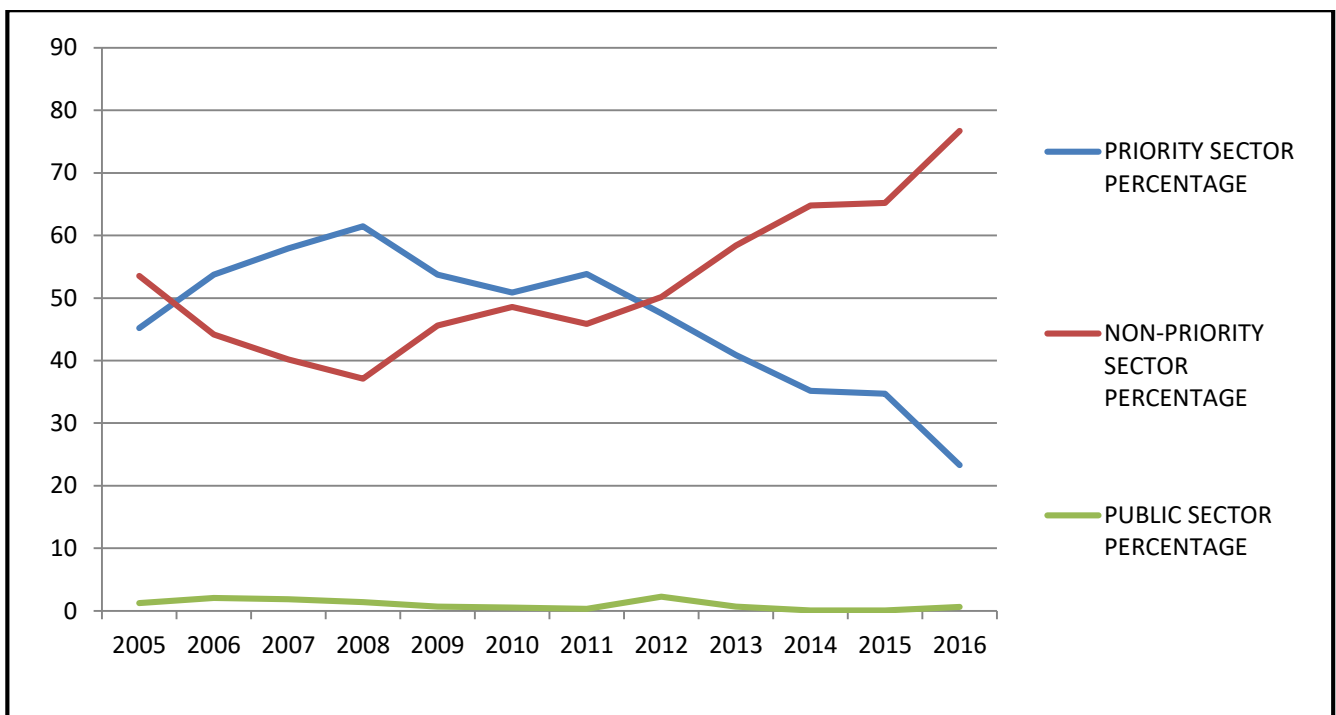
By pointing to the table (2) and graph 2 (a) & (b) above the proportion of Standard advances to total is continuously coming down since 2009. This indicates that more provisions are being made for those assets which are turning into non-standard assets. When we look at the non- standard assets, it is evident that the concentration of sub-standard, doubtful and los assets are increasing and this presents a serious threat to the banking system. It is also evident from the data that the ROA of PSBs is showing a declining trend as the percentage of Standard assets coming down.

Table No: 4 - Priority Sector and Non-Priority Sector Lending

Sector	Priority sector		Non-priority sector		Public sector		Total
	Amount	Percentage	Amount	Percentage	Amount	Percentage	
2005	215.36	45.22	254.94	53.53	5.92	1.24	476.22
2006	222.36	53.75	182.79	44.18	8.55	2.07	413.7
2007	225.19	57.96	156.03	40.16	7.32	1.88	388.54
2008	248.74	61.48	150.07	37.1	5.74	1.42	404.56
2009	242.01	53.75	205.28	45.59	2.97	0.66	450.26
2010	304.96	50.89	291.14	48.58	3.14	0.52	599.24
2011	401.86	53.82	342.35	45.85	2.43	0.32	746.64
2012	557.8	47.57	588.26	50.17	26.56	2.27	1172.62
2013	672.76	40.91	960.31	58.39	11.55	0.7	1644.61
2014	798.99	35.16	1472.35	64.79	1.3	0.06	2272.64
2015	966.11	34.69	1815.98	65.21	2.59	0.09	2784.68
2016	1258.09	23.3	4141.48	76.7	34.82	0.64	5399.57

[Source: RBI- Database on Indian economy]





Graph: 3 - Priority sector and Non- Priority sector lending

The most important sectors include agriculture and allied activities, lending to specific sectors, such as micro and small businesses (MSME), retail housing, education, and debt relief. Prior to 2008, the priority sector was dominant and most of the bank's loans were borrowed. Throughout the period 2005-08, the trend towards a dominant network of lending trends has shown an upward trend and a tendency toward a slowdown in the non-priority sector. During this period retail crediting and agricultural credit dominated the bank's loan portfolio. Post 2008 had the opposite trend. As discussed in the chart, the development of the priority industry has diminished, and the non-priority sector has grown. One of the reasons may be the Global Financial Crisis, which led to more lending to private and non-priority sectors to ensure the economic growth of the banks. In 2016, the highest priority was given to the industry and the most influential network. To address the situation, the current government has developed a variety of schemes to increase the loan portfolio of the primary sector. The schemes such as MUDRA, Prime Minister Awas Yojana (PMAY), Start-Up India and Stand-Up India have been launched to increase the loan portfolio of the Priority sector. However, the public sector has been showing a steady tendency over the years.

Tale No: 5 - Impact of NPA on Profitability of SCBs

Year (End-March)	GNPA to Gross Advances	GNPA to Total Asset	NNPA to Net Advances	NNPA to Total Assets	ROA	ROE
2005	5.2	2.5	2	0.9	0.8	13.8
2006	3.3	1.8	1.2	0.7	0.8	12.7
2007	2.5	1.5	1	0.6	0.9	13.2
2008	2.3	1.3	1	0.6	1	12.5
2009	2.3	1.3	1.1	0.6	1.13	15.44
2010	2.4	1.4	1.1	0.6	1.05	14.31
2011	2.5	1.4	1.1	0.6	1.1	14.96
2012	3.1	1.7	1.3	0.8	1.08	14.6
2013	3.2	2	1.7	1	1.04	13.84
2014	3.8	2.4	2.1	1.3	0.81	10.69
2015	4.3	2.7	2.4	1.5	0.81	10.42
2016	7.5	4.7	4.4	2.7	0.4	3.58

[Source: RBI- Database on Indian Economy & Balance of statement of commercial banks]

To study the impact of NNPA ratio on ROA & ROE, two regression analysis are performed by taking data from 2005 to 2016. Regression equations of ROA & ROE on NNPA are written as

$$Y_1 = \alpha + \beta_1 X + \varepsilon \dots\dots\dots (1)$$

$$Y_2 = \alpha + \beta_2 X + \varepsilon \dots\dots\dots (2)$$

Where,  $Y_1 = ROA$ ;  $Y_2 = ROE$ ;  $X = NNPA$  Ratio. Here, ROA is dependent variable and GNPA & NNPA are independent variables. A regression analysis will be done and F – test is used to test the significance at 0.05 levels of significance. Durbin – Watson statistic is also used to check auto-correlation in the time series data.

**Hypothesis 1**

$H_0 =$  There is no significant relationship between NNPA & ROA

Regression of ROA on NNPA

$$ROA = \alpha + \beta_1 NNPA + \varepsilon$$

**Table No: 6 - Summary Output of Regression of ROA on NNPA to Net Advance**

R	R square	Adj R Square	F-value	P-value	Correlation
0.871	0.758	0.732	28.32	0.00047	0.871

**INTERPRETATION**

Regression equation:  $Y = a + bX + \varepsilon \dots\dots\dots (1)$

$$ROA = 1.222 - 0.181 NNPA + \varepsilon \dots\dots\dots *$$

From the above regression table,  $R^2 = 0.758$  which shows the model is good. The Adjusted  $R^2$  is 0.732 which indicates that 73 % of variation in dependent variable i.e. ROA is explained by the independent variable NNPA to Net advance. The model is significant. The correlation between ROA & NNPA is 0.871, which shows there is positive correlation between ROA and NNPA. Here, the probability value (p-value) = 0.0047 which is less than 0.05. So that  $H_0$  may be rejected. From this above analysis we conclude that, there is significant relationship between NNPA & ROA.

**Hypothesis 2**

$H_0 =$  There is no significant relationship between NNPA & ROE

**Table No: - Summary Output of Regression of ROE on NNPA to Net Advance**

R	R square	Adj. R Square	F-value	P-value	Correlation
0.945	0.894	0.882	76.35	1.08641E-05	0.945

**INTERPRETATION**

Regression equation:  $Y = a + bX + \varepsilon \dots\dots\dots (2)$

$$ROE = 17.28 - 4.901 NNPA + \varepsilon \dots\dots\dots *$$

From the above regression table,  $R^2 = 0.894$  which shows the model is good. The Adjusted  $R^2$  is 0.882 which indicates that 88 % of variation in dependent variable i.e. ROE is explained by the independent variable NNPA to Net advance. The model is significant. The correlation between ROE & NNPA is 0.945, which shows there is positive correlation between ROE and NNPA. Here, the probability value (p-value) = 1.08641E-05 which is less than 0.05. So that  $H_0$  may be rejected. From this above analysis we conclude that, there is significant relationship between NNPA & ROE.

**CONCLUSION:**

The study concludes that there is an increasing trend in GNPA across all SCBs and the Standard assets are decreasing. It finds in the study that the NNPA has direct impact on ROA & ROE. The correlation between the NNPA and ROE & ROA is absolutely positively. Regression analysis also states that NNPA is a strong explanatory variable of ROE & ROA. The solution to dealing with the NPA is not easily available. Government, RBI and banks should use the proper NPA reduction and prevent mechanisms as soon as possible, so that all banking systems will be very active.

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