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A STUDY ON EFFECT OF NPA ON PROFIT AND MARKET CAPITALISATION

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Abstract:

A bank is a financial institution that serves as a financial intermediary. A central bank circulates money on behalf of a government and acts as its monetary authority by implementing monetary policy, which regulates the money supply. A commercial bank accepts deposits and pools those funds to provide credit, either directly by lending, or indirectly by investing through the capital markets. The study was analyzed based on comparing the gross and net NPA's of five different banks for the last five years with market capitalisation of the banks and for this purpose percentage analysis, correlation and regression were used as tools to analyse the secondary data. The conclusion is that the percentage difference between the banks was low in the last year. The correlation of all the banks are nearby 1 which shows that the gross and net NPA of the banks and market capitalisation are directly proportional with each other and gross and NPA has an impact on market capitalisation of the banks.

Key Words: NPA, Commercial Bank & Credit

Introduction to the Concept of Study:

Banking in India originated in the last decades of the 18th century. The oldest bank in existence in India is the State Bank of India, a government –owned bank that traces its origins back to June 1806 and that is the largest commercial bank in the country. Central banking is the responsibility of the Reserve Bank of India, which in 1935 formally took over these responsibilities from the Imperial bank of India, relegating it to commercial banking function. After India's independence in 1947, the Reserve Bank was nationalized and given broader powers. In 1969 the government nationalized the 14 largest commercial banks; the government nationalized the six next largest in 1980.

Non-Performing Assets:

Crumbling cross-border investment barriers have presented large banks with the opportunity to expand abroad relatively freely by acquiring or merging with banks in other countries. Many national markets are already dominated by a handful of large banks. New growth will come from cross-border expansion into both developed and emerging markets. Global banks may realize significant economies of scale from their size and geographic spread, but local and regional institutions will remain powerful competitors in many markets.

NPA is a loan or an advance where:

- ✓ Interest and /or instalment of principle remain overdue for a period of more than 90 days in respect of a term loan
- ✓ The account remains 'out of order' for a period of more than 90 days in respect of an overdraft or cash credit
- ✓ The bill remains overdue for a period of more than 90 days in case of bills purchased and discounted
- ✓ Any amount to be received overdue for a period of more than 90 days in respect of other accounts.

Objectives of the Study:

- ✓ To find out the relationship NPA and market capitalisation.
- ✓ To estimate the value of Non Performing Assets of the top five nationalised banks.
- ✓ To compare the gross and net Non performing assets of top five nationalised banks

Scope of the Study:

The study explains the concept of loan defaults and the impact of Non Performing Assets on the profitability, liquidity and financial performance of the bank. The study focuses on the financial analysis of the organisation at different level of NPAs. It provides the suggestions and the managerial strategies that could be adopted by the bank to minimise the losses due to NPAs. It throws light on the RBI directions in maintaining provisions by the bank for the different types of NPAs and the external and internal factors that cause the NPAs.

Review of Literature:

Lew Hurt, Akos Felsovalyi (1998) conducted a study on "Measuring loss on Latin American Defaulted bank loans" described the characteristics of commercial and Industrial bank loans defaults in Latin America and it is analysed that bank's understanding and use of portfolio management techniques have increased interest in active management of their loan portfolios.

Aldo Letizia (2010) conducted a study on "Vulnerability of Risk Management Systems in Credit Spread Widening Scenarios" and examined the expected losses that is aligned with the most common methodologies of credit risk evaluation and the evaluated that a significant portion of spread risk remains almost neglected by the standard value-at-risk models. The spread-duration gap informs about the risk that a general increase in spreads could result in penalizing banks with a higher mismatch between spread-duration of their assets and liabilities.

Satendramani Tiwari (2010) conducted a study on "Enhancements in Credit Risk+ Model" and suggested a parallel computing-based Monte-Carlo simulation, for a very large portfolio using the Credit Risk+ infrastructure, to calculate the portfolio loss distribution and observed that the parallel computing method significantly reduces the computation time.

Research Methodology:

Methods of Data Collection: The study uses Secondary data source.

Research Design: The research is primarily descriptive in nature and the information is secondary.

Sample Design: A sample data of the Bank's Profit and Loss account and Balance Sheet of the financial years 2013-16 were used in the study. The banks for the study are chosen based on market capitalisation for top five banks.

Banks Used for the Study: The banks for the study are taken based on the market capitalisation

- ✓ State bank of India
- ✓ Bank of Baroda
- ✓ Punjab national bank
- ✓ Central bank
- ✓ Bank of India

Tools: The statistical and financial tools used in the study include:

- ✓ Correlation
- ✓ Trend Percentage Analysis
- ✓ Regression (Trend analysis)

Limitations:

- ✓ Due to time constraints the analysis was restricted only to 5 years data
- ✓ The findings and suggestions given in the study is applicable only for five banks

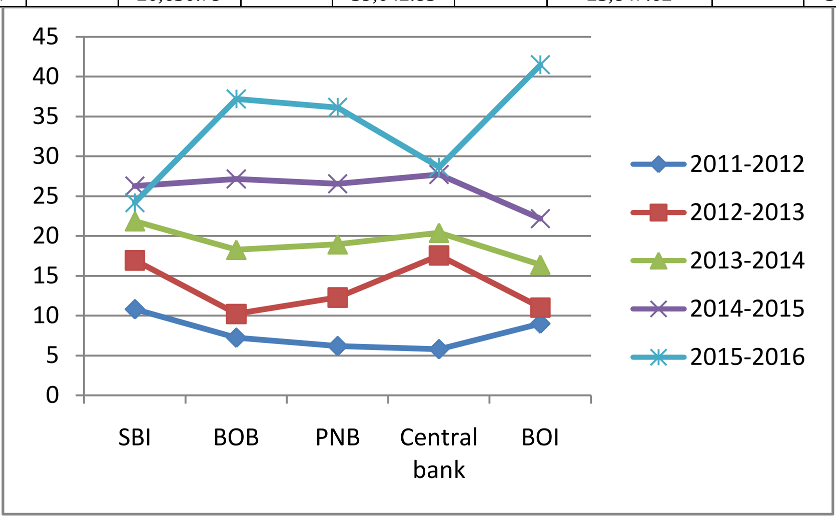
Analysis and Interpretation:

Percentage Analysis: Percentage methods refers to the specific kind which is used in making comparison between two or more series of data collected. Percentages are based on descriptive relationship. It compares the relative items. Through the use of percentage, the data are reduced in the form with base equal to 100%, which facilitate relative comparison.

Formula:

$$\text{Percentage} = \frac{\text{Concerned year}}{\text{Total value of five years}} \times 100$$

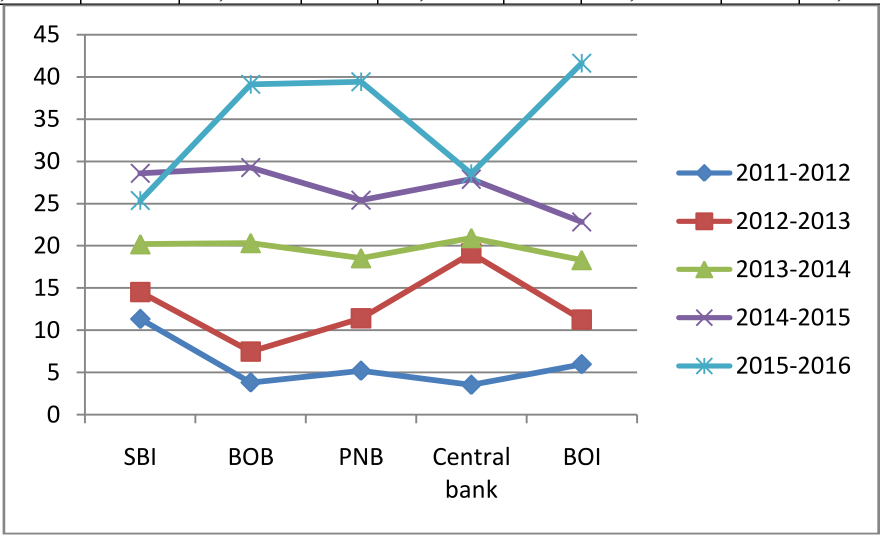
Gross NPA (Rs in crs)										
Year	SBI	%	BOB	%	PNB	%	Central bank	%	BOI	%
2012	25,326.29	10.80	3,152.50	7.21	4,379.39	6.16	2,394.53	5.77	4,811.55	8.99
2013	39,676.46	16.92	4,464.75	10.21	8,719.62	12.26	7,273.46	17.53	5,893.97	11.01
2014	51,189.39	21.83	7,982.58	18.25	13,465.79	18.93	8,456.18	20.38	8,765.25	16.37
2015	61,605.35	26.27	11,875.90	27.15	18,880.06	26.54	11,500.01	27.71	11,868.60	22.17
2016	56,725.34	24.19	16,261.45	37.18	25,694.86	36.12	11,873.06	28.61	22,193.24	41.46
	108,808.87		20,630.79		39,042.85		23,847.62		32,483.52	



Interpretation:

The above chart shows about the percentage comparison of Gross NPA of five different banks for the last five financial years were the contribution to total NPA was high in the last year which shows that it should reduced further in future period of time.

Net NPA (Rs in crs)										
Year	SBI	%	BOB	%	PNB	%	Central bank	%	BOI	%
2012	12,346.89	11.35	790.88	3.83	2,038.63	5.22	847.29	3.55	1,944.99	5.99
2013	15,818.85	14.54	1,543.64	7.48	4,454.23	11.41	4,556.77	19.11	3,656.42	11.26
2014	21,956.48	20.18	4,192.02	20.32	7,236.50	18.53	4,987.55	20.91	5,947.31	18.31
2015	31,096.07	28.58	6,034.76	29.25	9,916.99	25.40	6,648.56	27.88	7,417.23	22.83
2016	27,590.58	25.36	8,069.49	39.11	15,396.50	39.43	6,807.45	28.55	13,517.57	41.61
	234,522.83		43,737.18		71,139.72		41,497.24		53,532.61	



Interpretation:

The above chart shows about the percentage comparison of Net NPA of five different banks for the last five financial years were the contribution to total NPA was high in the last year which for all the banks except SBI were SBI had reduced the NPA slightly in last financial year and it shows that the NPA should reduced further in future period of time to increase the profit of the company.

Correlation (NPA vs Market Capitalization):

Correlation is computed into what is known as the correlation coefficient, which ranges between -1 and +1. Perfect positive correlation (a correlation co-efficient of +1) implies that as one moves, either up or down, the other side will move in lockstep, in the same direction. Alternatively, perfect negative correlation means that if one side moves in either direction the term that is perfectly negatively correlated will move in the opposite direction. If the correlation is 0, the movements of the terms are said to have no correlation; they are completely random.

Table Showing Correlation Table for Gross NPA and Market Capitalisation:

Gross NPA Vs Market capitalisation										
	SBI		**BOB**		**PNB**		**Central bank**		**BOI**	
	Gross NPA	**Market capitalisation**	**Gross NPA**	**Market capitalisation**	**Gross NPA**	**Market capitalisation**	**Gross NPA**	**Market capitalisation**	**Gross NPA**	**Market capitalisation**
2016	56,725.34	161,387.54	16,261.45	42,017.65	25,694.86	42,588.39	11,873.06	15,920.81	22,193.24	32,522.84
2015	61,605.35	147,370.53	11,875.90	37,846.83	18,880.06	38,516.33	11,500.01	14,170.08	11,868.60	30,773.72
2014	51,189.39	125,033.02	7,982.58	33,281.77	13,465.79	34,469.03	8,456.18	13,670.86	8,765.25	23,288.88
2013	39,676.46	106,230.01	4,464.75	28,516.30	8,719.62	29,203.84	7,273.46	10,765.40	5,893.97	20,178.11
2012	25,326.29	83,471.25	3,152.50	21,826.57	4,379.39	22,614.66	2,394.53	9,076.42	4,811.55	16,316.61
	0.94		0.96		0.98		0.94		0.89	

Interpretation:

The above chart shows about the correlation of gross NPA and market capitalisation were the correlation was low with BOI at (0.89) and was high with the bank PNB (0.98). It shows that mostly the correlation of all the banks are nearby 1 which shows that the gross NPA of the banks and market capitalisation are directly proportional with each other and gross NPA has an impact on market capitalisation of the banks.

Chart Showing Correlation Table for Gross NPA and Market Capitalisation:

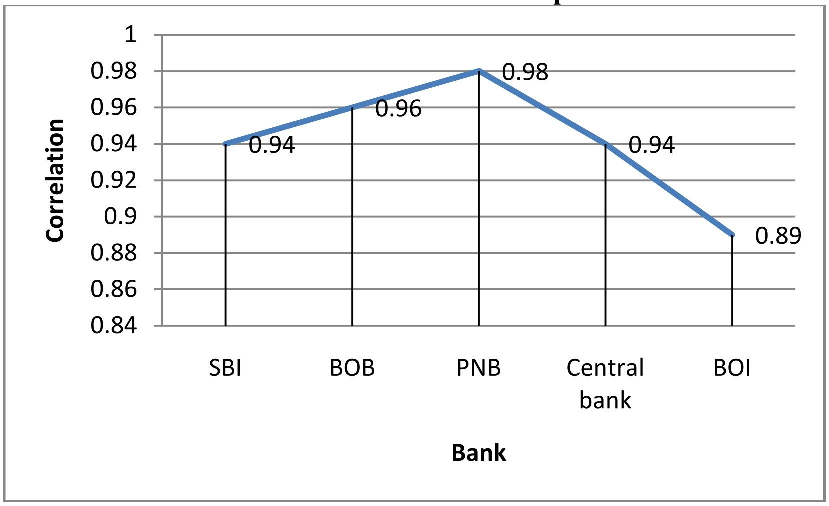


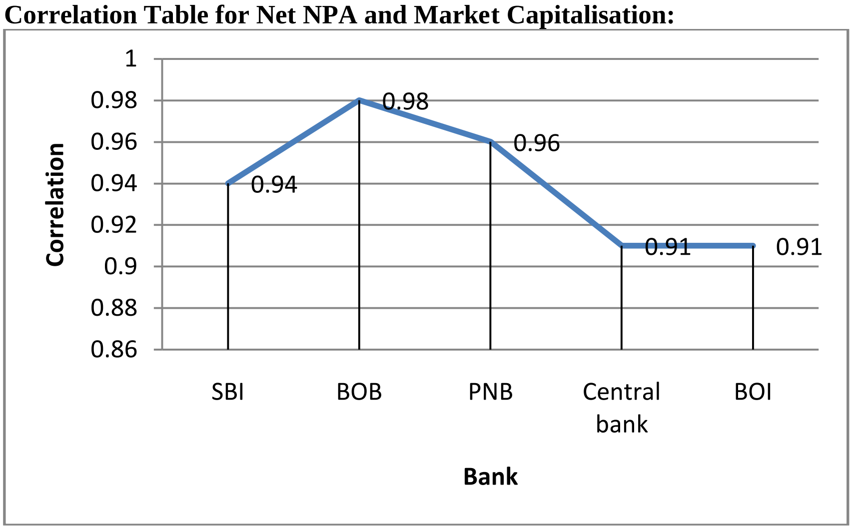
Table Showing Correlation Table for Net NPA and Market Capitalisation:

NET NPA Vs Market capitalisation										
	SBI		**BOB**		**PNB**		**Central bank**		**BOI**	
	Net NPA	**Market capitalisation**	**Net NPA**	**Market capitalisation**	**Net NPA**	**Market capitalisation**	**Net NPA**	**Market capitalisation**	**Net NPA**	**Market capitalisation**
2016	27,590.58	161,387.54	8,069.49	42,017.65	15,396.50	42,588.39	6,807.45	15,920.81	13,517.57	32,522.84
2015	31,096.07	147,370.53	6,034.76	37,846.83	9,916.99	38,516.33	6,648.56	14,170.08	7,417.23	30,773.72
2014	21,956.48	125,033.02	4,192.02	33,281.77	7,236.50	34,469.03	4,987.55	13,670.86	5,947.31	23,288.88
2013	15,818.85	106,230.01	1,543.64	28,516.30	4,454.23	29,203.84	4,556.77	10,765.40	3,656.42	20,178.11
2012	12,346.89	83,471.25	790.88	21,826.57	2,038.63	22,614.66	847.29	9,076.42	1,944.99	16,316.61
	0.94		0.98		0.96		0.91		0.91	

Interpretation:

The above chart shows about the correlation of net NPA and market capitalisation were the correlation was low with BOI and Central bank at (0.91) and was high with the bank BOB at (0.98). It shows that mostly the correlation of all the banks are nearby 1 which shows that the net NPA of the banks and market capitalisation are directly proportional with each other and net NPA has an impact on market capitalisation of the banks.

Chart Showing Correlation Table for Net NPA and Market Capitalisation:



Regression Analysis for Gross NPA and Market Capitalisaion:

Bank	Regression (R Square)
SBI	0.891
BOB	0.930
PNB	0.975
Central Bank	0.858

BOI	0.970

Interpretation:

The above table shows about the regression analysis for gross NPA and market capitalisaion. The R Square is at 0.930 for BOB, 0.975 for PNB, and 0.970 for BOI, which is a very good fit. The R value closer to 1, the better the regression line. The R value is at 0.891 for SBI and 0.858 for central bank were its less than other three banks.

Findings:

- ✓ The volatility of gross NPA was high in the last year and the percentage difference between the banks was low in the last year.
- ✓ The percentage difference between the banks was low in the last year. When compared to other banks the NPA of PNB varied high in the last five years.
- ✓ The correlation of all the banks are nearby 1 which shows that the gross and net NPA of the banks and market capitalisation are directly proportional with each other and gross and NPA has an impact on market capitalisation of the banks.
- ✓ The R Square is at 0.930 for BOB, 0.975 for PNB, and 0.970 for BOI, which is a very good fit. The R value closer to 1, the better the regression line.

Suggestions:

- ✓ The banks may tighten its credit policy in order to prevent further increase in the NPAs
- ✓ The banks may adopt certain measures to recover the NPAs from small and medium scale industries
- ✓ The banks may restructure the education loans by reducing the interest rates.

Conclusion:

Nonperforming asset means an asset or account of borrower, which has been classified by bank or financial institution as sub –standard, doubtful or loss asset, in accordance with the direction or guidelines relating to assets classification issued by RBI. The study was analyzed based on comparing the gross and net NPA's of five different banks for the last five years with market capitalisation of the banks and for this purpose percentage analysis, correlation and regression were used as tools to analyse the secondary data. The conclusion is that the percentage difference between the banks was low in the last year. The correlation of all the banks are nearby 1 which shows that the gross and net NPA of the banks and market capitalisation are directly proportional with each other and gross and NPA has an impact on market capitalisation of the banks. So the banks may adopt measures to increase their asset value in order to pay its current obligations.

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