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Jiban Kumar Parida



STRESSED ASSET QUALITY AFFECT THE FUNDAMENTAL VALUE: A STUDY ON INDIAN PUBLIC SECTOR BANK



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ABSTRACT

In present scenario, the banking sector acts as the catalyst for the country's economy by playing a crucial role in providing financial resources (capital-intensive sectors). In emerging economies, banks are more than mere agents of financial intermediation with additional responsibility of achieving the government's social agenda also. The issue of NPA acceleration is giving jolt to banking sector particularly in Countries like India where Gross NPA levels in the Indian banking system will reach an unparalleled 4.4 per cent in March 2014 compared with 2.09 per cent in 2008-09. A high level of NPAs shows large number of credit defaults in turn affect the profitability, liquidity and net-worth of banks and also erodes the value of the asset. In case of Public sector banks, it has displayed outstanding financial operations. However, the only problem of these banks is the increasing level of nonperforming assets, year by year. Present study focuses on the NPA and its effect on stock's value in the Indian banking industry. There are many research conducted on the topic of Non- Performing Assets (NPA) Management, concerning particular bank, comparative study of commercial banks etc. but this paper considers the aggregate data of public sector banks and attempts to emphasize NPA's impact on fundamental value from the year FY2011 -FY2015.

KEYWORDS :NPAs, Public banks, Earning Per Share, Return on Equity

INTRODUCTION

Non Performing Asset¹ (NPA) quality is a general concern for the financial authority in every

country throughout the world which is extremely important for banking sector. In 1995, US Fed Reserve established the norm for the financial institution called “standard for safety and soundness”. The norm comprised to setup asset quality monitoring systems for identifying possible emerging problem of bank asset and evaluation of risk associated with it. Indian Banking System passed through a significant transformation phase due to sector reforms, globalization, adapting international practices various norms have been introduction to improve the efficiency and the system. In the past year, the Indian banking industry has experienced exponential growth which contributed more than 15% to the GDP of India. The CNX Bank Nifty has grown by more than 1000% in absolute terms, and at a compounded annual growth rate of over 25% in the period from 2005 – 2015, while the Nifty grew at a compounded annual growth rate of 12%. This shows the performance of Indian banks after transformation phase of Indian banking system. As per RBI guidelines that identification and reduction of NPA is as good as national priority because NPA directly linked with credit risks and allocating resources of financial system (in accordance with Narshimam committee).

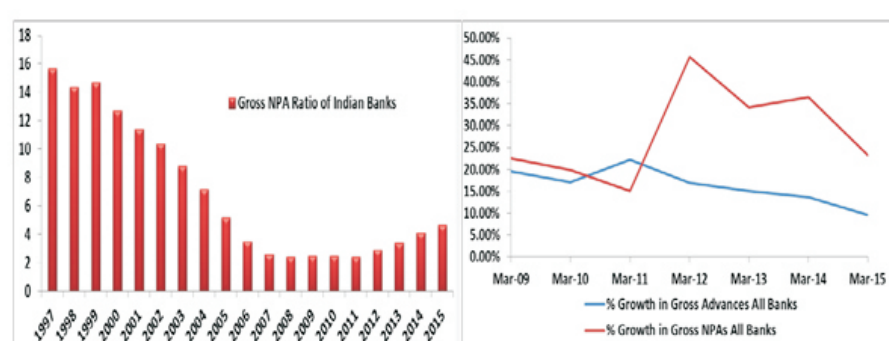
NPAs put detrimental impact on the profitability, capital adequacy ratio and credibility of banks. Therefore, an NPA account not only reduces profitability of banks by provisioning in the profit and loss account, but their carrying cost is also increased which results in excess & avoidable management attention. Apart from this, a high level of NPA also puts strain on a bank’s net worth because banks are under pressure to maintain a desired level of Capital Adequacy and in the absence of comfortable profit level, banks eventually look towards their internal financial strength to fulfill the norms thereby slowly eroding the net worth.²

Bad asset quality in loan portfolio affects operational efficiency which in turn affects profitability, liquidity and solvency position of banks. Keeping this in view, this study has been carried out on the Non- Performing Assets in Indian public sector bank. Recent trends in NPA are mentioned in below Table-1 and Table-2.

¹ A non-performing asset (NPA) is the money lent to an individual that does not earn income and full payment of principal and interest is no longer anticipated, principal or interest is 90 days or more delinquent, or the maturity date has passed and payment in full has not been made (Boudriga et al, 2009) Loans include nonaccrual loans, non-performing leases, reduced rate loans, renegotiated loans.

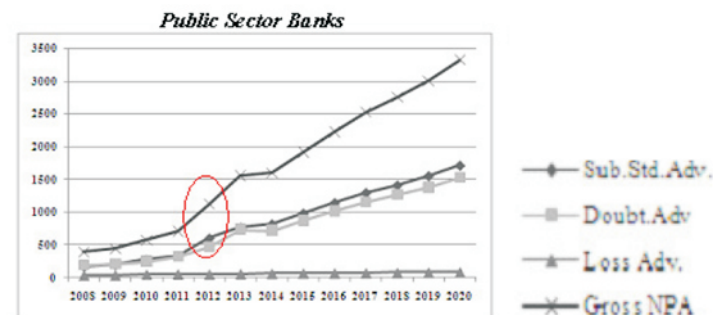
² Ruby & Sharma (2005)

FIG-1



Source: Keynote address delivered by Shri R. Gandhi, Deputy Governor at the The Economic Times ReModel in India - Asset Reconstruction & NPA Management Summit, Mumbai on Sep 15, 2015.

FIG-2



Source: Hemavathy R. and Arunkumar T. (2015), *Forecasting the Trends of NPAs in Indian Banking Sector*, *Asian Journal of Management Research*, Vol. 5 No. 4, pp. 629-634

PSB are incurring around as high as 12% of their NPA as operating cost for monitoring and recovering every year. For this both regulatory agencies, institutions & rating agencies are not comfortable with the NPA of PSB banks. During the high growth phase of the economy from 2002 to 2008, credit growth in the banking sector was in excess of 22%. The NPA levels have almost double from 5.7% in 2008 to 10.2% in 2014 which has adversely affect the banking system. According to the recent study conducted by RBI, the factors contributing to NPA are divided into 2 segments

(I) INTERNAL FACTORS AND (II) EXTERNAL FACTORS

Internal factors are (a) in efficiency in bank management. (b) Diversion of fund for assisting or promoting associate concerns. (c) Time or cost overrun during the project implementation stage. (d) Business failure due to product failure, failure in marketing etc. (e) Diversion of fund for expansion, diversification, and modernization or for taking up new projects (f) Slackness in credit management and monitoring. (g) In appropriate technology or problems related to modern technology.

EXTERNAL FACTORS ARE

(a) Recession in the economy as a whole. (b) Input or power shortage. (c) Price escalation of inputs. (d) Exchange rate fluctuations (e) Change in government policies.

OBJECTIVES

The objectives of this paper are as follows:

- 1) To analyze the asset quality of the Public sector banking of India and the factor contributing for NPA creation.
- 2) Establish the relationship between asset quality & stock's fundamental value.
- 3) To suggest the various measures to for proper NPA management.

SCOPE & LIMITATION

The present paper is descriptive in nature which was evaluating the NPA level of public sector bank and its market value. This paper provides a better understanding of NPA level in banking sector and attempt to covers the impact of asset quality on its financial stability. This paper is limited to the availability of data with limited period.

REVIEW OF LITERATURE

There are several financial economics literature suggests that the NPAs of banks are closely linked to economic performance like recessions, low rate of savings, weak markets, depressions in industrial production, reduction in per capita income levels and the level of inflation. For banking crisis and a ratings system for bank fragility a multivariate logit framework to develop an early warning system (**Dermiguc-Kunt and Detragiache, 2000**). **Beck, Demirguc-Kunt, and Levine (2005)** again examine the relationship between bank concentration and banking system fragility and show that higher bank concentration is associated with lower profitability. Observe that gross domestic product (GDP) growth, bank size and capital had a negative effect on NPAs, while loan growth, collateral, net interest margin, debt-equity ratio, market power and regulation regime had a positive impact on NPAs (**Lis et al. 2000**). According to (McNulty et al 2001), controlling NPAs is very important for both the performance of an individual bank and the economy's financial environment. In research paper on "Management of Non-Performing Assets in Public Sector Banks: Evidence from India" **Ghosh.S and Ghosh.D (2011)** emphasizes on management of non-performing assets in the perspective of the public sector banks in India in the context of stringent regulatory framework of the Reserve Bank of India and suggestion given that reduction of non-performing asset is necessary to improve profitability of banks and comply with the capital adequacy norms as per the Basel Accord. While describing NPA as a negative financial indicator, **Paul.P, Bose.S.K, Rizwan.S.D (2011)** attempt to measure the relationship of Indian PSU banks on overall financial performance in their research paper entitled "Efficiency measurement of Indian Public Sector Banks: non-Performing Assets as Negative Output"

In the Indian context, The problem of NPAs is related to several internal and external factors (**Muniappan, 2002**) where the internal factors are diversion of funds for expansion/ modernization /diversification, new projects set up, helping/promoting associate concerns, time/cost overruns during the project implementation stage, business (product, marketing, etc.) failure, inefficient management, strained labour relations, inappropriate technology/technical problems, product obsolescence, etc., while external factors are recession, non-payment in other countries, inputs/power shortage, price escalation, accidents and natural calamities. **Rajaraman and Vasishtha (2002)** in an empirical study provided an evidence of significant bivariate relationship between an operating inefficiency indicator and the problem loans of public sector banks. In a similar manner, largely from lenders' perspective, **Das and Ghosh (2003)** empirically examined non-performing loans of India's public sector banks in terms of various indicators such as asset size, credit growth and macroeconomic condition, and operating efficiency indicators. **Selvarajan & Vadivalagan (2013)** suggest that the management of banks must pay special attention towards the NPA management and take appropriate steps to arrest the creation of new. Timely action is essential to ensure future growth of the Bank. Good credit appraisal procedures, effective internal control systems along with their efforts to improve asset quality in their balance sheets should adopted to bring down NPA. However, maintaining profitability is a challenge to commercial banks especially in a highly competitive era and opening up of banking business to NBFC and foreign banks in general (**Balasubramaniam, 2001**). While consider empirical analysis **Fernandez et al. (2000)** explain bank loan losses in Spain employing a simultaneous equation model by using a host of indicators such as GDP growth rate, debt-equity ratios of firms, regulation regime, loan growth, bank branch growth rates, bank size (assets over total size), collateral loans, net interest margin, capital asset ratio (CAR) and market power of default companies. **Chen et al. (1998)** study the relationship between risks and ownership structure, and find an apparent negative correlation between managers' shareholdings and risks faced by financial institutions. Banks are facing a number of challenges, such as

frequent changes in banking technology, stringent prudential norms, increasing competition, worrying level of NPAs, rising customer expectations, increasing pressure on profitability, asset liability management, liquidity and credit risk management, rising operating expenditure, shrinking size of spread and so on. However, *Singh (2005)* argues that globalization of operations and development of new technologies are taking place at a rapid pace, and this has led to the increase in resource productivity, increasing level of deposits, credits and profitability and decrease in NPAs.

The main cause of mounting NPAs in public sector banks is malfunctioning of the banks. Narasimham Committee identified the NPAs as one of the possible effects of malfunctioning of public sector banks (Ramu, N., 2009). It has been examined that the reason behind the falling revenues from traditional sources is 78% of the total NPAs accounted in public sector banks (Bhavani Prasad, G. and Veena, V.D., 2011).

RESEARCH METHODOLOGY

DATA COLLECTION:

Methodology adopted with the help of secondary data to analyze the objectives of this study which were collected from the reports, articles, journals, documents, printed literatures, certain web sites and other online data bases etc. further it analyze the Total Advances, Net Profit, Gross NPA, Net NPA, Earning Per Share (EPS) of PSB and arrive at a more complete understanding about performance for the period of five years from 2010-15.

DATA ANALYSIS

Quantitative techniques like use of means, relative frequencies, mode, median, standard deviation and t-test were used to analyze the data. The data has been analyzed by using Ratio Analysis and coefficient of correlation to determine whether there is any relation between Return on Equity (ROE), Net NPA, Earning per Share (EPS) & Stock Return³.

HYPOTHESIS

THE HYPOTHESES FRAMED ARE:

H1A₀ = There is no significant relationship between NPA & EPS of selected banks.

H1A₁ = There is significant relationship between NPA & EPS of selected banks.

H2A₀ = There is no significant relationship between NPA & Stock Return of selected banks.

H2A₁ = There is no significant relationship between NPA & Stock Return of selected banks.

H3A₀ = There is no significant relationship between NPA & ROE of selected banks.

H3A₁ = There is no significant relationship between NPA & ROE of selected banks.

The study will be done at 99% significant level to either accept or reject the null hypothesis. Since the study is hypothesizing that there is no change in the NPA's, this is a two tailed test.

3 Stock Return (R_t):

$$R_t = \frac{P_t - P_{t-1}}{P_{t-1}} \times 100$$

R_t = the stock return in period t

P_t = the stock price in period t

P_{t-1} = the cum-day price. This is usually also the stock price in period t-1

DATA ANALYSIS & FINDINGS

FIG-3

| SBI | | | | |
|---------|------------------|---------|--------|-------------|
| Year | Stock Return (%) | EPS | ROE | Net NPA (%) |
| 2011 | 15.3 | 130 | 12.62 | 1.63 |
| 2012 | 47.14 | 174.45 | 15.72 | 1.82 |
| 2013 | -25.9 | 206.20 | 15.43 | 2.1 |
| 2014 | 76.6 | 145.88 | 10.03 | 1.08 |
| 2015 | -22.3 | 18.32* | 10.62* | 0.21* |
| Mean | 18.168 | 134.970 | 12.884 | 1.368 |
| Std Dev | 44.276 | 71.385 | 2.639 | 0.747 |

| PNB | | | | |
|---------|------------------|---------|--------|-------------|
| Year | Stock Return (%) | EPS | ROE | Net NPA (%) |
| 2011 | 28.3 | 139.94 | 24.45 | 0.85 |
| 2012 | 11.14 | 144.00 | 21.05 | 1.52 |
| 2013 | -28.08 | 134.31 | 16.48 | 2.35 |
| 2014 | 74.8 | 92.31 | 10.17 | 1.31 |
| 2015 | -36.3 | 16.52* | 8.48* | 0.41* |
| Mean | 9.972 | 105.416 | 16.126 | 1.288 |
| Std Dev | 45.08 | 53.828 | 6.848 | 0.732 |

| Bank of Baroda | | | | |
|----------------|------------------|--------|--------|-------------|
| Year | Stock Return (%) | EPS | ROE | Net NPA (%) |
| 2011 | -25.9 | 108.33 | 24.3 | 0.35 |
| 2012 | 31.1 | 121.79 | 21.72 | 0.54 |
| 2013 | -25.5 | 106.37 | 15.68 | 1.28 |
| 2014 | 67.7 | 105.75 | 13.8 | 0.69 |
| 2015 | -21.48 | 15.37* | 9.21* | 0.19* |
| Mean | 5.184 | 91.522 | 16.942 | 0.610 |
| Std Dev | 42.422 | 43.072 | 6.087 | 0.42 |

| Bank of India | | | | |
|---------------|------------------|--------|--------|-------------|
| Year | Stock Return (%) | EPS | ROE | Net NPA (%) |
| 2011 | 0.7 | 45.54 | 17.3 | 0.91 |
| 2012 | 28.64 | 46.66 | 15.0 | 1.47 |
| 2013 | -30.7 | 46.14 | 12.95 | 2.06 |
| 2014 | 26.71 | 42.49 | 11.16 | 0.89 |
| 2015 | -5.8 | 25.7* | 6.32* | 0.34* |
| Mean | -6.53 | 41.306 | 12.546 | 1.134 |
| Std Dev | 37.508 | 8.873 | 4.167 | 0.654 |

| CANARA | | | | |
|---------|------------------|--------|--------|-------------|
| Year | Stock Return (%) | EPS | ROE | Net NPA (%) |
| 2011 | 10.1 | 90.88 | 26.42 | 1.1 |
| 2012 | 36.35 | 74.10 | 17.02 | 1.46 |
| 2013 | -43.05 | 64.83 | 13.21 | 2.18 |
| 2014 | 59.06 | 52.86 | 10.38 | 0.87 |
| 2015 | -41.54 | 56.87* | 10.69* | 0.27* |
| Mean | 4.184 | 67.908 | 15.544 | 1.176 |
| Std Dev | 45.833 | 15.197 | 6.636 | 0.709 |

* For the period Q1FY 2015

Figure-3 of five leading PSU bank of India shows the following findings:

- (i) In the year 2013, where both Stock Return and Net NPA were worst performer. Regarding Stock Return all the PSU Bank has negative return in comparison with other years whereas Net NPA also high which is more than 2%.
- (ii) Among all five PSU bank SBI has high Net NPA where as Bank of Baroda has lowest.
- (iii) Regarding Stock Return & Earning per Share SBI has positive outcome where as Bank of India has negative
- (iv) In the year 2011, Return on Equity of all five PSU bank is better than other year

FIG-4

| Bank | NPA/EPS | | | NPA/Stock Return | | | NPA/ROE | | |
|--------|-------------------|-------------|------------------------------------|-------------------|-------------|------------------------------------|-------------------|-------------|------------------------------------|
| | Finding value (t) | Table value | H1A ₀ /H1A ₁ | Finding value (t) | Table value | H2A ₀ /H2A ₁ | Finding value (t) | Table value | H3A ₀ /H3A ₁ |
| SBI | 4.185 | 2.306 | H1A ₁ | 0.848 | 2.306 | H2A ₀ | 9.387 | 2.306 | H3A ₁ |
| PNB | 4.325 | 2.306 | H1A ₁ | 0.431 | 2.306 | H2A ₀ | 4.817 | 2.306 | H3A ₁ |
| BOB | 4.719 | 2.306 | H1A ₁ | 0.241 | 2.306 | H2A ₀ | 5.985 | 2.306 | H3A ₁ |
| BOI | 10.096 | 2.306 | H1A ₁ | 0.457 | 2.306 | H2A ₀ | 6.049 | 2.306 | H3A ₁ |
| CANARA | 9.808 | 2.306 | H1A ₁ | 0.147 | 2.306 | H2A ₀ | 4.814 | 2.306 | H3A ₁ |

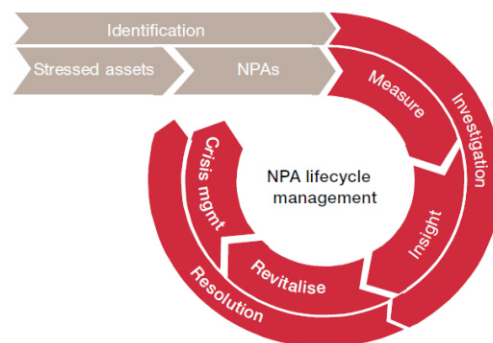
Fig-4 shows the Hypothesis Test (t-test with two tailed check & normal distribution) where the outcomes shows that Net NPA have significant relationship with Earning per Share and Return on Equity where as with Stock Return it has unclear picture.

Further for detail analysis we can establish the correlation between all variable (NPA, EPS, SR & ROE) by Pearson Correlation Coefficient Matrix for examining short run co-movement and ADF test (Augmented Dickey-Fuller Unit root Test), Johansen's Co-integration Test & Granger Causality Tests while adopting Vector Error Correction Model (VECM) which is applied to both short run and long run relationship among Net NPA, Stock Return, Earning per Share and Return on Equity.

SUGGESTION

To recover NPAs some of the legal measures which are already followed like Debt Recovery Tribunals (DRTs)⁵, Securitization Act (2002)⁶, Lok Adalats (suitable for the recovery of small loans), Compromise Settlement, Credit Information Bureau and finally Corporate Governance⁷ adopted by the bank and the NBFCs.

Other aspect of efficient NPA management are as follows (i) Borrowers are to be contacted regular basis (ii) management should know the market conditions (iii) credit appraisal and credit monitoring can be better by proper human resource management, training and knowledge (iv) Effective risk management by its policy, its architecture, independent evaluation, centralized data base, credit management information system and credit modeling



Source: "Growing NPAs in banks Efficacy of credit rating agencies" By PricewaterhouseCoopers Private Limited and ASSOCHAM, 2014-15.

Finally, the study observes that the rules, regulation, norms and other initiatives taken by the regulatory bodies has put the banks under pressure to improve their performance, and consequently resulted into trim down of NPA as well as improvement in the financial health of the Indian banking system.

⁴Narasimham Committee Report I (1991) recommended the setting up of Special Tribunals to reduce the time required for settling cases. There are 22 DRTs and 5 Debt Recovery Appellate Tribunals.

⁵Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act enable the banks to issue notices to defaulters with empowering the banks to take over the possession of the assets and management of the company.

⁶Reserve Bank of India set up committee under the chairmanship of Dr. A.S. Ganguly to review the supervisory role of Boards of banks and financial institutions and to obtain feedback on the functioning of the Boards vis-à-vis compliance, transparency, disclosures, audit committees etc. and make recommendations for making the role of Board of Directors more effective with a view to minimizing risks.

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