Impact of Recapitalization on the performance of public sector banks. A study on IDBI, Sate Bank of India and Punjab National Bank.

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ABSTRACT

The Government of India announced the recapitalization package for public sector banks with INR 2.11 lakh crore on 24th October 2017. The Government bifurcated the Rs 2.11 lakh crore amount for recapitalisation into two parts: First through budgetary allocation of Rs. 76,000 lakh crore and Rs 1.35 lakh crore by issuing recapitalisation bond. On 24th January 2018, the Government pledged to inject INR 88,140crore into twenty public sector banks. Rs. 80,000 crores was raised by issuing recapitalisation bonds and Rs. 8,140 crore through budgetary allocation. The Government intends to adequately capitalise the public sector and to reduce the NPA level, enable them to serve people and support inclusive growth. The study has been undertaken to analyse the effect of recapitalisation on the performance of public sector banks considering two different events (24th October 2017 and 24th January 2018). The study uses paired sample t test to analyse the effect of recapitalisation on Nifty PSU index (6 month and 9 months), Net NPA, ROA and EPS of selected public sector banks. The study also analyses whether a higher amount of recapitalisation has a positive impact on bank performance. However, the study found no significant difference in performance of Nifty PSU stock index, NPA and EPS during the pre and post recapitalisation announcement (24th October 2017 and 24th January 2018). Thus, recapitalisation has potential to increase the return on assets in IDBI, SBI and PNB. The government and RBI must take essential policy and prevention measures to reduce the level of non- performing assets and increase the earning quality of the three banks.

KEYWORDS: Recapitalisation, Nifty PSU, Earning per share, Net NPA, ROA.

INTRODUCTION

Recapitalization as in simple terms has been described as "reshuffling of a capital structure within the framework of an existing corporation". Recapitalization of public sector banks indicates the infusion of capital into the banks by the government by means of equity investments. In order to create a virtuous cycle of investment and jobs, the banks should be healthy enough to lend to healthy firms and borrowers. The government being the majority shareholder of public sector banks has the obligation to strengthen the banks as the responsibility to do so falls on the shoulders of the government. The need for infusing capital into

banks is to enable them to maintain adequate capital, adhering to the requirements of tier 1, tier 2 and Basel III norms, to meet the credit needs of the economy. The Indian Banking System consists of 27 public sector banks, 21 private sector banks, 49 foreign banks, 56 regional rural banks, 1562 urban cooperative banks and 94,384 rural cooperative banks and credit cooperative institutions. The Banking Industry caters to segments like the retail banking sector, Investment banking, wealth and asset management, corporate banking. The persuasive need for recapitalization is the rising volume of bad debts, erosion in the value of their bond portfolios and to provide for banks rising bad loan situation. As per the data provided by reserve bank, there is an increase in stressed assets since 2011 and is materially crystalized in the form of non-performing assets (NPA). Banks that have not met their asset quality, capitalization and profitability thresholds have come under the Reserve banks of India Prompt Corrective Actions. "Indradhanush" which was announced in 2015 was one of the major plans by the government to revamp the public sector banks. As per the plan, a program of capitalization was introduced to ensure the public-sector banks remain compliant with the BASEL – III. Several desirable features are encompassed in the proposed recapitalization package of the banking sector by employing recapitalization bonds. In October 2017, The Narendra Modi government had announced that Rs. 2.11 Lakh Crore will be induced into Public sector banks based on efficiency and merit basis. Out of Rs 2.11 Lakh Crore, Rs 1.35 lakh crore will be raised through recapitalization bonds and the remaining amount through fund raising and mix of regular capital infusion annually. The parameters include responsible banking, better customer responsiveness, credit offtake through technology, financial inclusion and digitisation deepening. On January 24th, 2018 a better clarity on the plan was made by the Finance minister Arun Jaitley. It was announced that the Government will infuse Rs 88,139 crore into the twenty Public Sector Banks with highest amount being infused into IDBI followed by SBI and PNB.

REVIEW OF LITERATURE

According to (Acharya, 2017) a data source, 0SMOS Returns submitted to RBI shows that the stressed asset ratio of public Sector banks has been considerably increasing since March 2008. Banks that have not met their asset quality, capitalization and profitability thresholds have come under the Reserve banks of India Prompt Corrective Actions. As these banks have a significant amount of bad loans and deficient Capital Adequacy levels, sustenance of such banks is challenging

(Gambacorta & Shin , 2016) in their study of the importance of Bank capital for monetary policy states that bank capitalisation has a positive impact on bank loan supply. They sate that a 1 percentage increase in the equity-total assets ratio led to a 0.6 percentage surge in annual loans. The plan for recapitalization is considered as a big milestone towards improving the financial ratios of the public sector banks. (Acharya & Subramanian, 2016) state that 'PSBs and new private banks started off from the same position in 2015 with a declining trend while after the crisis, new private banks have strengthened their credit portfolio and reduced NPAs while PSBs have showed a huge increase in NPAs (Non-Performing Assets).' Banks that do not come

under the PCA framework are banks with enough and required capital. These banks do not require external help for sustenance and can survive on a standalone basis.

A study found that Recapitalization that took place during the Global Financial Crisis showed a positive impact on the bank's profitability and the increase in the profit amount was proportionate to the amount that was inducted into the banks. When the key objective of a recapitalization plan is to strengthen banks and revive the overall economy, a gradual increase in the profit amount can be seen as a result of such recapitalizations (TOMEC & JAGRIČ , 2017).

(Axis, 2017)In order to strengthen the NPA-hit public sector banks which in turn will lead to credit growth take-off, the government announced a 2.11 trillion recapitalization package for the fiscal year 2017-2018 and 2018-2019. In order to increase the propensity of banks to lend, improve GDP growth prospects and boost the credit cycle such measure were taken.

(Andrews, 2003) states that the government has taken several measures to curb the restricting costs of banks through recapitalizing by issue of government bonds. The benefits of recapitalization of banks are greater than the cost involved in the disruption of the real economy, in the case of bank lending. However, such a benefit is difficult to quantify as they avoid disruptive effects that are of a qualitative nature.

(Philippon & Schnabl, 2013) in their study state that 'Efficient recapitalization is profitable if the benefits of lower aggregate credit risk exceed the cost of implicit transfers to bank debt holder'. The size of recapitalization plays an important role because infusing a small amount of capital can be worse than providing no capital at all according to (Diamond, 2001).

As stated by (W. Diamond & G. Rajan , 2011) 'if the troubled banks could wind up being forced to sell the assets quickly so that prices are depressed below fundamentals, other potential buyers of the assets (i.e., the healthy banks) would choose to avoid making loans that tie up their capital'. The presence of impaired banks can distort the incentives of other healthy institutions with securities that are hard to value (Hoshi & K Kashyap, 2010).

Any problem with the value of large amount of assets can materialise into losses very quickly, affecting the bank capital and the GDP. Banks profitability and eventual survival are often linked to recapitalization. In order to offset the impact of NPA by providing the bank with fresh lease to grow and make profits (Mohapatra & Jha, 2018).

Toxic assets can be wiped out faster, safety can be maintained. The foundation of successful restructuring is the timely identification of distressed assets. A study on the impact of Indonesia's bank recapitalization program by (Poczter, 2015) found that recapitalization has increased lending of banks and even more in the case of larger banks as a result of estimates through difference-in-difference estimates. As a result of recapitalization on banks, it has helped boost the real-side economy from a downturn, increase solvency, create an appeal to the bank credit motive. (Daigo, Yonetani, & Marumo, 1999) interpreted from their results

that capital injection had a strong effect on the stock prices as investors estimate the true figures of the banks more exceedingly than before from the market to market accounting measure. They also found that the capital pumped into the such banks can be interpreted by investors as a measure to support weak banks rather than to fortify strong banks.

OBJECTIVES:

1. To analyse the effect of recapitalization of Nifty PSU stocks index of NSE as announced on October 24th, 2017
2. To study the effect of recapitalization on Net NPA, ROA, EPS of IDBI, State Bank of India and Punjab National Bank as announced on 24th January 2018.
3. To examine whether a higher amount of recapitalization have a positive impact on profitability of banks.

VARIABLES IDENTIFIED FOR THE STUDY:

1. **Independent variable**
   Amount of Recapitalization infused into banks as announced on 24th October 2017 and 24th January 2018.
2. **Dependent variable**
   Performance of public sector banks in terms of profitability taking into consideration Net NPA, EPS and ROA.

HYPOTHESIS

H0a: There is no significant difference on the performance of the PSU bank stocks before and after the announcement of recapitalization.

H1a: There is significant difference on the performance of the PSU bank stocks before and after the announcement of recapitalization.

H0b: There is no significant difference in Net NPA (%), ROA (%), EPS of the selected PSU banks before and after recapitalization.

H1b: There is significant difference in Net NPA (%), ROA (%), EPS of the selected PSU banks before and after recapitalization.

RESEARCH DESIGN:

Type of research: Analytical research which aims to prove the impact of recapitalization on the performance of Public sector banks.

Data and Event window

1. For recapitalization on 24th October 2017, the daily closing prices of NIFTY PSU BANKS are collected for six months, pre and post recapitalization, that is from 24th April 2017 to 24th April 2018 and for 9 months, pre and post recapitalization, that is from 24th January 2017 to 24th July 2018.
2. The recapitalization which took place on 24th January 2018, quarterly data on Net NPA (%), Earnings per share and Return on Assets (%) are taken before and after recapitalization. The data is collected for IDBI Bank and State Bank of India for four quarters pre and post the recapitalization date (24th January 2018). The quarters taken into consideration are March 2017, June 2017, September 2017, December 2017, March 2018, June 2018, September 2018 and December 2018.

TOOLS OF DATA COLLECTION

Secondary data:

1. The daily closing prices of Nifty PSU stocks on the NSE website.
2. The quarterly data for IDBI and State Bank of India for their Net NPA, EPS and ROA are collected from the money control website. The data is collected for four quarters.

Selection of Banks:

1. For the recapitalization that took place on October 24th, 2017, the Nifty PSU Banks stocks are taken into consideration.
2. The NIFTY PSU Bank Index captures the performance of the PSU Banks. The Index comprises of 12 banks listed in the National Stock Exchange (NSE).
3. The Banks have been selected are IDBI, State Bank of India and PNB as these banks are the market leaders and a higher amount of recapitalization has been induced in to these three banks. (Source: Firstpost 24th January 2018)

Plan of analysis

1. Paired sample t test: The study used paired sample t test to analyse the impact of recapitalization on Public sector banks taking into consideration the Net NPA, EPS and ROA before and after the recapitalization dates (24th October 2017 and 24th January 2018).
2. The daily closing bank prices of the Nifty PSU stocks are taken, and the returns are calculated.

- Return: The logarithmic return of the daily closing prices of the Nifty PSU banks is calculated using the following formula:
- Ri= ln [P1/ P0] * 100
- Where P1= today's closing price of Nifty PSU
- P0= Yesterday's closing prices of Nifty PSU
- Ln= natural Logarithm

- Net NPA (%) = Gross NPA- (DICGC/ECGC claims received and held pending adjustment+ Part payment received and kept in suspense account + Balance in interest Suspense account = total provisions held)
- Where DICGC/ ECGC claims refer to the claims by deposit Insurance and Credit Guarantee Corporation and Export Credit Corporation of India Ltd.
- Earnings per share (EPS) = (net income of the business- dividends on the preferred stock)/ number of outstanding common shares.
- Return on Assets (ROA %) = (Net profit after tax/ Average total Assets) * 100

FINDINGS AND DISCUSSION

Table 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Pre_NIFTYPSU	124	-4.975	3.557	-.13490	1.460600	-.313	.217	1.093	.431
Post_NIFTYPSU	124	-5.385	25.949	-.08327	3.064093	5.061	.217	41.967	.431
Pre_NIFTYPSU	184	-4.975	3.888	.00045	1.456374	-.123	.179	.944	.356
Post_NIFTYPSU	184	-5.385	25.949	-.05886	2.708228	4.905	.179	45.724	.356
Pre_NPA	12	3.71	16.06	9.5233	4.52412	.550	.637	-1.330	1.232
Post_NPA	12	3.95	18.76	10.4592	5.20691	.361	.637	-1.323	1.232
Pre_ROA	12	-3.36	.43	-.4258	1.13032	-1.970	.637	3.653	1.232
Post_ROA	12	-6.72	.45	-2.4667	2.68743	-.579	.637	-1.283	1.232
Pre_EPS	12	-15.54	3.55	-1.2725	5.39910	-1.905	.637	3.997	1.232
Post_EPS	12	-54.89	4.43	-10.7050	15.65949	-2.285	.637	6.232	1.232

Table (1) shows the descriptive statistics of Nifty PSU returns, Net NPA. ROA and EPS during Pre and post recapitalization. The table clearly shows that the mean values and the volatility values are reduced after recapitalization except the mean of NPA and Nifty PSU returns for 6 months.

Table 2: Correlation between pre and post recapitalisation values

		N	Correlation	Sig.
Pair 1	Pre_NIFTYPSU & Post_NIFTYPSU	124	0.062	0.496
Pair 1	Pre_NIFTYPSU & Post_NIFTYPSU	184	0.108	0.146
Pair 1	Pre_EPS & Post_EPS	12	0.096	0.767
Pair 1	Pre_NPA & Post_NPA	12	0.933	0
Pair 1	Pre_ROA & Post_ROA	12	0.628	0.029

Table (2) shows the cross-correlation statistics of Nifty PSU index returns, EPS, Net NPA and ROA during pre and post recapitalisation. It clearly indicates that the pre and post values have positively correlated.

Table 3: Paired Sample T test result

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pre_NIFTYPSU - Post_NIFTYPSU	-0.0516317	3.3121353	0.2974385	-0.640393	0.5371297	-0.174	123	0.862
Pre_NIFTYPSU - Post_NIFTYPSU	0.0593056	2.9336284	0.21627	-0.3673976	0.4860088	0.274	183	0.784
Pre_EPS - Post_EPS	9.4325	16.06687	4.6381	-4.97256	23.83756	2.034	11	0.067
Pre_NPA - Post_NPA	-0.93583	1.89881	0.54814	-2.63825	0.76658	-1.707	11	0.116
Pre_ROA - Post_ROA	2.04083	2.16417	0.62474	0.1005	3.98116	3.267	11	0.008

Table (3) shows paired sample t test results of the daily closing prices of the NIFTY PSU stock index for six and nine months. It clearly shows that the probability value of the daily returns of the Nifty PSU is not significant at 5% and 1% significance respectively. It indicates that there is no significant difference in the NIFTY PSU stock index before and after the announcement of recapitalization as on 24th October 2018 respectively

Further, paired sample t test results clearly shows that the probability value of EPS and Net NPA is not significant at 5% and 1% significance respectively. It indicates that there is no significant difference in the EPS and Net NPA of the selected public sector banks before and after the announcement of recapitalization as on 24th January 2018 respectively.

The probability value of ROA is significant at 5% significance respectively. It indicates that there is a significant difference in the ROA of the selected public sector banks before and after the announcement of recapitalization as on 24th January 2018 respectively.

To examine whether a higher amount of recapitalization have a positive impact on profitability of banks.

When the market implied capital falls short in banks, a sufficiently large capital that is induced into the banks increases lending and deposits, cleans up the balance sheet. On the other hand, banks that receive a small amount of recapitalization as compare to their shortfall in capital shrinks' assets and reduces lending (Homar, 2016).

(Li, 2013) and (Brei, 2013)Evidence shows that equity injections increase the supply of loans, although only sufficiently recapitalized banks increase loans to creditworthy borrowers; In addition, additional capital can only be focussed into lending during a crisis if the capitalisation of banks exceeds a critical threshold.

We found that the higher amount of recapitalization positively effects profitability with a lag. This is expected, as it usually takes time for newly invested equity results to have a more positive effect on banks' performance. The higher the amount of recapitalization, the faster and more efficiently banks can wipe out their toxic assets and are able to support the expansion of business activities with a positive effect on growth. Therefore, sufficient recapitalization is suggested; not just for the amount to fill the capital gap and to meet capital adequacy, but for the amount that enables banks to support further activities.

However, A study by (Diamond, 2001) proves that if too much capital is injected into banks, it will leave them with inefficient operations continuously and too much capital will be wasted. The government faces a problem in this case as too little capital is of no use to banks and too much capital will lead to wastage.

IMPLICATIONS OF THE STUDY

The study has been undertaken to study the impact of recapitalization on the performance of Indian public sector banks. The study considered two events (October 24th, 2017 and January 24th, 2018) using paired sample t test to compare the profitability of banks before and after the recapitalization announcement dates.

- At the macro-economic level, the most apparent effect of the recapitalization programme, Increase the capital volume, to reduce risk in credit, dilution in the value of stock, thereby leading to negative impact on shareholders.
- As a result of recapitalization Banks can lend a larger amount of money to corporates which can result in credit growth in the market and generation of employment leading to better productivity and expansion of businesses. All these factors will contribute to GDP.
- As citizens of the country are compensating the loss anticipated by Big corporates and wilful defaulters, the study can help banks to rearrange their NPA’s and to expand their credit growth in the market which will further lead to an increase in the GDP of the country.
- The main aim of recapitalization is to restore assurance among people. If people are assured, and deposits are safe, there will no need for them to withdraw. This study will help people to understand the performances of the banks, to understand the status of banks and withdraw money if they feel the bank will become bankrupt. A recapitalisation study can assure the depositors whether their savings are safe in the respective banks.

LIMITATIONS OF THE STUDY

- The study has not looked into more than three banks. The reason for selection of these three banks were based on their level of gross Non-performing Assets. State bank of India has the highest Gross

Non-performing Asset at Rs, 2.05 trillion, followed by Punjab National Bank with Rs. 552 billion and IDBI with Rs. 445 billion. (Economic times, 2018).

- There was a limitation in carrying out the study because, the data collected for Nifty PSU (nine months), post 24th October 2017 was more than the data collected prior to 24th October 2017 as a result of which the four extra days could not be included.

CONCLUSION

The study has been undertaken to analyse the impact of recapitalisation on the performance of IDBI, State bank of India and Punjab National Bank and the Nifty PSU Index. The study takes two different announcement date into consideration i.e. 24th October 2017 and 24th January 2018. The study uses paired sample t test to analyse the effect. Overall the study found a significant impact on Return on Assets (ROA) of the selected banks. The study found no significant difference in the Nifty PSU stock index, Earning per share (EPS) and Net NPA. Further the study found that a sufficiently higher amount of recapitalisation has a positive impact on the performance of banks in terms of increasing lending and cleaning up the balance sheet.

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