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An empirical study of ratio analysis in the context of public sector bank

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Abstract
The Ratio analysis plays a very crucial role in the decision-making process in the organisations. The Banking sector is not an exception in this context. The Balance Sheet and the financial statements can be analysed considering different ratios. The policies regarding the revision and reconsideration of the ratios in the banking context with special reference to Public Sector Banks forms the basis for the research study. The present study mustered the financial statements herein for the analytical study and the interpretations are drawn accordingly.

Keywords: ratios, efficiency, performance

Introduction

Efficiency factors influencing capital adequacy

It is important for a bank to maintain depositors' confidence and preventing the bank from going bankrupt. It reflects the overall financial condition of banks and also the ability of management to meet the need of additional capital. It also indicates whether the bank has enough capital to absorb unexpected losses. Capital adequacy ratios act as indicators of bank leverage. The following ratios measure capital adequacy

- Capital Adequacy Ratio (CAR)
- Debt-Equity Ratio(D/E)
- Total Advances to Total Assets(ADV/AST)
- G-Secs to Total Investments (G-Sec/Inv)

Efficiency factors influencing assets quality

The quality of assets in an important parameter to gauge the strength of bank. The prime motto behind measuring the assets quality is to ascertain the component of non-performing assets as a percentage of the total assets. This indicates what types of advances the bank has made to generate interest income. The ratios necessary to assess the assets quality are:

- Total Net NPAs to Total Assets(NNPAs/TA)
- Net NPAs to Net Advances(NNPAs/NA)
- Total Assets(TI/TA)
- Percentage Change in Net NPAs

Factors influencing management efficiency

Management efficiency is another important element of the CAMEL Model. The ratio in this segment involves subjective analysis to measure the efficiency and effectiveness of management. The management of bank takes crucial decisions depending on its risk perception. It sets vision and goals for the organization and sees that it achieves them. This parameter is used to evaluate management efficiency as to assign premium to better quality banks and discount poorly managed ones. The ratios used to evaluate management efficiency are:

- Total Advances to Total Deposits (TA/TD)
- Profit per Employee (PPE)
- Business per Employee (BPE)
- Return on Net worth (RONW)

Efficiency factors influencing earnings quality

The quality of earnings is a very important criterion that determines the ability of a bank to earn consistently. It basically determines the profitability of bank and explains its sustainability and growth in earnings in future. This parameter gains importance in the light of argument that much of a bank's income is earned through non-core activities like investments, treasury operations and corporate advisory services and so on. The following ratios explain the quality of income generation.

- Operating profit by Average Working Funds (OP/AWF)
- Percentage Growth in Net Profit(PAT Growth)
- Net Profit/Average assets(PAT/AA)

Efficiency factors influencing liquidity

Risk of liquidity is curse to the image of bank. Bank has to take a proper care to hedge the liquidity risk; at the same time ensuring good percentage of funds are invested in high return generating securities, so that it is in a position to generate profit with provision liquidity to the depositors. The following ratios are used to measure the liquidity under the CAMEL Model.

- Liquid Assets Deposits (LA/ DD)
- Liquid Assets to Total Deposits (LA/TD).
- Liquid Assets to Total Assets (LA/TA)
- G-Sec to Total Assets (G-Secs/TA)
- Approved Securities/Total Assets(AS/TA)

Concept of efficiency [1]

When we address ourselves to the concept of _Efficiency', we soon realize that _Efficiency' is a loose term indeed; a host of different concepts of _Efficiency' come readily to the mind. To an engineer efficiency may mean ratio output/ input or

[1] Operational efficiency in banking sector –A conceptual framework

percent (thus speaking of the efficiency of a machine) while the cost accountant uses the ratio, standard cost/ actual cost, percent or its inverse to measure the efficiency of a firm, department or cost centre. An economist, when he refers to the efficiency of a firm, generally means one of two ratios. First concerns the firm‘s success in producing as large as possible output (or what amounts to the same thing, producing a given output with least inputs), this he calls productivity or technical efficiency. Second measures, also a ratio of output to inputs, are in value terms. Sometimes it takes the form of the ratio, value of output/value of input (Amer & George Allen, 1969).

Efficiency‖ from the view point of the working of a machine or a plant and a cost accountant from financial aspects regarding cost or cost control and an economist use productivity as an indicator of efficiency. For a marketing manager ‗efficiency ‘means ability to earn profits through customer satisfaction. Thus ‘efficiency’ means different things to different people.

Categorization of efficiency

Efficiency could be categorized into different categories based on scope of efficiency targeted; the efficiency can be decomposed into scale efficiency, scope efficiency, technical efficiency and allocate efficiency (Chen, 2001). A bank has the scale efficiency when it operates in the range of constant returns to scale (CRS).

Scope efficiency occurs when the bank operates in different diversified locations. When the bank maximizes the output from the given level of input technical efficiency occurs and when bank, chooses revenue maximizing mixes of output, allocative efficiency occurs.

Efficiency‘ will also vary according to whose point we are considering. That is, whether the researcher studying efficiency from the point of view of an individual firm or of the community. The adjective ‗economic ‘when applied to efficiency refers to the community view and economists are concerned with this particular concept ―Economic Efficiency‖. Thus ‘efficiency’ can be broadly being studied from two stand points (Refer Fig. 4.1). First, from the view point of an economy as a whole, which is termed as ―Economic Efficiency‖ and secondly, from the view point of an Individual business enterprises, which can be termed as ―Operational Efficiency‖ of existing units or projects of a firm is to be studied.

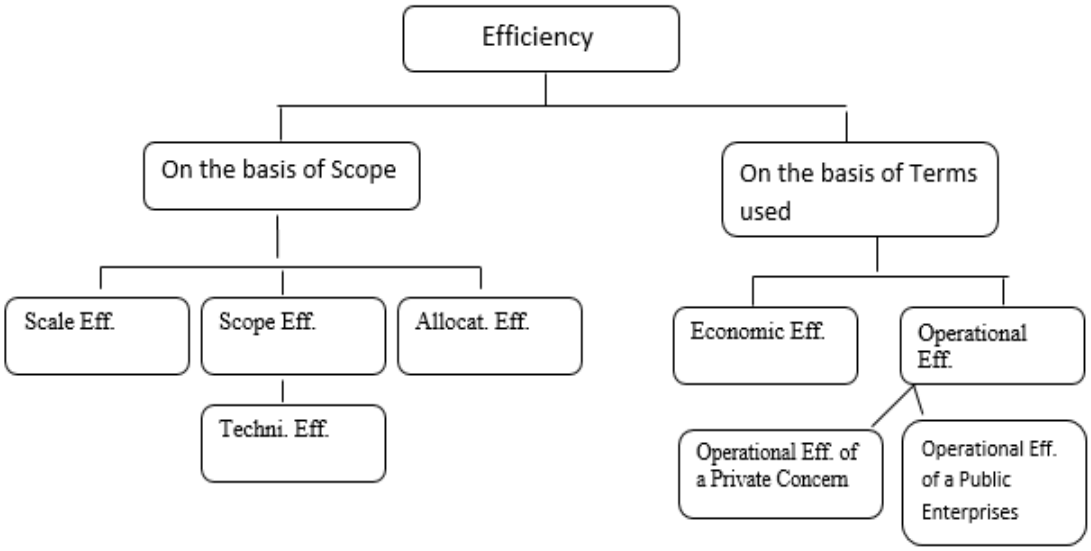

Fig 1: Categorization of Efficiency

into useful output is waste. It means producing more goods and services with no greater Operational Efficiency‖ of a business can be further studied from the stand –point of a private concern or a public concern. This is necessary because of the fact that ultimate goal of the private business is to ‗maximize profits and dividends‘. Therefore, rate of profit earned by private business serves as a measuring rod of its efficiency. But maximization of profits and dividends is not the chief goal of public enterprises. Since, the present study relates to public sector banks which come under Government ownership are therefore concerned with ‗Operational Efficiency ‘from the stand point of public sector banks only.

Table 1: Profile of State Bank of India

Logo	SBI
Type	Public
Traded as	▪ NSE: SBIN ▪ BSE: 500112 ▪ LSE: SBID ▪ BSE SENSEX Constituent ▪ CNX Nifty Constituent
Industry	▪ Banking, financial services

Founded	▪ 2 June 1806, Bank of Calcutta ▪ 27 January 1921, Imperial Bank of India ▪ 1 July 1955, State Bank of India ▪ 2 June 1956, nationalization
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Headquarters	▪ Mumbai, Maharashtra, India
Area served	▪ Worldwide
Key people	▪ Arundhati Bhattacharya (Chairman)
Products	▪ Consumer banking, corporate banking, finance and insurance, investment banking, mortgage loans, private banking, private equity, savings, securities, asset management, wealth management, credit cards
Revenue	▪ ₹298,640.45 crore (US$46 billion) (2017) ▪ ₹273,461.13 crore (US$42 billion) (2016)
Operating income	▪ ₹50,847.90 crore (US$7.9 billion) (2017)
Profit	▪ ₹10,484.10 crore (US$1.6 billion) (2017) ▪ ₹9,950.65 crore (US$1.5 billion) (2016)
Total assets	▪ ₹2,705,966.30 crore (US$420 billion) (2017)
Total equity	▪ ₹144,274.65 (US$2,200) (2016)
Number of employees	▪ Number of employees

Table 2: Ratio Calculation for the State Bank of India

Cash-Deposit Ratio			Credit Deposit Ratio		Investment Deposit Ratio		Credit + Investment Deposit Ratio		Loan-to-Deposit Ratio (LTD)	
2005	4.58		55.14		53.7		108.83		79.81	
2006	5.7		68.89		42.77		111.65		76.93	
2007	6.68		77.46		34.25		111.7		76.87	
2008	9.59		77.55		35.26		112.81		74.48	
2009	7.49	Mean= 6.90 S.D.= 1.76	73.11	Mean= 77.37 S.D.= 9.15	37.19	Mean = 35.93 S.D.= 7.62	110.29	Mean= 112.88 S.D.= 2.23	76.94	Mean= 77.04 S.D.= 1.31
2010	7.62		78.58		36.78		115.37		76.33	
2011	10.11		81.03		31.65		112.68		76.32	
2012	5.18		83.13		29.91		113.04		78.15	
2013	5.47		86.94		29.17		116.11		76.79	
2014	6.09		86.76		28.6		115.36		77.78	
2015	7.35		82.45		31.39		113.84		76.99	

1. Cash deposit ratio

Cash in cash-deposit ratio includes cash in hand and balances with RBI. Cash-Deposit ratio = (Cash in hand + Balances with RBI) / Deposits. The Cash deposit ratio tells how much total liquidity you have in hand out of Total Deposit receipt. Sample Bank's operational efficiency depend on inflow and outflow of Cash. Inflow of Cash pertaining to a Bank denotes all types of Deposits including Cash deposits. Under the study, mean scores for these banks stood above Six and corresponding S.D. scores are too satisfactory and well within the limits.

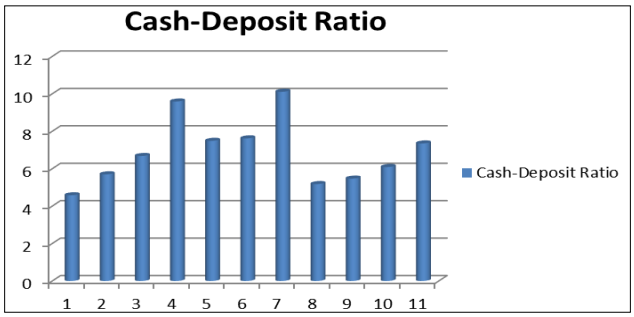

Fig 1

2. Credit deposit ratio

Credit Deposit tells that company how much loan given outside out of his total deposit. Higher this ratio better for company, if company Given loan in high interest rate so company get good yield. The loan to Deposit (LTD) is expressed as Credit Ratio by Banks. This implies that for every 100 Rupees of Deposit collected by a bank, how much has been dispersed by way of Loans and Advances. SBI Has lent 77.37% of its total Deposits by way of loans. The Standard Devitations are well within the limits.

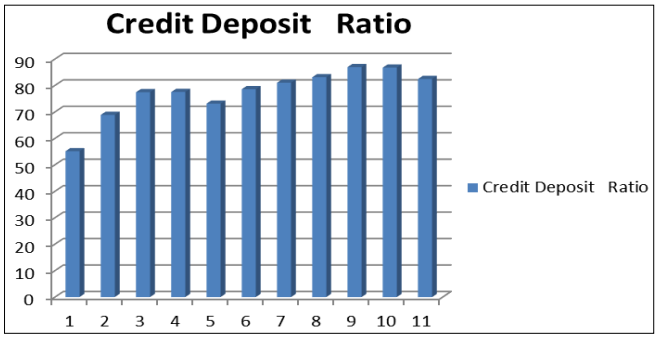

Fig 2

3. Investment deposit ratio

Investment Deposit Ratio basically give information that where bank using there deposit may be development, economy wealth and many other sector where bank can put their money for investment so that Bank earn more interest. Investment to Deposit Ratio = Total Investment / Total Deposit

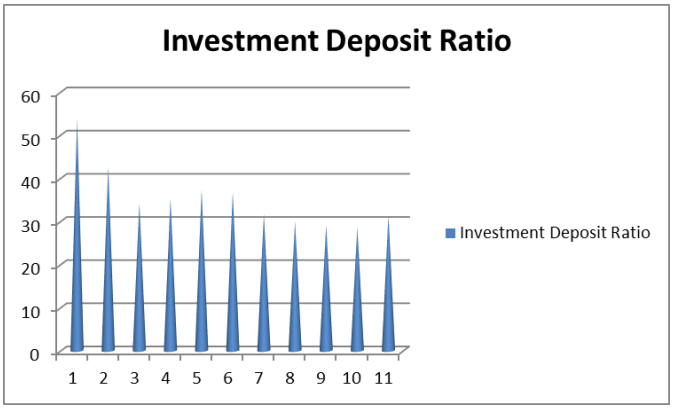

Fig 3

One of the important portfolios of a typical banker is investment. Certain percentage of total Deposits is invested in Shares, Debentures, Bonds and other Securities. This is to increase non-operational income and thus enhancement of the total income of the Bank. The prudent sample banks are doing the same. The Investment Deposit Ratio is 35.93 (SBI). The corresponding S.D. is within the range indicating the consistency.

4. Credit + Investment Deposit Ratio

The loan to deposit ratio is used to calculate a lending institution's ability to cover withdrawals made by its customers. A lending institution that accepts deposits must have a certain measure of liquidity to maintain its normal daily operations.

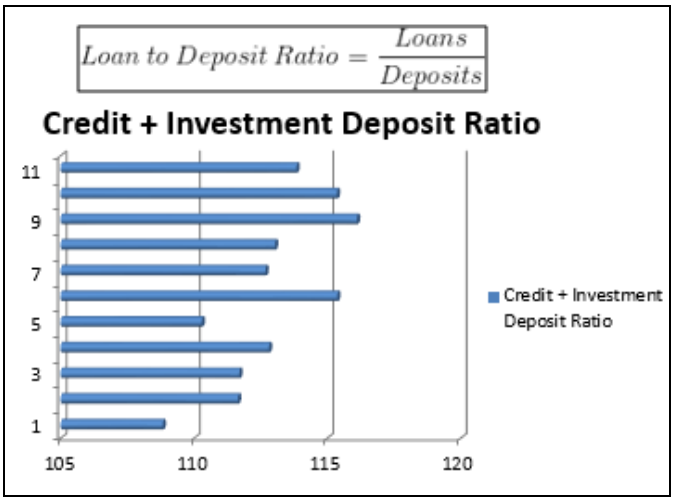

Fig 4

Loans given to its customers are mostly not considered liquid meaning that they are investments over a longer period of time. Although a bank will keep a certain level of mandatory reserves, they may also choose to keep a percentage of their non-lending investing in short term securities to ensure that any monies needed can be accessed in the short term. The combined Credit and Investment Deposit Ratio reflect operational efficiency in the form of earning capacity from loan to Deposit (LTD) and Investment Portfolios. The sample Banks under the study have more than 100 Percent of their Deposits and Retained Earnings fruitfully employed in Loans and Advances and investment in various securities. The mean scores and S.Ds. are satisfactory

5. Ratio of deposits to total liabilities

The loan-to-deposit ratio (LTD) is a commonly used statistic for assessing a bank's liquidity by dividing the bank's total loans by its total deposits. This number is expressed as a percentage. If the ratio is too high, it means that the bank may not have enough liquidity to cover any unforeseen fund requirements, and conversely, if the ratio is too low, the bank may not be earning as much as it could be.

Tradition and prudence indicate that the ideal LTD ratio is between 80 and 90%. However, banks also have to keep relevant regulations in mind. The Office of the Comptroller of the Currency (OCC), the Board of Governors of the Federal Reserve System and the Federal Deposit Insurance Corporation (FDIC) do not set minimum or maximum LTD ratios for banks.

Deposits to Total Liabilities of Sample Banks are a ratio computed to know the range of deposits liabilities to other liabilities. This indicates whether Deposits liabilities are more or are less than the other liabilities of Banker. The results indicate under the study that the deposit liabilities of sample banks stood at more than 2/3rd

Suggestions

Advances provided by banks need to be done pre-sanctioning evaluation and post disbursement control so that NPA can decrease. Good management needed on the side of banks to decrease the level of NPA. Proper selection of borrowers & follow ups required to get timely payment. Non-performing assets are a drain to the banks. The banks in India are adopting various strategies to reduce the non-performing assets in their banks and they are also adopting various methodologies by which further addition to NPA portfolio is minimized In the real sense, in case there is a recovery in principal and installments due in respect of the loans granted to the banks are received 100%, the question of non-performing assets do not arise. However, there is no such ideal bank where the NPA is nil. Except banks which were originated recently, all banks are prone to have some portion of their loans and advances as Non Performing Advances. The following are some strategies by which banks are trying to curtail non-performing assets to a great extent:

Recovery camps

Bank personnel jointly approach the defaulting borrowers for repayment at a place and time convenient to both the parties. These are more suited to small loans. Normally the borrowers who had availed small loans will be more in number in rural and semi urban areas rather than urban and metro centers. As

such, the banks instead search areas rather than urban and metro centers. As such, the banks instead of conducting the recovery camps at their branches, they usually conduct such recovery camps in centres like panchayat board offices, court buildings, government department buildings etc. such recovery camps so that the borrowers find it convenient to attend the recovery camps. Under certain circumstances, the manager in charge of the bank branches along with some branch officials go to each visit each house of the borrowers and recover the installments due in respect of loans availed by them. This type of recovery camp will be successful in case an advance notice is served on the borrowers mentioning the date of recovery camps

Preference of claims

Banks should expeditiously and properly claim indemnity from organizations like Deposit Insurance and Credit Guarantee Corporation called DICGC, Export Credit Guarantee Corporation called ECGC, Credit Guarantee Fund Trust for small scale industries, Insurance Companies etc. and invokes Government/other personal guarantees to recover loan dues and reduce non-performing assets.

Conclusion

The Ratio analysis in the context of Banks is very crucial. The Reserve Bank of India controls the overall functioning of the banks. The rules are amended and coined from time to time. The Present study mustered the data of sample Public Sector Bank, State Bank of India. The ratios are found to be satisfactory. It is mandatory for the Banks to stick to the rules set forth by the Public Sector Banks.

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