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A Note on Asset and Liability Management of Selected Commercial Banks in India

KEYWORDS

Asset Liability Management, Liquidity, Profitability

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ABSTRACT This paper examines the management of asset-liability in banking sector. The main objective of the study is to present the optimal mix of asset and liability of selected commercial banks in India. The paper mainly discusses on four banks out of which two are nationalized bank i.e. State Bank of India and Punjab National Bank and remaining two are private banks i.e. ICICI Bank Limited and HDFC Bank Limited. In order to analyze the changing perspectives, the study has been conducted for the period of five years i.e. 2011-12 to 2015-16. In the present paper an attempt has been made to evaluate the impact of ALM on liquidity and profitability of banks (comparison between public and private sector banks). For this comparison was made on different ratios like : Net Profit Margin (NPM), Return on Equity (ROE), Net Interest Margin (NIM), Credit Deposit Ratio (CDR), Investment Deposit Ratio (IDR) and Cash Deposit Ratio.

INTRODUCTION

Commercial banks play an important role in the development of a country. A sound, progressive and dynamic banking system is a fundamental requirement for economic development. As an important segment of the tertiary sector of an economy, commercial banks act as the backbone of economic growth and prosperity by acting as a catalyst in the process of development. They inculcate the habit of saving and mobilize funds from numerous small households and business firms spread over a wide geographical area. The funds so mobilized are used for productive purposes in agriculture, industry and trade (Kavitha, 2012).

The commercial banking sector plays an important role in mobilization of deposits and disbursement of credit to various sectors of the economy. A sound and efficient banking system is important for maintaining financial stability. The financial strength of individual banks, which are major participants in the financial system, is the first line of defense against financial risks. The banking industry in India is undergoing transformation since the beginning of liberalization. Banks in India are venturing into non-traditional areas and generating income through diversified activities other than the core banking activities. There have been new banks, new instruments, new windows, new opportunities and, along with all this, new challenges. While deregulation has opened up new vistas for banks to augment revenues, it has entailed greater competition, reduced margins and consequently greater risks (Singh and Tondon, 2012).

ASSET-LIABILITY MANAGEMENT – CONCEPT AND IMPORTANCE

The Asset Liability Management has been defined in different ways. Some of the definitions provided by eminent bankers that capture the basic message of this technique are as under:

(a) The process of managing the Net Interest Margin (NIM) within the Overall risk bearing capacity of the bank.

(b) The process of planning, directing, and controlling the flow, level, costs, yield and duration of the funds for the purpose of achieving financial goals & controlling financial risks.

(c) Coordinated management of the bank balance sheets to allow for alternative interest rates and liquidity scenario.

(d) An integrated approach to branch and financial management, requiring simultaneous decision about the types and amounts of financial assets and liabilities it holds or the Asset Liability mix and volume.

ALM is a comprehensive and dynamic framework for measuring, monitoring and managing the market risk of a bank. It is the management of structure of balance sheet (liabilities and assets) in such a way that the net earnings from interest are maximized within the overall risk-preference (present and future) of the institutions. The ALM functions extend to liquidly risk management, management of market risk, trading risk management, funding and capital planning and profit planning and growth projection (Singh and Tondon, 2012). The concept of ALM is of recent origin in India. It has been introduced in Indian Banking industry w.e.f. 1st April, 1999.

The transformation of the Indian financial markets over the past few years, the growing integration of domestic markets with external markets, and the risks associated with banks operations have become complex and large, the requirement strategic management in dealing with such complexities are on rise. In a fairly deregulated environment, banks are now required to determine on their own, the interest rates on deposits and advances in both domestic and foreign currencies on a dynamic basis. Intense competition for business involving both the assets and liabilities, together with increasing volatility in the domestic interest rates as well as foreign exchange rates, has brought pressure on management of banks to maintain a good balance among spreads, profitability and long-term viability. Imprudent liquidity management practices can put banks earnings and reputation at higher stake, thus calling for structured and comprehensive measures and not just ad hoc actions (Sheela and Bastray, 2015). Thus the broad objectives of the ALM Policy are profit planning, liquidity management, interest risk management, FOREX risk management, equity risk management and commodity price risk management (Singh, 2013). One of the main reasons for the growing importance of ALM is the rapid innovations taking place in the asset as well as liability products of the commercial banks to provide convenience, better & faster services to institutional & individual customers.

METHODOLOGY AND REVIEW OF LITERATURE

The area of the for the present study is limited to the selected Commercial Banks (i.e. Public Sector Banks and Private Sector Banks) in India. Foreign Banks have been excluded from the study. As the policies and regulations of Foreign Banks are different from other Commercial Banks they are excluded. Study mainly focuses on following aspects:

1. The changing strategies in the management of Assets and Liabilities in last five years.

2. The various risks involved in Assets Liability Management and its impact on profitability and the management of the same.

In the present study Two Public Sector banks (State Bank of India and Punjab National Bank) and Two Private Sector banks (ICICI Bank Limited and HDFC Bank Limited) were selected. In order to analyze the changing perspectives, the study has been conducted for the period of five years i.e. 2011-12 to 2015-16. The variables of the study were Sensitivity Assets – Investments and Advances, Sensitivity Liabilities – Deposits and Borrowings and Difference Component for ratios. The required data for the study collected from the Annual Reports and ALM reports of the selected banks and various publications of relating to these banks.

The amount of literature available about the asset liability management in banks is considerably high. Various researchers have made significant contributions in the field of asset liability management by studying it in different contexts.

Gardner and Mills (1991) discussed the principles of asset-liability management as a part of banks' strategic planning and as a response to the changing environment in prudential supervision, e-commerce and new taxation treaties. Their text provided the foundation of subsequent discussion on asset-liability management.

Sood (1999), in his paper titled, "Asset Liability Management; Challenges in implementation", has discussed some generic issues of relevance in managing risks in India where the market driven financial system has just evolved. The author observed that banks have invested a large share of their resources in government securities because of which banks are expected to bear high interest rate risk. The paper concluded that management of interest rate risk is different in a country like India, in comparison with countries that have more liquid and competitive financial markets. The author suggested that the Indian Banking system must understand the risk-return profile of the customer and choose a customer mix that best suits the bank's own risk-return profile. Further, the government must make a conscious effort to allow the market forces to determine the portfolio-mix and prices of financial assets in the economy.

Vaidyanathan (1999) discussed many issues in Indian context in asset liability management and elaborates on various categories of risk that require to be managed by banks. Indian banks in the initial stages were primarily concerned about adhering to statutory liquidity ratio norms; but in the post liberalization era where banks moved away from administered interest rate structure to market determined rates, it became important for banks to prepare themselves with some of these techniques, in order to immunize themselves against interest rate risk. Vaidyanathan concludes that the problem gets accentuated in the context of change in the main liability structure of the banks, namely the maturity period for term deposits.

Vaidya and Shahi (2001), studies asset-liability management in Indian banks. They suggested in particular that interest rate risk and liquidity risk are two key inputs in business planning process of banks. A linear programming model for assessing asset liability management in banks.

Bagchi (2003), in his paper 'Assets and liability information analysis of the Indian public sector banks' studies the behaviour of the banks with respect to their capital adequacy ratio dynamics, by decomposing the financial statements. This study shows the evidences that banks reorganised their assets and liabilities to achieve higher capital adequacy ratios, and also that the assets reorganisation was more pronounced than the reorganisation of the liabilities.

Pathak and Goshal (2007), proposed a linear model for asset liability assessment. They found that public sector banks have best asset liability management positions, maintaining profitability, satisfying the liquidity constraints, and reducing interest rate risk exposure. The present study analyses the impact of RBI guidelines on effective management of ALM in banks.

Chkrabraborty and Mohapatra (2007) stated in their study that public sector banks have an efficient asset liability maturity pattern. Also they found that the interest rate risk and liquidity risks are the significant risks that affect the bank's balance sheet and therefore, they should be regularly evaluated and managed.

Chaudhary and Sharma (2011) stated that public banks must pay attention on their functioning. These banks should select borrower very cleverly and also public banks should decrease the NPA level. Sometimes the perspective of management also defines the risk profile of banks which further determines the liquidity and profitability tradeoff.

Singh (2013), has found that there are serious attempts by banks to minimize the asset liability mismatch since the implementation of RBI guidelines in 1997. Banks have made adequate follow up and monitoring 97 arrangements at different levels. The study suggests much scope for banks to improve profitability by monitoring and reducing short term liquidity. The further break up of data into smaller rime buckets indicates negative gap. To fill the short term liquidity gap, banks resort to market borrowings at higher rate of interest which reduces interest margin and profitability of banks. Banks have greater scope to manage interest rate risk through various techniques.

Baser (2014) study indicates that Asset-Liability Management (ALM) was a comprehensive and dynamic framework for measuring, monitoring and managing the market risk of a bank. The study attempted to evaluate the changing perspectives of the banks in identifying and facing the risks and maintaining Asset Quality so as to ensure profitability with the help of ALM techniques.

PROFITABILITY AND LIQUIDITY ANALYSIS

In the present study an attempt has been made to evaluate the impact of ALM on profitability and liquidity of banks (comparison between public and private sector banks). For this comparison was made on different ratios like :

- Net Profit Margin (NPM)
- Return on Equity (ROE)
- Net Interest Margin (NIM)
- Credit Deposit Ratio (CDR)
- Investment Deposit Ratio (IDR)
- Cash Deposit Ratio

The Profitability analysis of the banks reveals that:

- For the State Bank of India the Net Profit Margin and ROE has sharply come down in last 5 years. While the Net Interest Margin has been stable to declining over last 5 years.

- Similar is the case with Punjab National Bank where the Net profit Margin and ROE has sharply come down in last 5 years and the Net Interest Margin has been stable to declining over last 5 years.

- In case of ICICI Bank Limited the Net profit Margin and ROE has been on upward trend, except some decline in 2015-2016 due to higher provisioning by the industry. Further, the Net Interest Margin has been steadily improving for ICICI.

- Similar is the case with HDFC Bank Limited where the Net profit Margin and ROE has been on upward trend except there has been some decline in ROE in 2015-2016. Further, the Net Interest Margin has been stable over the last 5 years. As such, HDFC has the best profitability ratios amongst the selected group of banks.

The Liquidity analysis of the banks reveals that:

- The State Bank of India has maintained a strict discipline on all liquidity ratios in the last 5 years. The credit deposit ratios post improving in 2013-2014 have deteriorated in last 2 years while

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the Investment deposit and Cash deposit ratios have been found stable.

- The Punjab National Bank has maintained a strict discipline on all liquidity ratios in the last 5 years. All liquidity ratios have slighted deteriorated in last 5 years.

- The ICICI bank has been steadily improving its credit deposit ratio over last 5 years. The investment deposit ratio has come down sharply commensurate with increased advances, however its investment ratios are still comfortably above the peers in this study. ICICI's cash deposit has been stable over last 4 years and has the best liquidity ratios.

The HDFC bank has been steadily improving its credit deposit ratio over last 5 years; though is still behind ICICI. The investment deposit ratio has come down sharply in last 2 years and cash deposit has come down sharply compared to 2012.

Table 1 and 2 gives the Profitability Ratios and Liquidity Ratios of different banks.

Table 1 : Showing Profitability Ratios of different banks

Profitability Ratios					
SBI	**Mar-16**	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Net Profit Margin (%)	5.51	8.17	7.49	10.66	10.42
Return on Equity (%)	6.82	10.53	9.61	14.32	14.44
Net Interest Margin (%)	2.79	2.94	2.99	3.09	3.33
PNB	**Mar-16**	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Net Profit Margin (%)	-8.38	6.61	7.73	11.33	13.4
Return on Equity (%)	-11.2	8.12	9.69	15.19	18.52
Net Interest Margin (%)	2.42	2.88	3.14	3.18	3.22
ICICI	**Mar-16**	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Net Profit Margin (%)	18.44	22.76	22.2	20.77	19.27
Return on Equity (%)	11.19	13.89	13.4	12.48	10.7
Net Interest Margin (%)	3.11	3.07	2.91	2.74	2.44
HDFC	**Mar-16**	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Net Profit Margin (%)	21.07	20.61	19.18	18.93	19.7
Return on Equity (%)	16.47	19.5	18.57	17.26	15.47
Net Interest Margin (%)	4.14	4.14	4.28	4	4.22

Table 2 : Showing Liquidity Ratios of different banks

Liquidity Ratios					
	Mar-16	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Credit Deposit Ratio	82.72	84.04	85.71	84.03	81.27
Investment Deposit Ratio	32.53	32.75	31.68	32.23	32.96
Cash Deposit Ratio	7.08	6.64	5.88	5.55	7.44
	Mar-16	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Credit Deposit Ratio	75.19	76.6	78.06	78.13	77.39
Investment Deposit Ratio	29.32	30.97	32.47	32.75	31.45
Cash Deposit Ratio	4.81	4.88	4.76	4.72	6.1
	Mar-16	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Credit Deposit Ratio	105.08	104.72	100.71	99.25	97.71
Investment Deposit Ratio	44.32	52.43	55.79	60.38	61.16
Cash Deposit Ratio	6.74	6.85	6.54	7.21	8.6
	Mar-16	**Mar-15**	**Mar-14**	**Mar-13**	**Mar-12**
Credit Deposit Ratio	81.71	81.79	80.14	78.06	76.02
Investment Deposit Ratio	35.13	35.05	38.51	36.99	34.45
Cash Deposit Ratio	6.46	6.02	5.46	8.81	10.79

Figures below illustrate the trends of different ratios during last five years in selected banks.

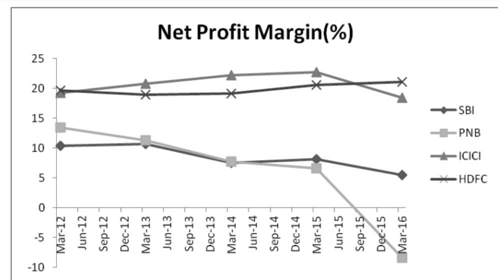

Figure 1: Shows the comparison of Net Profit Margin during last 5 years.

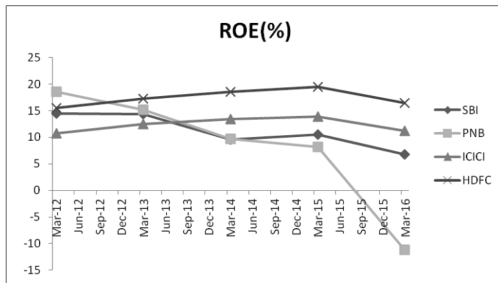

Figure 2: Shows the comparison of Return on Equity during last 5 years.

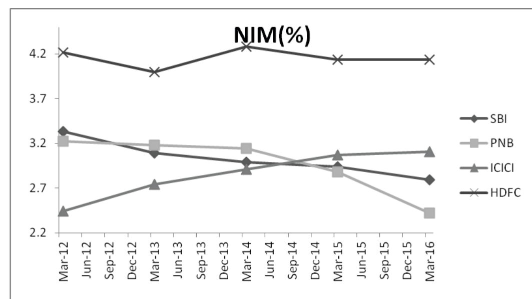

Figure 3: Shows the comparison of Net Interest Margin during last 5 years.

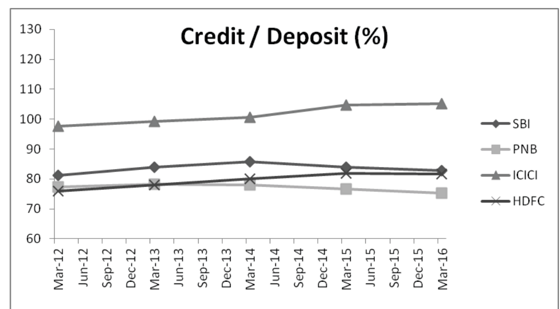

Figure 4: Shows the comparison of Credit Deposit Ratio during last 5 years.

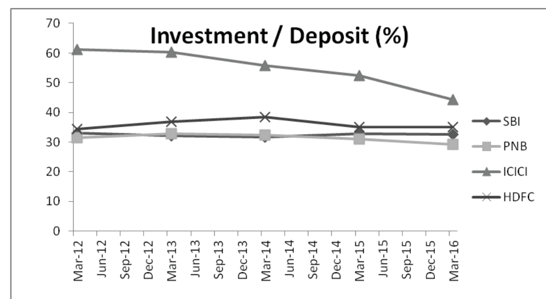

Figure 5: Shows the comparison of Investment Deposit Ratio during last 5 years.

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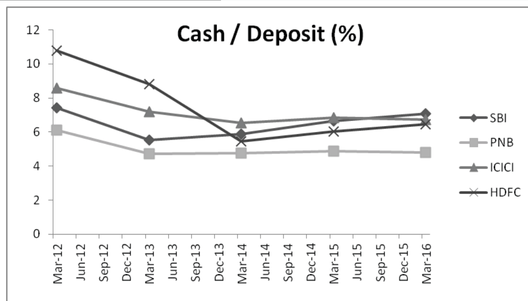

Figure 6: Shows the comparison of Cash Deposit Ratio during last 5 years.

The comparative studies thus reveal that:

- Private sector banks have better Net Profit Margins than public sector banks.
- Public sector banks' Net Profit Margin seems to be trending downwards.
- Private sector banks have more stable Net Profit Margins than public sector banks.
- Private sector banks have better Return on Equity (ROE) than public sector banks.
- Public sector banks ROE seem to be trending downwards.
- Private sector banks have more stable ROE than public sector banks.
- Private sector banks have better Net Interest Margin (NIM) than public sector banks.
- Public sector banks NIM seem to be trending downwards.
- Private sector have more stable NIM than public sector banks.
- Private sector banks have better profitability than public sector banks.
- Public sector banks profitability seem to be trending downwards.
- Private sector have more stable/rising profitability than public sector banks.
- Private sector banks have higher credit deposit ratio than public sector banks.
- Public sector banks credit deposit ratio seems to be stable/downwards trending.
- Private sector seems to be more aggressive in giving credit than creating deposits.
- Investment to deposit ratio of public and private sector seem to be converging.
- Private sector banks seem to be reducing their investments.
- Public sector banks have had a stable Investment to deposit ratio.
- Normally banks increase SLR holding during uncertain and low growth bouts.
- Cash to deposit ratio of public and private sector seem to be converging.
- Private sector banks seem to be reducing their cash balances.
- Public sector banks have had a stable cash to deposit ratio.
- Private sector banks have been more aggressive in creating credit than public sector banks.
- Despite being aggressive in credit creation private sector banks have historically been able to maintain liquidity at relatively higher levels compared to public sector banks.

CONCLUSION

- Both the private sector banks clearly have better Liquidity coverage ratios than public sector banks.
- They are having a well defined treasury setup with clearly defined roles and responsibilities of the ALCO which has a supporting effect on the Liquidity and Profitability (as seen from key ratios).
- Private sectors banks have already met and in cases exceeded expectations set by RBI regarding LCR requirements. Private sector banks prudent ALM management has helped them fare better than public sector banks in terms of key liquidity and profitability (KPI's).

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