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CONTENTS

A STUDY ON THE MATURITY PROFILE OF ASSETS AND LIABILITIES MANAGEMENT IN INDIAN SCHEDULED BANKS

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Abstract

The recent global financial turmoil demonstrated that maintenance of adequate liquidity is a sine qua non *for the uninterrupted functioning of the banking system. In the Indian context, the rapid growth observed in banks' lending which are long-term in nature coupled with dependence of the banking system on short-term deposits raises concerns with regard to ALM. In India asset liability mismatch in balance sheet of commercial banks posed serious challenges as the banks were following the traditional methods of recording assets and liabilities at the book value. The liberalization process in the economy coupled with multifaceted global developments exposed banks for various kinds of risks viz.interest rate risk, liquidity risk, exchange risk, operational risk etc. which have direct impact on their operations, profitability and efficiency to compete with. The Central Bank of the country focused and advised banks for taking concrete steps in minimizing the mismatch in the asset-liability composition. There had been many positive impacts of various strategies followed by banks in the last one decade. This paper is an attempt to analyze the maturity Profile of Assets and Liabilities of Scheduled Banks. The paper mainly discusses on the Nationalised Banks Group, Private Banks Group, Foreign Banks Group and Small Finance Group. In this study the researcher study the Maturity Profile of Assets and Liabilities of Scheduled Banks for the period of 2017.*

Keywords – banks, asset liability mismatches, Asset-liability management, Maturity Buckets

I. 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. 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.

In the developing countries including India the regulatory regime, on the operations and control of banks and financial institutions, did not allow much competition in the financial system. The interest rates were by and large controlled by

the Central bank; the Reserve bank of India (RBI).The balance sheet management did not pose many problems as the income was accounted for on accrual basis. Off balance sheet exposure for banks was minimum. It was only after liberalization process implemented in 1991the banking sector had undergone the following major changes:

- De-regulation of interest rates.
- Non-recognition of Income on accrual basis.
- Growth of forward contracts in foreign transactions and therefore higher of balance sheet exposure.
- Diversification of banking products.
- Growth of a healthy competition in banking sector.

The situation in pre liberalization era was that competition in the banks was negligible as the major business was handled by banks. Therefore liabilities to the bank in terms of deposits did not pose many problems. Banks used to have major focus on asset management. But in the changing context after liberalization, liability management also assumed significant importance. In the changing global scenario, banks have been facing several risks in their business operations viz., credit risk, interest rate risk, exchange risk, liquidity risk and operational risk. While all these risks could manifest in more than one form, the banks are more concerned about liquidity risk and interest rates risk. The significance being former effects the bank's commitment for meeting its liabilities in time impacting reputational risk while the later impacts the profitability of a bank.

Taking one step ahead, the banks now focus on integrated balance-sheet management which is one of the important areas that the banks are concentrating is Asset-liability management (ALM). The recent global financial turmoil can be largely attributed to mismanagement of assets and liabilities by large financial institutions. In this context, banks are now taking ALM more serious than ever. Sound ALM practices ensure the stability and liquidity of banks, thus enhancing the profitability. ALM is a mechanism to address the risk faced by banks due to mismatch in assets and liabilities. The mismatch may be because of maturity profile or due to interest rate structures. Any such mismatch in will lead banks into trouble. For instance, if assets are bearing fixed interest rate and liabilities are bearing floating interest rates, any rise in interest rate would axe the net interest margin of the banks. Similarly if the maturity of the assets is longer than that of liability, bank may face liquidity crisis. ALM unifies the liquidity and profitability of the banks. Therefore it is imperative to monitor the status of assets and liabilities constantly. The goal of ALM is not eliminating the risk but to manage the risk amicably between risk, liquidity and profitability. Having faced with increasing volatility in interest rates and severe competition in fund formation, the banks are now paying more attention to fund formation and monitoring of deposit value and its structure, as well as the state of non-deposit liabilities. Alongside, with the increased use of technology and computing power in the banks, ALM could find with a new and broader function to perform . To attract globally competent talents to do this job, banks are paying a very high remuneration for the talents performing this job . This reiterates the importance of ALM. In the post liberalisation era, with large deregulation in banking sector and due to intense competition, efficient management of assets and liabilities became imperative for survival of banks.

Need for ALM in Banks

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. The various risks that the banks are exposed to are – credit risk, interest rate risk, foreign exchange risk, equity/commodity price risk, liquidity risk and operational risks and thus, the banks need to introduce effective risk management systems that address the underlying issues. In such circumstances, banks need to address these risks in a structured manner by upgrading their risk management and adopting more comprehensive ALM practices than that has been done hitherto. ALM, among other functions, is primarily concerned with risk management and provides a comprehensive and dynamic framework for measuring, monitoring and managing the risks associated. In the process, it assesses various types of risks and alters the asset-liability portfolio in a dynamic way in order to manage risks. The first step of market risk management is to measure the liquidity and the interest rate risk. ALM policies are intended to keep those risks at an acceptable level given the expectations of future market/interest rates. Liquidity and interest rate policies, though distinct, are interdependent since any projected liquidity gap will be funded at an unknown rate, unless a hedge is contracted today.

II. OBJECTIVE

To analyze the maturity Profile of Assets and Liabilities management of Indian Scheduled Banks

Research Methodology

This is an analytical study where data of various banks as published by the Reserve bank of India is made use of. The paper analyses asset-liability management in banks operating in India by determining the liquidity position of Banks in India through maturity profiling. The data used for this purpose pertains to 2016-2017 for Scheduled Commercial banks. The asset liabilities were allocated and distributed in different maturity periods. To validate the findings, reference has also been made to a study conducted by the RBI.

The study is based on secondary information, and all the relevant information is collected from various issues of Statistical Tables Relating to Banks, Report on Currency and Finance published by the Reserve Bank of India, and Database on Indian Banking published by Indian Banking Association. In addition to that some information was also collected from different issues of Economic Survey published by the Government of India and certain important books and journals

Implications of the study

The present study is on the maturity profile of asset and liabilities of scheduled commercial banks. There are very few studies done in this area. The outcome of the study is significant for both practitioners and academicians.

Review of Literature

Priyanshu Raparia (2017)[1] observed in his paper “Impact of Asset-Liability Management on the Profitability of Banks” that In banking institutions, asset and liability management is the practice of managing various risks that arise due to mismatches between the assets and liabilities (loans

and advances) of the bank. Banks face several risks such as the risks associated with assets, interest, currency exchange risks. Asset Liability management (ALM) is at tool to manage interest rate risk and liquidity risk faced by various banks, other financial services companies.

Prabhakar, Mathivannan and Ashok Kumar (2017)[2] In their paper on "Asset and Liability Management In Banks – A Comparative Study On Gap Analysis Of SCBS In India" stated that in India asset liability mismatch in balance sheet of commercial banks posed serious challenges as the banks were following the traditional methods of recording assets and liabilities at the book value. The liberalization process in the economy coupled with multifaceted global developments exposed banks for various kinds of risks viz. interest rate risk, liquidity risk, exchange risk, operational risk etc. which have direct impact on their operations, profitability and efficiency to compete with. The

- Priyanshu Raparia (2017) observed in his paper "Impact of Asset-Liability Management on the Profitability of Banks"IOSR Journal of Business and Management (IOSR-JBM) Volume 19, Issue 7. Ver. VI. (July 2017), PP 72-76
- Prabhakar , Mathivannan , Ashok kumar, "Asset and Liability Management In Banks – A Comparative Study On Gap Analysis Of SCBS In India "International Journal of science Technology and Management,vol.No.6 , Issue No.2 February 2017,pp 211-218
- Central Bank of the country focused and advised banks for taking concrete steps in minimizing the mismatch in the asset -liability composition. There had been many positive impacts of various strategies followed by banks in the last one decade. This paper is an attempt to analyze the impact of measures and strategies banks undertook to manage the composition of asset - liability and its impact on their performance in general and profitability in particular.
- Umarani & M Jayanthi (2015)[3] in their paper "An Analysis Of Asset-Liability Management In Indian Banks" concluded that Assets and Liabilities Management (ALM) is a dynamic process of planning, organizing, coordinating and controlling the assets and liabilities-their mixes, volumes and maturities
- Amit Kumar Meena and JoydipDhar (2014)[4] in their research paper on "An Empirical Analysis and Comparative Study of Liquidity Ratios and Asset-Liability Management of Banks Operating in India" focused on the analysis and comparison of liquidity ratios and asset liability management practiced in top three banks from public, private and foreign sector in India. The analysis was based upon the liquidity ratios calculation and the determination of maturity gap profiles for the banks under study. The results of this study suggested that overall liquidity structure of banks in India is stable but the amount of cash they maintain with them can create problems in long run as it is deteriorating their profits.
- Krishna Prasad & Suprabha K.R (2014)[5] ,in their study" Anomalies in Maturity GAP: Evidence from Scheduled Commercial Banks in India", view that sound ALM practices ensure the stability and liquidity of banks, thus enhancing the profitability as ALM is a mechanism to address the risk
- Umarani & Jayanthi in their paper "An Analysis Of Asset-Liability Management In Indian Banks International Journal of Business and Administration Research Review, Vol. 1I ssue.11, July-Sep,2015.Page179
- Amit Kumar Meena and JoydipDhar, "An

Empirical Analysis and Comparative Study of Liquidity Ratios and Asset-Liability Management of Banks Operating in India", International Journal of Social, Human Science and Engineering, Volume:8, 2014 , pp-358-363

- Krishna Prasad & Suprabha K.R,"Anomalies in Maturity GAP: Evidence from Scheduled Commercial Banks in India", Procardia Economics and Finance, Volume 11,2014,pages 423 – 430

Faced by banks due to mismatch in assets and liabilities. The study attempts to find out the differences in ALM of Indian banks based on bank groups. The empirical result suggests that there is a significant difference in the gap ratio amongst the bank groups. The null hypothesis can be rejected.

Sheela & Tejaswini Bastray (2014)[6,] in their study "Effect Of Asset -Liability-Management On Commercial Banks Profitability In Indian Financial Market -A Case Study Of Two Public Sector Banks" examined the effect of Asset-Liability-Management (ALM) on Commercial banks profitability in Indian financial market by taking into consideration the two Public Sector Banks namely Union Bank of India and Indian Bank. A study has been carried to analyze the status of ALM approach in the Indian banking system. For this purpose, two nationalized banks operating in the Indian environment have been chosen and the multivariate statistical technique and ratio analysis have been conducted to study the nature and strength of relationship between the assets and liabilities in these two banks. From the analysis, it is found that the two banks have a good ALM framework n practice. The study also indicates a strong relationship between fixed assets and net worth for both the bank.

Kanhaiya Singh (2013)[7]found in his paper "Asset -Liability Management In Banks: A Dynamic Approach"that the strategies banks undertook to manage the composition of asset-liability and its impact on their performance in general and profitability in particular. Maturity profiling is used to determining the liquidity position and Duration analysis to measure interest rates risk. There are serious attempts by banks to minimize the asset liability mismatch since the implementation of RBI guidelines in 1997. The study suggested much scope for banks to improve profitability by monitoring and reducing short term liquidity.

Anurag B Singhand Ms. Priyanka Tandon (2012)[8]found in their study "Asset-Liabilty

- Sheela & Tejaswini Bastray, "Effect Of Asset -Liability-Management On Commercial Banks Profitability In Indian Financial Market -A Case Study Of Two Public Sector Banks" International Journal of Business and Administration Research Review,Vol.1,Issue.6, July-Sep,2014.Page 92 -103
- Kanhaiya Singh found in his paper "Asset -Liability Management In Banks: A Dynamic Approach"AIMA Journal of Management & Research, May 2013, Volume 7, Issue 2/4,
- Anurag B Singhand Ms. Priyanka Tandon, "Asset-Liabilty Management In Indian Banking Industry"Asia Pacific Journal of Marketing & Management Review
- Vol.1 No. 3, November2012,PP 121 – 132
- Management In Indian Banking Industry "that , the importance of liquidity risk management and interest rate risk management, various methods of measuring these risks and the challenges faced by Indian banks in managing these risks

Kavitha, (2012)[9] in her paper "An Assessment -Asset and Liability Management Of Scheduled Commercial Banks In India" examines management of asset-liability in banking sector. The main objective of the study is to present the

optimal mix of asset and liability of Scheduled Commercial Banks in India. The paper mainly discusses on the SBI Group, Nationalised Banks Group and Private Banks Group selected as the parameter. The increase in the profitability of a bank is always preceded by the composition of assets and liability. Hence, the following ratios are calculated to identify the optimal mix of asset and liabilities in relation to profitability, ratio analysis was used on the sample of 56 banks comprising SBI and its Associate Banks 8, Nationalized Banks group 19 and Private Banks group 29 for the ten years period. The findings suggest that SBI and its associate bank group were better performers as compared to Private Banks group and nationalized banks group

Kajal Chaudhary and Monika Sharma (2011)[10] in their study "Performance of Indian Public Sector Banks and Private Sector Banks: A Comparative Study "revealed that the major changes took place in the functioning of Banks in India only after liberalization, globalisation and privatisation. It has become very mandatory to study and to make a comparative analysis of services of Public sector Banks and Private Sector banks. Increased competition, new information technologies and thereby declining processing costs, the erosion of product and geographic boundaries, and less restrictive governmental regulations have all played a major role for Public Sector Banks in India to forcefully compete with Private and Foreign Banks. In this paper an attempt to analyse how efficiently Public and Private sector banks has been managing NPA. The study used statistical tools for projection of trend. The study concluded that the public banks must pay attention on their functioning. These banks should select borrower very smartly and also public banks should decrease the NPA level. The study also viewed that sometimes the perspective of management also defines the risk profile of banks which further determines the liquidity and profitability trade-off.

- Kavitha, "An Assessment -Asset And Liability Management Of Scheduled Commercial Banks In India"International Journal of Marketing and Technology Volume 2, Issue 4 April 2012,PP 20-44
- .Kajal Chaudhary and Monika Sharma, "Performance of Indian Public Sector Banks and Private Sector Banks: A Comparative Study", International Journal of innovation, Management and Technology, Vol.2(3):, 2011, PP 249-256

Data Analysis and interpretation

Table 1 Bank Group Wise Maturity profile of deposits for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	4743797(60)	1982652(24)	1199805(15)	1445(1)	7927700(100)
15 - 28 days	2170531(69)	666082(21)	310392(9)	271(1)	3147278(100)
29 days to 3 months	6549315(68)	2378896(24)	748561(7)	706(1)	9677479(100)
Over 3 months to 6 months	7473709(74)	2337640(22)	331181(3)	1842(1)	10144374(100)
Over 6 months to 1 year	12695957(78)	3289347(19)	343282(2)	7811(1)	16336398(100)
Over 1 year to 3 years	22528081(74)	6680066(21)	1345862(4)	19548(1)	30573558(100)
Over 3 years to 5 years	6942684(69)	2695311(26)	371827(4)	61(1)	10009884(100)
Over 5 years	17674287(75)	5614509(23)	4370(1)	11305(1)	23304472(100)
Total Deposits	80778361(73)	25644507(23)	4655283(3)	42995(1)	111121146(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

An analysis of the above data reveals that the composition of Nationalised deposits is comparatively higher in all maturity buckets, when it compared to private sector banks, Foreign Banks and Small finance banks and over 3 months to 6 months bucket the share of nationalised deposits is high followed by over 5 years bucket. The share of Nationalised banks, private banks, foreign banks and small finance banks in case of deposits is 73%, 23%, 3% and 1% respectively for the period 2016-17

Table 2 Bank Group Wise Maturity profile of Borrowings for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	1585184(74)	325186(15)	228883(10)	1734(1)	2140987(100)
15 - 28 days	262408(49)	173032(32)	102662(18)	3(1)	538105(100)
29 days to 3 months	764832(58)	401439(30)	152681(11)	4821(1)	1323774(100)
Over 3 months to 6 months	626172(55)	444823(39)	66135(5)	6334(1)	1143464(100)
Over 6 months to 1 year	325595(28)	765699(67)	46298(4)	6700(1)	1144293(100)
Over 1 year to 3 years	926738(48)	927526(47)	82887(4)	24569(1)	1957721(100)
Over 3 years to 5 years	739830(53)	627997(45)	8635(1)	2315(1)	1378778(100)
Over 5 years	1914994(62)	1138392(36)	16522(1)	2473(1)	3072381(100)
Total Borrowings	7141750(56)	4804096(38)	704708(5)	48951(1)	12699506(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

An analysis of the above data indicates that the composition of borrowings in the nationalised banks is high as compared to other banks and the borrowings that come under maturity bucket of 1-14 days is high followed by over 5 years maturity bucket. The share of nationalised banks, private banks, foreign banks and small finance is 56%,38%,5% and 1% respectively during the period 2016-17 in case of the borrowings

Table 3 Bank Group Wise Maturity profile of Investments for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	1566763(35)	1815761(4)	1121637(25)	1503(1)	4505665(100)
15 - 28 days	183480(25)	315059(43)	228234(31)	73(1)	726846(100)
29 days to 3 months	909080(54)	626756(36)	168719(9)	1369(1)	1695925(100)
Over 3 months to 6 months	1186633(65)	528489(28)	116375(6)	341(1)	1831839(100)
Over 6 months to 1 year	1234860(59)	728042(34)	132983(6)	3574(1)	2099461(100)
Over 1 year to 3 years	3611491(66)	1435062(26)	417308(7)	4513(1)	5468374(100)
Over 3 years to 5 years	3011257(78)	722879(18)	136225(3)	6442(1)	3876804(100)
Over 5 years	13886730(84)	2378301(14)	71221(1)	8873(1)	16345125.(100)
Total Investments	25580293(70)	8550352(23)	2392706(6)	26690(1)	36550042(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

The above table reveals that the contribution of nationalised banks is high in case of investments as compared to other bank groups for the period 2016 -17. over 5 years maturity bucket results with high share of 84% followed by the over 3 years to 5 years bucket share of 78%. In case of total investments the share of nationalised banks is 70%, private banks 23%, foreign banks 6% and

Small finance banks are 1%.

Table 4 Bank Group Wise Maturity profile of Loans and Advances for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	3527119(71)	943972(19)	443375(9)	3981(1)	4918448(100)
15 - 28 days	1431902(59)	647827(26)	354453(14)	954(1)	2435137(100)
29 days to 3 months	4056237(65)	1679971(27)	532776(7)	5653(1)	6274638(100)
Over 3 months to 6 months	2978490(60)	1582511(32)	383242(7)	7982(1)	4952227(100)
Over 6 months to 1 year	3854151(58)	2363962(36)	362088(5)	14719(1)	6594921(100)
Over 1 year to 3 years	19176394(70)	7499185(27)	610110(2)	28409(1)	27314098(100)
Over 3 years to 5 years	5916741(65)	2848823(31)	264351(3)	5005(1)	9034921(100)
Over 5 years	15041308(75)	4609863(23)	372944(1)	3964(1)	20028079(100)
Total Loans and Advances	55982340(67)	22176116(27)	3323342(5)	70672(1)	81552472(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

It is clear from the above data that in case of loans and advances over 5 years bucket of nationalised banks contributes the highest share of 75% followed by 1-14 days maturity bucket with 70%. The share of nationalised banks i s 67%, private banks is 27%, forein banks is 5% and 1% in case of small finance banks

Table 5 Bank Group Wise Maturity profile of Foreign Currency Assets for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	2103801(70)	535009(18)	371687(12)	0	3010499(100)
15 - 28 days	806783(66)	166456(14)	241121(20)	0	1214360(100)
29 days to 3 months	2109124(78)	407335(15)	178598(7)	0	2695057(100)
Over 3 months to 6 months	1312959(72)	346959(19)	163578(9)	0	1823497(100)
Over 6 months to 1 year	1482237(75)	428290(22)	64097(3)	0	1974625(100)
Over 1 year to 3 years	1313182(73)	413276(23)	61054(4)	0	1787513(100)
Over 3 years to 5 years	1216754(74)	332671(20)	87973(6)	0	1637400(100)
Over 5 years	832667(72)	280929(24)	48306(4)	0	1161902(100)
Total Foreign Currency Assets	11177508(73)	2910928(19)	1216419(8)	0	15304856(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

In case of foreign currency assets there is no contribution by small finance banks. The above table reveals among all the scheduled commercial banks the nationalised banks maturity bucket of 29 days to 3 months resulted with highest of 78% followed by the over 6 months to 1 year bucket with 75%. The share of nationalised banks is 73%, private banks 19% and foreign banks is 8% respectively in case of foreign currency assets.

Table 6 Bank Group Wise Maturity profile of Foreign Currency liabilities for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	1608128(78)	253585(12)	206440(10)	0	2068153(100)
15 - 28 days	786525(70)	223584(20)	112568(10)	0	1122677(100)
29 days to 3 months	2202365(82)	348574(13)	128531(5)	0	2679470(100)
Over 3 months to 6 months	1739415(84)	242962(12)	79092(4)	0	2061471(100)
Over 6 months to 1 year	1582679(74)	501756(23)	58501(3)	0	2142936(100)
Over 1 year to 3 years	1302453(57)	753399(33)	216208(10)	0	2272061(100)
Over 3 years to 5 years	775446(69)	310093(27)	46186(4)	0	1131725(100)
Over 5 years	526714(61)	273859(32)	56420(7)	0	856993(100)
Total Foreign Currency Liabilities	10523725(73)	2907815(20)	903948(7)	0	14335489(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

According to the above data over 3 months to 6 months maturity bucket of nationalised banks has the highest contribution in foreign currency liabilities with84% followed by 29 days to 3 months with 82%. The contribution of nationalised banks, private banks and Foreign Banks out of the total foreign currency liabilities is 73%, 20% and 7% respectively

Table 7 Bank Group Wise Share of the Maturity Buckets in the total Deposits for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	4743797(6)	1982652(1)	1199805(26)	1445(3)	7927700(7)
15 - 28 days	2170531(2)	666082(3)	310392(7)	271(1)	3147278(2)
29 days to 3 months	6549315(8)	2378896(10)	748561(16)	706(2)	9677479(9)
Over 3 months to 6 months	7473709(9)	2337640(10)	331181(7)	1842(4)	10144374(9)
Over 6 months to 1 year	12695957(16)	3289347(14)	343282(7)	7811(18)	16336398(15)
Over 1 year to 3 years	22528081(28)	6680066(27)	1345862(29)	19548(45)	30573558(28)
Over 3 years to 5 years	6942684(9)	2695311(12)	371827(7)	61(1)	10009884(9)
Over 5 years	17674287(22)	5614509(23)	4370(1)	11305(26)	23304472(21)
Total Deposits	80778361(100)	25644507(100)	4655283(100)	42995(100)	111121146(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

The above data reveals that, out of the total deposits ,in case of nationalised banks private banks and foreign banks and small finance banks , the major contribution is from the same maturity bucket that is over 1 year to 3 years but when it comes to least contribution it varies, in case of nationalised banks the least contribution is from 15 – 28 days maturity bucket with 2%,private banks is from 1-14 days maturity bucket with 1% and Foreign banks from over 5 years bucket with 1% . when it comes to short term deposits the total short term deposits is 41% and the long term deposits is 59% in nationalised banks . In case of private banks the short term deposits contribute to 38% and long term deposits contribute to 62%. IN case of foreign banks the short term deposits contribute 63% and long term deposits contribute to 37%. In case of small finance banks the short term deposits contribute to 28% and long term deposits is 72%.

The overall schedule commercial banks contribution towards short term deposits is 42% and long term deposits is 58%. and in case of scheduled commercial banks the highest contribution and least contribution is same as in the case of nationalised banks

Table 8 Bank Group Wise Share of the Maturity Buckets in the total borrowings for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	1585184(22)	325186(7)	228883(32)	1734(4)	2140987(17)
15 - 28 days	262408(3)	173032(4)	102662(15)	3(1)	538105(5)
29 days to 3 months	764832(11)	401439(8)	152681(22)	4821(10)	1323774(10)
Over 3 months to 6 months	626172(9)	444823(9)	66135(9)	6334(13)	1143464(9)
Over 6 months to 1 year	325595(5)	765699(16)	46298(7)	6700(14)	1144293(9)
Over 1 year to 3 years	926738(13)	927526(19)	82887(12)	24569(50)	1957721(15)
Over 3 years to 5	739830(10)	627997(13)	8635(1)	2315(4)	1378778(11)

years					
Over 5 years	1914994(27)	1138392(24)	16522(2)	2473(4)	3072381(24)
Total Borrowings	7141750(100)	4804096(100)	704708(100)	48951(100)	12699506(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

During the period 2016 -17 the borrowings of the nationalised banks and private banks is major for a period of over 5 years and least is for a period of 15 – 28 days. In case of foreign banks the highest borrowings is from 1-14 days maturity bucket and least is from over 3 years to 5 years bucket. In case of small finance banks the highest borrowings belong to over 1 year to 3 years maturity bucket and least is same as nationalised and private banks i.e. 15- 28 days bucket with 1%.In case of nationalised banks the short term borrowings contribute to 50% and long term contributes to 50%.In case of private banks the short term borrowings represent 44% and long term borrowings are 56%. In case of foreign banks the short term borrowings are 85% and long term 15%. In case of small finance banks it results 42% in case of short term borrowings and 58% in case of long erm borrowings. When it comes to the overall performance of scheduled commercial banks the short term borrowings ang long term borrowings and highest contribution and lowest contribution maturity buckets are same as nationalised banks.

Table 9 Bank Group Wise Share of the Maturity Buckets in the total investments for the period 2016-17

Maturity Buckets	**Nationalized Banks**	**Private sector Banks**	**Foreign Banks**	**Small Finance Banks**	**Scheduled Commercial Banks**
1 - 14 days	1566763(6)	1815761(21)	1121637(48)	1503(6)	4505665(12)
15 - 28 days	183480(2)	315059(4)	228234(2)	73(1)	726846(2)
29 days to 3 months	909080(5)	626756(7)	168719(8)	1369(5)	1695925(4)
Over 3 months to 6 months	1186633(5)	528489(6)	116375(6)	341(1)	1831839(5)
Over 6 months to 1 year	1234860(2)	728042(9)	132983(7)	3574(13)	2099461(6)
Over 1 year to 3 years	3611491(14)	1435062(17)	417308(18)	4513(17)	5468374(15)
Over 3 years to 5 years	3011257(12)	722879(8)	136225(7)	6442(24)	3876804(11)
Over 5 years	13886730(54)	2378301(28)	71221(4)	8873(33)	16345125.(45)
Total Investments	25580293(100)	8550352(100)	2392706(100)	26690(100)	36550042(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

As per the above data analysis the highest investment contribution for nationalised banks private banks and small finance banks is from over 5 maturity bucket with 54% ,28% 33% respectively. In case of foreign banks it is different.

The highest contribution from 1-14 days investment maturity bucket. When it comes to short term investments the nationalised banks contribute to 20%, private banks (48%), foreign banks (69%) and small finance banks (26%) and in case of long term investments, nationalised banks – 80%, private banks – 52%, foreign banks – 21% and small finance banks – 74%. The overall performance of scheduled commercial banks reveals that short term investment is 29% and long term investment is 71% .Among the total investments of scheduled commercial banks the highest contribution from over 5 years maturity bucket and least contribution is from 15- 28 days maturity bucket

Table 10 Bank Group Wise Share of the Maturity Buckets in the total loans and advances for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	3527119(6)	943972(3)	443375(13)	3981(6)	4918448(6)
15 - 28 days	1431902(3)	647827(3)	354453(11)	954(1)	2435137(3)
29 days to 3 months	4056237(7)	1679971(8)	532776(16)	5653(8)	6274638 (8)
Over 3 months to 6 months	2978490(5)	1582511(7)	383242(12)	7982(11)	4952227(6)
Over 6 months to 1 year	3854151(7)	2363962(11)	362088(11)	14719(21)	6594921(8)
Over 1 year to 3 years	19176394(34)	7499185(34)	610110(18)	28409(40)	27314098(33)
Over 3 years to 5 years	5916741(11)	2848823(13)	264351(8)	5005(7)	9034921(11)
Over 5 years	15041308(27)	4609863(21)	372944(11)	3964(6)	20028079(25)
Total Loans and Advances	55982340(100)	22176116(100)	3323342(100)	70672(100)	81552472 (100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

From the above table it is noticed that the share of short-term loans up to one year, accounts for about 28 per cent of total loans and long term loans with one to five years and above maturity, account for 72 per cent of bank loans in case of nationalised banks and in case of private banks the share of short-term loans up to one year, accounts for about 32% and long term loans from one to five years and above maturity accounting for 68%. In case of foreign banks short term loans accounts about 63% and long term loans and advances to 37%the remaining 23-25 per cent. The share of short term loans below one year maturity accounts for about 47 per cent and 53% for long term loans and advances in case of small finance banks. In case of overall performance of scheduled commercial banks the short term loans account 31% and long term loans account 69%. There is a uniform trend in case of highest contribution and least contribution with respect to maturity buckets for the period 2016-2017 i.e. the highest contribution of all bank groups and scheduled banks is from over 1 year to 3 years bucket and least from 15 – 28 days bucket.

Table 11 Bank Group Wise Share of the Maturity Buckets in the total Foreign Currency Assets for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	1608128(15)	253585(9)	206440(23)	0	2068153(14)
15 - 28 days	786525(7)	223584(8)	112568(12)	0	1122677(8)
29 days to 3 months	2202365(21)	348574(12)	128531(14)	0	2679470(19)
Over 3 months to 6 months	1739415(17)	242962(8)	79092(9)	0	2061471(14)
Over 6 months to 1 year	1582679(15)	501756(17)	58501(6)	0	2142936(15)
Over 1 year to 3 years	1302453(12)	753399(26)	216208(24)	0	2272061(18)
Over 3 years to 5 years	775446(7)	310093(11)	46186(6)	0	1131725(8)
Over 5 years	526714(6)	273859(9)	56420(6)	0	856993(6)
Total Foreign Currency Liabilities	10523725(100)	2907815(100)	903948(100)	0	14335489(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

From the above table it is observed that in case of highest contribution for foreign currency assets all bank groups and scheduled commercial banks results in 1- 14 days maturity bucket and the short term foreign currency assets of nationalised banks , private banks and foreign banks accounts about 70% ,65% and 84% respectively. In case of long term foreign currency

assets the nationalised banks, private banks and foreign banks accounts about 30% ,35% and 16% respectively. The contribution of short term foreign currency assets in overall scheduled commercial banks is 69% and long term foreign currency assets account about 31%

Table 12 Bank Group Wise Share of the Maturity Buckets in the total foreign currency liabilities for the period 2016-17

Maturity Buckets	Nationalized Banks	Private sector Banks	Foreign Banks	Small Finance Banks	Scheduled Commercial Banks
1 - 14 days	1608128(15)	253585(9)	206440(23)	0	2068153(14)
15 - 28 days	786525(7)	223584(8)	112568(12)	0	1122677(8)
29 days to 3 months	2202365(21)	348574(12)	128531(14)	0	2679470(19)
Over 3 months to 6 months	1739415(17)	242962(8)	79092(9)	0	2061471(14)
Over 6 months to 1 year	1582679(15)	501756(17)	58501(6)	0	2142936(15)
Over 1 year to 3 years	1302453(12)	753399(26)	216208(24)	0	2272061(18)
Over 3 years to 5 years	775446(7)	310093(11)	46186(6)	0	1131725(8)
Over 5 years	526714(6)	273859(9)	56420(6)	0	856993(6)
Total Foreign Currency Liabilities	10523725(100)	2907815(100)	903948(100)	0	14335489(100)

Source: Statistical Tables Relating to Banks in India, 2017, RBI

From the above table it is clear that the nationalised banks and scheduled commercial banks the has highest contribution in case of foreign currency liabilities from 29 days to 3 months bucket with 21% share and 19 % share respectively and least contribution from over 5 years bucket with 6% share..In case of private banks and foreign banks the highest contribution from over 1 year to 3 years bucket with26% and 24% respectively.

The short term foreign currency liabilities of nationalised banks , private banks and foreign banks is 75%,52% and 64% respectively and long term foreign currency liability results with 25%,48% and 36% respectively. The overall contribution of scheduled commercial banks results in 70% in case of short term and 32% in case of long term foreign currency liabilities

III. FINDINGS

It is evidence that banks' prefer largely term loans for more than 1 year maturity. The banks raise funds by accepting deposits more from long term. The operations of the banks are spread across a vast geographical area and its difficult for the banks to take decisions of accepting deposits and lending credit based on the maturity at the aggregate level. Therefore there will be some differences in the maturity profile of the assets and liabilities. However, in the ideal environment maturity should exactly match to minimize the liquidity risk of the banks. In the real time banking business scenario it is not possible. It is the responsibility of the banks to review the maturity profile of assets and liabilities frequently, desirably on a real time basis. On review if any mismatches beyond the acceptable limits are found banks should initiate the corrective actions such as, stop accepting deposits for specific time duration and so on.

The results of the study concluded that The Foreign currency asset and foreign currency liabilities major chunk constitute from the short term. This indicated that short -term foreign currency has a higher impact on the Indian banking sector as compared with Long term. The Study reveals that based on the maturity profile of select liabilities/assets of different bank groups the contribution of each bank group differs.. A perusal of the accompanying data indicates that 42 per cent of deposits of all scheduled commercial banks (SCBs) have a maturity of up to one year as at the end of March 2017; and 58% of deposits have a long term maturity.

The study merely says that the share of

short term and long term borrowings during 2016-17 formed in the ration of 50% and 50% respectively.

The maturity profile of loans and advances, on the other hand, shows that those having a maturity of more than one year constitute 69 per cent and less than one year 31% as at the end of March 2017.

On the investments side, only 29 per cent has maturity of less than one year and 71% of more than one year maturity.

IV. SUGGESTIONS & CONCLUSIONS

In the banking sector there are differences in maturity profile of assets and liabilities this leads maturity mismatch of a bank and results in liquidity to risk exposure. However, in the ideal environment maturity should exactly match to minimise the liquidity risks of the banks but in the real time banking scenario it is not possible. so, it is the responsibility of the banks to review the maturity profile of assets and liabilities frequently, desirable as areal time basis. On review, if any mismatches beyond acceptable limits are found banks should initiative the corrective actions by focusing on funds management approach to manage asset liability management in order to reduce liquidity risk.

The study concludes that the share of Nationalised banks, private banks, foreign banks and small finance banks in case of deposits is 73%, 23%, 3% and 1% respectively for the period 2016-17. The share of nationalised banks, private banks, foreign banks and small finance is 56%,38%,5% and 1% respectively during the period 2016-17 in case of the borrowings. In case of total investments the share of nationalised banks is 70%, private banks 23%, foreign banks 6% and small finance banks is 1%.. The share of nationalised banks i s 67%, private banks is 27%,forein banks is 5% and 1% in case of small finance banks when it comes to loans and advances.

The share of nationalised banks is 73%,private banks 19% and foreign banks is 8% respectively in case of foreign currency assets. The contribution of nationalised banks , private banks and Foreign Banks out of the total foreign currency liabilities is 73%,20% and 7% respectively

The overall schedule commercial banks contribution towards short term deposits is 42% and long term deposits is 58%. and in case of scheduled commercial banks the highest contribution and least contribution is same as in the case of nationalised banks. When it comes to the overall performance of scheduled commercial banks the short term borrowings ang long term borrowings and highest contribution and lowest contribution maturity buckets are same as nationalised banks.

The overall performance of scheduled commercial banks reveals that short term investment is 29% and long term investment is 71% .Among the total investments of scheduled commercial banks the highest contribution from over 5 years maturity bucket and least contribution is from 15- 28 days maturity bucket.. In case of overall performance of scheduled commercial banks the short term loans account 31% and long term loans account 69%.

There is a uniform trend in case of highest contribution and least contribution with respect to maturity buckets for the period 2016-2017 i.e the highest contribution of all bank groups and scheduled banks is from over 1 year to 3 years bucket and least from 15 – 28 days bucket. in case of highest contribution for foreign currency assets all bank groups and scheduled commercial banks results in 1- 14 days maturity bucket and the short term foreign currency assets of nationalised banks , private banks and foreign banks accounts about 70% ,65% and 84% respectively.

In case of long term foreign currency assets the nationalised banks, private banks and foreign banks accounts about 30%, 35% and 16% respectively. The contribution of short term foreign currency assets in overall scheduled commercial banks is 69% and long term foreign currency assets account about 31%. The overall contribution of scheduled commercial banks results in 70% in case of short term and 32% in case of long term foreign currency liabilities.

V. REFERENCES

1) Anurag B Singh and PriyankaTandon (2012), "Asset -Liability Management in Indian Banking Industry" Asia Pacific Journal of Marketing & Management Review, Vol.1, No. 3, pp.121-132.
2) Brinds Jagirdar and Amlendu K Dubey, "Performance of Public Sector Banks", The Indian Banker, Vol II No 12, December 2007
3) Chakra borty , S. and Mohapatra, S.(2007), "An Empirical Study of Asset Liability Management Approach by the Indian Banks," The IUP Journal of Bank Management, Vol. VIII, Nos. 3 & 4, pp. 7-13, August & November 2009.
4) Chaudhary, K., Sharma, M. 2011. To Compare the Performance of Public and Private Banks of India and to find out Trends in NPA level International Journal of Innovation, Management and Technology, Vol.2, No. 3, June 2011.
5) Chiu, M. C., & Li, D. (2009). Asset-Liability Management under the Safety-First Principle. Journal of Optimization Theory and Applications, 143(3), 455–478
6) D Gosh Roy, "Asset liability management", Banking finance, Vol 8, No.12, Dec 1995, pp 30-31
7) Galagedera, D. U. A., & Edirisuriya, P. (2005). Performance of Indian Commercial Banks (1995-2002). South Asian Journal of Management, 12, 52.
8) Ganesan, "Determinants of Profits and Profitability of Public Sector Banks In India: A Profit function Approach", Journal of Financial Management and Analysis,, 14 (1) : 27-37, 2001.
9) Houpt J.V. and J. Embersit: "An Analysis of Commercial Bank Exposure to Interest Rate Risk", Federal Reserve Bulletin, February,199 pp. 115-128.
10) K Kannan , "Relevance and importance of Asset liability management in banks", The Journal of Indian Institute of bankers, Vol.67, No.4, Oct-Dec 1999, pp 150-156.
11) Prathap B N (2013) "An Empirical Study of Asset Liability Management by Indian Banks", Asia Pacific Journal, Volume No: 2, Issue: 4, pp.1-10.
12) Rakhe P.B (2012), "Asset Liability Mismatches (ALMi) in the Indian Banking Sector–The Extent, Persistence and Reasons", W P S (DEPR) : 17 / 2012,Reserve Bank of India Working Paper Series, November.
13) Shilpa Baid, What drives Profitability of Indian Commercial Banks?, Asian Economic Review (Journal of the Indian Institute of Economics), Vol. 48, No.3, 2006.
14) Mishra, M.N., „Analysis of Profitability of Commercial Banks, Indian Journal of Banking and Finance, Vol. 5, 1992.
15) Mohi-ud-Din Sangmi and Tabassum Nazir (2010), "Analyzing financial Performance of Commercial Banks in India: Application of CAMEL Model," Pak. J. Commer. Soc. Sci., Vol. 4 (1), 40-55.
16) Salvin Surjith FP & N. Sathyanarayana, "A Study On Asset And Liability Management In Icici Bank, International Journal of Advanced Research in Management and Social Sciences

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17) Shilpa Baid, What drives Profitability of Indian Commercial Banks?, Asian Economic Review (Journal of the Indian Institute of Economics), Vol. 48, No.3, 2006

18) Swamy, B. N. A. (2001). New Competition, Deregulation and Emerging Changes in Indian Banking. The Journal of Indian Institute of Bankers, 72(3), 3–22.