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ASSET LIABILITY MANAGEMENT – A COMPARATIVE STUDY ON PUBLIC PRIVATE AND FOREIGN SECTOR COMMERCIAL BANKS IN INDIA

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Abstract

Asset-Liability-Management (ALM) is a comprehensive and dynamic framework for measuring, monitoring and managing the market risk of a bank. It is the management of balance sheet structure (Asset-Liability) in such a way that the net earnings from interest are maximized within the overall risk-preference (present and future) of the banks. This study examined the effect of Asset-Liability Management (ALM) on the Commercial banks profitability in Indian financial market by taking into consideration Public Sector Bank, private sector bank and foreign sector banks in India. This paper attempts to compare the growth rates of assets and liabilities of different sectors of SCBs in India.

Keywords: *Asset-liability management, Liquidity risk, Interest rate risk, Dynamic risk management*

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. Under the highly protected environment, for years the Indian banks remained unconcerned about risk management but things are changing now. In the present day, Asset Liability Management (ALM) has become the buzzword in the banking world.

It is a part of the overall risk management system in banks. ALM implies examination of all the assets and liabilities simultaneously on a continuous basis with a view to ensure a proper balance between fund mobilization and their deployment with respect to their: (a) maturity profiles; (b) cost; (c) yields; (d) risk exposure, etc., so as to prepare the banks fully to face the emerging challenges.

It includes product pricing for deposits as well as advances and the desired maturity profile of assets and liabilities. ALM is basically a hedging response to the risk in financial intermediation. It attempts to provide a degree of protection to the institution from intermediation risk and makes such risk acceptable. It provides the necessary framework to

define measure, monitor, modify and manage these risks. In a way, it is a form of insurance. The function of ALM is not just protection from risk. The safety achieved through ALM also opens up opportunities for enhancing the net worth. ALM can make it possible for an institution to take on positions that would have been considered too large in the absence of protection offered by ALM.

Need of the Study

Assets and Liabilities Management is the first step in the long-term strategic planning process. Therefore, it can be considered as a planning function for an intermediate term. In a sense, various aspects of balance sheet management deal with planning as well as direction and control of the levels, changes and mixes of assets, liabilities and capital. The key to successful ALM is to understand the uncertainties in return on and of investments (assets side) and the uncertainties in the amount and the duration of payouts (liabilities side). The tools of yester years fall short of managing the assets and liabilities under uncertainties.

The objective of the researcher is to study and analyze the status of ALM approach in the Indian Banking System. For the purpose, a sample consisting of Public, Private, and Foreign Banks operating in the India has been taken and the statistical technique have been done to capture the nature and strength of relationship between the assets and liabilities in these banks. Under a highly protected environment, for years the Indian banks have remained unconcerned with the risk management but things are changing now and, ALM has become the buzzword in the banking world. It is a part the overall risk management system in banks. This study analyses the ALM of Commercial Banks in India. It examine the growth rates of assets and liabilities and comparison of assets and liabilities of SCBs in India

Literature Review

Charumathi (2008) in her study on interest rate risk management concluded that balance sheet risks include interest rate and liquidity risks.

Vaidya and Shahi (2001) studies assetliability 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.

Rajan and Nallari (2004) used canonical analysis to examine asset-liability management in Indian banks in the period 1992-2004. According to this study, SBI and associates had the beat asset-liability management in the period 1992-2004. They also found that, other than foreign banks, all other banks could be said to be liability-managed. Private sector banks were found to be aggressive in profit generation, while nationalized banks were found to be excessively concerned about liquidity.

Dash and Pathak (2011) proposed a linear model for asset-liability assessment. They found that public sector banks have best assetliability 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.

Prathap B N (2013) concluded that ownership and structure of the banks do have a major bearing in the ALM procedure. It is further observed that SBI and its Associates have the best correlation, thereby indicating the best asset-liability maturity pattern. Most of the Indian banks, unlike foreign banks, are liability-managed banks because they all borrow from money market to meet their maturing liabilities. The private banks are highly aggressive for profit generation and use the short-term funds for long-term investments.

P.Sheela Ms.Tejaswini Bastray 2014 in his article "Effect of Asset Liability management on Commercial Banks Profitability in Indian Financial Market – A Case Study of Two Public Sector Banks" This study 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. Asset Liability Management is an attempt to match the assets and liabilities in terms of their maturities and interest rate sensitivities so that the risk arising from such mismatches mainly—interest rate risk and liquidity risk can be managed within the desired limit. As far as ALM in Indian banking system is concerned, it is still in a beginning stage. Against this backdrop, 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 in practice. The study also indicates a strong relationship between fixed assets and net worth for both the banks.

Objectives of the Study

- To compare the growth rates of assets and liabilities of different sectors of SCBs in India.
- To offer suitable suggestions based on the findings of the study.

Methodology of the Study

The study is purely based on the secondary data. The data required for the study are collected from the RBI bulletin, Annual Report, Reports on Trends and Progress of Banking in India, Government Publications, Books, Journals and Websites.

Period of the Study

The study period is for eleven financial years i.e., the period from 2000-2001 to 2014-2015. The financial year starts from 1st April of a year and ends on 31st March of next year.

Plan of Analysis

The researcher shall use the statistical tools In order to analyse the Assets and Liabilities of PSCBs, PvtSCBs and FCBs in India, Kruskal –Wallis Test was used to compare the growth rates of various sector of SCBs in India.

Hypotheses of Study

- There is no significant difference between the growth rates of Capital, Reserve and Surplus, Deposits, Borrowings and Other Liabilities and Provisions of PSCBs, Pvt SCBs and FCBs in India.
- There is no significant difference between total assets of growth rate of Cash and balances with RBI, Balances with banks and money at call and Short notice, Investments, Loans and Advances, Fixed Assets and Other Assets of PSCBs, PvtSCBs and FCBs in India.

Comparison of Asset – Liability Management

The study on the comparison of total assets and liabilities with the three banks is done for a period of 15 years (2001-2015).

Table 1 Comparison of Growth Rates of Capital of Various Sectors of SCBS in India: Kruskal-Wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	12.43
	Private	14	19.71
	Foreign	14	32.36
	Total	42	

Source: Report on Trend and Progress of Banking in india (2001-2015)

	Values
Chi-square	18.917
df	2
Asymp. Sig	.000

From the Table 1 it is inferred that the calculated value of 'W' for capital (18.917) is higher than the table value of χ^2 (5.99 at 5% level and 9.21 at 1% level). Hence, the null hypothesis framed is rejected. It indicates that there is a significant difference in growth rate of capital of SCBs in India.

Table 2 Comparison of Growth Rates of Reserve and Surplus of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	20.86
	Private	14	2.86
	Foreign	14	22.79
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	.231
df	2
Asymp. Sig	.891

a. Kruskal Wallis Test
b. Grouping Variable: banks

Table 2 shows that the calculated value of 'W' for reserve and surplus (0.231) is less than the table value of χ^2 (5.99 at 5 %level and 9.21 at 1 % level). Hence, the null hypothesis framed is accepted. It indicates there is no significant difference in the growth rate of reserve and surplus of SCBs in India.

Table 3 Comparison of Growth Rates of Deposits of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	21.07
	Private	14	26.86
	Foreign	14	16.57
	Total	42	

Source: Report on Trend and Progress of Banking in india (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	4.946
df	2
Asymp. Sig	.084

a. Kruskal Wallis Test
b. Grouping Variable: banks

Table 3 it is intelligible that the calculated value of 'W' for deposits (4.946) is less than the table value of χ^2 (5.99 at 5 % level and 9.21 at 1 % level). Hence, the null hypothesis framed is accepted. It indicates that there is no significant difference in the growth rate of deposits of SCBs in India.

Table 4 Comparison of Growth Rates of Borrowings of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	20.29
	Private	14	23.43
	Foreign	14	20.79
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	.531
df	2
Asymp. Sig	.767

a. Kruskal Wallis Test
b. Grouping Variable: banks

Table 4 denotes the calculated value of 'W' for borrowings (0.531) is less than the table value of χ^2 (5.99 at 5 % level and 9.21 at 1 % level). Hence, the null hypothesis framed is accepted. It indicates that there is no significant difference in the growth rate of borrowings of SCBs in India.

Table 5 Comparison of Growth Rates of Other Liabilities and Provisions of various Sectors of SCBs in India: Kruskal-wallis Test Rank

	Banks	N	Mean Rank
Values	Public	14	18.04
	Private	14	20.46
	Foreign	14	26.00
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	3.100
df	2
Asymp. Sig	.212

a. Kruskal Wallis Test
b. Grouping Variable: banks

Form the Table 5 it is understood that the calculated value of 'W' for other liabilities and provisions (3.100) is less than the table value of χ^2 (5.99 at 5% level and 9.21 at 1% level). Hence, the null hypothesis framed is accepted. It indicates there is no significant difference in the growth rate of other liabilities and provisions of SCBs in India.

Table 6 Comparison of Growth Rates of Cash and Balances with RBI of various Sectors of SCBs in India: Kruskal-wallis Test

	Banks	N	Mean Rank
Values	Public	14	22.89
	Private	14	26.64
	Foreign	14	14.96
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	6.615
df	2
Asymp. Sig	.037

a. Kruskal Wallis Test
b. Grouping Variable: banks

Form the Table 6 it is understood that the calculated value of 'W' for cash and balances with RBI (6.615) is greater than the table value of χ^2 (5.99 at 5%level and 9.21 at 1% level). Hence, the null hypothesis framed is rejected. It indicates there is no significant difference in the growth rate of cash and balances with RBI of SCBs in India.

Table 7 Comparison of Growth Rates of Balances with Banks and Money at Call and Short notice of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	17.82
	Private	14	21.93
	Foreign	14	24.75
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	2.259
df	2
Asymp. Sig	.323

a. Kruskal Wallis Test

b. Grouping Variable: banks

It could be seen Table 7 the calculated value of 'W' for balances with banks and money at call and short notice (2.259) is less than the table value of χ^2 (5.99 at 5%level and 9.21 at 1% level). Hence, the null hypothesis framed is accepted. It indicates there is no significant difference in the growth rate of balances with banks and money at call and short notice of SCBs in India.

Table 8 Comparison of Growth Rates of Investments of various Sectors of SCBs in India: Kruskal-wallis Test Rank

	Banks	N	Mean Rank
Values	Public	14	18.64
	Private	14	24.64
	Foreign	14	21.21
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	1.686
df	2
Asymp. Sig	.430

a. Kruskal Wallis Test

b. Grouping Variable: banks

Form the Table 8 it is noted that the calculated value of 'W' for investments (1.686) is less than the table value of χ^2 (5.99 at 5%level and 9.21 at 1% level). Hence, the null

hypothesis framed is accepted. It indicates there is no significant difference in the growth rate of investments of SCBs in India.

Table 9 Comparison of Growth Rates of Loans and Advances of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	21.07
	Private	14	27.21
	Foreign	14	16.21
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	5.654
df	2
Asymp. Sig	0.59

a. Kruskal Wallis Test
b. Grouping Variable: banks

Table 9 exhibits the calculated value of 'W' for loans and advances (5.654) is less than the table value of χ^2 (5.99 at 5%level and 9.21 at 1% level). Hence, the null hypothesis framed is accepted. It indicates there is significant difference in the growth rate of loans and advances of SCBs in India.

Table 10 Comparison of Growth Rates of Fixed Assets of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	25.86
	Private	14	21.21
	Foreign	14	17.43
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	3.316
df	2
Asymp. Sig	.191

a. Kruskal Wallis Test
b. Grouping Variable: banks

Form the Table 10 it is narrated that the calculated value of 'W' for fixed assets (3.316) is less than the table value of χ^2 (5.99 at 5% level and 9.21 at 1% level). Hence, the null hypothesis framed is accepted. It indicates there is no significant difference in the growth rate of fixed assets of SCBs in India.

Table 11 Comparison of Growth Rates of Other Assets of various Sectors of SCBs in India: Kruskal-wallis Test Ranks

	Banks	N	Mean Rank
Values	Public	14	17.00
	Private	14	23.07
	Foreign	14	24.43
	Total	42	

Source: Report on Trend and Progress of Banking in India (2001-2015)

Test Statistics [a,b]

	Values
Chi-Square	2.911
df	2
Asymp. Sig	.233

a. Kruskal Wallis Test
b. Grouping Variable: banks

Form the Table 11 reveals that the calculated value of 'W' for other assets (2.911) is less than the table value of χ^2 (5.99 at 5%level and 9.21 at 1% level). Hence, the null hypothesis framed is accepted. It indicates there is no significant difference in the growth rate of other assets of SCBs in India.

Suggestions

The deposits to total liabilities of PSCBs have decreased during the study period. The banks have taken necessary steps to enhance the deposits from the PvtSCBs and FCBs and the PSCBs offering various deposits scheme. The borrowings of SCBs have increasing every year except FCBs. It will affect the profitability of banks. The banks should take reduced borrowings with help of increasing more deposits.

Most of the banks failed to manage the proper liabilities, because they all borrowings from other sources to meet their maturity liabilities. So the banks should avoid borrowings from other sources, because it will affect the future performance of the SCBs. The investment of FCBs was highly increased during the study period. The banks should take necessary steps to increasing the investments in the profitable manner.

Conclusion

Asset-Liability Management has evolved as a vital activity of all financial institutions and to some extent other industries too. It has become the prime focus in the banking industry, with every bank trying to maximize yield and reduce their risk exposure. The Reserve Bank of India has issued guidelines to banks operating in the Indian environment to regulate their asset-liability positions in order to maintain stability of the financial system. Maturity-gap analysis has a wide range of focus, not only as a situation analysis tool, but also as a planning tool. Banks need to maintain the maturity gap as low as possible in order to avoid any liquidity exposure. This would necessarily mean that the

outflows in different maturity buckets need to be funded from the inflows in the same bucket. As per the RBI's guidelines, banks have to maintain a stable liquidity position in the short term duration, including both days and 15-28 days time buckets, to ensure the stability and credibility of the banking system of the country.

At the end it is being concluded that asset-liability management is one of the vital tool for risk management in banks and bank have to take great care for that. All banks have to work properly with regard to the ALM so as to increase their performance.

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