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An Analysis Of Asset-Liability Management In Banking Sector With Special Reference Of HDFC Bank

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ABSTRACT

The Indian Banking Sector's performance is so much improving in present days with a very fast way. To survive in this competitive environment, banks are very much in need to maintain their profitability. In the banking system, the Assets and Liability Management (ALM) is a systemic and dynamic process of planning, organizing, coordinating and controlling the assets and liabilities of the banking system. It is one of the vital tools for risk management in banks. Keeping with all this aspect, the present study make an attempt with HDFC Bank to discuss the theoretical background of asset and liability management and to assess the profitability position of the bank and also evaluate the performance of profit and loss account and balance sheet ratios of HDFC Bank.

KEY WORDS: Asset Liability Management, risk management, Profitability, Interest rate risk, Debt coverage etc.

1. INTRODUCTION

Assets Liability Management (ALM) is a system which manages infrastructure assets to reduce the total cost of owning and functioning them while continuously delivering the service level customer's desire. Asset Liability Management is one of the important tools for risk management in banks. The banks have to concentrate more and work appropriately with regards to the Asset Liability Management so as to boost their performance. It is a widespread and structured approach to the long term management of asset. It refers to a systematic process of effective maintenance, up-grading and operating assets with very well business practice. It involves with the control of assets, such as investments or property. Liability Management is a method of managing the debts, loans and mortgages. The victory of the banking system much depends on the appropriate Asset-Liability Management, which internally depends on the effective policies, governance and risk management practices. ALM is a tool used to deal with the risk faced by banks due to variation between assets and liabilities either due to liquidity or changes in the interest rates. Therefore, this analysis has been done to fulfil on Assets Liability Management and the impact on profitability of the HDFC Bank.

PROFILE OF THE BANK

HDFC Bank was incorporated in August 1994. As of September 30, 2019, the Bank has a nationwide distribution network with 5,314 branches and 13,514 ATM's in 2,768 cities/towns. The Housing Development Finance Corporation Limited (HDFC) was amongst the first to receive an 'in principle' approval from the Reserve Bank of India (RBI) to set up a bank in the private sector, as part of RBI's 1994 Policy, in the name of 'HDFC Bank Limited', with its registered office in Mumbai, India. With the liberalisation of the Indian Banking Industry in 1994, the bank was incorporated in August 1994. HDFC Bank commenced its operations as a Scheduled Commercial

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Bank in January 1995. HDFC already has developed significant expertise in retail mortgage loans to different market segments and also has a large corporate client base for its housing related credit facilities. With its experience in the financial markets, strong market reputation, large shareholder base and unique consumer franchise, HDFC was ideally positioned to promote a bank in the Indian environment.

2. REVIEW OF LITERATURE

MS.M.JAYNATHI, DR. UMARANI (2014) analysed that the mismatches between assets and liabilities leads to liquidity risk and interest rate risk, and managing these two risks is the crux of any ALM system in banks. Different approaches to manage these risks have also been presented in this study. Ever since the initiation of the process of deregulation of the Indian banking system and gradual freeing of interest rates to market forces, and consequent injection of a dose of competition among the banks, introduction of asset liability management becomes an absolute necessity.

MR. CHETAN SHETTY, MS. POOJA PATEL, MS. NANDINI (2016) concluded in their study, that the Assets and Liability Management (ALM) is a organized and dynamic process of planning, organising, coordinating and controlling the assets and liabilities or in the sense management of balance sheet structure in such a way the net earnings from interest are maximised within the overall risk preference of the banks. This study also observes the effect of ALM on Five Private Sector Banks profitability in Indian financial market by using Gap Analysis and Ratio Analysis Technique. The finding from the study made known that banks have been exposed to liquidity risk.

MR. MD. SALIM UDDIN, & ANAMUL HAQUE (2016) suggested that there is no underlying fact to overlook the importance of asset-liability management policy to ensure profitability and long-run sustainability of financial institutions in any economy. The study has been conducted to investigate the impacts of ALM policy on the profitability of sample banks working in Bangladesh. The rationality of this study is to watch the degree of relationship of different assets and liability variables with profitability by applying Statistical Cost Accounting (SCA) model implying time series data from 2003 to 2014 to identify the relationship among the variables. After the analysis, Loans & Advances has been found to have a significant positive relationship with banks' profitability.

MR. PRABHAKAR , DR. S. MATHIVANNAN , J. ASHOK KUMAR (2017) jointly observed that in India, asset liability of the banks' balance sheet with commercial banks posed serious challenges as the banks, which have direct impact on their operations, profitability and efficiency to compete with. The RBI of the country focused and advised banks for taking concrete steps in minimizing the mismatch in the asset-liability management. There had been many encouraging impacts of various strategies followed by banks in the last one decade.

MR. S. P. JOSHI1 & DR. R. V. SONTAKAY (2017) evaluated that Asset and Liability Management (ALM) plays a vital role in banking and finance industries. Any bank or financial industry will fall down without the use of ALM tactics. Therefore, to survive in the market, the ALM analysis is carried out timely manner by these industries to measure the value of risk factors concerned. ALM analysis not only minimizes the risk but also helps to achieve the financial target of the industry. In the analysis paper, a presentation done with survey of various

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ALM techniques reported in the literature, aiming to financial stability. The survey helps for emerging banks to

decide the different ALM process used by the banking industries and to select the efficient process out of the reported techniques.

STATEMENT OF THE PROBLEM

Assets and Liability Management is now a most essential tool to appraise the risk facing by bank in sustaining their asset and liability thereby ensuring profitability of the business. Assessing the quality of asset in banking sector play a significant role in progress and improvement of the performance of banking sectors, which make a study of ALM is very much essential and significant.

3. OBJECTIVES OF THE STUDY

1. To understand fully about the theoretical background of Asset Liability Management
   To assess the complete profitability position of HDFC Bank
2. To calculate the performance of Profit and Loss account and Balance Sheet Ratios of the Bank
3. To give proper recommendations and valuable suggestions for the study.

4. RESEARCH METHODOLOGY

The present study is exploratory in nature and all the secondary data were collected from annual reports of HDFC Bank from the period of 2014-15 to 2018-19. Appropriate and advanced statistical tools such as ANOVA, Regression analysis, Ratio analysis was used to interpret the data to know the asset and Liability position of HDFC Bank.

DATA ANALYSIS AND INTERPRETATION

TABLE NO: 1 PROFITABILITY RATIO

YEAR	INTEREST SPREAD	RETURN ON EQUITY	NET PROFIT MARGIN	RETURN ON LONG TERM FUND
2014-15	8.01	16.47	21.07	66.77
2015-16	7.52	16.91	20.41	70.54
2016-17	7.46	16.26	20.99	65.17
2017-18	7.78	16.45	21.79	62.88
2018-19	7.20	14.12	21.29	55.57
Total	37.97	80.21	105.55	320.93

Source: Annual Reports of HDFC Bank

Table No.1 represents the Profitability ratio analysis of HDFC Bank. It has been classified into four categories such as Interest Spread, Return on Equity, Net Profit Margin and Return on Long Term Fund. We found the overall Interest Spread found as 7.20 and Return on Equity as 14.12 which follows the Net profit Margin as 21.29 and Return on Long Term Fund shows 55.57. In this context the Interest spread shows a decreasing trend from 2014-15 to 2018-19 from 8.01 to 7.20, a decreasing trend shows with the Return on Equity from 16.47 to 14.12 with years 2014-15 to 2018-19, the Net profit Margin shows an increasing trend from 21.07 in year

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2014-15 to 21.29 with year 2018-19, and the Return on Long Term Fund shows a decreasing trend from year 2014-15 to 2018-19 with figures 66.77 to 55.57 respectively.

TABLE NO: 2 PROFIT AND LOSS ACCOUNT RATIO

YEAR	INTEREST EXPENDED TO INTEREST EARNED	OTHER INCOME TO TOTAL INCOME	OPERATING EXPENSES TO TOTAL INCOME
2014-15	53.79	15.66	23.20
2015-16	54.18	15.15	22.93
2016-17	52.18	15.07	23.12
2017-18	50.03	15.94	22.82
2018-19	51.26	15.12	21.42
Total	261.44	76.94	113.49

Source: Annual Reports of HDFC Bank

Table No. 2 shows the Profit and Loss Account Ratio with the HDFC Bank. These are categorized with three sections as Interest Expended to Interest Earned, Other Income to Total Income and Operating Expenses to Total Income respectively. It is found to be the overall Interest Expended to Interest Earned is 51.26, Other Income to total Income is 15.12 and Operating Expenses to Total Income is 21.42 respectively. There is a decreasing trend found with the Interest Expended to Interest Earned with 53.79 in 2014-15 to 51.26 in 2018-19. Another decreasing trend found with Other Income to Total Income in the year 2014-15 with 15.66 to 15.12 in 2018-19. Operating Expenses to Total income also shows a decreasing trend from 23.20 to 21.42 from 2014-15 to 2018-19 respectively.

TABLE NO: 3 BALANCE SHEET RATIO

YEAR	CAPITAL ADEQUACY RATIO	CURRENT RATIO	QUICK RATIO
2014-15	16.79	15.66	23.20
2015-16	15.53	15.15	22.93
2016-17	14.55	15.07	23.12
2017-18	14.82	15.94	22.82
2018-19	17.11	15.12	21.42
CAGR	78.8	76.94	113.49

Source: Annual Reports of HDFC Bank

Table No.3 shows the HDFC Bank's Balance Sheet Ratio. Three categories are found in this table as Capital Adequacy Ratio, Current Ratio and Quick Ratio. The overall Capital Adequacy Ratio is 17.11, Current Ratio is 15.12 and the Quick Ratio is 21.42 according to the figures obtained. There is an increasing trend found with the Capital Adequacy Ratio from 16.79 in 2014-15 to 17.11 in the year 2018-19. Current Ratio shows a decreasing trend from 15.66 to 15.12 in the years 2014-15 to 2018-19. Also a decreasing trend found with the Quick Ratio showing 23.20 in 2014-15 to 21.42 in the year 2018-19.

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TABLE NO: 4 DEBT COVERAGE RATIO

YEAR	CREDIT DEPOSIT RATIO	CASH DEPOSIT RATIO	TOTAL DEBT TO OWNER FUND
2014-15	81.71	6.46	8.00
2015-16	83.24	5.77	8.25
2016-17	85.64	5.71	8.02
2017-18	84.68	9.95	8.58
2018-19	86.32	8.85	6.97
CAGR	421.59	36.74	39.82

Source: Annual Reports of HDFC Bank

Table No.4 indicates the Debt Coverage Ratio of the HDFC Bank. These are categorized as Credit Deposit Ratio, Cash Deposit Ratio and Total Debt to Owner Fund respectively. The overall figure shows 86.32 with Credit Deposit Ratio, 8.85 with the Cash Deposit Ratio and Total Debt to Owner fund shows 6.97. An Increasing trend found with the Credit Deposit Ratio from 81.71 to 86.32 with years 2014-15 to 2018-19. Cash Deposit Ratio shows a increasing trend from 6.46 in 2014-15 to 8.85 in 2018-19. The Total Debt to Owner Fund shows with a decreasing trend from the year 2014-15 with 8.00 to 6.97 in the year 2018-19.

APPLICATION OF STATISTICAL TOOL:
FITTING OF LINEAR REGRESSION MODEL

An attempt is made to forecast the future profitability ratio.
Ho: There will be no increase in the Profitability ratio
H1: There will be an increase in the Profitability ratio.

MODEL SUMMARY

MODEL	R	R SQUARE	ADJUSTED R SQUARE	STD. ERROR OF THE ESTIMATE
1	.741[a]	.550	.399	.85286

a. Predictors: (Constant), Year
From the above table, it is observed that there is an increasing trend in Profitability ratio in every year (R=7.41)

ANOVA[a]

MODEL		SUM OF SQUARES	DF	MEAN SQUARE	F	SIG.
1	Regression	2.663	1	2.663	3.661	.000[b]
	Residual	2.182	3	.727		
	Total	4.845	4			

a. Dependent Variable: Profitability Ratio
b. Predictors: (Constant), Year

From the table 2, it is inferred that the dependent variable is more reliable and the model is good, since the significant level is less than .05 (P=.000)

COEFFICIENTS [A]

MODEL		UNSTANDARDIZED COEFFICIENTS		STANDARDIZED COEFFICIENTS	T	SIG.
		B	Std. Error	Beta		
1	(Constant)	1056.814	543.982		1.943	.004
	Year	-.516	.270	-.741	1.913	.000

a. Dependent Variable: Profitability Ratio

INFERENCE

The fitted regression model is as follows:

Y= 1056.814+.516 X
Where Y= Profitability ratio, X = Year

S.NO	YEAR	ESTIMATED PROFITABILITY RATIO
1	2019-2020	1059
2	2020-2021	1060
3	2021-2022	1061
4	2022-2023	1062
5	2023-2024	1062

As in the above table there is an increase in the profitability ratio, Null hypothesis is rejected.

5. FINDINGS OF THE STUDY

1. The Overall Interest spread and Return on Equity was recorded with the value of 37.97 and 80.21 respectively.
2. The Overall Net Profit Margin and Return on Long Term Fund was found with the value of 105.55 and 320.93 respectively.
3. In the Context of Profitability Ratio, Net Profit Margin shows increasing trend from 2014-15 to 2018-19 and was recorded the value of 21.07 to 21.29 respectively.
4. The Overall Interest Expended to Interest Earned, Other Income to Total Income, and Operating Expenses to total Income was recorded with the value of 261.44, 76.94, 113.49 respectively.
5. It has been found that the Profit and Loss Account ratio shows a decreasing trend from the year 2014-15 to 2018-19.
6. The Overall Capital Adequacy Ratio, Current Ratio and Quick ratio was found 78.8, 76.94, and 113.49 respectively.
7. In the context of Balance Sheet Ratio, It is observed that Capital Adequacy Ratio shows a increasing trend from 2014-15 to 2018-19 and recorded with the value of 16.79 to 17.11 respectively.
8. The Overall Credit Deposit Ratio, Cash Deposit Ratio, Total Debt to Owner Fund was recorded with the value of 421.59, 36.74 and 39.82 respectively.

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6. SUGGESTIONS FOR THE STUDY

1. The banks should have an effective liquidity management plans in place. It means banks must know how much liquidity they have and how they would provide fund to depositors' demands at any time.
2. The banks must able to identify their core or stable deposit base and match that against longer-term assets to reduce interest rate risk. Such deposits include equity, certificates of deposit with penalties for early withdrawal, retirement savings, savings with a stated purpose, and regular savings accounts with small balances.
3. The banks should identify the minimum net margin (gross income – cost of funds) needed to fund financial costs, operating expenses, and contributions to capital.
4. The banks must have an effective management information system, either manual or computerized, which provides the necessary data and must have Formal, written liquidity and ALM banking and ALM finance-policies.
5. The banks should continuously monitor liquidity, the gap position of the institution, the core deposits, and the net margin.

7. CONCLUSION

Asset Liability Management plays a very vital and crucial role in managing and planning of assets and Liabilities of Banks, against the risk exposed due to the changing surroundings in the banking business. This attempt was made specially to evaluate and matching assets and liability of the HDFC Bank. After calculating the various ratios, it is evident that this bank is performing satisfactory in terms of Net profit Margin Ratio, Capital Adequacy Ratio, Credit Deposit Ratio because this ratio shows an increasing trend during the study period. Therefore it is in need to pick up and maintain consistency in Net Profit Margin and Total Income of HDFC Bank. The Bank should practice asset liability management techniques, which shows that they know their assets and liabilities; and observing a close eye on any interest rate fluctuations; and are willing and able to revise interest rates on loans and deposits as the market – and national interest rate fluctuations – dictate.

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