

ANALYTICAL STUDY ON ASSET LIABILITY MANAGEMENT IN SBI

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ABSTRACT

Asset Liability Management (ALM) is a critical aspect of financial management that plays a pivotal role in ensuring the stability and profitability of financial institutions. This research paper presents an in-depth analytical study focused on the Asset Liability Management practices within the State Bank of India (SBI). The research investigates various components of Asset Liability Management, including interest rate risk, liquidity risk, and market risk. It explores how SBI identifies, measures, monitors, and controls these risks to maintain a balanced and sustainable financial position. The findings of this research aim to provide insights into the strengths and weaknesses of SBI's current Asset Liability Management framework, offering practical recommendations for improvement.

KEYWORDS: *Stability and Profitability of Financial Institutions, Asset Liability Management*

Article History

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INTRODUCTION OF THE STUDY

Asset-Liability Management refers to the process by which an institution manages its balance sheet which provides institutions with protection that makes such risk acceptable. ALM Models enable institutions to measure and monitor risk and provide suitable strategies for their management. ALM includes not only understanding but also a way to quantify and manage risks. Further, even in the absence of a formal Asset Liability Management program, the understanding of these concepts is of value to an institution as it provides a true picture of the risk/reward trade-off in which institution is engaged.

ALM is a tool used to address the risk faced by banks due to difference between assets and liabilities either due to liquidity or changes in the interest rates. It is basically a technique used to manage its balance sheet by allowing alternative interest rates and liquidity scenarios. Banks and financial institutions provide services, which involve various kinds of risk: liquidity risk, interest risk & credit risk. Failure to identify this risk leads to effect the financial position of those institutions. Therefore, one of the strategies to access such kind of risk is ALM. It is used to analyse the difference between assets and liabilities with respect to maturities and interest rate sensitivity, so that the banks can minimize the risk arising from such gap mainly from interest risk and liquidity risk.

ALM involves identification of risk parameters, Risk identification, Risk measurement and Risk management and framing of Risk policies and tolerance levels.

Asset-Liability Management is a 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, the 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.

OBJECTIVES OF THE STUDY

To study the concept of Asset Liability Management with reference to SBI

1. To study ALM process practiced by STATE BANK OF INDIA
2. To compare and analyze the maturity gap of SBI for measuring the liquidity risks and to find out the causes of mismatches of assets and liabilities if any
3. To study the trend analysis of 5 years (i.e. from 2017-2022) by utilizing structural liquidity statements for determining liquidity requirements and position for maintaining optimal liquidity management.
4. To study the financial efficiency of the firm through Ratio Analysis

Limitations of Study

1. Financial markets are dynamic and can be influenced by various external factors such as geopolitical events, economic shocks, or regulatory changes. These factors can impact the effectiveness of ALM strategies
2. An in - depth study cannot be done because of time constraint.
3. Incomplete or inaccurate data may lead to flawed conclusions and recommendations.

5. RESEARCH METHODOLOGY

Research Methodology is a systematic way to solve the research problems. Research methodology used for the study includes secondary sources of data. Research has been done by using the information collected from Purchase department and Finance & Accounts department. Methodology of the study involves the following steps, they are:

-) Data Collection
-) Data Classification
-) Data Analysis and Interpretation

RESEARCH DESIGN

This analytical study aims to investigate and develop optimal asset liability management (ALM) strategies for infrastructure projects. Asset liability management refers to the process of managing the financial risks arising from the maturity mismatch between assets and liabilities. Infrastructure projects, such as transportation systems, energy facilities, and public works, typically involve long-term investments with substantial funding requirements and extended operational periods. Effective ALM is crucial to ensure the financial sustainability and success of such projects.

Tool used for Data Analysis Liquidity Gap Analysis

Structural Liquidity for the financial years

Data Analysis is done by segregating data into tables according to Time Buckets and represented through Bar Charts.

Company net worth is determined through ratio analysis

Return on total assets is calculated through net income and total assets.

DATA ANALYSIS AND INTERPRETATION

Statement of structural liquidity showing the mismatch between assets and liabilities i.e. (≤ 1 year) for the financial year 2017-2018 to 2021-2022

Table No: 4.1 (Source: Annual reports of SBI)

Representing mismatch between Assets and Liabilities (Rupees in Lakhs)

PARTICULARS	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
RUPEE ASSETS	23,93,765	27,13,892	29,04,440	31,82,725	35,06,152	14,700,974
RUPEE LIABILITIES	32,35,624	34,60,000	37,19,387	42,80,555	47,07,509	19,403,075
SURPLUS/DEFICIT						
S/D%	-35.16	-27.49	-28.05	-34.49	-34.26	

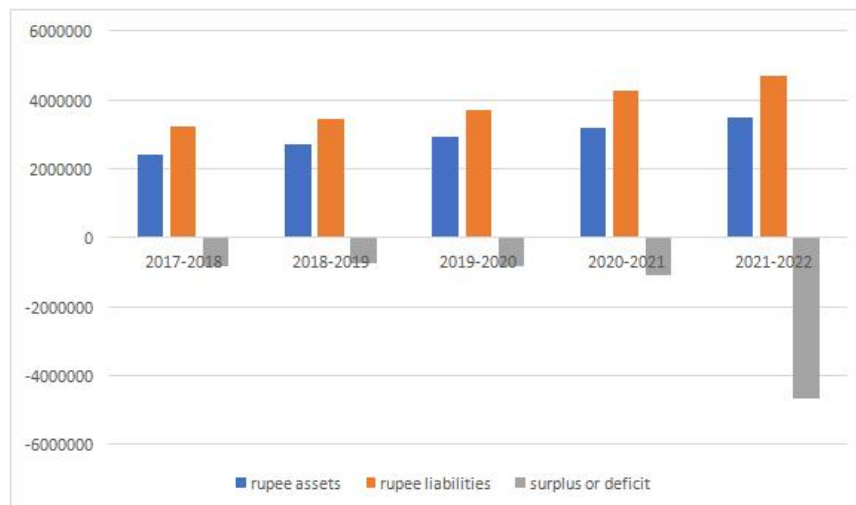


Figure No: 4.1 (Source: Secondary)

INTERPRETATION

-) The rupee assets for the year 2017-2018 are 23,93,765 and the liabilities are 32,35,624, therefore there is a negative gap of -8,41,859.
-) The rupee assets for the year 2018-2019 are 27,13,892 and the liabilities are 34,60,000, therefore there is a negative gap of -7,46,108.
-) The rupee assets for the year 2019-2020 are 29,04,440 and the liabilities are 37,19,387, therefore there is a negative gap of -8,14,947.

-) The rupee assets for the year 2020-2021 are 31,82,725 and the liabilities are 42,80,555, therefore there is a negative gap of -10,97,830.
-) The rupee assets for the year 2021-2022 are 35,06,152 and the liabilities are 47,07,509, therefore there is a negative gap of -12,01,357.
-) The Total Assets for five financial year i.e.2018-2022 are 14,700,974 and the Total Liabilities are 19,403,075, therefore there is a negative gap of- 47,02,101.

Statement of structural liquidity showing the mismatch between assets and liabilities i.e. (>6 months & upto 1 year) for the financial year 2017- 2018 to 2021-2022

**Table no: 4.2 (Source: Annual reports of SBI)
Representing Mismatch between Assets and Liabilities (Rupees in Lakhs)**

PARTICULARS	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
RUPEE ASSETS	114,136.47	369,872.14	184,200.86	116,239.21	350,648.46	1,135,097.14
RUPEE LIABILITIES	399,312.46	600,745.88	657,626.08	721,834.33	981,662.25	3,361,181
SURPLUS/DEFICIT	-285,175.99	-230,873.74	-473,425.22	-605,595.12	-631,013.74	-2,226,083.81
S/D %	-249.85	-62.41	-257.01	-520.99	-179.95	-1270.21

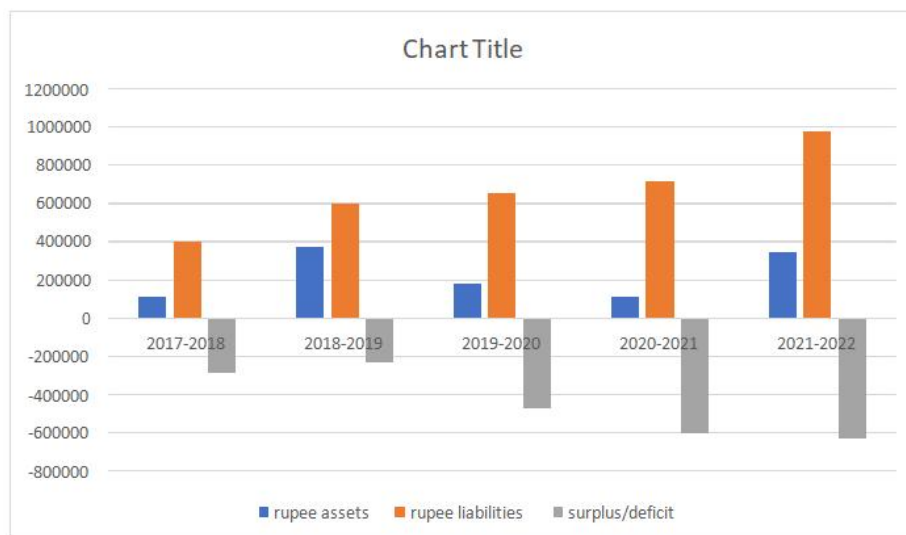


Figure no: 4.2 (Source: Secondary)

INTERPRETATION

-) The rupee assets for the year 2017-2018 are 114,136.47 and the liabilities are 399,312.46, therefore there is a negative gap of -285,175.99.
-) The rupee assets for the year 2018-2019 are 369,872.14 and the liabilities are 600,745.88, therefore there is a negative gap of -230,873.74.

- J The rupee assets for the year 2019-2020 are 184,200.86 and the liabilities are 657,626.08, therefore there is a negative gap of -473,425.22.
- J The rupee assets for the year 2020-2021 are 116,239.21 and the liabilities are 721,834.33, therefore there is a negative gap of -605,595.12.
- J The rupee assets for the year 2021-2022 are 350,648.46 and the liabilities are 981,662.25, therefore there is a negative gap of -631,013.74.
- J The Total Assets for five financial year i.e.2018-2022 are 1,135,097.14 and the Total Liabilities are 3,361,181, therefore there is a negative gap of - 2,226,083.81.

Statement of structural liquidity showing the mismatch between assets and liabilities i.e. (>1 year & upto 3 years) for the financial year 2017-2018 to 2021-2022

**Table no: 4.3 (Source: Annual reports of SBI)
Representing mismatch between Assets and Liabilities (Rupees in Lakhs)**

PARTICULARS	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTA
RUPEE ASSETS	737,731.61	597,983.27	1,354,465.03	1,382,258.17	1,323,400.48	5,395,838.56
RUPEE LIABILITIES	525,033.14	626,227.8	638,044.19	735,288.61	921,405.76	3,445,999.5
SURPLUS/DEFICIT	212,698.47	-28,244.53	716,420.84	646,969.57	401,994.72	1,949,839.03
S/D%	28.83	-4.72	52.89	46.80	30.37	154.17

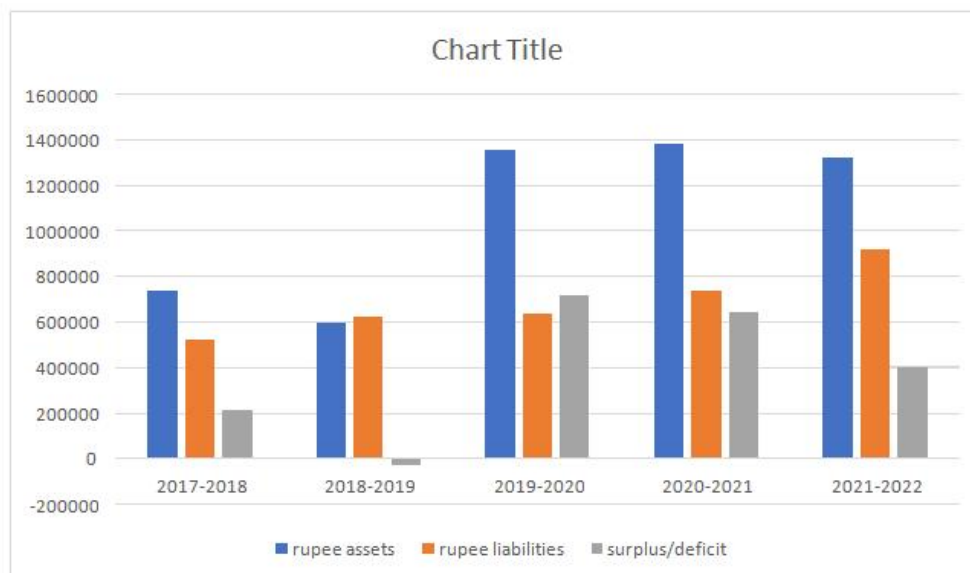


Figure no: 4.3 (Source: Secondary)

INTERPRETATION

- J The rupee assets for the year 2017-2018 are 737,731.61 and the liabilities are 525,033.14, therefore there is a positive gap of 212,698.47.

- J The rupee assets for the year 2018-2019 are 597,983.27 and the liabilities are 626,622.78, therefore there is a negative gap of -28,244.53.
- J The rupee assets for the year 2019-2020 are 1,354,465.03 and the liabilities are 638,044.19, therefore there is a positive gap of 716,420.84.
- J The rupee assets for the year 2020-2021 are 1,382,258.17 and the liabilities are 735,288.61, therefore there is a positive gap of 646,969.51.
- J The rupee assets for the year 2021-2022 are 1,323,400.48 and the liabilities are 921,405.76, therefore there is a positive gap of 401,994.72.

Statement of structural liquidity showing the mismatch between assets and liabilities i.e. (>3 years & upto 5 years) for the financial year 2017-2018 to 2021- 2022

**Table no: 4.4 (Source: Annual reports of SBI)
Representing mismatch between Assets and Liabilities (Rupees in Lakhs)**

PARTICULARS	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022	TOTAL
RUPEE ASSETS	306,639.38	497,414.67	555,382.25	448,338.13	623,411.82	2,431,186.25
RUPEE LIABILITIES	262,910.72	350,183.07	380,365.73	420,583.62	471,649.06	1,885,692.2
SURPLUS/DEFICIT	43,728.66	147,231.6	175,016.52	27,754.51	151,762.76	545,494.05
S/D %	14.26	29.59	31.51	6.19	24.34	105.89

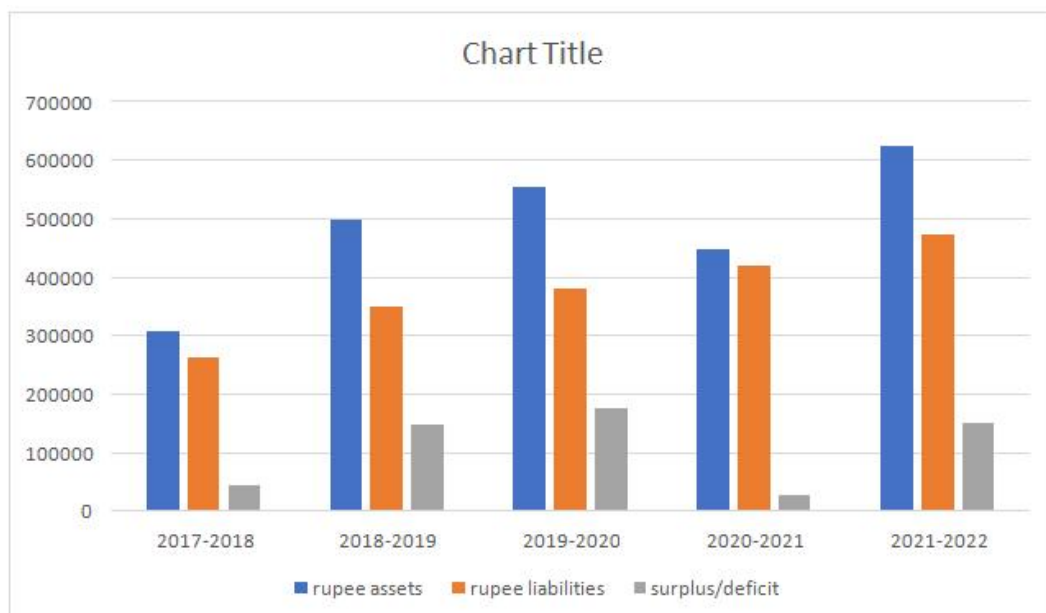


Figure no: 4.4 (Source: Secondary)

INTERPRETATION

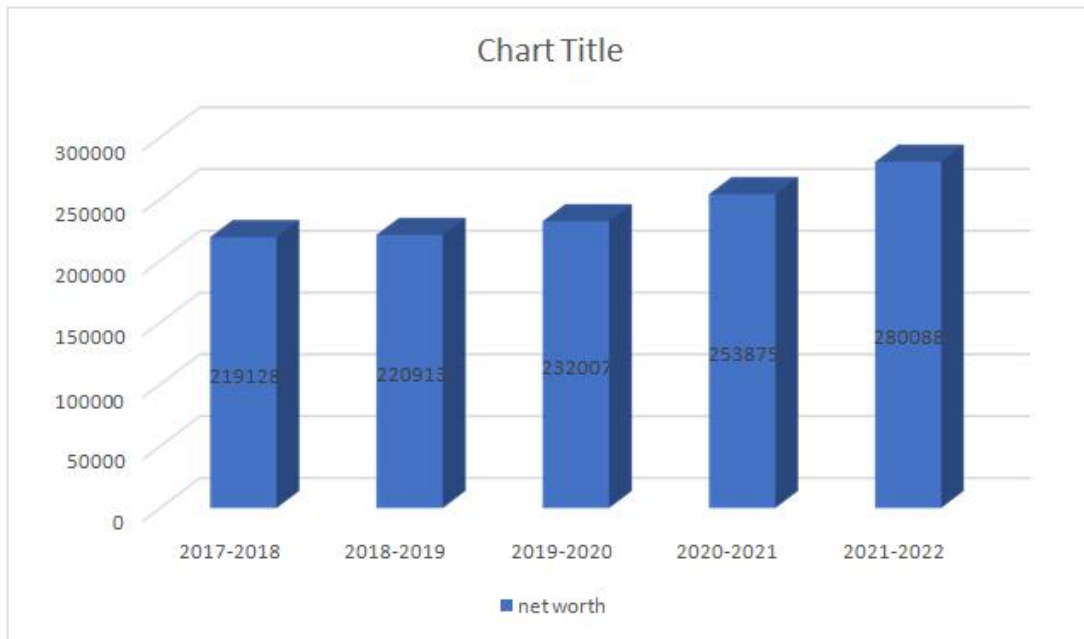
- J The rupee assets for the year 2017-2018 are 6501.69 and the liabilities are 51728.73, therefore there is a positive gap of 43,728.66.
- J The rupee assets for the year 2018-2019 are 25511.06 and the liabilities are 46712.95, therefore there is a positive gap of 147,231.6.
- J The rupee assets for the year 2019-2020 are 32661.62 and the liabilities are 14720, therefore there is a positive gap of 175,016.52.
- J The rupee assets for the year 2020-2021 are 18913.5 and the liabilities are 4160, therefore there is a positive gap of 27,754.51.
- J The rupee assets for the year 2021-2022 are 25899.43 and the liabilities are 0, therefore there is a positive gap of 151,762.76.
- J The Total Assets for five financial year i.e. 2018-2022 are 2,431,186.25 and the Total Liabilities are 1,885,692.2, therefore there is a positive gap of 545,494.05.

Ratio Analysis:

Ratio analysis is a powerful tool used in financial analysis to evaluate the performance and financial health of a company. It involves the calculation and interpretation of various financial ratios derived from the financial statements, such as the income statement and balance sheet. These ratios provide insights into the relationships between different financial variables and help assess the overall efficiency, profitability, liquidity, and solvency of a business.

Net Worth = TOTAL ASSETS – TOTAL LIABILITIES

Table No: Net Worth	
Years	Net Worth(In Crores)
2017-2018	219,128
2018-2019	220,913
2019-2020	232,007
2020-2021	253,875
2021-2022	280,088



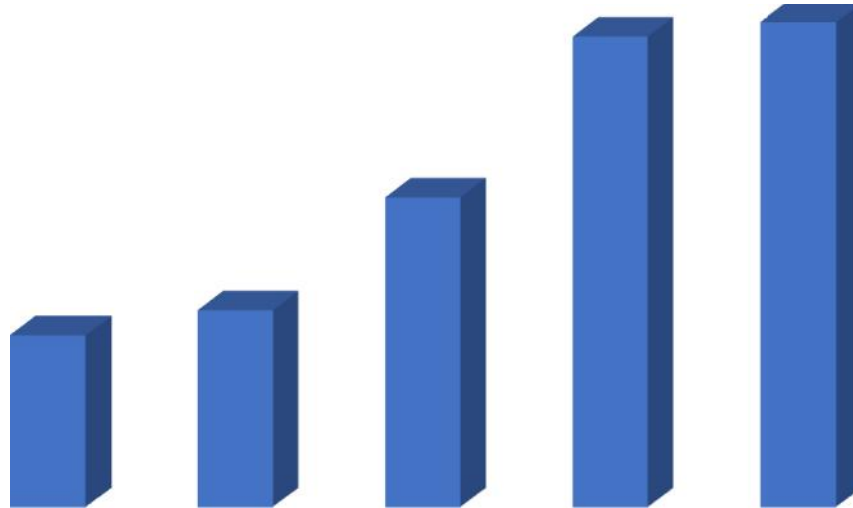
INTERPRETATION

The net worth of the corporation improved to Rs 280,088 crores as on 31-3-2022 from Rs 219,128 crores as on 31-3-2017. The net worth registered a increased profits.

Capital Adequacy Ratio

Table No: Capital Adequacy Ratio	
Years	Capital Adequacy Ratio
2017-2018	12.72
2018-2019	12.83
2019-2020	13.30
2020-2021	13.97
2021-2022	14.03
14.2	
14	
13.8	
13.6	
13.4	
13.2	
13	13.97 14.03
12.8	
	13.3
12.6	

	12.4	12.72	12.83			
	12.2					
	12					
		2017-2018	2018-2019	2019-2020	2020-2021	2021-2022



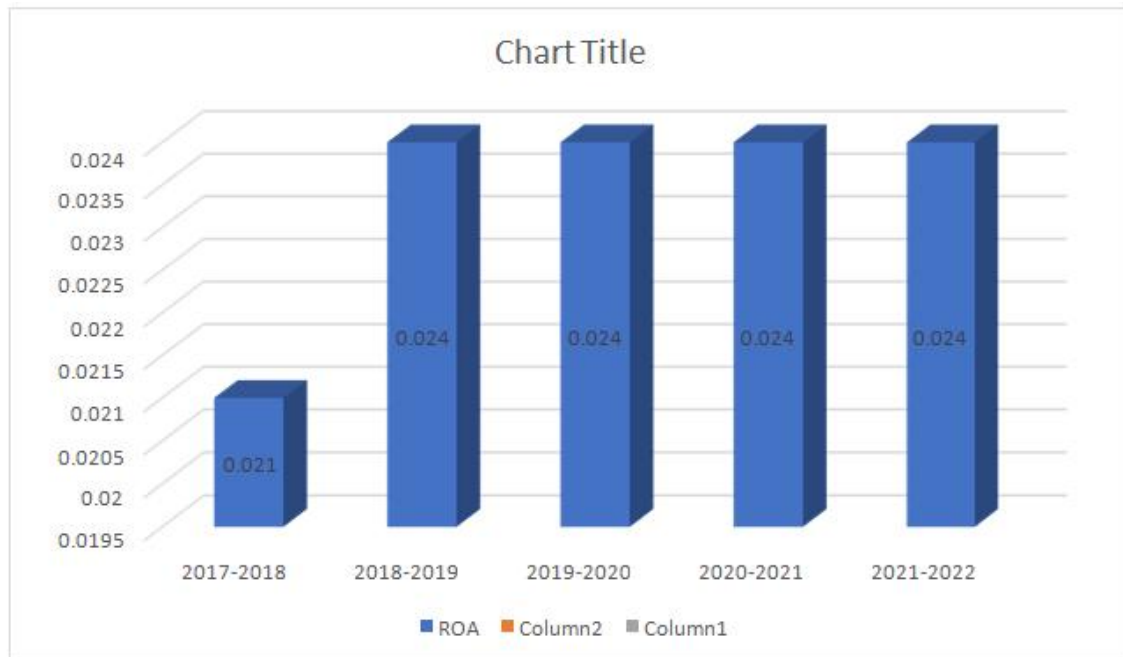
INTERPRETATION

The Capital Adequacy Ratio of the corporation improved to 14.03% as on 31-3-2022 from 12.72 as on 31-3-2018. The increase in net worth has led to an increase in Capital Adequacy Ratio (CAR).

Return on Total Assets FORMULA:

$$\text{Return on Total Assets} = \frac{\text{Net Income}}{\text{Total Assets}}$$

Table No: Return on Total Assets			
Years	Net Income(In Crores)	Total Assets (In Crores)	Return On Total Assets
2017-2018	74,854	3,454,752	0.021
2018-2019	88,349	3,680,914	0.024
2019-2020	98,085	3,951,394	0.024
2020-2021	110,710	4,534,430	0.024
2021-2022	120,708	4,987,597	0.024



INTERPRETATION

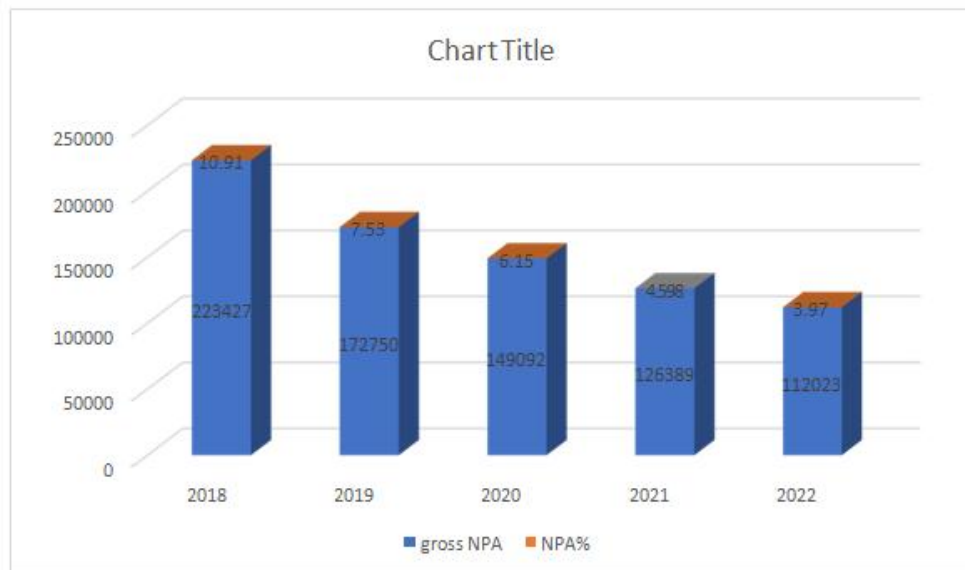
The above table shows the relationship between the Net Income and Total Assets. The Return on Assets is showing an constant trend over a period of time from 2018to 2022.

The Return on Assets in the year 2017-2018 is 0.021%, and in the year 2018-2019it is increased to 0.024%.

A return of 10% is considered as the ideal ratio. But the return is less than the10%. It indicates the lower productivity of the resources in SBI.

GROSS NPA AND NPA%

Year	2018	2019	2020	2021	2022
GROSS NPA	223,427	1,72,750	1,49,092	1,26,389	1,12,023
NPA%	10.91%	7.53%	6.15%	4.98%	3.97%



INTERPRETATION:

The above table shows that there is a decrease in gross NPA's and NPA % for the years 2017-2022.

FINDINGS

- J ALM technique is aimed to tackle the market risks and its objective is to stabilize & improve profitability of the firm.
- J Implementation of ALM as a Risk Management tool helps financial institutions manage the risks associated with their assets and liabilities.
- J The Total Assets for less than 1 year are 14,700,974 and the Total Liabilities are 19,403,075, therefore there is a negative gap of -4,702,101.
- J The Total Assets for six months to one year are 1,135,097.14 and the Total Liabilities are 3,361,181, therefore there is a negative gap of -2,226,083.81.
- J The Total Assets for one year and up to three years are 5,395,838.56 and the Total Liabilities are 3,445,999.5, therefore there is a positive gap of 1,949,839.03.
- J The Total Assets three years and up to 5 years are 2,431,186.25 and the Total Liabilities are 1,885,692.2, therefore there is a positive gap of 545,494.05.
- J The Total Assets for more than five years are 5,926,359.38 and the Total Liabilities are 4,509,791.25, therefore there is a positive gap of 1,416,568.13.
- J ALM presents a disciplined decision-making framework for a while at the same time guarding the risk levels.
- J The net worth of the corporation improved to Rs 280,088 crores as on 31-3-2022
- J The Capital Adequacy Ratio of the corporation improved to 14.03% as on 31-3-2022

J The Return on Assets is showing an constant trend over a period of time from 2017-2022

A return of 10% is considered as the ideal ratio. But the return is less than the 10%. It indicates the lower productivity of the resources in SBI.

SUGGESTIONS

- J It is suggested to strengthen its management information systems (MIS) and computerprocessing capabilities for accurate measurement of liquidity position of the bank
- J SBI requires efficient technological infrastructure which will lead to smooth integration of the risk management process with effective business strategies
- J It is essential to remain vigilant to the events that effect its operating environment & reactaccordingly in order to avoid any undesirable risks.
- J There should be proper limit structures, which should be monitored by Asset Liability Management committee (ALCO) on a regular basis. There should be involvement of ALCO members in its decisions.
- J The company need to concentrate on the management of Total assets and its returns.
- J It has been recommended that the company needs to maintain the same level of net worth, Capital Adequacy ratio and other financial ratios in the future for the benefit of the company.

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