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A COMPREHENSIVE STUDY ON ASSET LIABILITY MANAGEMENT AND ITS ROLE IN FINANCIAL STABILITY WITH REFERENCE TO ICICI

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ABSTRACT

Banks, other financial organisations, and corporations employ Asset Liability Management (ALM) as a financial strategy to mitigate risks caused by asset-liability mismatches. In order to guarantee financial stability and profitability over the long term, this research delves into the structure, significance, and methodology of ALM, with a particular emphasis on controlling interest rate risk, liquidity risk, and market risk.

By coordinating the due dates and interest rates on assets and liabilities, ALM aids institutions in keeping their risk-return profiles in check, as shown in the study. Analysis of interest rate sensitivity and cash flow mismatches is done using simulation models, gap analysis, and duration analysis, among other important methods. The ALM committees (ALCO) and regulatory frameworks that oversee policy implementation and financial risk exposure reviews are also part of the scope of the research.

The results imply that a bank's capacity to adapt to shifting market circumstances, new regulations, and liquidity issues is improved by efficient ALM. Optimisation of the balance sheet, capital planning, and risk management as a whole all rely on it. Findings indicate that ALM is a crucial financial discipline for long-term development and stability in uncertain economic times.

1. INTRODUCTION

Asset Liability Management(ALM) is a strategic approach of managing the balance sheet dynamics in such a way that the net earnings are maximized. This approach is concerned with management of net interest margin to ensure that its level and riskiness are compatible with the risk return objectives.

If one has to define **Asset and Liability management** without going into detail about its need and utility, it can be defined as simply "*management of money"* which carries value and can change its shape very quickly and has an ability to come back to its original shape with or without an additional growth. The art of proper management of healthy money is **ASSET AND LIABILITY MANAGEMENT (ALM).**

The Liberalization measures initiated in the country resulted in revolutionary changes in the sector. There was a shift in the policy approach from the traditionally administered market regime to a free market driven regime. This has put pressure on the earning capacity of co-operative, which forced them to foray into new operational areas thereby exposing themselves to new risks. As major part of funds at the disposal from outside sources, the management are concerned about ***RISK*** arising out of shrinkage in the value of asset, and managing such risks became critically important to them. Although co-operatives are able to mobilize deposits, major portions of it are high cost fixed deposits. Maturities of these fixed deposits were not properly matched with the maturities of assets created out of them. The tool called **ASSET AND LIABILITY MANAGEMENT** provides a better solution for this.

ASSET LIABILITY MANAGEMENT (ALM) is a portfolio management of assets and liability of an organization. This is a method of matching

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various assets with liabilities on the basis of expected rates of return and expected maturity pattern

In the context of **ALM** is defined as "***a process of adjusting s liability to meet loan demands, liquidity needs and safety requirements***". This will result in optimum value of the same time reducing the risks faced by them and managing the different types of risks by keeping it within acceptable levels.

NEED OF THE STUDY:

The need of the study is to concentrates on the growth and performance of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)** and to calculate the growth and performance by using asset and liability management and to know the management of nonperforming assets.

- To know financial position of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To analyze existing situation of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To improve the performance of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To analyze competition between **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)** with other cooperatives.

SCOPE OF THE STUDY:

In this study the analysis based on ratios to know asset and liabilities management under **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)** and to analyze the growth and performance of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)** by using the calculations under asset and liability management based on ratio.

- **Ratio analysis**
- **Comparative statement**

OBJECTIVES OF THE STUDY

- To study the concept of ASSET & LIABLITY MANAGEMENT **in INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To study process of CASH INFLOWS and OUTFLOWS in **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To study RISK MANAGEMENT under **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To study RESERVES CYCLE of ALM under **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
- To study FUNCTIONS AND OBJECTIVES of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)** committee.

METHODOLOGY OF THE STUDY

The study of **ALM Management** is based on two factors.

1. Primary data collection.
2. Secondary data collection

PRIMARY DATA COLLECTION:

The sources of primary data were

- The chief manager – **ALM** cell
- Department Sr. manager financing & Accounting
- System manager- **ALM** cell

Gathering the information from other managers and other officials of the organization.

SECONDARY DATA COLLECTION:

Collected from books regarding journal, and management containing relevant

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information about ALM and Other main sources were

- Annual report of the **ICICI**
- Published report of the **ICICI**
- **RBI** guidelines for **ALM.**

LIMITATION OF THE STUDY:

1. This subject is based on past data of **INDUSTRIAL CREDIT AND INVESTMENT CORPORATION OF INDIA (ICICI)**
2. The analysis is based on structural liquidity statement and gap analysis.
3. The study is mainly based on secondary data.
4. Approximate results: The results are approximated, as no accurate data is Available.
5. Study takes into consideration only LTP and issue prices and their difference for Concluding whether an issue is overpriced or under priced leaving other.
6. The study is based on the issues that are listed on NSE only.

ASSET LIABILITY MANAGEMENT (ALM) SYSTEM

Asset-Liability Management (ALM) can be termed as a risk management technique designed to earn an adequate return while maintaining a comfortable surplus of assets beyond liabilities. It takes into consideration interest rates, earning power, and degree of willingness to take on debt and hence is also known as Surplus Management.

But in the last decade the meaning of ALM has evolved. It is now used in many different ways under different contexts. ALM, which was actually pioneered by financial institutions and banks, are now widely being used in industries too. The Society of Actuaries Task Force on ALM Principles, Canada, offers the following definition for ALM: "Asset Liability Management is the on-going process of formulating, implementing, monitoring, and revising strategies related to assets and liabilities in an attempt to achieve financial objectives for a given set of risk tolerances and constraints."

Basis of Asset-Liability Management

Traditionally, banks and insurance companies used accrual system of accounting for all their assets and liabilities. They would take on liabilities - such as deposits, life insurance policies or annuities. They would then invest the proceeds from these liabilities in assets such as loans, bonds or real estate. All these assets and liabilities were held at book value. Doing so disguised possible risks arising from how the assets and liabilities were structured.

Consider a bank that borrows 1 Crore (100 Lakhs) at 6 % for a year and lends the same money at 7 % to a highly rated borrower for 5 years. The net transaction appears profitable- the bank is earning a 100 basis point spread - but it entails considerable risk. At the end of a year, the bank will have to find new financing for the loan, which will have 4 more years before it matures. If interest rates have risen, the bank may have to pay a higher rate of interest on the new financing than the fixed 7 % it is earning on its loan.

Suppose, at the end of a year, an applicable 4-year interest rate is 8 %. The bank is in serious trouble. It is going to earn 7 % on its loan but would have to pay 8 % on its financing. Accrual accounting does not recognize this problem. Based upon accrual accounting, the bank would earn Rs 100,000 in the first year

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although in the preceding years it is going to incur a loss.

The problem in this example was caused by a mismatch between assets and liabilities. Prior to the 1970's, such mismatches tended not to be a significant problem. Interest rates in developed countries experienced only modest fluctuations, so losses due to asset-liability mismatches were small or trivial. Many firms intentionally mismatched their balance sheets and as yield curves were generally upward sloping, banks could earn a spread by borrowing short and lending long.

Things started to change in the 1970s, which ushered in a period of volatile interest rates that continued till the early 1980s. US regulations which had capped the interest rates so that banks could pay depositors, was abandoned which led to a migration of dollar deposit overseas. Managers of many firms, who were accustomed to thinking in terms of accrual accounting, were slow to recognize this emerging risk. Some firms suffered staggering losses. Because the firms used accrual accounting, it resulted in more of crippled balance sheets than bankruptcies. Firms had no options but to accrue the losses over a subsequent period of 5 to 10 years.

One example, which drew attention, was that of US mutual life insurance company "The Equitable." During the early 1980s, as the USD yield curve was inverted with short-term interest rates sky rocketing, the company sold a number of long-term Guaranteed Interest Contracts (GICs) guaranteeing rates of around 16% for periods up to 10 years. Equitable then invested the assets short-term to earn the high interest rates guaranteed on the contracts. But short-term interest rates soon came down. When the Equitable had to reinvest, it couldn't get even close to the interest rates it was paying on the GICs. The firm was crippled. Eventually, it had to demutualize and was acquired by the Axa Group.

Increasingly banks and asset management companies started to focus on Asset-Liability Risk. The problem was not that the value of assets might fall or that the value of liabilities might rise. It was that capital might be depleted by narrowing of the difference between assets and liabilities and that the values of assets and liabilities might fail to move in tandem. Asset-liability risk is predominantly a leveraged form of risk.

The capital of most financial institutions is small relative to the firm's assets or liabilities, and so small percentage changes in assets or liabilities can translate into large percentage changes in capital. Accrual accounting could disguise the problem by deferring losses into the future, but it could not solve the problem. Firms responded by forming asset-liability management (ALM) departments to assess these asset-liability risk.

Asset-Liability Management Approach

ALM in its most apparent sense is based on funds management. Funds management represents the core of sound bank planning and financial management. Although funding practices, techniques, and norms have been revised substantially in recent years, it is not a new concept. Funds management is the process of managing the spread between interest earned and interest paid while ensuring adequate liquidity. Therefore, funds management has following three components, which have been discussed briefly.

A. Liquidity Management

Liquidity represents the ability to accommodate decreases in liabilities and to fund increases in assets. An organization has adequate liquidity when it can obtain sufficient funds, either by increasing liabilities or by converting assets, promptly and at a reasonable cost. Liquidity is essential in all organizations to compensate for expected and unexpected balance sheet fluctuations and to provide funds for growth. The price of liquidity is a function of market conditions and market perception of the risks, both interest rate and credit risks, reflected in the balance sheet and off-balance sheet activities in the case of a bank. If liquidity needs are not met through liquid asset holdings, a bank may be forced to restructure or acquire additional liabilities under adverse market conditions.

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Liquidity exposure can stem from both internally (institution-specific) and externally generated factors. Sound liquidity risk management should address both types of exposure. External liquidity risks can be geographic, systemic or instrument-specific. Internal liquidity risk relates largely to the perception of an institution in its various markets: local, regional, national or international. Determination of the adequacy of a bank's liquidity position depends upon an analysis of its: -

B. Asset Management

Many banks (primarily the smaller ones) tend to have little influence over the size of their total assets. Liquid assets enable a bank to provide funds to satisfy increased demand for loans. But banks, which rely solely on asset management, concentrate on adjusting the price and availability of credit and the level of liquid assets. However, assets that are often assumed to be liquid are sometimes difficult to liquidate. For example, investment securities may be pledged against public deposits or repurchase agreements, or may be heavily depreciated because of interest rate changes. Furthermore, the holding of liquid assets for liquidity purposes is less attractive because of thin profit spreads.

Asset liquidity, or how "salable" the bank's assets are in terms of both time and cost, is of primary importance in asset management. To maximize profitability, management must carefully weigh the full return on liquid assets (yield plus liquidity value) against the higher return associated with less liquid assets. Income derived from higher yielding assets may be offset if a forced sale, at less than book value, is necessary because of adverse balance sheet fluctuations.

C. Liability Management

Liquidity needs can be met through the discretionary acquisition of funds on the basis of interest rate competition. This does not preclude the option of selling assets to meet funding needs, and conceptually, the availability of asset and liability options should result in a lower liquidity maintenance cost. The alternative costs of available discretionary liabilities can be compared to the opportunity cost of selling various assets. The major difference between liquidity in larger banks and in smaller banks is that larger banks are better able to control the level and composition of their liabilities and assets. When funds are required, larger banks have a wider variety of options from which to select the least costly method of generating funds. The ability to obtain additional liabilities represents liquidity potential. The marginal cost of liquidity and the cost of incremental funds acquired are of paramount importance in evaluating liability sources of liquidity. Consideration must be given to such factors as the frequency with which the banks must regularly refinance maturing purchased liabilities, as well as an evaluation of the bank's ongoing ability to obtain funds under normal market conditions.

1. **Liquidity Risk Management :**

Measuring and managing liquidity needs are vital activities of the Risk. By assuring a returns ability to meet its liability as they become due, liquidity management can reduce the probability of an adverse situation development. The importance of liquidity transcends individual institutions, as liquidity shortfall in one institution can have repercussions on the entire system.

Liquidity risk management refers to the risk of maturing liability not finding enough maturing assets to meet these liabilities. It is the potential inability to meet the liability as they became due. This risk arises because borrows funds for different maturities in the form of deposits, market operations etc. and lock them into assets of different maturities.

Liquidity Gap also arises due to unpredictability of deposit withdrawals, changes in loan demands. Hence measuring and managing liquidity needs are vital for effective and viable operations.

Liquidity measurement is quite a difficult task and usually the stock or cash flow approaches are used for its measurement. The stock

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approach used certain liquidity ratios. The liquidity ratios are the ideal indicators of liquidity of Operating in developed financial markets, the ratio do not reveal the real liquidity profile of s which are operating generally in a fairly illiquid market. The assets, which are commonly considered as liquid like Government securities, have limited liquidity when the market and players are in one direction. Thus analysis of liquidity involves tracking of cash flow mismatches.

The statement of structural liquidity may be prepared by placing all cash inflows and outflows in the maturity ladder according to the expected timing of cash flows.

The MATURITY PROFILE could be used for measuring the future cash flows in different time bands.

The position of Assets and Liabilities are classified according to the maturity patterns a maturing liability will be a cash outflow while a maturing asset will be a cash inflows. The measuring of the future cash flows of s is done in different time buckets.

MATURITY PROFILE – LIQUIDITY

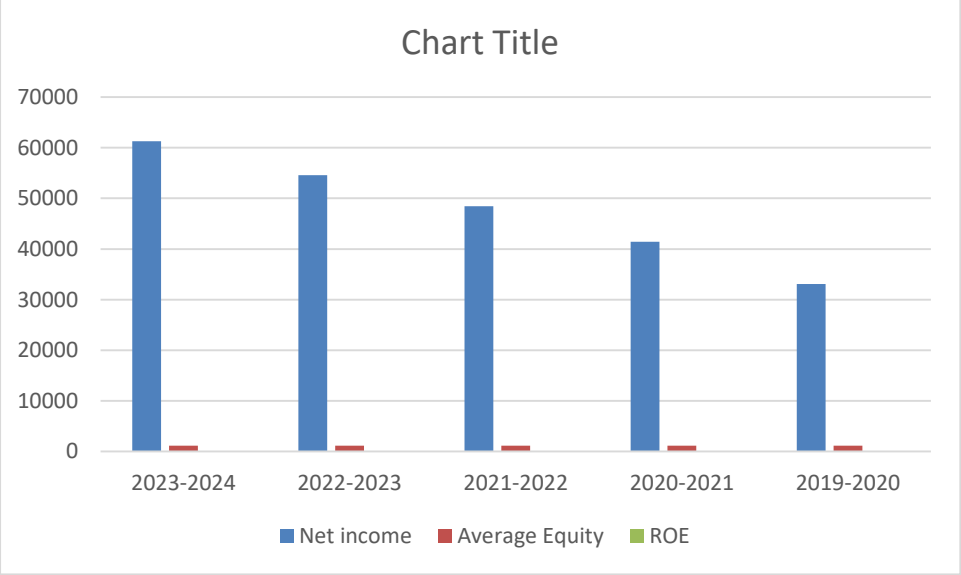
DATA ANALYSIS AND INTERPRETATION

Ratio Analysis

- Return on Assets (ROA)

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

Year	Net income	Average Total Assets	ROA
2023-2024	61267.29	646129.30	9.48220
2022-2023	54606.02	594641.60	9.18301
2021-2022	48421.30	536794.69	9.02045
2020-2021	41450.75	473647.09	8.75145
2019-2020	33082.96	406233.67	8.14382



Interpretation:

In the ROA the total Average Assets was increasing year by year and the net income was also in the increasing position

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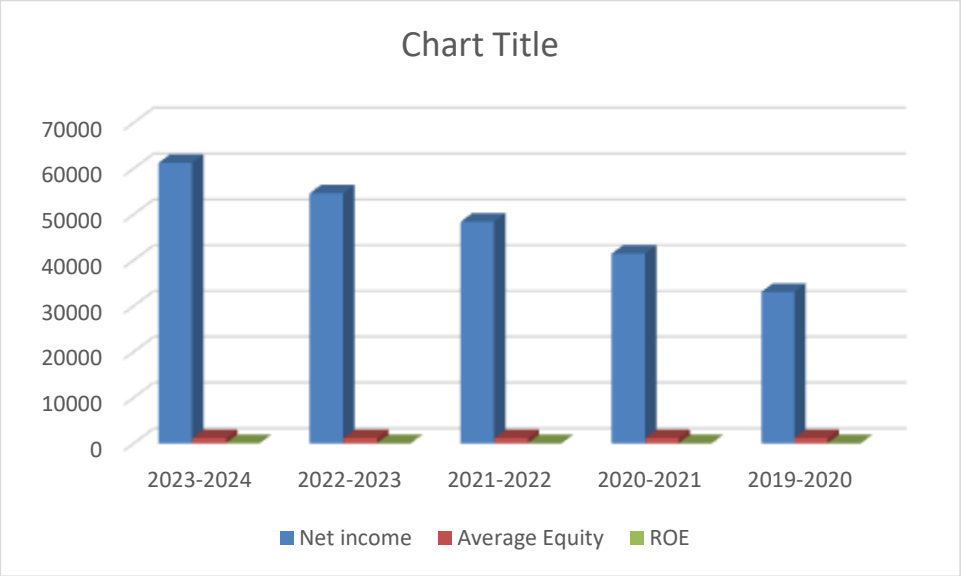
🔸Return on Equity (ROE)

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Average Stockholders' Equity}}$$

Year	Net income	Average Equity	ROE
2023-2024	61267.29	1159.66	52.83211
2022-2023	54606.02	1155.04	47.27630
2021-2022	48421.30	1153.63	41.97298
2020-2021	41450.75	1152.77	35.95752
2019-2020	33082.96	1151.82	28.72234



Interpretation:
The net income of the organization was in the increasing position and also the equity value for the investors is also in the increasing stage.

🔸Return on Common Equity (ROCE)

$$\text{Return on Common Equity} = \frac{\text{Net Income}}{\text{Average Common Stockholders' Equity}}$$

Year	Net income	Average Common Stockholders' Equity	ROCE
2023-2024	61267.29	1159.66	52.83211
2022-2023	54606.02	1155.04	47.27630
2021-2022	48421.30	1153.63	41.97298
2020-2021	41450.75	1152.77	35.95752
2019-2020	33082.96	1151.82	28.72234

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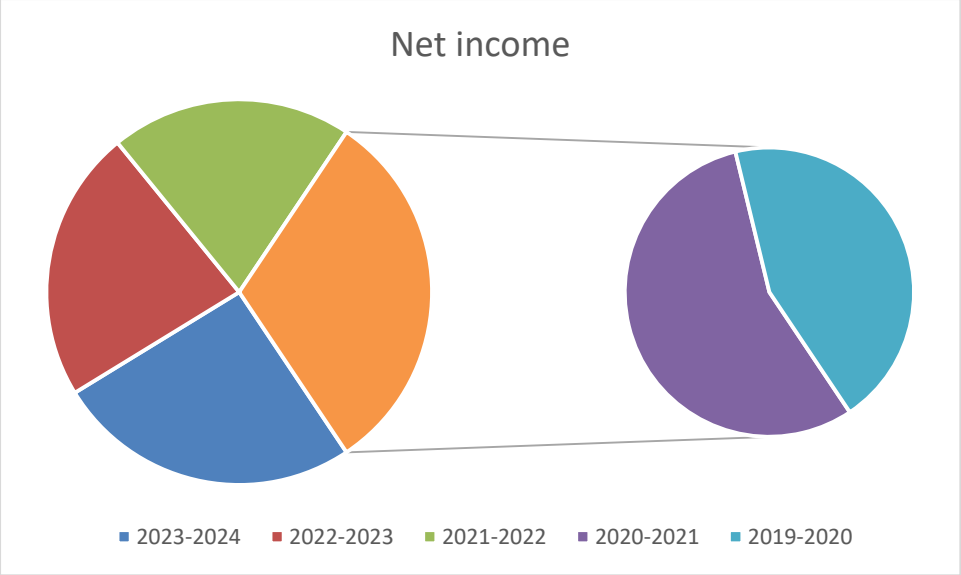


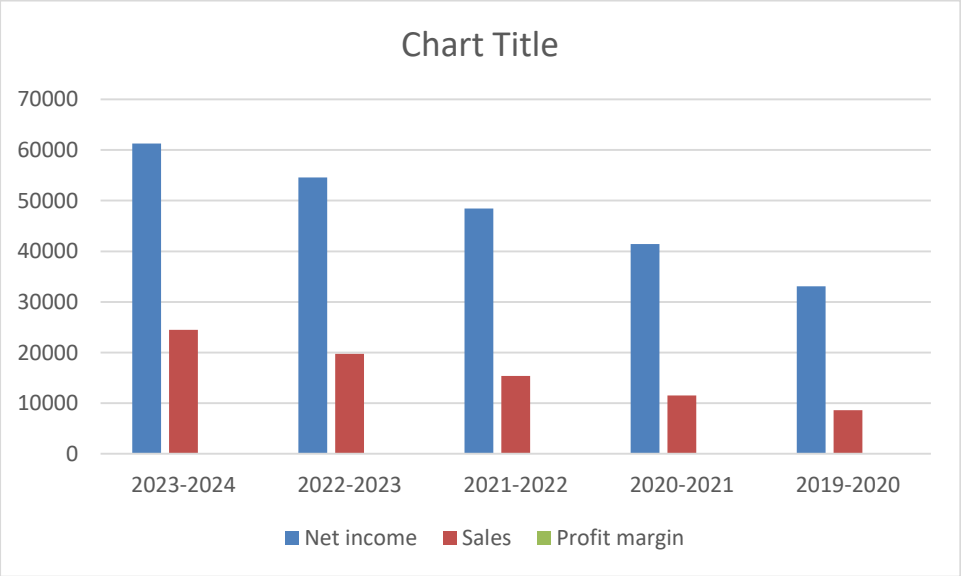
Interpretation:

The net income of the organization was in the increasing position and also the equity value for the shareholders is also in the increasing stage.

🔶Profit Margin

$$\text{Profit Margin} = \frac{\text{Net Income}}{\text{Sales}}$$

Year	Net income	Sales	Profit margin
2023-2024	61267.29	24493.94	2.501324
2022-2023	54606.02	19712.77	2.770083
2021-2022	48421.30	15379.70	3.148390
2020-2021	41450.75	11483.01	3.609746
2019-2020	33082.96	8613.59	3.840786



Interpretation:

The profit margin of ICICI is in the decreasing stage (margin depends on company police).

FINDINGS

1. **ALM** technique is aimed to tackle the market risks. Its objective is to stabilize

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and improve Net interest Income **(NII) i.e 61267.29 in 2024**.

2. Implementation of ALM as a Risk Management tool is done using maturity profiles and GAP analysis and Gap is 9558.21.
3. ALM presents a disciplined decision making framework for while at the same time guarding the risk levels.
4. Perform Division realization has increased by 5.39% even the Turnover has come to 11,495.83Cr in 2022-23 year. The profit After Tax has came **11,1 75.35** Cr in Current year because of slope in Industry.
5. The PAT is in an increasing trend from 2019-2020 because of increase in sale prices and also decreases in the cost of manufacturing/Service. In 2023 and 2024 even the cost of manufacturing has increased by 5.69% because of higher sales volume PAT has increased considerably, which leads to higher EPS, which is at **19.28**in 2024.
6. The company also increased considerably which investors in coming period. The company has taken up a plant expansion program during the year to increase the production activity and to meet the increase in the demand
7. Because of decrease in Operating expenses to the time of 14,631.56 Cr the Net profit has increased. It stood at in current year increase because of redemption of debenture and cost reduction. A dividend of Rs.250.00 Cr as declared during the year at 8.57% on equity.

CONCLUSION

It is not always the goal of ALM to remove or significantly reduce risk. The return demand and the goals of the company will determine the amount of risk.

In most cases, an entity's upper management will establish and periodically assess its financial goals and risk tolerances.

Every asset and liability has its own unique collection of potential dangers. Each risk is dissected into its constituent parts, and the root causes of each part are evaluated.

There are also found relationships between different types of dangers and external causes.

One way to measure risk exposure is in relation to changes in the individual parts. Another way is to look at the distribution of results for a collection of simulated scenarios for the part over time. Lastly, you may find the highest predicted loss for a particular confidence interval in a set of scenarios.

The risk exposure must be measured and monitored on a regular basis. The entity's risk tolerances and financial goals are subject to change, which means that the present ALM techniques may not be suitable in an ever-changing context.

Therefore, it is necessary to assess and modify these methods on a regular basis. At this stage, it is crucial to have a structured, recorded communication procedure.

Suggestions

1. They should strengthen its management information system (MIS) and computer processing capabilities for accurate measurement of liquidity and interest rate Risks in their Books.
2. In the short term the Net interest income or Net interest margins (NIM) creates economic value of the which involves up gradation of existing systems & Application software to attain better & improvised levels.
3. It is essential that remain alert to the events that effect its operating environment & react accordingly in order to avoid any undesirable risks.
4. **ICICI** requires efficient human and technological infrastructure which will future lead to smooth integration of the risk management process with effective business strategies.

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