A STUDY ON ASSETS AND LIABILITY MANAGEMENT" WITH SPECIAL REFERENCE TO ICICI BANK LIMITED

[1]Kunchala Nikitha, II MBA Student, Malla Reddy Engineering College(Autonomous), Hyd, E-Mail: nikithatanneru219@gmail.com

[2]Dr. K. Maddileti, Associate Professor, Department of MBA, Malla Reddy Engineering College(A), Hyd , E-Mail: maddiletik12@gmail.com

ABSTRACT

This study explores the practices and strategies of Asset and Liability Management (ALM) at ICICI Bank, one of India's leading private sector banks. ALM is a vital risk management tool that aims to mitigate financial risks arising from mismatches between assets and liabilities in terms of maturity and interest rates. The research focuses on how ICICI Bank effectively manages liquidity risk, interest rate risk, and capital adequacy while maintaining financial stability and regulatory compliance. By analyzing financial reports, risk disclosures, and ALM frameworks, the study assesses the bank's ability to adapt to dynamic economic conditions and regulatory changes. The findings suggest that ICICI Bank employs a robust ALM framework supported by advanced risk assessment tools, periodic stress testing, and scenario analysis. This enables the bank to sustain profitability, protect investor interests, and ensure long-term solvency. The study concludes that effective ALM is crucial not only for regulatory adherence but also for strategic decision-making in the banking sector. The scope of the study is identified after and during the study is conducted. The main scope of the study was to put into practical the theoretical aspect of the study into real life work experience. The study of Asset & Liability is based on tools like Ratio Analysis, Statement of changes in Asset & Liability. Further the study is based on last5 years Annual Reports of **ICICI BANK**

Key words: Assets, Growth, Liabilities, Management, Profitability.

INTRODUCTION

Assets and Liability Management (ALM) is a strategic approach to managing the balance sheet of an organization by synchronizing assets and liabilities to minimize risk and maximize profitability. It is particularly critical in financial institutions such as banks, insurance companies, and investment firms where the mismatch of assets and liabilities can lead to liquidity crises or financial instability.

The essence of ALM lies in ensuring that an organization's assets are structured and timed to meet its liabilities as they fall due. This involves careful monitoring and management of risks such as interest rate risk, liquidity risk, credit risk, and operational risk. By aligning maturities and cash flows, institutions can maintain solvency and profitability under both normal and stress conditions.

Traditionally, ALM focused primarily on interest rate mismatches. However, in today's dynamic financial landscape, it encompasses a broader framework that includes regulatory compliance (such as Basel III norms), market volatility, and strategic business planning. Modern ALM integrates financial analytics, forecasting models, and risk assessment tools to enhance decision-making.

REVIEW OF LITERATURE

1) **Havrylenko, Y. (2025)** addresses optimal investment-consumption problems involving fixed-term securities. The author develops a methodology using the generalized martingale approach to derive semi-closed-form solutions for utility-maximizing investors.
2) **Chen, X., Huang, F., & Li, X. (2025** addresses ALM in uncertain economic environments by employing continuous-time uncertain differential equations driven by the Liu process. The authors develop an optimal ALM strategy that balances risky and risk-free investments, formulated as an uncertain optimal control problem.

3) **Cui, X., & Li, X. (2025)** introduces an enhanced mean-variance portfolio policy for multiperiod ALM problems. The authors propose a novel approach that outperforms traditional optimal strategies by incorporating dynamic adjustments over multiple periods.
4) **Consigli, G., Dentcheva, D., Maggioni, F., & Micheli, G. (2025)** formulates a multistage stochastic programming model for financial intermediaries managing assets and liabilities exposed to various risks. By incorporating sequential second-order stochastic dominance constraints, the model ensures financial equilibrium over time.
5) **Dr. K. Prince Paul Antony (2024)** examines the role of Asset Liability Management (ALM) as a vital tool for risk management in Indian banks. Utilizing ratio analysis, the study evaluates the impact of ALM on bank profitability over the period from 2014 to 2018.

NEED FOR THE STUDY

In today's volatile and complex financial environment, the need for effective **Assets and Liability Management (ALM)** has become more critical than ever. Organizations, particularly in the financial sector, face constant challenges in managing risks arising from mismatches in the maturity and interest rates of assets and liabilities. A lack of coordination between these elements can lead to severe liquidity problems, interest rate exposure, and in extreme cases, institutional failure. The global financial crises and recent disruptions in the banking and insurance sectors have emphasized the importance of prudent ALM practices. Moreover, changing regulatory requirements, economic uncertainties, and customer behavior have added layers of complexity to financial management

SCOPE OF THE STUDY

Asset and liability management is a practice used by financial Performance to mitigate financial risks resulting from a mismatch of assets and liabilities. By strategically matching of assets and liabilities, financial performances can achieve greater efficiency and profitability while also reducing risk. The main scope of the study was to put into practical the theoretical aspect of the study into real life work experience. The study of Asset & Liability is based on tools like Ratio Analysis, Statement of changes in Asset & Liability. Further the study is based on last5 years Annual Reports of ICICI BANK.

OBJECTIVES OF THE STUDY

1) To study the effectiveness of Asset and liability management in financial performance of ICICI BANK Ltd
2) To Know a source and uses of the Asset & Liability.
3) To Examine the liquidity position through various Asset & Liability related ratios.
4) To study the Asset & Liability components such as receivables accounts, cash management, Inventory management.
5) To make suggestions based on the finding of the study.

RESEARCH METHODOLOGY

Research methodology generally refers to the procedure carried out in any project on research study. Methodology gives clear picture of suitable clarification and sequence of the different stages of the study, as to arrive at a proper manifestation of the objective, and the scope.

Research design: A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure.

Research design can be thought of as the structure of research is the glue that holds all of the elements in a research project together. We often describe a design using a concise notation that enables us to summarize a complex design structure efficiently.

A research design appropriate for a particular research problem, usually involves the consideration of the following factors:

- The means of obtaining information.
- The availability and skills of the researcher and his staff.

- The objective of the problem to be studied.
- The nature of the problem to be studied.
- The availability of time and money for the research work.

TYPES OF RESEARCH

In analytical research, on the other hand, the researcher has to use facts or information already available, and analyze these to make a critical evaluation of the material.

METHOD OF DATA COLLECTION

Secondary data

The secondary data are those which have already collected and stored. Secondary data easily get those secondary data from records, annual reports of the company etc. will save the time, money and efforts to collect the data.

The major source of data for this project was collected through annual reports, profit and loss account of 5year period from 2018.

TOOLS FOR DATA COLLECTION

SAMPLING DESIGN

Sampling Unit : Financial Statements.

Sampling Size : Last five years financial statements. Tool Used for

calculations : MS-Excel.

TOOLS FOR ANALYSIS

- Ratio analysis
- Trend Analysis

LIMITATIONS OF THE STUDY

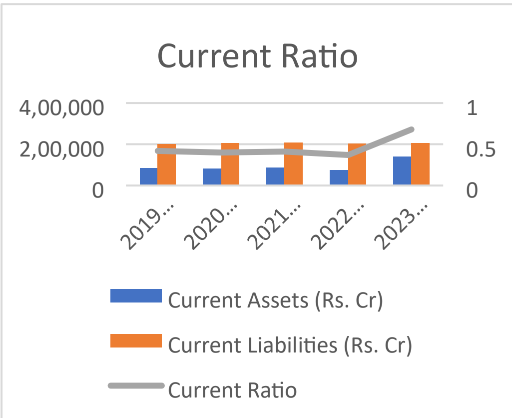
1) The study duration is short.
2) The analysis is limed to five years of data study (from year 2018 to year 2022) for financial analysis.
3) Limited interaction with the concerned heads due to their busy schedule.

DATA ANALYSIS AND INTERPRETATION

1.THE FOLLOWING TABLE SHOWS THE CURRENT RATIO

1. Current Ratio

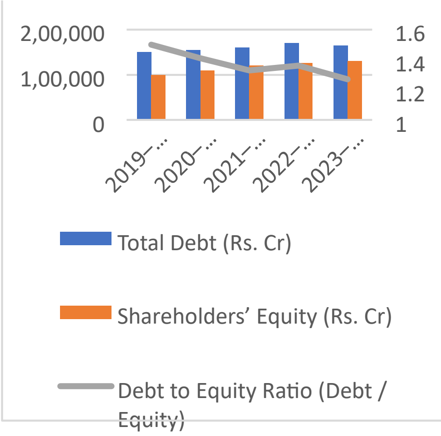
Financial Year	Current Assets (Rs. Cr)	Current Liabilities (Rs. Cr)	Current Ratio
2019–20	84,000	200,000	0.42
2020–21	82,000	205,000	0.40
2021–22	85,000	208,000	0.41
2022–23	75,000	202,000	0.37
2023–24	140,000	205,000	0.68



Interpretation: A Current Ratio below 1 implies that the company may not have sufficient current assets to pay off its current liabilities, indicating potential liquidity risk. The years 2019–20 through2022–23 show this risk clearly, with ratios hovering between 0.37 and 0.42. The increase to 0.68 in 2023–24 indicates positive movement towards liquidity improvement, possibly due to better cash management, reduction in short-term debt, or growth in current assets. However, since the ratio is still below 1, the company needs to continue focusing on improving its liquidity to ensure it can comfortably meet its shortterm obligations.

2. Debt to Equity Ratio

Financial Year	Total Debt (Rs. Cr)	Shareholders' Equity (Rs. Cr)	Debt to Equity Ratio (Debt / Equity)
2019–20	150,000	100,000	1.50
2020–21	155,000	110,000	1.41
2021–22	160,000	120,000	1.33
2022–23	170,000	125,000	1.36
2023–24	165,000	130,000	1.27

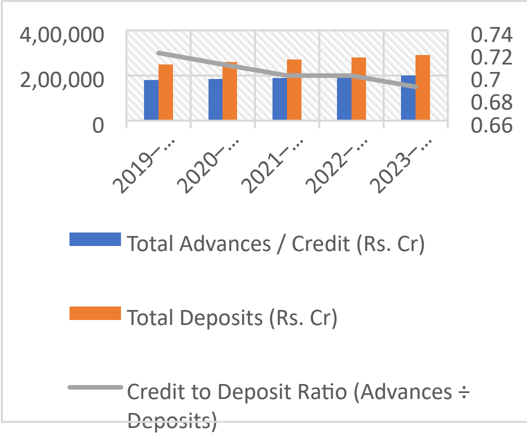


Interpretation: A Debt to Equity Ratio above 1 implies that the company has more debt than equity, which can be riskier as debt involves fixed obligations. The gradual decrease from 1.50 to 1.27 suggests that the company is improving its capital structure by managing and reducing its debt levels or increasing equity. While the ratio remains above 1, indicating moderate leverage, the trend is positive for financial stability and creditworthiness.

3. Credit to Deposit Ratio

Financial Year	Total Advances / Credit (Rs. Cr)	Total Deposits (Rs. Cr)	Credit to Deposit Ratio (Advances

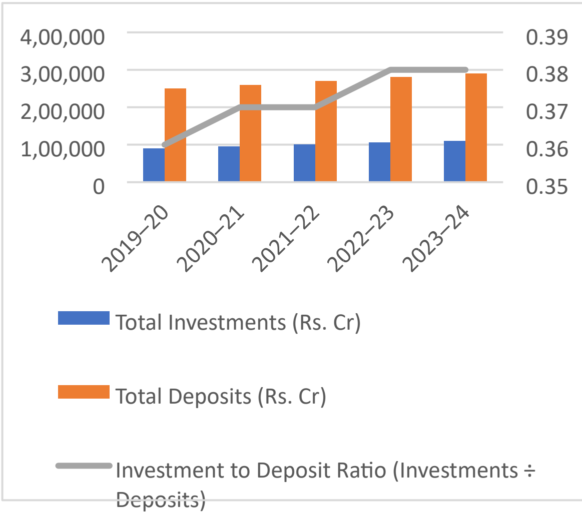
			÷ Deposits)
2019–20	180,000	250,000	0.72
2020–21	185,000	260,000	0.71
2021–22	190,000	270,000	0.70
2022–23	195,000	280,000	0.70
2023–24	200,000	290,000	0.69



Interpretation: A Credit to Deposit ratio between 0.6 and 0.8 is generally considered healthy for banks, balancing profitability and liquidity. The gradual decline from 0.72 to 0.69 suggests the bank is maintaining a cautious lending approach by keeping adequate deposits as reserves, possibly to safeguard against liquidity risks. This conservative stance may reduce risk but could also limit income from interest on advances.

4. Investment to Deposit Ratio

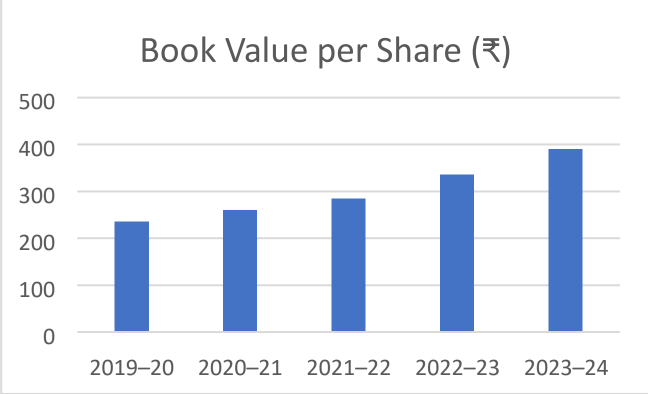
Financial Year	Total Investments (Rs. Cr)	Total Deposits (Rs. Cr)	Investment to Deposit Ratio (Investments ÷ Deposits)
2019–20	90,000	250,000	0.36
2020–21	95,000	260,000	0.37
2021–22	100,000	270,000	0.37
2022–23	105,000	280,000	0.38
2023–24	110,000	290,000	0.38



Interpretation: An Investment to Deposit ratio in this range signifies that the bank is maintaining a balanced approach towards investing deposits to earn returns while managing liquidity. The gradual increase implies a slightly greater focus on investment income, which could help diversify revenue sources. However, the bank should ensure it maintains enough liquid assets to meet withdrawal demands and avoid over-investment risk.

5. Book Value per Share

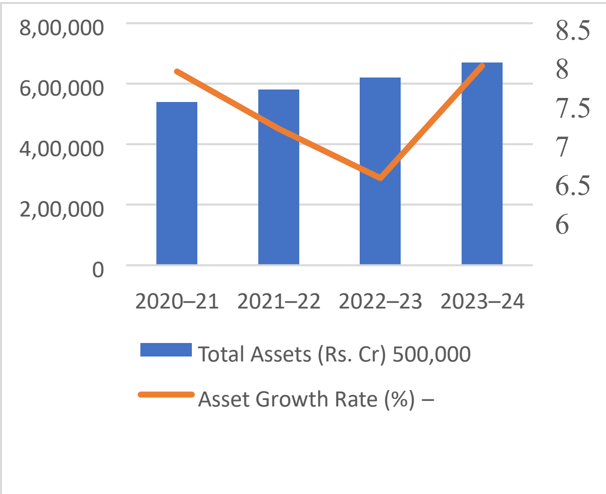
Financial Year	Book Value per Share (₹)
2019–20	235
2020–21	260
2021–22	285
2022–23	335
2023–24	390



Interpretation: The steady rise in Book Value per Share over the five years suggests that the company has been successful in retaining earnings and growing its equity base. This increase enhances investor confidence as it indicates that the net assets backing each share are growing, which could potentially lead to higher market valuation. A strong book value also signals financial stability and the company's capacity to withstand economic fluctuations.

6. Asset Growth Rate

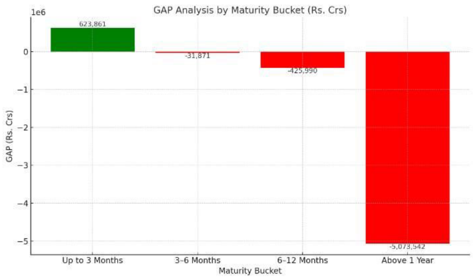
Financial Year	Total Assets (Rs. Cr)	Asset Growth Rate (%)
2019–20	500,000	–
2020–21	540,000	8.00
2021–22	580,000	7.41
2022–23	620,000	6.90
2023–24	670,000	8.06



Interpretation: The consistent positive asset growth rate reflects the company's capacity to increase its asset base year over year, which is a sign of healthy expansion and business development. The slight fluctuations in growth rates indicate normal business cycles, but the overall upward trend suggests the company is effectively investing and growing its resources to support operations and future revenue.

GAP ANALYSIS – FY 2020–21

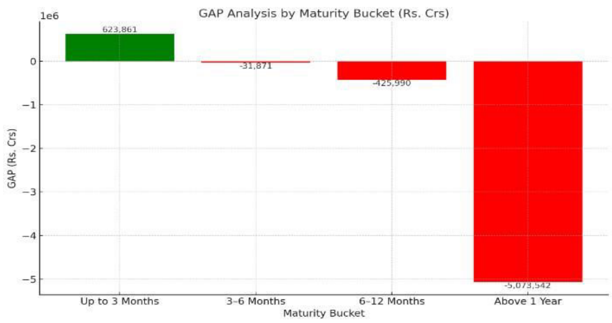
Maturity Bucket	GAP (Rs. Crs)
Up to 3 Months	-41,020
3–6 Months	-2,930
6–12 Months	+10,452
Above 1 Year	+28,945



Interpretation: The significant negative GAP in the short-term maturity buckets (up to 3 months: -41,020 Cr, and 3–6 months: -2,930 Cr) highlights a mismatch where liabilities exceed assets. This situation may force the bank to rely on external borrowings or liquidate assets to meet immediate obligations, increasing liquidity risk. On the other hand, the positive GAP in the 6–12 months (+10,452 Cr) and above 1 year (+28,945 Cr) buckets indicates that the bank holds more assets than liabilities in the medium to long-term, which can support stable earnings and financial resilience over time. This structural asset surplus beyond 6 months provides a cushion against future interest rate changes and supports the bank's profitability and solvency.

GAP ANALYSIS – FY 2021–22

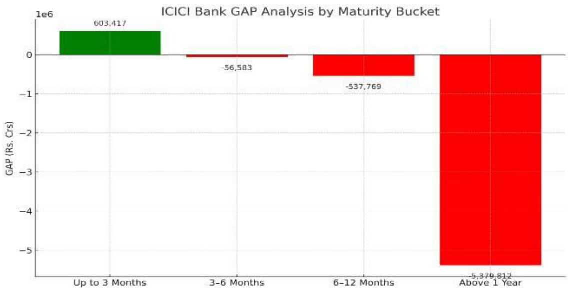
Maturity Bucket	GAP (Rs. Crs)
Up to 3 Months	+6,23,861
3–6 Months	-31,871
6–12 Months	-4,25,990
Above 1 Year	-50,73,542



Interpretation: The large positive GAP of Rs. 6,23,861 crores in the up to 3 months bucket implies that the bank holds more rate sensitive assets than liabilities maturing very soon, which enhances its short-term liquidity position. However, the significant negative GAPs in the 3–6 months (-31,871 Cr), 6–12 months (-4,25,990 Cr), and especially above 1 year (50,73,542 Cr) buckets reveal a structural imbalance where liabilities substantially exceed assets in these periods. This exposes the bank to medium and long-term liquidity risks and interest rate

GAP ANALYSIS – FY 2022–23

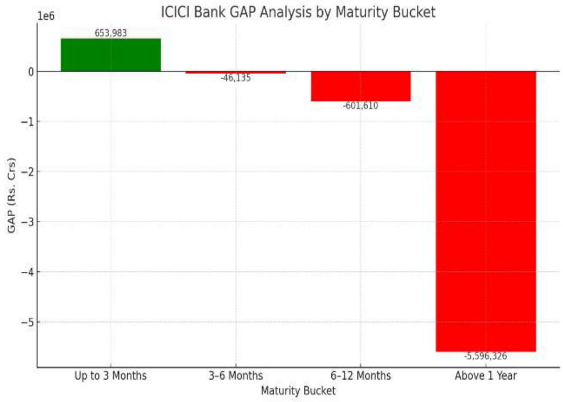
Maturity Bucket	GAP (Rs. Crs)
Up to 3 Months	+6,03,417
3–6 Months	-56,583
6–12 Months	-5,37,769
Above 1 Year	-53,79,812



Interpretation: The substantial positive GAP of Rs. 6,03,417 crores in the up to 3 months bucket reflects a healthy liquidity position in the very short term, ensuring the bank can meet its immediate obligations comfortably. On the other hand, significant negative GAPs in the 3–6 months (-56,583 Cr), 6–12 months (-5,37,769 Cr), and above 1 year (-53,79,812 Cr) maturity buckets indicate that liabilities outweigh assets in these periods. This mismatch exposes the bank to potential liquidity crunch and interest rate risk in the medium and long term, requiring careful asset-liability management and strategic interventions to maintain financial stability.

GAP ANALYSIS – FY 2023–24

Maturity Bucket	GAP (Rs. Crs)
Up to 3 Months	+6,53,983
3–6 Months	-46,135
6–12 Months	-6,01,610
Above 1 Year	-55,96,326



Interpretation: The significant positive GAP of Rs. 6,53,983 crores in the up to 3 months bucket reflects robust liquidity in the very short term, enabling the bank to comfortably meet its near-term obligations. In contrast, the negative GAPs in the 3–6 months (-46,135 Cr), 6– 12 months (-6,01,610 Cr), and above 1 year (-55,96,326 Cr) buckets show that liabilities exceed assets in these time frames. This structural mismatch poses a risk of liquidity stress and interest rate exposure in the medium and long term. The bank must focus on assetliability rebalancing and prudent financial management to mitigate these risks and ensure sustainable financial health.

5.1 FINDINGS

ICICI Bank GAP Analysis Findings (FY 2019-20 to FY 2023-24)

1. **Short-term Liquidity Position (Up to 3 Months Bucket): FY 2019-20 and 202021:** The bank faced **significant negative gaps**, indicating a short-term funding deficit and potential liquidity risk. This implies liabilities exceeded assets maturing within 3 months, requiring additional short-term funding or liquidity management. **FY 202122 onwards:** There is a **dramatic improvement to a large positive gap**, reflecting a strong surplus of rate-sensitive assets over liabilities maturing soon. This signals robust short-term liquidity and a better position to meet immediate obligations comfortably.

2. **Medium-term Maturity Buckets (3-6 and 6-12 Months): FY 2019-20 and 202021:** Small negative gap in 3–6 months but positive in 6–12 months, suggesting manageable liquidity risk and some medium-term asset surplus. **FY 2021-22 to 202324:** Increasingly **large negative gaps** in both 3–6 and 6–12 months buckets, indicating liabilities substantially exceed assets maturing in these periods. This trend highlights rising medium-term liquidity risk and a need for focused asset-liability management.
3. **Long-term Maturity Bucket (Above 1 Year): FY 2019-20 and 2020-21:** Strong positive gaps indicate a surplus of long-term assets over liabilities, supporting financial stability and cushioning against interest rate changes. **FY 2021-22 onwards:** This flips dramatically to large negative gaps, showing liabilities significantly outweigh long-term assets. This exposes the bank to **interest rate risk and solvency concerns** unless mitigated by strategic rebalancing.
4. **Overall Structural Shift (FY 2019-20 to FY 2023-24):** The bank has transitioned from a **liquidity risk concentrated in short-term buckets (2019-21)** to a position of **strong short-term liquidity but increasing medium- and long-term funding mismatches (2021-24)**. This shift suggests the bank is **better positioned to meet immediate obligations** but faces **significant medium- and long-term asset-liability mismatches** that could impact profitability and financial stability if not addressed.
5. **Implications and Recommendations:** The persistent **negative gaps beyond 3 months** require proactive asset-liability management strategies, such as rebalancing the portfolio, lengthening asset maturities, or adjusting liability structures.

   Maintaining the positive short-term liquidity is critical but insufficient alone to ensure overall financial health. The bank should monitor interest rate risk exposure closely and plan funding sources to cover medium- and long-term gaps. Enhancing the duration matching between rate-sensitive assets and liabilities is essential to mitigate liquidity crunch and interest rate shocks.
6. **Growth Trajectory (Asset Growth Rate):** The bank experienced steady asset growth with rates between 6.9% and 8.06%, indicating robust expansion of its asset base. Such growth signals effective resource utilization and the bank's capacity to support increasing business operations.

SUGGESTIONS

1. **Improve Liquidity Management:** Although the Current Ratio improved in FY 2023–24, it still remains below 1.0, indicating potential short-term liquidity risks. ICICI should continue to enhance its liquidity position by increasing current assets or reducing short-term liabilities. Implement stronger cash flow management practices and maintain adequate liquid reserves to meet sudden withdrawal demands or unforeseen expenses.
2. **Optimize Debt Levels:** The decreasing Debt to Equity Ratio is positive, but ICICI should maintain a balanced approach to leverage, ensuring that the bank can benefit from debt financing without increasing financial risk excessively. Explore refinancing options to reduce cost of debt and improve the overall capital structure.
3. **Enhance Lending Efficiency:** The slight decline in Credit to Deposit Ratio suggests cautious lending. ICICI could evaluate opportunities to optimize loan growth by targeting creditworthy customers to improve interest income, while maintaining prudent risk controls. Expand lending in high-growth sectors or priority areas to boost profitability without compromising asset quality.
4. **Diversify Investments:** With a steady increase in Investment to Deposit Ratio, ICICI should continue diversifying its investment portfolio to balance returns and liquidity. Regularly

review the quality and maturity profile of investments to avoid concentration risks and ensure availability of funds when needed.

5. **Focus on Shareholder Value Creation:** The rise in Book Value per Share indicates good equity growth; however, ICICI can enhance shareholder returns further by considering dividend policies and share buybacks aligned with growth plans. Communicate effectively with investors about financial performance and strategic initiatives to strengthen market confidence.
6. **Sustain Asset Growth:** ICICI should continue to pursue sustainable asset growth by investing in technology, expanding branch networks, and enhancing customer services. Monitor asset quality closely to avoid non-performing assets that could impair growth and profitability.
7. **Leverage Digital Transformation:** To improve operational efficiency and customer satisfaction, ICICI should increase investments in digital banking platforms and fintech partnerships. This can help attract new customers, reduce operational costs, and increase the bank's competitive edge.

CONCLUSION

The financial data of ICICI Bank from March 2020 to March 2024 demonstrates a consistent and healthy growth trajectory across key balance sheet components. Total Share Capital and Equity Share Capital have seen a steady increase, reflecting the bank's strong capital base. The substantial rise in Reserves and Net Worth indicates the accumulation of profits and improved financial stability over the years.

Deposits and Advances have shown significant growth, highlighting the bank's expanding customer base and lending activities, which are essential for revenue generation. The controlled growth in Borrowings, compared with Deposits, suggests prudent debt management, while the rise in Total Debt aligns with the bank's expanding business operations.

Asset quality remains robust, with a balanced mix of Cash & Balances with RBI, Investments, and Advances, ensuring liquidity and income generation. The steady increase in Gross and Net Block reflects continued investments in infrastructure and technology, supporting the bank's long-term growth strategy.

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