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THE FINANCIAL MODELLING PRACTICES IN KOTAK MAHINDRA BANK, HYDERABAD

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ABSTRACT
The financial modeling is a crucial tool for businesses in today's complex economy. It explains the theoretical foundation of financial modeling and its various applications in budgeting, forecasting, valuation, risk management, and investment decisions. The core of the report dives into the practical steps of building a financial model, from data collection to using different financial statements to create a complete picture of a company's financial health. A case study demonstrates how this model can be used in real-world situations to forecast outcomes, assess market changes, and evaluate investments. The report also acknowledges limitations like reliance on assumptions and data availability, emphasizing the importance of sensitivity analysis for a robust model. Finally, it concludes with recommendations for future advancements in financial modeling, including ongoing refinement, integration of AI and machine learning, and user training to maximize the benefits of this valuable tool.
Key Words: *Financial Evaluation, Risk Management, Financial Modelling, Investment Decisions.*

1. INTRODUCTION

Financial modeling is the process of creating a spreadsheet to analyze a company's financial performance. It is used to forecast future performance and make decisions about capital allocation, budgeting, and investments. Financial models can be complex and take into account a variety of factors, but they are a valuable tool for businesses of all sizes. The internet has had a major impact on financial modeling. New technologies such as mobile payments and cloud computing have made it easier for businesses to collect and analyze data. This has led to the development of more sophisticated financial models that can provide more accurate insights. The growth of the internet has also led to the emergence of new financial models, such as peer-to-peer lending and crowdfunding. These models are still in their early stages ofdevelopment, but they have the potential to disrupt the traditional financial industry. Despite the challenges, the internet has had a positive impact on financial modeling.easier for businesses to access data and develop more sophisticated models. This has led to better decision-making and improved financial performance for many businesses.

2.NEED AND IMPORTANCE OF THE STUDY

Financial modelling is a powerful tool for business leaders. It allows them to quantify the potential impact of decisions on a company's financial health before they are actually implemented. This is achieved by creating models that forecast future performance in areas like profit and loss, balance sheet, and cash flow. These models offer several advantages. They can predict outcomes, enabling managers to compare different options and make data-driven decisions with a clear justification. However, to be effective, financial models need to be built with specific principles in mind. The model's purpose should be clear, it should be adaptable to changing circumstances, and inflation must be considered.Additionally,clear communication and well-defined outcome metrics are crucial for a

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successful financial. Therefore, there is a need and importance of the study focus on the financial modelling practices in Kotak Mahindra bank.

3. SCOPE OF THE STUDY

Financial modelling is a versatile tool used across finance and business. It essentially translates real-world financial situations into mathematical models. This allows individuals and organizations to make data-driven decisions through quantitative analysis. In the realm of corporate finance, financial models are crucial for tasks like budgeting, planning, allocating resources, and evaluating investments. Equity research also leans heavily on financial modelling. Analysts use these models to assess companies, predict performance, and make investment recommendations. By considering various financial data and market factors, financial modelling empowers informed decision-making for both businesses and investors.

4. OBJECTIVE OF THE STUDY

- To forecast future financial performance (revenue, expenses, profitability) at Kotak Mahindra bank.
- To analyze potential investments using DCF, ROI, and comparisons to choose the best option.
- To develop budgets and assess strategic decisions to optimize financial plans of Kotak Mahindra bank.
- To demonstrate the versatility of financial modeling as a tool for informed decision-making in finance.

5.REVIEWOF LITERATURE

- **Almeida-Filho *et. al* (2021)** analyzed that the main financial criteria and the MCDM/A methods used for financial decisions; the problematics covered by the papers; and identifying the main authors, journals and financial areas supported by these models**. Kurniawan and Fredy (2010)**analyzed that the expectations of the parties who are involved in PFI financial modelling through a comprehensive literature review. Since the stakeholders' expectations are often different and contradictory, how their key interests are accommodated and the opposing expectations are managed and discussed in this paper. The stakeholders' expectations are identified as critical success factors (CSFs) in PFI financial modelling.**Mitra *et. al* (2009)**analyzed those properties of scenario generators which are regarded as desirable; these are not sufficient to guarantee the "goodness" of a scenario generator. We also review classical models for scenario generation of asset prices. **Rutkauskas *et.al (*2008)** concluded that the research was performed with an experiment in FOREX and in some matured and emerging capital markets. The adequate for investments decision's reliability assessment portfolio will be presented and analyses as main instrument for developing sustainable return investment decisions strategy. **Brooke *et. al* (1986)**established that whether a new generation of modelling technologies and concepts, as expressed by the notion of decision support systems, had been successful in resolving the problems experienced with previous generations of computer models. **Beaman *et. al* (2005)** emphasized that reports on a survey and spreadsheet exercise given to a group of second-year undergraduate accounting students at an Australian university, both before and after a semester course aimed specifically at teaching spreadsheet design principles and problem-solving techniques. The findings show that spreadsheet errors and, in particular, spreadsheet design errors are prolific even for a simple domain-free exercise. **Spronk *et. al* (1997)** suggested that financial modelling is 'the development and implementation of tools supporting firms, investors, intermediaries, governments and others in their financial-economic decision making, including the validation of the premises behind these tools and the measurement of the effectivity of the use of these tools'. Clearly, in this definition, the decision and its solution are central. Unlike financial modelling in our definition, the theory of finance is not so much concerned with individual decisions, but rather with the effects of the decisions and actions of many individuals on the formation of prices in financial markets.

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6.RESEARCH METHODOLOGY

The basic principle in the research has been adopted in the overall methodology. The following methodology has been used for meeting the requirements.

6.1 Sources of data:

Secondary Data:

To build a comprehensive financial model, we will utilize secondary data sources such as financial statements, economic and industry reports, research articles, and stock market data.

6.2 PERIOD OF THE STUDY: The study covered period of 5 years i.e. from 2019-2023.

6.3 TOOLS & TECHNIQUES: To enhance our financial analysis, we will examine key ratios including liquidity ratios (Current Ratio, Quick Ratio), leverage ratios (Debt to Equity Ratio, Interest Coverage Ratio), and efficiency ratios (Asset Turnover Ratio, Inventory Turnover Ratio).

6.4 LIMITATIONS OF THE STUDY

- The future direction of markets is highly uncertain. In short, no single model can contain all the necessary information to capture the uncertain Path of outcomes.
- As a financial modelling is an analytical study, so that the result of study is different from person to person and company.
- The accuracy of a forecast depends on the quality of the data used as a basis for the financial model and projections. A company entering a new market space does not have any historical data on which to base then projections.

7. DATA ANALYSIS AND INTERPRETATION:

INCOME STATEMENT:

Metric	Average Growth Rate %)
nterest Income	5.19
Iet Interest Income	.92
Ion-Interest Income	5.54
)perating Income	2.84
retax Income	4.38
Iet Income	4.98

INTERPRETATION:

- Interest Income: Grew significantly, indicating strong earnings from loans and investments.
- Net Interest Income: Increased steadily, showing a healthy margin between interest earned and paid.
- Non-Interest Income: Declined slightly, possibly due to market challenges.
- Operating Income: Grew strongly, driven by efficient operations.
- Pretax Income: Grew healthily, reflecting effective cost management.
- Net Income: Increased substantially, highlighting overall profitability and financial strength.

BALANCE SHEET:

Metric	Average Growth Rate (%)
Total Assets	25.95
Total Liabilities	21.88

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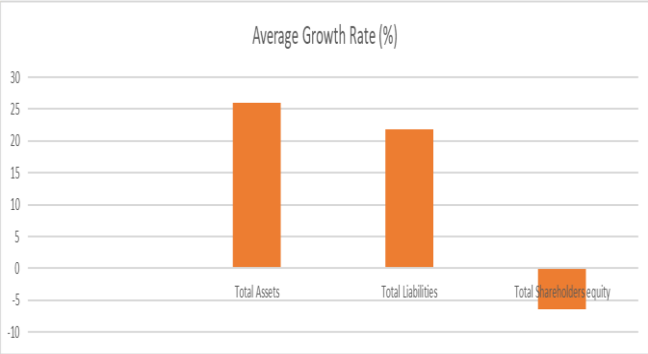
Total Shareholders' Equity	-6.45



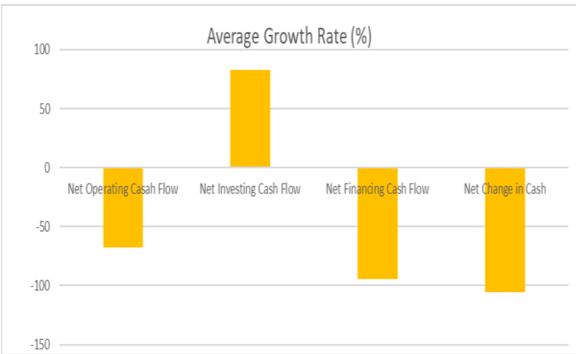
INTERPRETATION:

- **Total Assets**: Grew at an average rate of 25.95%, indicating expansion in the bank's asset base, potentially through increased investments and acquisitions.
- **Total Liabilities**: Increased by 21.88% on average, suggesting growth in the bank's liabilities, possibly to fund the expansion of its operations and lending activities.

- **Total Shareholders' Equity**: Declined at an average rate of -6.45%, indicating a reduction in the bank's net worth attributed to shareholders. This could result from factors like dividend payouts, share buybacks, or losses.

CASH FLOW STATEMENT:

Metric	Average Growth Rate (%)
Net Operating Cash Flow	57.59
Net Investing Cash Flow	2.48
Net Financing Cash Flow	94.48
Net Change in Cash	105.75



INTERPRETATION:

- **Net Operating Cash Flow**: Decreased significantly on average, indicating less cash generated from day-to-day business operations.

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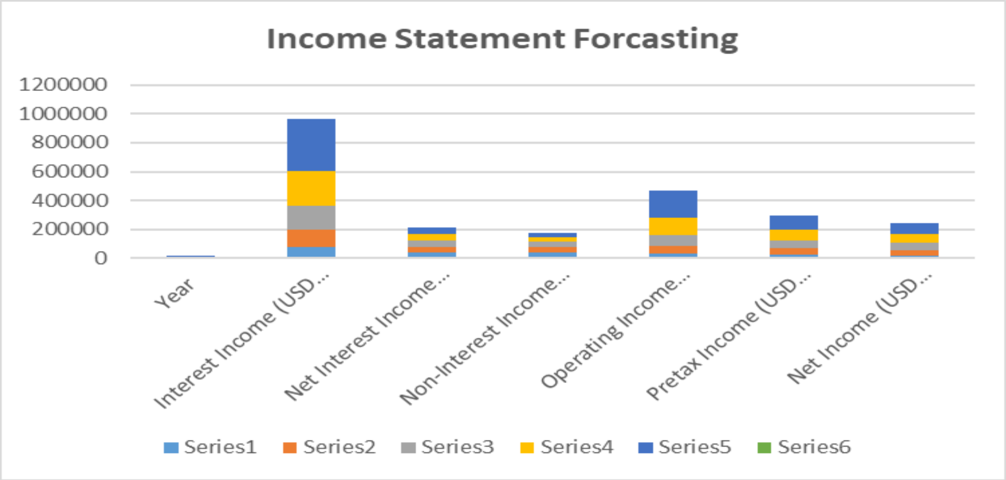
- **Net Investing Cash Flow**: Increased substantially, showing higher cash flows related to investments in assets like securities and loans.
- **Net Financing Cash Flow**: Decreased significantly, indicating reduced cash flows from activities such as issuing stocks or bonds and paying dividends.
- **Net Change in Cash**: Decreased overall, reflecting a net outflow of cash over the period, possibly due to increased investments and reduced cash generation from operations and financing.

INCOME STATEMENT FORECAST:

Year	Interest Income (USD Millions)	Net Interest Income (USD Millions)	Non-Interest Income (USD Millions)	Operating Income (USD Millions)	Pretax Income (USD Millions)	Net Income (USD Millions)
2024	$79,500	$38,700	$40,800	$31,800	$25,600	$21,500
2025	$115,500	$40,600	$38,100	$52,700	$41,800	$35,900
2026	$168,100	$42,800	$35,600	$78,900	$58,500	$47,400
2027	$244,500	$45,300	$33,300	$119,800	$75,600	$60,000
2028	$355,900	$48,200	$31,200	$184,800	$97,400	$76,200



INTERPRETATION:

- Interest Income: There is a pronounced uptick, with interest income growing from $79.5 million in 2024 to $355.9 million in 2028. This suggests an expanding base of interest-earning assets or an increasing interest rate environment.
- Net Interest Income: Net interest income also shows growth, albeit at a more moderate rate, from $38.7 million in 2024 to $48.2 million in 2028. This indicates stability or slight improvement in the net interest margin amidst growing interest income.
- Non-Interest Income: In contrast, non-interest income exhibits a decline, falling from $40.8 million in 2024 to $31.2 million in 2028. This could be attributed to factors such as changes in fee income, trading income, or other non-interest revenue sources.
- Operating Income: Operating income demonstrates substantial growth, soaring from $31.8 million in 2024 to $184.8 million in 2028. This reflects the overall profitability from both interest and non-interest sources after accounting for operating expenses.
- Pretax Income: Pretax income shows significant improvement, climbing from $25.6 million in 2024 to $97.4 million in 2028. This highlights the organization's pre-tax profitability.
- Net Income: Net income follows a similar upward trend, increasing from $21.5 million in 2024 to $76.2 million in 2028. This denotes the organization's bottom-line profitability, after all expenses and taxes are accounted for, indicating strong financial health.

BALANCE SHEET FORECAST:

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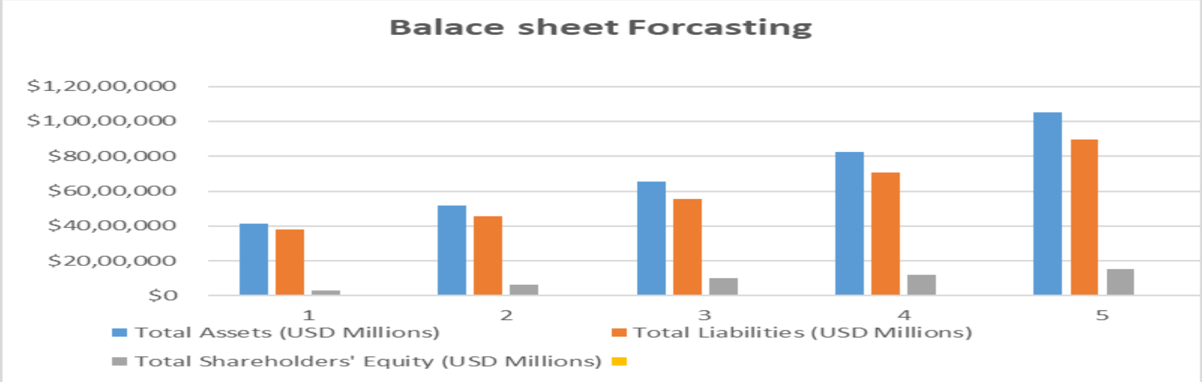
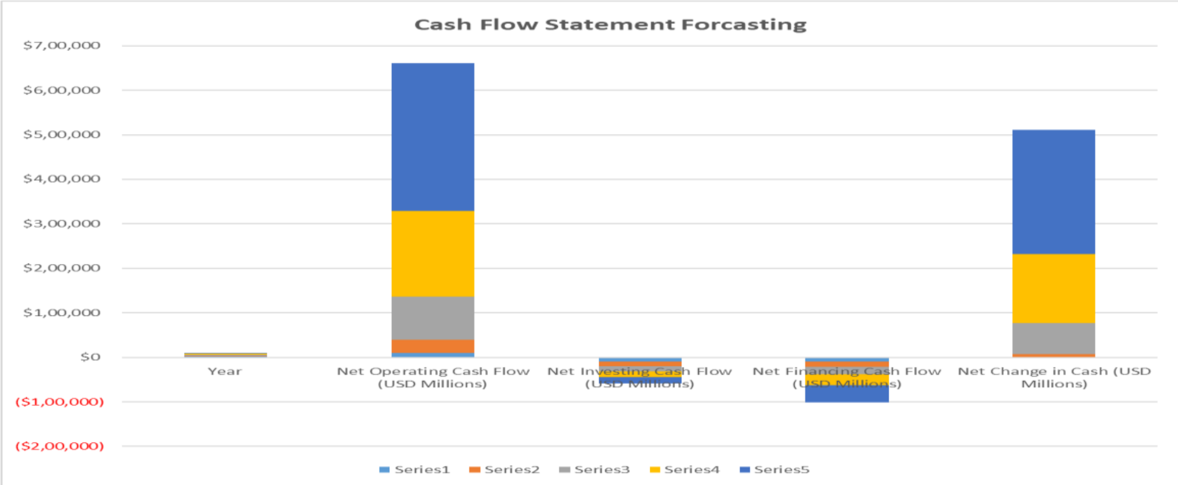
Year	Total Assets (USD Millions)	Total Liabilities (USD Millions)	Total Shareholders' Equity (USD Millions)
2024	$4,114,500	$3,812,400	$302,100
2025	$5,180,600	$4,549,300	$631,300
2026	$6,537,600	$5,539,900	$997,700
2027	$8,266,500	$7,065,000	$1,201,500
2028	$10,499,400	$8,953,700	$1,545,700



Interpretation:
Total Assets: There is a substantial increase in total assets, escalating from $4,114.5 million in 2024 to $10,499.4 million in 2028. This robust growth suggests enhanced asset base, potentially fueled by expansion in loans, investments, and other assets.
Total Liabilities: Total liabilities also expand, growing from $3,812.4 million in 2024 to $8,953.7 million in 2028. This indicates an increase in financial obligations such as deposits, borrowings, and other liabilities, albeit in line with asset growth.
Shareholders' Equity: Shareholders' equity experiences a notable rise, from $302.1 million in 2024 to $1,545.7 million in 2028. This favorable trend points to a strong capital base, with assets being primarily financed through equity, resulting in a healthy and substantial increase in net worth over the forecast period.

CASH FLOW STATEMENT FORECAST:

Year	Net Operating Cash Flow (USD Millions)	Net Investing Cash Flow (USD Millions)	Net Financing Cash Flow (USD Millions)	Net Change in Cash (USD Millions)
2024	$9,800	$-9,600	$-9,900	$-800
2025	$29,800	$-10,200	$-11,800	$7,800
2026	$97,200	$-11,400	$-16,200	$69,600
2027	$192,400	$-12,900	$-25,000	$154,500
2028	$331,600	$-14,100	$-38,900	$278,600



INTERPRETATION:

- Net Operating Cash Flow: Indicates a strong upward trajectory, escalating from $9,800 million in 2024 to a substantial $331,600 million in 2028. This suggests an impressive capacity to generate cash from core operations.
- Net Investing Cash Flow: Remains persistently negative, reflecting substantial investments in assets. It declines from -$9,600 million in 2024 to -$14,100 million in 2028, indicative of a decelerating pace of investment relative to operating cash flows.
- Net Financing Cash Flow: Exhibits a declining trend, dropping from -$9,900 million in 2024 to -$38,900 million in 2028, highlighting the company's preference for internal financing over external sources, possibly to maintain financial independence.
- Net Change in Cash: Despite the variability in investing and financing cash flows, there's a substantial net increase in cash, rising from -$800 million in 2024 to a vast $278,600 million by 2028. This accumulation signals a strong cash position and potential for future growth or strategic opportunities.

8.FINDINGS:

- Non-Interest Income remained relatively stable from 2019 to 2023, with slight fluctuations. In 2023, there was a slight increase to $68,731 million from $64,735 million in 2022.
- Non-Interest Expenses increased consistently, reaching $85,764 million in 2023, reflecting higher operational costs.
- Net Income showed a growth trend from 2019 to 2023, except for a dip in 2020. In 2023, it grew by 31.41%, reaching $49,261 million.
- Total Assets saw a steady increase, growing from $2,687,379 million in 2019 to $3,883,155 million in 2023.
- Total Liabilities followed a similar growth pattern to Total Assets, increasing to $3,555,277 million in 2023.
- Shareholders' Equity increased from $261,330 million in 2019 to $327,878 million in 2023, improving the company's financial stability.

9.SUGGESTIONS:

- **Interest Income and Expense Management:** Aim to reduce interest expenses through renegotiating borrowing terms or refinancing high-interest debt, thereby enhancing net interest margins.
- **Loan Loss Provision Strategy:** Implement stringent credit assessment and risk management procedures to minimize loan loss provisions, ensuring more stable profitability.
- **Operational Efficiency:** Review and optimize operational expenses to curb the rise in non-interest expenses, utilizing cost-cutting measures and efficiency enhancements.

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- **Diversification of Income:** Continue diversifying non-interest income sources, such as fee-based services, to decrease dependency on interest revenue.
- **Asset Management:** Focus on effective asset management to sustain total asset growth, involving strategic investments and asset optimization for maximum returns.
- **Debt Management:** Carefully monitor and manage the increase in total liabilities, maintaining a healthy debt-to-equity ratio to ensure long-term financial stability.
- **Shareholders'Equity Strengthening:**Enhance shareholders' equity through retained earnings and sound financial management, reinforcing the company's financial position.
- **Cash Flow Optimization:** Ensure efficient working capital management and cash flow optimization to support operations and investments, focusing on improving cash collection and managing payables effectively.

10.CONCULSION:

- Kotak Mahindra Bank is a diversified financial institution offering a wide range of services. Their strengths include a global presence, strong brand, and technological innovation. They benefit from multiple revenue streams and are positioned well for future growth through digital banking and emerging markets. Challenges include managing complexity and competition. Overall, Kotak Mahindra Bank is a leader in the global financial industry.

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