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Profitability of Bank of Baroda: An Analysis

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1. ABSTRACT

One of the industries in India with the highest growth is the banking sector. The banking industry is getting more complex today. In India, there are various banking organizations in operation. Bank of Baroda, the second-largest public sector bank, is the current choice. The study's goal is to anayse the Bank of Baroda's financial situation and performance both before and after the bank's merger. Bank profitability can be measured in a variety of ways, including WACC, regression analysis, the CAMEL model, and DuPont analysis. The study has used the DuPont model, which analyses the profitability of banks from each of the key parameters such net profit margin, assets turnover, and equity multiplier, since it makes it simple to analyze the profitability of businesses.

Key words: DuPont model, Bank of Baroda, Profitability.

2. INTRODUCTION

A bank is any entity that offers the service of transferring money and making money, as well as a financial intermediary that accepts deposits and loans money to the public. The middle French word Banque is where the word bank originates, and it basically means bench or counter. Banks actively contribute to the nation's economic growth. Their capacity to contribute positively to starting the growth process depends on an efficient financial system. The banking system is a crucial element of the larger economic system. It plays a significant part in mobilizing the country's funds and directing them toward important investment goals and better usage of the resources at hand.

The strength of a nation's banking system determines its financial situation. Understanding how banks perform is aided by analysis of their performance across a range of improvement areas. It is quite intriguing to know the business performance of the bank at its various time zone operations given that the Bank of Baroda has recently been one of the largest and best performing banking institutions, providing banking services to both urban and rural areas at its post-merger operations.

3. REVIEW OF LITERATURES

Padake.V et.al. (2015) examined that the study analyses the performance of selected banks in India using DuPont model. The researcher has chosen top 12 banks BSE Banked is selected to study the performance of banking sector in India in the last six years. DuPont model basically segregates the ROE into 3 parts net profit margin, total assets turnover, and the equity multiplier. The study revealed that performance of the bank cannot be judged by the profit or some ratios only. The banks made that more profits were not really efficient. Higher profit is reflection of more capital but there is no efficiency in utilizing all the capital.

Vidyha S et.al. (2018) compared and made an empirical assessment of financial efficiency of Citi bank and standard chartered bank. The study is based on secondary data. DuPont model to know the company returns on equity which can be analyzed through various ratios. The study concluded that DuPont model gives a white view on ROE of the firms which highlights and identify the area where there is a scope for improvement.

Ramu.L et.al. (2019) observed that strategy with higher assets turnover and lower equity multiplier when the interest rates were in the rising trend in the earlier years in HDFC. Differentiation strategy with high equity multiplayer and lower acids turnover ratio when the interest rates were in the decline in the later years leading to higher ROE.

Bansal.R (2014) examined that to find comparative financial analysis is among the banking companies profitability using DuPont point analysis. The research paper aims to measure the profitability of Indian banking industries for the period of April 2010 to March 2015 using comparative financial ratios. As applied in this study financial ratios were grouped into five Categories that is liquidity profitability salvanshi market based and leverage ratio the study conclude that federal Bank is the most financially stable company in comparison to others.

Balasaravanan.K (2016) examined the evaluation of financial healthiness of Parle India limited the performance of an organization should be analyzed by using various important techniques DuPont analysis. The study covers the operational jurisdiction of Parle India limited the source collected from the primary and secondary resources. Like personal interviews and annual reports of KS and DL. For the analysis of 6 financial year data has been collected and classified and tabulated.

Naveen S et.al. (2020) focused and combination of two more companies into one giant companies' analysis the profitability of the banks pre and post-merger. The sources randomly collected from the 5 years pre and post-merger financial reports from the bank. Evaluate the profitability of bank using DuPont analysis is the most important key factor based on result of the study concluded that even though merger brings and board enormous benefit to companies involved. This company should not expect drastic automatic improvement in performance after the merger.

Gujjar.P et.al. (2018) assessed profitability of Indian information technology companies using DuPont model. The main objective of the study to evaluate the return on equity with the help of return and assets and return of sales. This study was based on 3 Indian information technology companies. The DuPont profit ability linkage model is a sample but powerful tool to assess the profitability of a company. The study also helps to take a decision regarding investment.

Arpana B. (2020) founder performance analysis of Indian construction industry 10 year period should be having a completed data to find out the efficiency of financial operation in relation to solvency liquidity and profitability of the construction industry. The research methodology is completely based on the secondary data. This industry in the last 10 years reviled highly on capital market funding allowed by financial institutions. The study conclude that some major problem faced by it when the assets are being efficiently used due to in efficient operation maintenance and financial cost.

4. STATEMENT OF THE PROBLEM

The public sector banks are the main economic nodes, allowing RBI to put all monetary policies and rules into practice for better control over the expansion and development of the economy. Bank of Baroda, one of the public sector banks, has been essential in delivering financial services to the poor and creating jobs for the economy. A timely study of a public sector bank's profitability serves as a warning for them to grasp their situation in relation to the economy's banking sector's performance. The main principle of public sector banks is to serve the customer rather than make a profit, yet even with this principle, generating a profit is still necessary in today's world. Therefore, it is the right time to access financial position public sector banks. The present wish to assess the profitability of Bank of Baroda which is the second the largest public sector bank during its pre and post-merger time.

5. RESEARCH GAP

The study will last for five years, from 2017–18 to 2021–22. Numerous studies are being conducted to examine the financial performance of public sector banks, such as Bank of Baroda, using various performance models, and to compare public sector banks' performance with that of private banks (for instance, Jaspreet Kaur et. al., (2015), Hari K.K et. al., (2015), and Kim & Hak-Seon (2016)), but only a small number of studies are being conducted to examine the profitability of public sector banks using the DuPont (2017). But there are scant studies have been conducted to assess the profitability of Bank of Baroda and comparison of Pre and Post-merger performance of the bank using DuPont model. Therefore, to fill this research gap, the present study wishes to assess the profitability of Bank of Baroda and compare the same in between pre and post- merger time based on the DuPont results through the following research questions.

6. RESEARCH QUESTIONS

1) What is the economic significance of public sector banks in Indian economy.?
2) What are the implications of mergers and acquisitions on Indian public sector banks.?
3) What is the profitability of Indian public sector banks particularly Bank of Baroda during pre and post-merger condition.?

To answer the above research questions, the following objectives have been framed.

7. OBJECTIVES OF THE STUDY

1. To analyze the economic significance of public sector banks in Indian economy.
2. To study the implications of mergers and acquisition on public banks in India.
3. To examine the profitability of Bank of Baroda from 2017-18 to 2021-22.

8. RESEARCH HYPOTHESIS

H1: There is a significant impact of Net profit margin on Total Asset Turnover.
H2: There is a positive relationship between Net profit margin and Equity multiplier.

9. RESEARCH METHODOLOGY

The Present study is a descriptive study. The secondary data has been used for this study, which is taken from annual report of a banks from 2017-18 to 2021-22.

9.1. Plan of analysis:

The present study will depict the data in tabulated mode. The profitability of Bank of Baroda is done on the basis of the results computed with the help of DuPont model. The hypotheses are tested using Regression, correlation of coefficient statistical tools.

8. SCOPE OF THE STUDY

A five-year period, from 2017–18 to 2021–2022, has been set aside for the evaluation of Bank of Baroda's profitability. The secondary data, which was obtained from Bank of Baroda's annual report, was used to create the data for the analysis.

9. LIMITATIONS OF THE STUDY

The study is based on secondary data collected from various source such as article journals and website of the bank. Therefore, the quality has the data depends upon this accuracy reliability and quality of the secondary data sources. The publisher data is not uniform and not properly disclosed by the banks.

ECONOMIC SIGNIFICANCE OF PUBLIC BANKS IN INDIAN ECONOMY

The public sector of an economy is that area of the economy that provides infrastructure, public transportation, public education, health care, and police and military services, among other things. Governments, other publicly managed or supported organizations, corporations, and other organizations that offer goods or services to the broad public sector.

1. Building of Infrastructure

Infrastructure development is a prerequisite for economic growth. Public sector investments in infrastructure have paved the way for the growth of the nation's agricultural and industrial sectors, contributing to overall economic growth. These investments have been made in areas like power, transportation, communication, basic and heavy industries, irrigation, canals, education, and technical training. These infrastructure facilities built by the public sector of the nation rely on contributions from the private sector as well.

2. A solid industrial base

The public sector has also made a substantial contribution by building the nation's robust industrial base. The economy's industrial base has been greatly bolstered by the growth of public sector businesses in a variety of industries, including iron and steel, coal, heavy engineering, heavy electrical machinery, petroleum and natural gas, fertilisers, chemicals, and pharmaceuticals.

3. Job possibilities

The public sector aids in a nation's economic growth by encouraging rapid economic growth through the development and extension of infrastructure. As a result, it creates work possibilities, which further aid in the growth of a nation's financial resources.

4. Development of Capital

The gross domestic product of the nation has been significantly influenced by the public sector. In India, the public sector now accounts for 9.2 percent of gross domestic capital formation, up from just under 3 percent in the first five years of the plan. Comparative public sector gross capital formation rates in the nation also altered, rising from 33.67 percent under the First Plan to 50 percent during the Sixth Plan before dropping to 21.9 percent in 2005-2006

KEY IMPLICATIONS OF MERGERS AND ACQUISITION ON INDIAN BANKING INDUSTRY.

For Indian businesses, 2018 was a key year for merger and acquisition activity. India was active in this field in 2018, with merger and acquisition deals totaling a record-breaking $129 billion. Inward M&A activity reached $55 billion, an increase of 77% over 2017. Additionally, a 17.2% increase from 2017 was seen in the quantity of M&A deals. The average M&A deal size climbed to $127.8 million from 82.8 million in 2017, and India witnessed five transactions worth greater than $5 billion. The only transaction over $5 billion to take place in India in 2017 was the 11.6 billion Idea-Vodafone merger.

The retail sector had the biggest transaction value of any industry in India in 2018, accounting for 33.1% of all inbound M&A deals at $18.5 billion. Materials accounts for 17.2% of M&A activity, making it the second-largest industry in terms of value. The healthcare sector came in third with a 12.3% market share. M&A has grown in the banking sector both internationally and in India. Like all other organisations and businesses, banks work to safeguard themselves from threats and take advantage of untapped opportunities. As of right now, the business is mature in terms of supply and product choices, and Indian banks have strong, stable, and transparent balance sheets.

10. ANALYSIS OF PROFITABILITY OF BANK OF BARODA

DUPONT MODEL

For a thorough analysis of the company's profitability, the management at DuPont Corporation created a model known as DuPont Analysis in the 1920s. A method called DuPont Analysis could aid us in avoiding drawing incorrect inferences about a company's profitability. The basic DuPont analysis model is a method of breaking down the original equation for Return On Equity (ROE) into three components: Operating efficiency, asset efficiency and leverage.

DuPont Model

- **Net Profit Margin**
- **Total Asset Turnover**
- **Financial Leverage**

The Net Profit Margin, which measures operating efficiency, shows how much net income is produced for every dollar of sales. The Total Asset Turnover, which measures asset efficiency, shows how much revenue is produced for every dollar invested in assets. Finally, the Equity Multiplier determines financial leverage.

Table No.1

Components of DuPont model required to compute the profitability of Bank of Baroda

Components	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**Mean**
Shareholdings	4635664196	5318367264	5318367264	9268468172	10370059358	6982185251
Total assets	6948754235	7199997716	7809874049	11579155151	11553647714	9018285773
Total income	489579907	503056945	560651008	863004788	826594993	648577528.2
Net profit	13831360	243181221	4335225	5461875	8289552	55019846.6

Source: Compiled and computed from the annual reports of Bank of Baroda.

Table No.2

Profitability of Bank of Baroda during the year from 2017-18 to 2021-22 using the DuPont model

Measures	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**Mean**	**SD**
a.Net Profit Margin	0.099	0.480	0.007	0.006	0.011	0.1206	0.120
b. Total Assets Turnover	0.700	0.069	0.072	0.075	0.072	0.1976	0.197
c. Equity multiplier	1.50	1.35	1.47	1.25	1.11	1.336	1.336
ROE(a*b*c)	**1.103**	**0.044**	**0.0007**	**0.10**	**0.879**	**0.425**	**0.425**

Source: Compiled and computed from the annual reports of Bank of Baroda

The table no.2 shows the net profit margin, total assets turnover and equity multiplier of Bank of Baroda during the pre-merger period, i.e. 2017-18 and 2018-19 and post-merger period i.e. 2019-20 to 2021-22.

The table 2 shows that, in the pre-merger time the net profit against to total income was 0.099 during 2017-18 and it was 0.480 in 2018-19. Whereas in the post-merger condition of the bank the net profit against to total income was 0.007, 0.006 and 0.011 during 2019-20, 2020-21 and 2021-22 respectively**.** It is revealed that, the net profitability of the bank is better at pre-merger position than the post-merger position of the bank.

The total assets turnover during the pre-merger time of the bank was 0.700, 0.069 whereas during the post-merger time it was 0.072, 0.075 and 0.072 respectively, it is found that, somehow the bank could able to manage to use it assets to generate the income from its pre-merger to post-merger time.

The table also shows that, the total assets held by the bank to its total shareholdings in the study period. There is no such a major fluctuation in equity multiplier during the pre and post-merger conditions of the Bank of Baroda.

The return on equity of the Bank of Baroda during the pre-merger time during 2017-18 and 2018-19 was 1.103 and 0.044 respectively further during the post-merger time of Bank of Baroda was to not better than the pre-merger time.

CAGR of Net Profit Margin, Total assets turnover, Equity multiplier and ROE
Table No.3

S.No.	Variables of DuPont Model	CAGR (%)
1	Net Profit Margin	**-35.56%**
2	Total assets turnover	**-36.55%**
3	Equity multiplier	**-5.84%**
4	Return on Equity (ROE)	**-4.44%**

Source: Compiled and computed from annual reports of Bank of Baroda

There is no considerable compounded annual growth rate in the net profit margin, total assets turnover, equity multiplier and return on equity during the study period from 2017-18 to 2021-22.

11.TESTING OF HYPOTHESIS

H1: There is a significant impact of Net profit margin on Total Asset Turnover
Table No.4

Variable	R	R^2	Adj. R^2	Coeff.	SE	P Value	Results
	Total Assets Turnover						
Net Profit Margin	0.06	.004	-0.327	0.129986	0.235919	0.40	Insignificant

Source: Compiled and computed from the annual reports of Bank of Baroda

There is no significant relationship between net profit margin and total assets turnover (R=0.06, P>0.05), with Net profit margin accounting for 4 % of the variance of total assets turnover. For every unit increase in net profit margin, total assets turnover will enhance by 0.129986. Hence, the alternative hypothesis is rejected.

H2: There is a positive relationship between Net profit margin and Equity multiplier
Table No.5

Net profit margin	1	
Equity multiplier	0.15857	1

There is a positive relationship between net profit margin and equity multiplier of Bank of Baroda during the study period from 2017-18 to 2021-22.

12.SUMMARY OF FINDINGS

The study found that, there has been a much different can be found in between the pre and post-merger performance of the bank, the net profit margin has not been good since the bank's merger, the compounded annual growth rate also not been satisfactory, there is no significant impact of net profit margin on total asset turnover of the bank and there is a significant positive relationship between net profit margin and equity multiplier.

13.CONCLUSION

The public sector banks play a vital role in making alive and growth oriented economy, especially large public sector banks impact is very high economic contribution towards an economy, the pre-merger performance of the bank was good with less capital structure, whereas in post-merger time the performance with respect to making profit to be improved with the support of increased capital structure. When there is optimistic position to such large public sector banks, definitely economic growth will also be in right path.

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