A STUDY ON SELECT BANK SPECIFIC VARIABLES IMPACTING THE PROFITABILITY AMONG PUBLIC SECTOR BANKS ANY BANKS IN INDIA

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ABSTRACT

The study identified and investigated a few bank-specific factors that affected public sector banks' profitability from FY 2013–14 to FY 2022–23. The securities a bank possesses and the loans it extends to individuals, businesses, and other organisations are its principal assets. Due to their extensive use of leverage, banks are exposed to a variety of hazards that must be properly managed. The study makes an effort to look at how certain bank-specific elements affect a bank's profitability. Based on their high market capitalization, six public sector banks in India were chosen as a sample, and secondary data for bank-specific variables was gathered from the official website of the Reserve Bank of India. The dependent variable is Net Interest Margin, a profitability indicator, and financial metrics such the Capital Adequacy Ratio, Cash. The independent variables include the Deposit Ratio, the Ratio of Secured Advances to Total Advances, Business per Employee, Return on Assets, Return on Equity, the Ratio of Net NPAs to Net Advances, and Profit per Employee. The statistical methods used to investigate the effects of certain bank-specific variables on public sector bank profitability include correlation and multiple regression. According to the study, Net Interest Margin rises as Profit per Employee rises and falls as Cash Deposit Ratio and Ratio of Secured Advances to Total Advances rise.

Keywords: banks' profitability, Reserve Bank of India, Return on Assets, Return on Equity, Cash Deposit Ratio.

1. INTRODUCTION

A bank is a type of financial organisation that borrows and lends money. Consumers can deposit money with banks in exchange for a yearly interest payout. The majority of these deposits are then used by the bank as collateral for loans made to other customers. The difference between the two interest rates is effectively the banks' profit margin. Banks are important to the economy because they offer a service to consumers who want to save. Banks play a critical role in helping businesses that want to expand and develop with funding. These business loans and investments are essential for fostering economic development.

If banks don't complete these obligations, the effects on the economy as a whole might swiftly spread to the point where even the financial system would be vulnerable to significant shocks. It is crucial that banks are able to take losses on board and fulfil their present financial commitments.

Banks must adhere to stringent regulatory regulations in order to ensure this. Among these are the capital and liquidity criteria that apply to banks in order to guarantee that they can fulfil their present financial obligations. The banks' internal payment systems must likewise be reliable and secure.

System of banking

A network of institutions that offer financial services to the public is referred to as a banking system. Central banks, internet banks, commercial banks, savings banks, investment banks, loan associations, credit unionsandinsurance companies are just a few of the organisations that make up the financial system.

The goal of banking systems is to boost economic security and confidence. Suppose banks went bankrupt, it would mean widespread financial shock in the economy, and many consumers would prefer to withdraw their savings in cash.

Operation of banking systems

Regardless of the type of bank, baking systems function according to controlling the transfer of funds between individuals and commercial entities. Through this procedure, they generate income through successful investments, loan interest, and fees assessed to consumers.

To make money, banks also engage in activities including currency exchange, wealth management, safe deposit boxes, and loan offerings.

2. REVIEW OF LITERATURE

JerisSazzad Saeed (2021) [1] studied how to increase profitability in commercial banks in Bangladesh by using bank-specific and macroeconomic variables in the study "Factors Influencing Bank Profitability in a Developing Economy: Panel Evidence from Bangladesh." In the four-year span (2014-2018), data from 27 commercial banks in Bangladesh were gathered. The study's independent variables are macroeconomic variables such as GDP (Gross Domestic Product), inflation, and bank-specific variables such as bank size, CIR (Cost to Income Ratio), CAP (Capital Ratio), Loan ratio, DEP (Deposit ratio), LLP (Loan Loss Provision Ratio), LNDEPO-Market share.

The study's dependent variables are a measure of profitability known as ROA (Return on Assets) and ROE (Return Data about the macro economy is taken from the World Bank. To comprehend the mean, descriptive analysis was used. Few independent variables have a broad range of variance, according to the standard deviation and variation of dependent and independent variables. In order to assess the relationship between independent variables and bank profitability, the OLS (Ordinary Least Squares) approach and regression analysis are used to estimate the factors affecting the profitability of commercial banks in Bangladesh

Banu Meraj (2019) [2] examined the operational efficiency of profitability, short-term liquidity, and long-term solvency of private sector, public sector, and foreign sector banks in India in the study titled "Operational Efficiency of Indian Banking Sector- A Comparative Analysis." In India, information was gathered over a ten-year period from 10 public sector, 10 private sector, and 10 international banks (2007-2017). short-term liquidity: total loans and advances, credit-deposit ratio, and cash-deposit ratio; Profitability, Return on Assets (ROA), Return on Equity (ROE), Return on Advances (ROAd), and Return on Investment (ROI), as well as long-term solvency, Investment-Deposit Ratio and Net Interest Margin Ratio, are used as independent variables to analyse the operational efficiency of banks, which is a dependent variable. To gauge liquidity, solvency, and profitability, various ratios are utilised.

The impact of electronic banking technology on bank profitability and cost was examined by Tunay Neela, YükselSerhat, and Tunay Batu (2019) [3] in their article titled "The Effects of Technology on Bank Performance in Advanced and Emerging Economies: An Empirical Analysis." New electronic banking technologies are being developed to boost consumer happiness and make banking more convenient.

OBJECTIVES:

➢ To identify the select bank-specific variables impacting profitability among public sector banks.

➢ To examine the impact on profit among public sector banks using the select bank-specific variables.

HYPOTHESIS OF THE STUDY:

➢ H_{01}: Profit per Employee, Capital Adequacy ratio, Ratio of secured advances to total advances, Cash Deposit ratio does not impact Net Interest Margin.

➢ H_1: Profit per Employee, Capital Adequacy ratio, Ratio of secured advances to total advances, Cash Deposit ratio impact Net Interest Margin.

➢ H_{02}: Asset quality variables does not impact Net Interest Margin.

➢ H_2: Asset quality variables impact Net Interest Margin.

➢ H_{03}: Earnings capacity variables does not impact Net Interest Margin.

➢ H_3: Earnings capacity variables impact Net Interest Margin.

➢ H_{04}: Management efficiency variables does not impact Net Interest Margin.

➢ H_4: Management efficiency variables impact Net Interest Margin.

➢ H_{05}: Capital Adequacy Ratio does not impact Net Interest Margin.

➢ H_5: Capital Adequacy ratio impact Net Interest Margin.

➢ H_{06}: Cash Deposit ratio does not impact Net Interest Margin

➢ H_6: Cash Deposit ratio does impact Net Interest Margin

3. RESEARCH METHODOLOGY

Need For the Study

Banks are the backbone for the economic growth but their profitability is linked to several risk factors in market they operate. Banks are exposed to several risks such as interest rate risk, market risk, currency risk, credit default risk and operational risk.These risk factors impact bank's profitability as they are directly linked to the income of any bank.The study therefore intends to analyse the impact of select bank specific variables on profitability of select Indian commercial banks.

Scope Of the Study:

➢ The present study is confined to select bank-specific variables which impacts the profitability of banks in India with respect to select public sector banks.

> The study is for a period of 10 years during the financial years from FY 2013-14 to FY 2022-23 which includes 6 public sector banks which are chosen based upon banks with high market capitalization.

4. DATA ANALYSIS & INTERPRETATION

Descriptive Statistics

Descriptive statistics gives the description of central tendency and variability of the select bank-specific variables.

The below Table 3 shows the descriptive statistics of select bank-specific variables

Table 1. Descriptive statistics of select bank-specific variables

Select bank-specific variables	Mean	Standard Error	Median	Standard Deviation	Sample Variance
Net Interest margin	2.19	0.05	2.20	0.17	0.03
Capital Adequacy Ratio	11.81	0.43	11.22	1.35	1.81
Cash Deposit ratio	6.17	0.47	5.52	1.49	2.21
Ratio of secured advances to total advances	87.47	0.89	87.80	2.83	8.00
Profit per Employee	-4.37	2.46	-4.39	7.78	60.53
Ratio of net NPAs to net advances	5.70	1.04	4.99	3.29	10.82
Business per Employee	1496.63	55.94	1512.34	176.90	31293.19
Return on Assets	-0.34	0.24	-0.27	0.75	0.56
Return on Equity	-6.62	4.34	-7.43	13.74	188.76

Source: compiled data

The Table 3 shows the descriptive statistics of select bank-specific variables in the study from the select public sector banks of India for a period of 10 years from FY 2013-14 to FY 2022-23. The diagnostic test includes: mean, median, standard error, standard deviation and sample variance to ensure the data is suitable for regression model.

Correlation

Table 2 Correlation test

		Net Interest margin	Capital Adequacy Ratio	Cash Deposit ratio	Ratio of secured advances to total advances	Profit per Employee
Net Interest margin	Pearson Correlation	1	.495	-.645[*]	-.689[*]	.709[*]
	Sig. (2-tailed)		.146	.044	.027	.022
	N	10	10	10	10	10
Capital Adequacy Ratio	Pearson Correlation	.495	1	.137	-.375	.221
	Sig. (2-tailed)	.146		.705	.285	.539
	N	10	10	10	10	10
Cash Deposit ratio	Pearson Correlation	-.645[*]	.137	1	.252	-.391
	Sig. (2-tailed)	.044	.705		.482	.264
	N	10	10	10	10	10
Ratio of secured advances to total advances	Pearson Correlation	-.689[*]	-.375	.252	1	-.431
	Sig. (2-tailed)	.027	.285	.482		.213
	N	10	10	10	10	10
Profit per Employee	Pearson Correlation	.709[*]	.221	-.391	-.431	1
	Sig. (2-tailed)	.022	.539	.264	.213	
	N	10	10	10	10	10

The above Table 4 reveals that the upper value in each cell indicates the correlation coefficient (r), the middle value the level of significance, and the bottom value the number of observations. The correlation strength between the variables is indicated by the value of r. It can between -1 and +1. All of the factors in the Aforementioned table have a positive or negative correlation with one another. The degree of significance reveals whether or not there is a substantial correlation between the variables.As significance level rises, precision degree of correlation falls. Whenever the significance level is less than 0.05, it indicates that the variable's correlation is significant. All of the factors in the aforementioned table are significantly connected with one another as every value is less than 0.05.

The following table 5 shows the correlation between the two variables:

Table 3 Correlation between two variables

Positive correlation	Negative correlation
Net Interest Margin and Profit per Employee	Net Interest Margin and Cash Deposit ratio
	Ratio of Secured advances to total advances and Net Interest Margin

Multiple Regression

The regression equations with select bank-specific variables is used in finding the impact of the independent variable over the dependent variable.

Multiple Regression between Net Interest Margin and select bank-specific variables

Table 4 Multiple Regression between Net Interest Margin and select bank-specific variables

R	R Square	Adjusted R Square	Std. Error of the Estimate
.965[a]	.931	.876	.05837

a. Predictors: (Constant), Profit per Employee, Capital Adequacy Ratio, Cash Deposit ratio, Ratio of secured advances to total advances
b. Dependent Variable: Net Interest Margin

Table 5 p-value for Net Interest Margin and select bank-specific variables

	Coefficients	Standard Error	t Stat	P-value
Intercept	3.459	0.786	4.398	0.007
Capital Adequacy Ratio	0.048	0.016	2.939	0.032
Cash Deposit ratio	-0.057	0.015	-3.790	0.013
Ratio of secured advances to total advances	-0.017	0.008	-2.031	0.098
Profit per Employee	0.006	0.003	2.152	0.084

The Table 7 reveals that Capital Adequacy ratio, Cash Deposit ratio, Ratio of secured advances to total advances and Profit per Employee is a significant variable to explain the variations in Net Interest Margin since the significance value (0.04) is lesser than the normally accepted level of significance i.e.,0.05 or 5 percent hence one can reject null hypothesis and accept alternative hypothesis (H_1).

Multiple Regression between Net Interest Margin and Asset quality variables

Table 6 Multiple Regression between Net Interest Margin and asset quality variables

R	R Square	Adjusted R Square	Std. Error of the Estimate
.971[a]	.943	.926	.04497

Predictors: (Constant), Ratio of net NPAs to net advances Ratio of secured advances to total advances Dependent Variable: Net Interest Margin.

Table 7 p-values of Net Interest Margin and Asset quality variables

	Coefficients	Standard Error	t Stat	P-value
Intercept	3.177	0.574	5.539	0.001
Ratio of secured advances to total advances	-0.008	0.007	-1.236	0.256
Ratio of net NPAs to net advances	-0.044	0.006	-7.554	0.000

Multiple Regression between Net Interest Margin and Earning capability variables

Table 8 Multiple Regression between Net Interest Margin and Earning capability variables

R	R Square	Adjusted R Square	Std. Error of the Estimate
.792a	.628	.521	.11461

a. Predictors: (constant), Return on Equity, Return on Assets

b. Dependent variable: Net Interest Margin

Table 9 p-values of Net Interest Margin and Earnings capability variables

	Coefficients	Standard Error	t Stat	P-value
Intercept	2.257	0.041	55.246	1.669E-10
Return on Assets	-0.276	0.336	-0.820	0.4393576
Return on Equity	0.024	0.018	1.317	0.2292772

Multiple Regression between Net Interest Margin and Management efficiency variables

R	R Square	Adjusted R Square	Std. Error of the Estimate
.711a	.505	.364	.13216

p-values of Net Interest Margin and Management efficiency variables

	Coefficients	Standard Error	t Stat	P-value
Intercept	2.345	0.455	5.151	0.001
Profit per Employee	0.014	0.007	1.987	0.087
Business per employee	0.000	0.000	-0.192	0.853

The Table 13 reveals that Business per Employee; Profit per Employee is not a significant variable to explain the variations in Net Interest Margin since the significance value (0.085) is greater than the normally accepted level of significance i.e.,0.05 or 5 percent hence one can accept null hypothesis and reject alternative hypothesis (H_{04}).

Regression on Net Interest Margin and Capital Adequacy ratio

Table 10 Regression between Net Interest Margin and Capital Adequacy ratio

R	R Square	Adjusted R Square	Std. Error of the Estimate
.495a	.245	.150	.15271

Table 11 p-values of Net Interest Margin and Capital Adequacy ratio

	Coefficients	Standard Error	t Stat	P-value
Intercept	1.473	0.449	3.280	0.011
Capital Adequacy Ratio	0.061	0.038	1.610	0.146

The Table 15 reveals that Capital Adequacy ratio is not a significant variable to explain the variations in Net Interest Margin since the significance value (0.146) is greater than the normally accepted level of significance i.e.,0.05 or 5 percent hence one can accept null hypothesis and reject alternative hypothesis (H_{05}).

Regression on Net Interest Margin and Cash Deposit ratio

Regression between Net Interest Margin and Cash Deposit ratio

R	R Square	Adjusted R Square	Std. Error of the Estimate
.645a	.416	.343	.13430

Table 12 p-values of Net Interest Margin and Cash Deposit ratio

	Coefficients	Standard Error	t Stat	P-value
Intercept	2.63	0.19	13.85	7.2E-07
Cash Deposit ratio	-0.07	0.03	-2.39	0.04413

The Table 17 reveals that Cash Deposit ratio is a significant variable to explain the variations in Net Interest Margin since the significance value (0.04) is lesser than the normally accepted level of significance i.e.,0.05 or 5 percent hence one can reject null hypothesis and accept alternative hypothesis (H_6).

5. CONCLUSION OF THE STUDY

It has been made an effort to pinpoint the individual bank-specific variables that affect the profitability of particular Indian public sector banks. The study found that several variables have a noticeably positive and statistically significant impact. These factors include the profit per employee, the cash deposit ratio, and the secured advance to total advance ratio. However, other variables, such as the Business per Employee and Capital Adequacy Ratio, are found to have less significant affect. As a result, there is a considerable correlation between the variables cash deposit ratio and ratio of secured advances to total advances and Net Interest Margin. The variable Cash Deposit ratio has a negative correlation with Net Interest Margin indicating excess liquidity to the banks leading to aggressive strategies to capture market share and compromise on interest income leading to fall in interest margins.

6. REFERENCES

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