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AN ANALYSIS OF RELATIONSHIP BETWEEN CAPITAL ADEQUACY RATIO AND PROFITABILITY IN SELECT PUBLIC SECTOR BANKS IN INDIA DURING 2019 – 2023

*** Prof. Bhumika Shah**

** Assistant Professor, GhanshyamDas Saraf College of Commerce & Arts, Malad W, Mumbai-400064*

Abstract

Capital acts as a buffer in times of crisis or poor performance by a bank. Sufficiency of capital also instils depositors' confidence. Attainment of regulatory capital standard contribute towards financial stability. Bank's profitability as one of the important parameters has influence on financial health. This research paper will study the relationship between Capital Adequacy Ratio and Profitability of selected Public Sector Banks in India from 2018-19 to 2022-23. The purpose of the research paper to study the impact of Capital Adequacy Ratio on profitability of the banks and its significance with respect to achievement of capital adequacy norms.

Keywords: *Capital Adequacy, Profitability, CAR Ratio, Earning Per Share (EPS), Return on Equity (ROE)*

Introduction:

Banks play very important role in the economy. For the smooth flow of credit in an economy, it is essential that banks should be financially sound to meet the various requirements of other fields. Banks play a pivotal role in the shaping up of the economy of a country, given the relationship between the wellbeing of the banking sector and the growth of the economy (Rajan and Zingales 1998). Capital is a source of financing. Banks gets finance from customer deposits, borrowing and share capital. Capital represents shareholders contribution to support the institution and this gives them right to enjoy future earnings of the bank (Athanasoglou, Delis & staikouras, 2006). For a bank to remain stable and achieve desired level of financial performance it should be adequately capitalised.

The essential function of banks is to receive deposits and grant loans. Deposits can normally be withdrawn without notice or at short notice, while loans generally have considerably longer maturities. It means banks are using short term sources of funds (Liabilities) to meet the long-term lending (assets) for the banks. There are higher chances of mismatch between assets and liabilities which is risky for the banks. Income from assets needs to be realised on time otherwise bank suffer losses or affects profitability. Generally, banks are expected to absorb the losses from the normal earnings but there may be some unanticipated losses which cannot be absorbed by normal earnings. Capital helps to absorb such losses. It provides the customer, the public and the regulatory authority with confidence in the continued financial viability of the bank. Unlike other business enterprises, Banks are therefore subject to extensive regulation, including capital requirements as an important element.

The Basel Committee - initially named the Committee on Banking Regulations and Supervisory Practices - was established by the central bank Governors of the Group of Ten countries at the end of 1974 in the aftermath of serious disturbances in international

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currency and banking markets. The Committee has established a series of international standards for bank regulation, which includes the accords on capital adequacy known as Basel I, Basel II and Basel III.

The Basel I and Basel II accord introduces capital adequacy framework which reflects underlying risk. After 2007-08 Global crisis as a response Basel Committee on Banking Supervision (BCBS) came out with Basel III to improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, thus reducing the risk of spill over from the financial sector to the real economy. Basel III accord focuses on Capital Adequacy Requirement taking in to consideration Risk Weighted Assets (RWA). It gives the view about the Capital to Risk-weighted Assets Ratio (CRAR). Regulatory capital consists of:

- ✓ Common Equity Tier 1 – common shares, retained earnings and other reserves.
- ✓ Additional Tier 1 – capital instruments with no fixed maturity.
- ✓ Tier 2 – subordinated debt and general loan-loss reserves.
- ✓ CRAR = Eligible Total Capital / Risk Weighted Assets

Minimum capital requirements (in per cent)	
Common Equity Tier (CET) 1	5.5
Capital Conservation Buffer (CCB) (comprised of Common Equity)	2.5
Minimum CET1 and CCB	8
Minimum Tier 1 capital	7
Minimum Total Capital	9
Minimum Total Capital including CCB (CRAR)	11.5

Source: Reserve Bank of India

Profitability is one of the important determinants which decides the future of the banks as survival solely dependent on the profit. Profitability provides cushion to the bank to absorb the financial shock. Without excess earning no organisation can withstand in the market and becomes difficult to support the operational and financial activities. Thus, it becomes inevitable to understand the relation between the profitability and capital adequacy of the bank.

The Present Research will study the relationship between Capital Adequacy Ratio and Profitability of the public sector banks in India.

Review of Literature:

Applying minimum capital adequacy ratios serves to promote testability and efficiency of the financial system by reducing the likelihood of banks becoming insolvent. When a bank becomes insolvent, this may lead to loss of confidence in the financial system, causing financial problems for other banks and perhaps threatening the smooth functioning of financial markets (Gabriel Ogere Abba et al, 2013).

B Mahapatra (2012) gaves views on Implications of Basel III for capital, liquidity and profitability of banks that the impact of these requirements on the profitability of banks would depend upon sensitivity of lending rates to capital structure of banks and sensitivity of the credit growth to the lending rates.

Matthew Osborne et al. (2012) have examined the effect of capital ratios on bank profitability over economic cycles using data from the US banking sector spanning several economic cycles from the late 1970s to the financial crisis of 2008-10 and found banks with a surplus of capital relative to target exhibit a strongly negative relationship between capital and profitability, both in stressed and non-stressed conditions, implying that reducing capital may be the optimal strategy for these banks.

Ahmad Aref Almazari et al. (2017) examined the effect

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of capital Adequacy on profitability between two banks SAMBA and SABB of Saudi Arabia and found negative relationship between ROA and ROE with Capital Adequacy.

Ini S. Udom and Eze, Onyekachi R. (2018) examined the effect of capital adequacy requirements on the performance of commercial banks in Nigeria. The overall capital adequacy variables of the study shows that Adjusted Shareholders Fund, Capital to Risk Weighted Assets, Total Qualifying Capital together have significant effect on the Return on Asset (ROA), which measures bank performance. The results further show that capital adequacy impact positively on the financial performance of commercial banks in Nigeria. This implies that capital adequacy strongly and actively stimulates, improve, and grow the financial performance of commercial banks and that sufficiency of capital and adequate management can translate to improved performance.

Past studies argue that a capital adequacy requirement is effective in the sense that it improves the soundness and safety of the banking sector and consequently its profitability (Gilbert and Wheelock, 2007).

Larojan Chandrasegaran (2020) conducted study to identify the relationship between the capital adequacy requirements and profitability and to examine the effect of capital adequacy requirements on profitability of banking industry in Sri Lanka. The results of the multiple regression analysis shown that capital adequacy ratio had a positive significant relationship with non-interest income to average assets.

Objectives of the study:

- To analyse the Relationship between Capital Adequacy Ratio and Net Profit of the banks
- To analyse the Relationship between Capital Adequacy Ratio and EPS of the banks
- To analyse the Relationship between Capital Adequacy Ratio and ROE of the banks

Hypothesis of the study:

H01: There is no relationship between Capital Adequacy Ratio and Net Profit of the banks

H02: There is no relationship between Capital Adequacy Ratio and EPS of the banks

H03: There is no relationship between Capital Adequacy Ratio and ROE of the banks

Limitation:

- A Generalisations of the result is based on the limited number of samples.
- Study can be undertaken for more number of years.

Research Methodology:

- Data Collection: The study is based on secondary financial data, which are gathered from the bank's financial statements and other relevant manuals and publications.
- Sample Size: 5 Public Sector banks listed on BSE are considered for study purpose
- Method of Data Analysis: Variables are calculated through EXCEL. Correlation statistical tool used to measure strength and degree of relationship between variables
- Period of study: Five years period i.e., 2018-19 to 2022-23 are covered for the study

Result and Analysis:

Study covers Bank of Baroda, Bank of India, Central Bank of India, Indian Bank, and Union Bank of India. Correlation statistical tool is used to study the relationship between the variables.

Profitability approach evaluated based on Net Profit (Rs.), EPS (Rs.), and ROE (%) variables.

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Correlation Matrix:

		Capital Adequacy Ratio	Net Profit	EPS	ROE
Bank Of Baroda	Capital Adequacy Ratio	1			
	Net Profit	0.8454	1		
	EPS	0.8283	0.9983	1	
	ROE	0.8511	0.9966	0.9970	1
Bank Of India	Capital Adequacy Ratio	1			
	Net Profit	0.7559	1		
	EPS	0.6046	0.9746	1	
	ROE	0.7287	0.9972	0.9824	1
Central Bank of India	Capital Adequacy Ratio	1			
	Net Profit	0.8522	1		
	EPS	0.8642	0.9724	1	
	ROE	0.8514	0.9999	0.9729	1
Indian Bank	Capital Adequacy Ratio	1			
	Net Profit	0.9578	1		
	EPS	0.9554	0.9895	1	
	ROE	0.9814	0.9898	0.9883	1
Union Bank of India	Capital Adequacy Ratio	1			
	Net Profit	0.8591	1		
	EPS	0.7745	0.9420	1	
	ROE	0.7819	0.9825	0.9790	1

Finding shows the strong correlation between variables. Capital Adequacy ratio has a positive correlation with Net Profit, Earning Per Share, and Return on Equity. Which indicates that Capital Adequacy Ratio has a positive and significant effect on Net Profit, EPS, and ROE of the banks. The analysis suggests that capital adequacy ratio impact profitability of the banks. Therefore, null hypotheses rejected and alternate hypotheses accepted.

Achievement of the required capital adequacy ratio is the necessity of the banks as it provides the cushion to the banks to absorb the losses. Fulfilling capital adequacy requirement by banks will enhance the operational efficiency of the banks which may further lead to better profitability performance. Other extraneous variables can have significant impact on the profitability which need to be considered.

Conclusion:

Banking system remains sound and resilient if it is backed by high capital ratios, improved asset quality and robust earnings growth. This supports a double-digit credit growth and domestic economic activity. The Correlation analysis showed that Capital Adequacy Ratio is positively correlated with Net Profit, Earning Per Share and Return on Equity. The study helps in understanding the mechanism driving profitability and calibrate the design of future policy requirements.

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