A Study of Financial Performance Appraisal of Public Sector Banks Using CAMELS Model

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Abstract

The public sector banks are the fastest growing sectors and works as an integral part of the developing economy of India. as the banking sector has become more complex now days so in this relentless environment supervision, monitoring and performance appraisal of banks has become necessary to ensure the financial stability of the economy. The present study is an attempt of financial appraisal of public sector banks (as public sector banks are non-profitable organisation and works for social upliftment) using six parameters of CAMELS model. The study considers four top public sector banks as per the government holdings that is Punjab National Bank (PNB), Central Bank of India (CBOI), Union Bank of India (UBOI), Bank of Baroda (BOB). The data is collected for the study is concentrated from the official websites of banks and Prowess IQ database for the period of 2013-14 to 2022-23. The results shows that Bank of Baroda has highest performance in most of the ratios of CAMELS model and Union Bank of India has lowest performance in all aspect of CAMELS parameters.

Key Words: Evaluation, importance, economy, public sector banks, monitoring, appraisal, government

Introduction

The banking sector of India is an essential part of the Indian Financial system. The banking sector is categorised as public sector banks, private sector banks, foreign banks, scheduled and non-scheduled banks.(Abinaya & Selvakumar, 2021) The financial performance appraisal is a systematic process to analyse the stability and future growth perspectives of banks.(Balaji & Praveen Kumar, 2016) The financial performance appraisal of banks is a strengthening measure that helps to reducing the vulnerability of banks at the period of economic fluctuations.(A. Singh, n.d.) A sustainable and growing banking sector tends to cause of development of economy. The banking sector has facing tremendous changes in different executing segment of Indian banks. (Pervez & Ali, 2024)Indian banking sector has been dominated by public sector banks since 1969.(Nagarkar, 2015) The public sector banks play an important role in financial inclusion, lending and deposit mobilization and also required to improve the performance and functioning to compete with the changing environment of private sector and foreign banks. (Gangu Naidu, 2012)

The CAMELS rating system was first introduced in 1970 by the three U.S. banking regulators as a Regulatory Uniform Financial Institution rating system. (Kumar Raj, n.d.)This model has amended in 1988 as a "Early Warning Mechanism" in India. in CAMELS rating C for capital adequacy, A for assets quality, M for management ability, E for earning capacity, L for liquidity and S for sensitivity. (Bethapudi, n.d.)The six parameters of CAMELS model provide a ranking of 1 (excellent) to 5 (poor) on the basis of the outcomes of different ratios related to the parameters of the model.(Maqbool & Zameer, 2018)

The banking sector have direct and indirect impact on the development of economy and has a important role in the allocation of funds, resources and stability of country. (Haque, 2014)In the modern economy the role of banking operations is unavoidable and provides various services and products in the welfare of the society and country.(Akhtar et al., n.d.) In the modern era. (Manicka Vasuki, 2022)Banking sector is engaged into various business activities such as leasing, mutual funds, housing finance, merchant banking, portfolio management and venture capital etc. (S. Singh & Das, 2018)The financial stability, sustainability of the banks strongly depends upon the innovative strategy, proper utilisation of resources. Management ability for facing both the physical and human challenges.(Saminathan, 2020)

Financial performance appraisal is a systematic process to summarise the financial and operating activities of a business into a useful information for the internal and external uses.(Jain & Gupta, 2022) It is an efficient measure to improve the profitability and to efficiently manage their risk and pressure to deal with the external environment.(Jaggarwal, n.d.)

Objectives

To evaluate the financial performance of public sector banks using CAMELS model.

Hypothesis

Ho : There is no statistically significant difference between selected public sector banks.

H1 : There is a statistically significant difference between selected public sector banks.

Methodology

The study covers the financial data of top public sector banks (Central bank of India, Union bank of India, Punjab National Bank and Bank of Baroda) as per the government holdings for ten-year period from 2013-14 to 2022-23. The data is collected from the official websites of banks and prowess IQ data base. The study is empirical in nature. The study uses classification, tabulation, mean, range and structural equation model.

Data Analysis and Interpretation

The analysis of `Selected Public Sector Banks is shown in the following table-

Table No. 1 Composite Analysis of CAMELS Model of Public sector Banks For the period of 2013-14 to 2022-23

S. No.	Variables	Ratios/ Banks	CBOI	UBOI	PNB	BOB	Range
1	C	Return on Capital Employed Ratio	1.11	1.65	**1.88**	1.65	0.77
		Price to Book Value Ratio	**0.78**	0.5	0.67	0.76	0.28
		Return on Equity Ratio	-8.66	1.28	-2.49	**3.08**	11.74
2	A	Gross NPA Ratio	13.9	10.1	11.7	**7.4**	6.5
		Net NPA Ratio	6.4	4.75	5.98	**3.12**	3.28
3	M	Operating Expenses to Total Assets Ratio	1.85	1.49	1.57	**1.38**	0.47
		Working Capital Turnover Ratio	9.29	10.63	11.02	**12.78**	3.49

S. No.	Variables	Ratios/ Banks	CBOI	UBOI	PNB	BOB	Range
4	E	Return on Assets Ratio	-0.46	0.06	-0.07	0.17	0.63
		Basic EPS Ratio	-5.93	2.87	15.55	22.25	28.18
		Net Profit Margin Ratio	-6.38	0.53	-1.72	3.09	9.47
		Earning Yield Ratio	-0.11	0.01	-0.03	0.04	0.15
5	L	Current Ratio	24.74	30.53	34.07	22.03	12.04
		Quick Ratio	22.92	28.16	31.73	20.54	11.19
		Dividend Per Share Ratio	1.59	4.83	9.44	7.44	7.85
6	S	Interest Income to Total Assets Ratio	7.38	7.24	6.94	6.15	1.23
		Non-Interest Income to Total Assets Ratio	0.75	0.95	1.01	0.82	0.26
		Total Assets Turnover Ratio	13.76	14.03	14.65	16.1	2.34
		Current Assets Turnover Ratio	9.7	11.01	11.36	13.4	3.7
		Fixed Assets Turnover Ratio	0.17	0.11	0.11	0.11	0.06

Interpretation:

The above table shows the performance of public sector banks on the basis of selected ratios under the six parameters of CAMELS model. As per the analysis it can be stated that the return on capital employed ratio is highest (1.88) in PNB, the price to book value ratio is maximum (0.78) in CBOI and the return on equity ratio is highest (3.08) in BOB. So, as per the evaluation it can is observed that in terms of capital adequacy all of the three banks(PNB, CBOI and BOB)have highest performance and UBOI is not performing good in that particular parameter. While in terms of assets quality, Bank of Baroda is having lowest percentage in both GNPA (7.4) and NNPA (3.12) that shows the ability of bank in managing their NPA accounts.

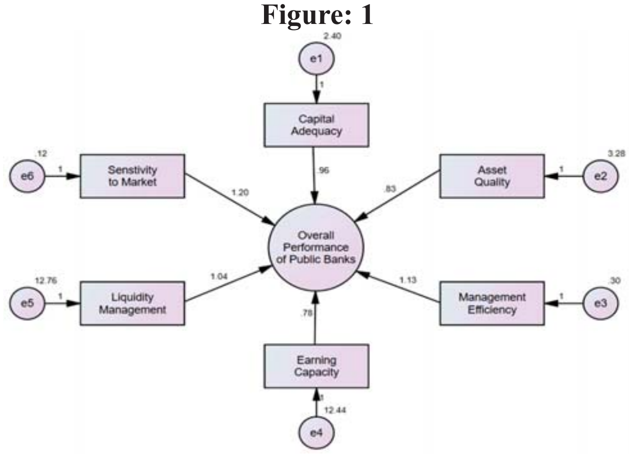
The lower percentage of GNPA and NNPA considers favourable so, the other banks (PNB, CBOI, UBOI) are having higher GNPA and NNPA among the all banks and having lower performance as compare to other banks. In terms of management efficiency ratio, Bank of Baroda is performing good rather than other public sector banks (PNB, CBOI, UBOI). The Bank of Baroda has lower percentage in operating expenses to total assets ratio (1.38) and highest performance in aspect of working capital turnover ratio (12.78).

According to selected ratios of earning parameter, BOB again has highest performance among all the selected public sector banks. The return on assets ratio of BOB is 0.17, Basic EPS ratio is 22.25, Net profit margin ratio is 3.09 and earning yield ratio of BOB is 0.04, which shows the highest performance of Bank of Baroda. Similarly, the liquidity position (the current ratio, quick ratio and dividend per share ratio) of PNB is strong among the selected public sector banks. The PNB has highest performance in current ratio (34.07), quick ratio (31.73), dividend per share (9.44).

In terms of interest income to total assets ratio (7.38)and fixed assets turnover ratio (0.17) the CBOI has highest performance, in non-interest income to total assets ratio the PNB has highest performance (1.01) while, in terms of total assets turnover ratio and current assets turnover ratio BOB has highest performance. Overall, it can be said that in terms of sensitivity UBOI has lowest performance in all aspects and the performance of PNB, CBOI and BOB is good as per different ratio.

Structural Equation Model:

Figure: 1



Each of these factors is connected to the central node by arrows, suggesting a flow of influence towards the overall performance. Alongside these arrows are numbers indicating the weight or importance of each factor in the overall performance evaluation.

Each of these factors also has an associated error term (e1 to e6), suggesting that there is an acknowledgment of uncertainty or potential error in the measurement of each factor.The 1's near each of the contributing factors imply a one-to-one relationship for their respective weights. The arrows may also indicate the direction of the effect, meaning each of these factors directly influences the overall performance evaluation.At the centre of the diagram is the main node labelled Overall Performance of Public Banks,which is connected to six contributing factors, each represented as nodes such as capital adequacy; asset quality; management efficiency; earning capacity; liquidity management and sensitivity to market. The factors are as follows:

- Capital adequacy has an impact of 0.96, making it quite significant in the evaluation that a change in capital adequacy will have a change of 0.96 in the overall performance of the bank.
- Asset quality has slightly less impact at 0.83.
- Management efficiency has the major impact of 1.13, suggesting it has a major impact on the overall performance.
- Earning capacity has an impact of 0.78.
- Liquidity management has the high impact of 1.04, indicating it is the one of the most influential factors.
- Sensitivity to market has a weight of 1.20, the major influential on the overall performance.

On the basis of the CAMELS model, it cab be concluded that this model is unique for evaluating the performance of any bank through several factors. On the basis of above model, it can also be analysis that the banks need a proper evaluation tool so that these can minimise the NPA in present banking sector.

Conclusion

It can be observed from the table thatthe financial appraisal is a systematic process of evaluating the effectiveness of business activities and operations for the proper utilisation of resources and funds. The public sector banks play an important role in financial inclusion, lending and deposit mobilization as their primary motive is social welfare rather than profit making organisation. So, it is mandatory to analyse the financial performance of public sector banks so that they can enhance their performance. The above analysis shows the performance of selected public sector banks for the period of ten years from 2013-14 to 2022-23 on the basis of six parameters of CAMELS model. As the composite analysis of CAMELS Model, it can be said that in most of the ratios of CAMELS model parameters Bank of Baroda has highest performance and shows the ability of management to utilise their funds. While Punjab National Bank has highest performance in liquidity ratios, return on capital employed ratio and non-interest income to total assets ratio. Similarly, Central Bank of India has highest performance in price to book value ratio, interest income to total assets ratio and fixed assets turnover ratio. The Union Bank of India has lowest performance among all the selected banks and need to improve their weaker sections. While as per the SAM model, the management efficiency, liquidity and sensitivity parameters of CAMELS model have the major impact on the overall financial performance of public sector banks.

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