

FUNDAMENTAL ANALYSIS OF SELECTED PUBLIC SECTOR BANKS IN INDIA WITH SPECIAL REFERENCE TO Z SCORE MODEL TEST

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ABSTRACT

In today's highly volatile market and digitalization of India has change the financial health of any Bank, it is usually because of reflection of the health of the particular industry and sector; therefore, with the help of industry analysis, business owners can make appropriate strategy which likely to help the business grow and perform consistently. Availability of financial information can determine a bank fiscal health which actually requires a systematic analysis of banks's financials. In this research paper researcher try to capture the predictive viability of a bank's financial condition by using a combination of five financial ratios of Z score model which ultimately depicts a score. This score (Z score) can be used as an effective tool to analyze the financial health and credit worthiness of a bank.

Banking sector plays a crucial role in the Indian economy and has undergone various major reforms and restructuring for better financial viability and also providing better services to customers. This empirical analysis focused/concentrates on finding out the financial health of select Banking giants like SBI, Bank of Baroda and Canara Bank.

Keywords: Fiscal Health, Predictive Viability, Z score.

1. INTRODUCTION

In India it seems that now banking industry is securing stronger and well capable of withstanding the pressures of competition compare to other countries it is because of internationally accepted provident norms have been adopted by RBI and India Banks, with higher disclosures and transparency. Currently Indian banking industry is gradually growing and moving towards adopting and streamlining the banking best practices in accounting, corporate governance and risk management but few past case of loan approvals and money laundering is the live example. Interest rates have been deregulated and direct lending is being progressively reduced in India.

Today, as per the Reserve Bank of India (RBI), India's banking sector is sufficiently capitalized and well-regulated and having a fairly well developed banking system with different classes of banks – public sector banks, foreign banks, private sector banks, regional rural banks and co-operative banks in the system.

Indian banking industry has recently witnessed the roll out of innovative banking models like payments and small finance banks. RBI's new measures may go a long way in helping the restructuring of the domestic banking industry. The digital payments system in India has evolved the most among 25 countries with India's Immediate Payment Service (IMPS) being the only system at level 5 in the Faster Payments Innovation Index (FPII).* In August 2017, Global rating agency Moody's announced that its outlook for the Indian banking system was stable. In November 2017, Global rating agency Moody's upgraded four Indian banks from Baa3 to Baa2.

Market Size-The Indian banking system consists of 27 public sector banks, 26 private sector banks, 46 foreign banks, 56 regional rural banks, 1,574 urban cooperative banks and 93,913 rural cooperative banks, in addition to cooperative credit institutions. Public-sector banks control more than 70 per cent of the banking system assets, thereby leaving a comparatively smaller share for its private peers. Banks are also encouraging their customers to manage their finances using mobile phones. (Source: - RBI website)

2. STATEMENT OF THE PROBLEM

The banking sector has gained significant attention during the last 5 years. Communication has to keep pace with the advancements in other sectors of country's economy for proper and systematic growth during which many private sector banks have come into picture besides public sector banks like SBI, BOB and Canara Bank. The competition in various financial products seems to be war in the part of public sector compare to private sector banks and there is no corresponding growth in the revenue of the banks in this sector except customer addition. Also between private sector counterparts compel them in planning for providing services efficiently at cheaper rates to intermediaries and end-user. This day's industry making it too competitive to survive. Moreover the fast approaching privatization may usher-in giant MNCs and banking sector reforms impacted by demonetization. Hence the present study is done with the objective of diagnosing the financial health of the selected PSU banks in India.

3. OBJECTIVES

The objectives of the study are as follows:

1. To examine the overall financial performance of SBI, Bank of Baroda and Canara Bank.
2. To study the financial health by calculating various ratios and by applying "Z-Score" model and compare them with each selected bank with other banks.

1. METHODOLOGY

Banks are established into two sectors viz., public and private. The study is geographically restricted to India, which covers all the states. Three Public sector banks have been selected randomly i.e., SBI, BOB and Canara Bank and this study covers the period of 3 years from 2014-15 to 2016-17.

2. DATA COLLECTION

The study is confined to three Banks in the public sector. This study is mainly based on secondary data. The required information and data about these three banks is obtained from the secondary sources like published annual reports of corresponding banks as well as from CMIE- Prowess and EBSCO, NSE and BSE websites, news article etc.

3. TOOLS FOR ANALYSIS

The financial health of sample units has been judged through Altman score (Z score Model). To study the financial health, Z-score Model has been selected which incorporates five weighted financial ratios for its formulation.

Z-SCORE ANALYSIS

The Z scores formula used to evaluate the financial health of a Banks is as follows:

$$Z = 1.2 A + 1.4 B + 3.3 C + 0.6 D + 0.99 E$$

Where Z is the overall index

$$A = \text{Working Capital} / \text{Total Assets} * 100$$

$$B = \text{Retained Earnings} / \text{Total Assets} * 100$$

$$C = \text{EBIT} / \text{Total Assets} * 100$$

$$D = \text{Market value of equity} / \text{Book value} * 100$$

$E = \text{Sales} / \text{Total Assets}$.

The resulting Z-score puts a bank in one of the three categories:-

1. Banks with a Z-Score value less than 1.8 indicates a high probability for “**Financial distress**” in the coming couple of years.
2. Banks with a Z-Score value between 1.8 to 3 are considered within “**gray area**”. i.e. financial viability of the banks is considered to be healthy.
3. Banks with a Z-Score value above 3.0 are considered “**very healthy**”.

‘A’ COMPONENT

The ratio of working capital to Total Assets is the ‘A’ component of Z-Score. This is a reasonable predictor of deepening trouble for a bank. A bank which experiences repeated operating losses may suffer a reduction in working capital relative to its total assets.

‘B’ COMPONENT

The ratio of Retained earnings to Total assets is ‘B’ component of Z-Score. This provides information on the extent to which a Bank has been able to reinvest its earnings in itself.

‘C’ COMPONENT

The ratio of EBIT to Total assets is called ‘C’ component of Z-Score. This will adjust a banks’s earnings for varying income tax factors and makes adjustments for leveraging. These adjustments allow more effective measurement of the banks’s utilization of its assets.

‘D’ COMPONENT

The ratio of Market value of Equity to Book Value of Total Liability is called ‘D’ component of Z-Score. This gives an indication of how much a banks’s assets can decline in value before debts may exceed assets. Market value of Equity refers to the No. of outstanding shares multiplied by the market price.

‘E’ COMPONENT

The ratio of Sales to total assets is ‘E’ component of Z-Score. It measures the ability of the bank’s assets to generate sale.

4. ANALYSIS

Elements of ratios for Z-Score values and their trend of three PSU Banks of India are presented in the following tables.

TABLE 1 STATEMENT SHOWING VARIOUS FINANCIAL RATIOS OF SBI

Ratio	2016-17	2015-16	2014-15
Working Capital/Total Assets (A)	0.8	0.27	0.07
Retained Earnings/Total Assets (B)	0.80	0.70	0.79
EBIT/Total Assets (C)	0.06	0.57	0.06
Market value/Book Value (D)	1.48	1.04	1.55
Sales/Total Assets (E)	0.06	0.63	0.07

Table 1 depicts the average ratios of 3 years which are used in calculating Altman model

TABLE 1.1 STATEMENTS SHOWING THE Z-SCORES OF SBI

Year	1.2*A	1.4*B	3.3*C	0.6*D	0.999*E	Z-Score
2016-17	0.96	1.12	0.198	0.888	0.06	3.22
2015-16	0.32	0.98	1.881	0.624	0.63	4.44
2014-15	0.084	1.106	0.198	0.93	0.07	2.38

INFERENCE

Z-Scores of SBI from F.Y.2014-15 to 2016-17 are shown in Table 1.1. It is evident from the table that in all the years the Z-Scores are varying from minimum of 2.38 in the year 2014-15 to maximum of 4.44 in the year 2015-16.

It is evident from the above table that the 'Financial distress' is Moderate in SBI.

TABLE 2 STATEMENTS SHOWING VARIOUS FINANCIAL RATIOS OF BANK OF BARODA

Ratio	2016-17	2015-16	2014-15
Working Capital/Total Assets (A)	0.15	0.09	0.07
Retained Earnings/Total Assets (B)	0.15	0.17	0.14
EBIT/Total Assets (C)	0.057	0.059	0.064
Market value/Book Value (D)	0.98	0.84	0.90
Sales/Total Assets (E)	0.060	0.065	0.060

Table 2 depicts the average ratios of 3 years which are used in calculating Altman model

TABLE 2.1 STATEMENTS SHOWING THE Z-SCORES OF BANK OF BARODA

Year	1.2*A	1.4*B	3.3*C	0.6*D	0.999*E	Z-Score
2016-17	0.18	0.21	0.188	0.588	0.060	1.23
2015-16	0.108	0.238	0.195	0.504	0.065	1.11
2014-15	0.084	0.196	0.211	0.54	0.060	1.09

INFERENCE

Table.2.1 discloses the Z-Score values of BOB from 2014-15 to 2016-17. From the above table it is found that the Z-Scores in all the years are below 1.8. The Z-Score value of the bank ranged from a minimum of 1.09 in 2014-15 to a maximum of 1.23 in 2016-17. This means that the bank has placed itself in very risk and financial distress zone and its financial position is not viable.

TABLE 3 STATEMENTS SHOWING THE RATIOS OF CANARA BANK

Ratio	2016-17	2015-16	2014-15
Working Capital/Total Assets (A)	0.13	0.18	0.13
Retained Earnings/Total Assets (B)	0.06	0.05	0.01
EBIT/Total Assets (C)	0.069	0.074	0.074
Market value/Book Value (D)	0.63	0.37	0.64

Sales/Total Assets (E)	0.070	0.007	0.079
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Table 3 depicts the average ratios of 3 years which are used in calculating Altman model.

TABLE 3.1 STATEMENTS SHOWING THE Z-SCORES OF CANARA BANK

Year	1.2*A	1.4*B	3.3*C	0.6*D	0.999*E	Z-Score
2016-17	0.13	0.06	0.069	0.63	0.07	0.91
2015-16	0.18	0.05	0.074	0.37	0.007	0.76
2014-15	0.13	0.01	0.074	0.64	0.079	0.88

INFERENCE

It is evident from Table.3.1 that Z-Scores of Canara bank is showing a high volatility in trend. The Bank has reached to Gray zone in all the years and we can say that it entered into danger zone where its Z-Score values are less than 1.80.

The financial position in this situation is uncertain to predict. Therefore, the bank should immediately take all the corrective measures to be in safe zone.

The resultant Z-Score values of all the three BANKS are shown in Table below:

TABLE 4 COMPARATIVE STUDY OF SELECTED BANKS

Year	SBI	Change	Bank of Baroda	Change	Canara Bank	Change
2014-15	2.38	-	10.9	-	0.88	-
2015-16	4.44	54%	1.11	0.09%	0.76	-15.79
2016-17	3.22	-138%	1.23	0.90%	0.91	0.83%

INFERENCE

It is evident from the table that though the financial position of SBI is better than BOB and Canara Bank it is highly volatile and in financial distress zone from year on year.

5. CONCLUSION

The present study is the fundamental analysis of PSU Banks in India. From the interest of investors the study gives good analysis on the basis of which individual investor can get idea on which bank to invest more rather rely on it in future to get maximum returns. The parameters selected for the analysis proves to be useful for the investor to draw some conclusion out of the selected banks. From the result of the study, it is clear that the financial health of all select PSU Banks have been poor. In spite of having a well established infrastructural capacity, the public sector giant Canara Bank is still suffering to cope-up with the competition from SBI and BOB. It is suggested that all the PSU banks in India should take innovative steps for the survival and betterment of financial health with more focus on customer retention and upgraded services which will help them to cope up with private banks.

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