



ANALYSIS OF THE SOLVENCY POSITION OF SELECTED INDIAN BANKING SECTOR IN CONTEXT WITH PEARLS ANALYSIS

Vimal Kumarie V

Assistant Professor of Commerce, Siddhar Sivagnaani Arts And Science College Bommayapalayam, Tamil Nadu 605104, India.

ABSTRACT

PEARLS is a critical tool or technique to determine the financial stability of banks. It includes protection, Effective Financial Structure, Asset Quality, Rates of Return and Cost, Liquidity and Signs of growth. Here, this paper compares the solvency position of eight selected Indian Public and private sector banks named, SBI, Punjab National Bank, Indian Bank, bank of India, HDFC, ICICI, AXIS, Karur Vysya Bank, which have been analysed for the period of five years i.e. from March 2018 to March 2022. The findings highlighted that there is a significant difference in the solvency ratio of selected public and private sector banks.

KEYWORDS : PEARLS, World Council of Credit Union, Inc (WOCCU), solvency.

1. INTRODUCTION

PEARLS is a financial execution checking framework designed to provide management direction for credit associations and other investment fund organisations. PEARLS also serves as a controller supervisory device. There are 44 quantitative monetary pointers in total that encourage a critical examination of any monetary foundation's budgetary state. The reason for including so many pointers is to demonstrate how a change in one proportion affects so many different markers. Every indicator has a prudential standard or a related goal.

The World Council of Credit Unions, Inc. (WOCCU) advances the goal, or standard of perfection for each pointer, based on its field experience attempting to reinforce and modernise credit associations and advance investment funds-based development.

PEARLS will serve as an important guide through extremely volatile conditions, enhancing the executives' overall basic leadership capacity. In this context, the solvency position of selected Indian Banking sectors has been examined in this paper.

2. Objectives Of The Study

1. To explicate the concept of solvency ratio.
2. To investigate the Solvency position of the selected public and private sector banks for a period of five years from 2018 to 2022.

3. Research Methodology

- a. **Period of the Study:** The study covers a period of five years from 2018 to 2012
- b. **Data Collection:** Data has been collected from published annual reports of the selected banks.
- c. **Sample Size:** The study has taken a total of eight public and private sector banks.
- d. **Public Sector Banks:** SBI, Punjab National Bank, Indian Bank, bank of India,
- e. **Private Sector Banks:** HDFC, ICICI, AXIS, Karur Vysya Bank,
- f. **Statistical Tools:** The present study employed The two-way ANOVA was used to determine if there is a considerable variation in the solvency ratios between years and among the selected Indian banking sector and an independent sample t-test has been used to analyze the differences in the calculated ratios of the selected banks.

4. Solvency

Purpose: Determine the credit union's level of protection for member savings and shares in the event of the credit union's assets and liabilities being liquidated. This ratio is critical for determining the institution's solvency.

Formula

$$= \frac{\text{Net Value of Assets}}{\text{Total Shareholder's Fund}} \times 100$$

The above formula's components will be explained as follows.

Total Net Block (Gross Block-Depreciation) and Total Net Current Assets (Total Current Assets-Total Current Liabilities) comprise the Net Value of Assets. The total net block and total net current assets will be added and placed in the numerator.

The total shareholder fund includes the total equity capital, reserves, and surplus of the chosen company for the study period.

This ratio is an important parameter for the company's solvency because it shows the relationship between the institutions' Total Assets and Shareholder funds. In this case, WOCCU has stated that the ratio must be 110% or higher. Institutions that do not have the specified ratio should strive to achieve it as soon as possible. This ratio has no maximum value. As a result, the higher the ratio, the greater the company's solvency. The analysis of this ratio is shown in the table below.

5. Data Analysis And Interpretation
Part -I Analysis Of Public Sector Banks

I. Hypothesis

Hypothesis With Respect To The Years

Null Hypothesis

H₀: The Solvency ratio does not differ significantly over the years.

Alternate Hypothesis

H₁: The Solvency ratio differs significantly within the years

Hypothesis With Respect To the Selected Public Sector Banks

Null Hypothesis

H₀: The Solvency ratio does not differ significantly within Selected public Sector banks

Alternate Hypothesis

H₁: The Solvency ratio differs significantly within Selected public Sector banks

II. Analysis of Solvency of Selected Public Sector Bank

Table 1: Analysis of Solvency

SELECTED PUBLIC SECTOR BANKS				
YEAR	SBI	PNB	IB	BOI
2018	157.6587	186.4499	136.9851	171.5148
2019	166.6222	173.0295	144.4478	150.0013
2020	170.3132	133.2103	140.0989	149.9431

2021	178.6086	138.6266	162.9715	158.8808
2022	178.0725	137.6948	153.6688	133.2482
AVERGAE	170.255	153.8022	147.6344	152.7177
OVERALL AVERAGE	156.1023288			
S.D	8.700055	24.23498	10.63	14.01297

Source: Calculated from the Annual Reports of Selected Banks during the study under review.

III. Interpretation

Table 1 shows the public banks' wise Solvency during the study period Comparing the average ratio of all the banks during the study period with the overall average of the industry, it is observed that only SBI has got the highest average of the industry average. The industry average during the study period was 156.1023288 % whereas PNB registered 153.8022%, IB. got 147.6344%, and BOI. at 152.7177% and SBI registered with 170.255.

The solvency percentage of selected public banks, according to WOCCU, should be at least 110 per cent and preferably higher. Table 1 shows that SBI, PNB, IB, and IOB, all met the WOCCU's standard aim for all of the study's financial years.

Table 2: Two-way Anova Of Solvency Ratio

Source of Variation	SS	df	MS	F	F crit
Within the year	631.9701	(5-1) 4	157.9925	0.582001	3.26
Within the Banks	1443.758	(4-1) 3	481.2526	1.772803	3.49
Error	3257.571	12	271.4642		
Total	5333.299	19			

In Table 2, the value of the calculated F ratio for the years is 0.582001, whereas its table value with the significance level of 5% and degrees of freedom (4, 12) is 3.26. The calculated F ratio for the Selected Public banks is 1.772803, whereas its table value with the significance level of 5% and degrees of freedom (3, 12) is 3.49.

Component-years:

F Calculated [0.582001] < F = 0.05 and D.F. = (4, 12) α [3.26]

Hence, the null hypothesis, H₀ should be Accepted

Inference: This means that there is no significant difference in the Solvency ratio within years.

Component: Public Banks:

F Calculated [1.772803] < F = 0.05 and D.F. = (3, 12) α [3.49]

Hence, the null hypothesis, H₀, should be Accepted.

Inference:

This means that there is no significant difference in the Solvency ratio within Selected Public banks.

Part-II Analysis Of Private Sector Banks

I. Hypothesis

Hypothesis With Respect To The Years

Null Hypothesis

H₀ The Solvency ratio does not differ significantly over the years.

Alternate Hypothesis

H₁ The Solvency ratio differs significantly within the years

Hypothesis With Respect To the Selected Private Sector Banks

Null Hypothesis

H₀: The Solvency ratio does not differ significantly within Selected private Sector banks

Alternate Hypothesis

H₁: The Solvency ratio differs significantly within Selected private Sector banks

II. Analysis of Solvency of Selected Private Sector Banks

Table 3: Analysis of Solvency

SELECTED PRIVATE-SECTOR BANKS				
YEAR	HDFC	ICICI	AXIS	KVB
2018	100.0926	83.60575	108.9647	106.844
2019	83.41071	88.99849	120.1321	107.9593
2020	89.5109	94.2767	107.7326	103.4474
2021	85.74825	83.41397	98.04025	107.2212
2022	86.1556	82.76825	102.035	105.3664
AVERGAE	88.98361	86.61263	107.3809	106.1677
OVERALL AVERAGE	97.28621047			
S.D	6.580468	4.961914	8.382312	1.790207

Source: Calculated from the Annual Reports of Selected Banks during the study under review.

III. Interpretation

Table 3 shows the private banks' wise Solvency during the study period Comparing the average ratio of all the banks during the study period with the overall average of the industry, it is observed that only AXIS and KVB have got the highest average of the industry average. The industry average during the study period was 97.28621047 % whereas the registered HDFC was 88.98361 % ICICI. got 86.61263 %, and AXIS. at 107.3809 % and KVB registered with 106.1677 %.

The solvency percentage of selected private banks, according to WOCCU, should be at least 110 per cent and preferably higher. Table 3 shows that only KVB met the WOCCU's standard aim for all of the study's financial years.

Table 4: Two-way Anova Of Solvency Ratio

Source of Variation	SS	df	MS	F	F crit
Within the year	162.822	(5-1) 4	40.7055	1.212849	3.26
Within the Banks	1818.211	(4-1) 3	606.0703	18.05829	3.49
Error	402.7426	12	33.56188		
Total	2383.775	19			

In Table 4, the value of the calculated F ratio for the years is 1.212849, whereas its table value with the significance level of 5% and degrees of freedom (4, 12) is 3.26.

The calculated F ratio for the Selected Public banks is 18.05829, whereas its table value with the significance level of 5% and degrees of freedom (3, 12) is 3.49.

Component-years:

F Calculated [1.212849] < F = 0.05 and D.F. = (4, 12) α [3.26]

Hence, the null hypothesis, H₀ should be Accepted

Inference: This means that there is no significant difference in the Solvency ratio within years.

Component: Public Banks:

F Calculated [18.05829] > F = 0.05 and D.F. = (3, 12) α [3.49]

Hence, the null hypothesis, H₀, should be Rejected

Inference: This means that there is a significant difference in the Solvency ratio within Selected Private banks.

Part-III

6. Comparative Study On Public Ad Private Sector Banks

H01: There is no significant difference in the solvency ratio of selected public and private sector banks.

Ha1: There is a significant difference in the solvency ratio of selected public and private sector banks.

Table 5: Independent Sample t Test

Banks	N	Mean	SD	T value	p value	Results
Public sector	4	156.1023288	9.810735	7.9768622	0.000	H0Rejected
Private Sector	4	97.28621047	11.00973			

An Independent sample t-Test has been applied to examine the difference in the solvency ratio of the selected banks. Table 5 shows the values of mean, SD, t value and P value. The value of t is 7.9768622 and the p-value corresponding to it is 0.000 which is less than 0.05. It means the null hypothesis stands rejected and hence there is a significant difference in the solvency ratio of the public and private sector banks under study.

7. CONCLUSION

The above analysis and its results disclose that there is no significant difference in the Solvency ratio within selected public sector banks during the period under review. When comparing the private sector banks there is a significant difference in the Solvency ratio within selected private sector banks during the period under review, and there is a significant difference in the Solvency ratio within selected public banks during the period under review. Therefore public sector banks' performance was higher when compared to private sector banks. That's why a solvency position is also important for the financial status of the organisation along with other financial factors.

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