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Evaluating Debt Equity Ratio of Selected Public and Private Sector Banks between Prior and Post Demonetization in India

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ABSTRACT- The Debt-Equity ratio is a financial statistic that measures the amount of money the organization has borrowed from outside sources compared to the money its owners have invested. This ratio is used to calculate how much fund was obtained through equity and how much was borrowed from other sources. Debt Equity Ratio is one of the solvency ratios. Solvency ratios are used to measure an institution's capacity to meet its long-term obligations. Generally, the lower the debt-equity ratio, the better the financial position of the institutions. Therefore, this research paper is an attempt to evaluate the solvency position of banks in the prior and post-demonetization phases and reveals the conclusion based on the tested hypothesis on t-test analysis that there is no significant difference in Debt Equity Ratio of selected public and private sector banks before and after demonetization. It also found that private-sector banks have better debt-to-equity ratios than public-sector banks.

KEYWORDS- Debt Equity Ratio, Bank, Solvency, Demonetization

I. INTRODUCTION

The debt-to-equity ratio facilitates organisations in evaluating their financial strategy and determining if they are utilising debt or equity financing to fund their operations. Debt Equity ratio, also referred to as the gearing ratio, risk ratio, and debt-to-equity ratio, is a financial ratio that, in terms of accounting, is categorised under the solvency ratio, which evaluates the proportion of total debt and financial liabilities to total shareholder funds in financial institutions. It means this ratio indicates the relationship between total loans and total equity which is calculated by using this ratio. It is a crucial financial measure which is used to assess an institution's capacity to pay back its external lenders and creditors. A high debt-equity ratio indicates the much-borrowed finance is being used by an organization. Debt Equity Ratio is calculated as follows-
Formula,

$$\textit{Debt Equity Ratio} = \frac{\text{Debt}}{\text{Equity}}$$

or,

$$\textit{Debt Equity Ratio} = \frac{\text{Long term debt}}{\text{Shareholder's fund}}$$

where,
Long term debt = long term loan + debentures
Equity or Shareholder's fund = Equity shares capital + preference shares capital + revenue and surplus - P/L (loss) + fictious assets.

II. REVIEW OF LITRATUTRE

Anuara Hasliyawani and China Othman [1] aims to create a capital structure model for micro franchising from the standpoint of Malaysia. The focus of this research will be on the elements that go into creating a capital structure model that emphasises the debt-to-equity ratio. The debt in micro franchising is analysed using a regression model. The dependent variable in this study is the debt-to-equity ratio, whereas the independent factors are growth, tangibility, profitability, business size, liquidity, and age. Nukala Vasishta Bhargava et al. [3] shows how discount rates affect current values of future cash flows when the debt-to-equity capital structure ratio is adjusted from 0 to 2.5 debt-to-equity. The break-even sensitivity test was also done in reference to the company's various gross margin ratios. It was discovered that a rise in gross margins combined with a high debt-to-equity ratio resulted in a flatter net present value. Yaslim Erisanofil, Masdupi Erni [2] studied has analysed financial reports that have appeared in 10 recent academically regarded publications on business and finance. The findings therefore indicate that a rise in stock investment may be used to gauge the expectation that financial success will enhance stock returns. Consequently, stock returns are significantly influenced by debt policy and profitability.

III. MAIN CONCERN OF STUDY

- To know about Debt Equity Ratio and its role to measure the solvency of institutions.
- To analyse the Debt Equity Ratio.
- To evaluate the Debt Equity Ratio is selected public and private sector banks between prior and post

demonetization period.

A) *Statement of Problem*

The purpose of this study is to examine the influence of demonetization on the solvency capabilities of selected public and private sector banks through Debt Equity Ratio. As debt-equity ratio shows the solvent condition of institutions. Therefore, the importance of this study lies in understanding the amount of debt and equity in the prior and post-demonetization periods.

IV. RESEARCH METHODOLOGY

A. *Collection of Data*

The entire study is based on secondary data that was gathered from a variety of sources, including the annual reports of the relevant banks, journals, websites, books, magazines, and more.

B. *Selected Banks*

Six banks in total have been selected as sample for the study, three from the public sector (SBI, PNB, and BOB) and three from the private sector (HDFC, ICICI, Axis).

C. *Period of study*

The five financial years from 2015–16 to 2019–20 is covered by the present study.

D. *Techniques*

Debt Equity Ratios, which are as follows, have been used to analyze the solvency situation of selected public and private sector banks in prior and post demonetization phase.

E. *Tools*

T- test two sample variables has been applied to test the formulated hypothesis

F. *Data Analysis*

This ratio shows a bank's level of leverage. It reveals how much of a bank's funding comes from equity and how much from debt. A higher ratio is a warning indication for the organisation based on finance. The entire selected research unit, however, displays the mix patterns of the Debt Equity Ratio across the study period from 2014 to 2019 (See the below Table 1).

Table 1: Debt Equity ratio of selected public and private sector banks in prior and post demonetization period

Bank	Pre-Demonetization period				Post Demonetization period			
	2014	**2015**	**2016**	**Average**	**2017**	**2018**	**2019**	**Average**
SBI	14.73	15.18	14.24	14.72	15.08	15.79	16.89	15.92
PNB	13.92	13.93	17.28	15.04	17.39	18.8	17.36	17.85
BOB	17.33	16.95	15.11	16.46	15.69	15.07	15.37	15.38
HDFC	10.31	8.52	8.25	9.03	8.02	8.58	6.97	7.86
ICICI	7.12	7.03	6.86	7	6.58	7.28	7.77	7.21
Axis	9.03	9.34	8.6	8.99	9.31	9.48	10.52	9.77

Source: Annual reports of respective banks[4] [5] [6] [7] [8] [9]

In the pre-demonetization period (from 2014 to 2016), ICICI bank held the top place with the lowest 7.00 DER average ratio, followed by Axis bank in second place with 8.99 average ratios, HDFC bank in third place with 9.03 average ratios, SBI in fourth place with 14.72, PNB in fifth place with 15.04, and BOB in sixth place with 16.46 average ratios.

Additionally, between 2017 and 2019, during the post-demonetization period, ICICI Bank held the key position with the lowest 7.21 DER average ratio, followed by HDFC Bank with a 7.86 average ratio, Axis Bank with a 9.77 average ratio, BOB with a 15.38 average ratio, SBI with a 15.92 average ratio, and PNB with a 17.85 average ratio.

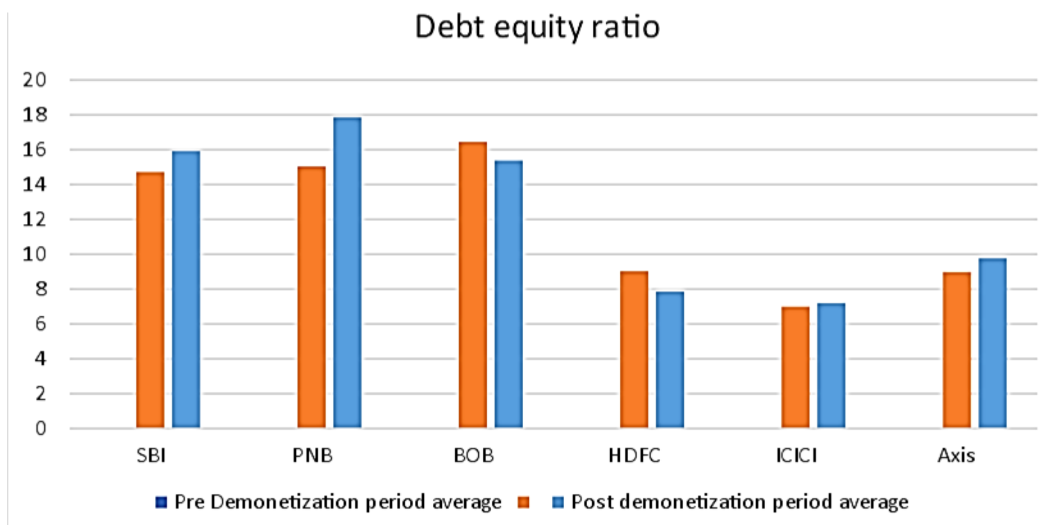

Figure 1: Debt Equity Rat

According to the above Figure 1, ICICI Bank performed admirably to obtain the lowest DER ratio in both the pre- and post-demonetization phases, whereas BOB and PNB respectively had the highest DER ratios in the pre- and post-demonetization periods.

Hypothesis - H0 = There is no significant difference in the Debt Equity ratio of selected public and private sector banks in the pre- and post-demonetization period.

Table 2: Hypothesis t-Test Analysis

t-Test: Paired Two Sample for Means	*Variable 1*	*Variable 2*
Mean	11.873333	12.33166667
Variance	15.863267	21.08197667
Observations	6	6
Pearson Correlation	0.9485369	
Hypothesized Mean Difference	0	
Df	5	
t Stat	-0.7480071	
P(T<=t) one-tail	0.244062	
t Critical one-tail	2.0150484	
P(T<=t) two-tail	0.488124	
t Critical two-tail	2.5705818	

The DER ratio of six selected banks was analysed by using T-test for the pre- and post-demonetization periods. Three public sector banks (SBI, PNB, and BOB) and three private sector banks (HDFC, ICICI, and Axis) were used as samples.

The aforementioned table 2 shows that the P two-tail value is 0.48, which is higher than the 0.05 alpha value (P-value 0.48 > 0.05). There is therefore no discernible variation in the DER ratio of a few chosen public and private sector banks in the Pre and Post demonetization era, supporting the null hypothesis (H01).

V. CONCLUSION

It is well known that the Debt-to-Equity Ratio is used to measure the bank's financial leverage, i.e., the percentage of financing that comes from investors and creditors. Banks finance their operations through deposit money. Hence, it is significant to evaluate the financing strategy of banks, which is widely influenced by any financial decision taken by the government or RBI.

The demonetization moves also influenced the bank's solvency capacity on a large scale. Therefore, this paper attempted to evaluate the Debt Equity Ratio of selected banks for five financial years and concluded based on t-test analysis that there is no significant difference in prior and post-demonetization periods.

VI. FINDINGS AND SUGGESTION

According to the study, ICICI Bank has a strong solvency position because it has the lowest debt-equity ratio among the selected banks over the last five financial years, while HDFC Bank and Axis Bank rank second and third, respectively. SBI, PNB, and BOB, on the other hand, have the highest debt equity ratios both prior to and post demonetization.

So, based on the findings the study suggests that public sector banks should improve their Debt Equity Ratio and private banks should maintain this level of Debt Equity Ratio.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

REFERENCES

[1] H. Anuara and C. Othman, "The Development of Debt-to-Equity Ratio in Capital Structure Model: A case of micro franchising," *Procedia Economics and Finance*, vol. 35, pp. 274–280, 2016. Available from: https://doi.org/10.1016/S2212-5671(16)00034-4

[2] Y. Erisanofil and M. Erni, "Variable in Telecommunications Companies Listed on the Indonesia Stock Exchange," *Advances in Economics, Business and Management Research*, vol. 152, 2020. Available from: https://tinyurl.com/mptvnzzs

[3] N. V. Bhargava and R. S. S. Prasada, "Role of debt-to-equity ratio in project investment valuation, assessing risk and return in capital markets," *Future Business Journal*, vol. 7, Article no. 13, 2021. Available from: https://tinyurl.com/2n2pxyzb

[4] State Bank of India (SBI), "Annual Reports 2014–15 to 2018–19." Available from: https://tinyurl.com/7f4v844m

[5] Punjab National Bank (PNB), "Annual Reports 2014–15 to 2018–19." Available from: https://tinyurl.com/2e7bt7bn

[6] Bank of Baroda (BOB), "Annual Reports 2014–15 to 2018–19." Available from: https://tinyurl.com/4dn6fk5n

[7] HDFC Bank, "Annual Reports 2014–15 to 2018–19." Available from: https://tinyurl.com/p2kjk5kb

[8] ICICI Bank, "Annual Reports 2014–15 to 2018–19." Available from: https://www.icicibank.com/aboutus/annual.page

[9] Axis Bank, "Annual Reports 2014–15 to 2018–19." Available from: https://tinyurl.com/2yjx26za