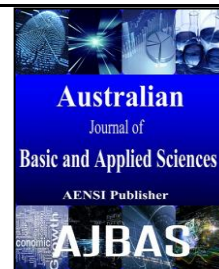




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The Role of Capital Structure Analysis on Indian Commercial Banks Comparative Study between Punjab National Bank (PNB) and Bank of Baroda (BOB)

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ABSTRACT

Capital Structure is the prime factor in success of a business; the present study is confined of the Punjab National Bank(PNB) and Bank of Baroda(BOB). The period of study is from 2006-07 to 2010-11. There are two sources of date i.e. primary data and secondary data. The primary data is original in nature. The primary data has been collected through personal interviews with the officials of the Banks. The secondary data have been collected through published annual reports, books, magazine and internet. Mainly the present study is based on the secondary data. The study finding the total debts and equity of both the banks showed an increasing trend during the whole period of study. Suggested the management of both the banks should try to increase the ratio by increasing the owner's funds, and it is suggested that the management of the both banks should try to bring down the ratio and keep the ratio one or less than one and finance the working capital out of long term borrowings.

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INTRODUCTION

A sound or appropriate capital structure is the prime factor in success of a business. Now a day it is being felt that a company should workout its capital structure in such a way that the funds are utilized to the maximum extent and it able to adopt more easily to the changing conditions. Capital structure should be such that it can get maximum use of favorable leverage flexibility solvency etc. show that the company can have better financial health in future.

The term capital structure means the financial planning according to which the assets of an industry are financed. According to Lawrence D. Schall and Charles W. Haley, "The term capital structure means the proportion of different types of securities issued by a firm. The optimal capital structure is the set of proportion that maximizes the total value of the firm. Lawrence and Charles (1999).

The word 'structure' is used in science of engineering where it means different parts of a building. Companies, raise their capital through various sources viz. shares, debentures, retained earnings etc. From whatever source the capital is raised, it is invested in different types of assets. As in the construction of a building, different types of materials are used in definite standard proportion according to size and nature of the building. Similarly, raising of capital from different sources and their use in different assets by a company is

made on the basis of certain principles that provide a system of capital so that the maximum rate of return can be earned at minimum cost. This sort of system of capital is known as capital structure. Thus capital structure refers to the combination or mix of debt and equity which a company uses to finance its long-term operations." A judicious use of debt and equity in capital structure can maximize the value of the firm." Rustagi (2005).

The capital structure analysis should always be turned to objectives. Different persons use the information to satisfy their specific curiosity. A shareholder would like to know whether the operations of the concern are profitable. A financier would like to assure the safety and reliability of the return on his investment. The short-term creditors and suppliers of material may be interested in knowing the short-term solvency position of the company. "Within every commercial enterprise of whatever size, there are inevitably many different interest to be served". Wilson and Mchugh (1987).

The rest of the study is organized as follows. The researchers start with reviewing related literature review on the capital structure. Then study the Problem Investigated which has been investigated in processes of capital structure, then objective of the study, then methodology which including the study sample and period, the final part of the study reports results and recommendations based some on the present study of the study.

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1. Literature Review:

Soumadi and Hayajneh. (2012). Capital structure and corporate performance empirical study on the public Jordanian shareholdings firms listed in the Amman stock market. The study investigates the effect of capital structure on the performance of the public Jordanian firms listed in Amman stock market. The study used multiple regression model represented by ordinary least squares (OLS) as a technique to examine what is the effect of capital structure on the performance by applying on 76 firms (53 industrial firms and 23 service corporation) for the period (2001-2006). The results of the study concluded that capital structure associated negatively and statistically with firm performance on the study sample generally. In addition, the study found out that there was no significant difference to the impact of the financial leverage between high financial leverage firms and low financial leverage firms on their performance. Finally, the study also showed that the effect of financial leverage on the basis of the growth that there is no difference between the financial leverage of high growth firms and low growth firms on the performance, which it was negatively and statistically.

Šarlija and Harc. (2012). The impact of liquidity on the capital structure: a case study of Croatian firms. The aim of this paper is to investigate the impact of liquidity on the capital structure of Croatian firms. Methods/Approach: Pearson correlation coefficient is applied to the test on the relationship between liquidity ratios and debt ratios, the share of retained earnings to capital and liquidity ratios and the relationship between the structure of current assets and leverage. Results: A survey has been conducted on a sample of 1058 Croatian firms. There are statistically significant correlations between liquidity ratios and leverage ratios. Also, there are statistically significant correlations between leverage ratios and the structure of current assets. The relationship between liquidity ratios and the short-term leverage is stronger than between liquidity ratios and the long-term leverage. Conclusions: The more liquid assets firms have, the less they are leveraged. Long-term leveraged firms are more liquid. Increasing inventory levels leads to an increase in leverage. Furthermore, increasing the cash in current assets leads to a reduction in the short-term and the long-term leverage.

Andrew, (2003). The capital structure decisions of firms: is there a pecking order?. This paper considers the 'trade-off' and 'pecking order' theories, the two most influential approaches to understanding firms' capital structure decisions. The paper adopts two approaches to examining capital structures using firm-level panel data for firms in both Spain and the United Kingdom. First, debt ratios are examined and found to be decreasing in cash flow or profitability and increasing in the investment of the firm in both countries. Second, aspects of the two different

financial systems are examined. The results are consistent with the pecking order approach and generally inconsistent with the tradeoff approach suggesting behavior consistent with the existence of a hierarchy of finance faced by firms in Spain and the United Kingdom.

Stewart. (2001). 'Capital structure'. The study of capital structure attempts to explain the mix of securities and financing sources used by corporations to finance real investment. Most of the research on capital structure has focused on the proportions of debt Vs equity observed on the right-hand sides of corporations' balance sheets. This paper is an introduction to that research. There is no universal theory of the debt-equity choice, and no reason to expect one. There are several useful conditional theories, however. For example, the tradeoff theory says that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. The tradeoff theory predicts moderate borrowing by tax-paying firms. The pecking order theory says that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. Thus the amount of debt will reflect the firm's cumulative need for external funds. The free cash flow theory says that dangerously high debt levels will increase value, despite the threat of financial distress, when a firm's operating cash flow significantly exceeds its profitable investment opportunities. The free cash flow theory is designed for mature firms that are prone to overinvest.

Harris. (1991). 'The theory of capital structure'. This paper surveys capital structure theories based on agency costs, asymmetric information, product/input market interactions, and corporate control considerations (but excluding tax-based theories). For each type of model, a brief overview of the papers surveyed and their relation to each other is provided. The central papers are described in some detail, and their results are summarized and followed by a discussion of related extensions. Each section concludes with a summary of the main implications of the models surveyed in the section. Finally, these results are collected and compared to the available evidence. Suggestions for future research are provided.

2. Problem of the Study:

The capital structure is essential to any Bank long-run success. The term capital structure refers to the pattern of financing and is the process which comes after determining capitalization. And the question that mention here is how the capital structure impact on debt equity, capital gearing ratio, proprietary ratio, solvency ratio, fixed assets to net worth ratio, and fixed assets to long-term funds ratio of the PNB and BOB.

3. Objectives of the study:

1. To examine the debt equity ratio of the PNB and BOB.
2. To evaluate the capital gearing ratio of the PNB and BOB..
3. To assess the proprietary ratio of the PNB and BOB.
4. To evaluate the solvency ratio of the PNB and BOB.
5. To find the fixed assets to net worth ratio of the PNB and BOB.
6. To find the fixed assets to long term funds ratio of the PNB and BOB.

5. Research Methodology:

The study is based on the following methodology.

5.1 Nature of Data

The data required for the purpose of the study are the following in nature:

1. Information relating to the formation, growth, operational jurisdiction, financial activities and programmes of Commercial Banks.
2. Balance sheet, Profit and Loss account published in the form of annual reports of Commercial Banks.
3. Statistical summary of all scheduled commercial banks in India published in annual reports of Commercial Banks present and past practices.
4. Banking statistics published in the Central Bank of India bulletin.

5.2 Sources of Data:

Most of the information collected for the study will be secondary in nature. The secondary data will be collected from the following sources:

- Information relating to scheduled commercial bank offices will be obtained from the Bank.
- Annual reports of banks.

5.3 Period of Study:

The period of study spans over the years between year 2006/2007 to 2010/2011. The period of five years has been taken mainly to analyze the impact of Capital Structure of Commercial Banks. Incidentally this is most significant period, in the life of Banks because the profits are more or less volatile during the period. Thus, the study covers a period of five years from 2006/2007 to 2010/2011.

5.4 Scope of the study:

In the present study following banks have been covered

- Punjab National Bank (PNB) and
- Bank of Baroda (BOB)

5.5 Hypotheses of the study:

H1: There is no significant difference in the debt equity ratio of the PNB and BOB.

H2: There is no significant difference in the capital gearing ratio of the PNB and BOB.

H3: There is no significant difference in the proprietary ratio of the PNB and BOB.

H4: There is no significant difference in the solvency ratio of the PNB and BOB.

H5: There is no significant difference in the fixed assets to net worth ratio of the PNB and BOB.

H6: There is no significant difference in the fixed assets to long term funds ratio of the PNB and BOB.

H1: There is no significant difference in the debt equity ratio of the PNB and BOB:

This ratio is an indicator of the soundness of the configuration of the debt-equity mix." The objective of computing this ratio is to measure the relative proportion of debt and equity in financing the assets of a firm." Tulsian (2010).

It can be noted from the table 1.1 that the debt equity ratio in PNB, showed a mixed fluctuating trend while the debt equity ratio in BOB, showed an increasing trend. The total debts and equity of both the banks showed an increasing trend during the whole period of study. The average of the debt equity ratio in PNB, was 17.23 times which is very high and denotes that the bank is fully depending on long term sources of capital. The management of the bank PNB should try to reduce the burden of long term borrowings and accordingly reduce the debt equity ratio. The average debt equity ratio in BOB, was 8.22 times though high for a commercial concern but for a banking concern it can be regarded satisfactory and the bank even at the time of requirement can raise the funds through borrowed capital. The coefficient of variation of both the banks showed a consistent trend but in PNB, it was consistent towards higher side and it can be suggested that the consistency should be brought towards the lower side.

Test of Significance for Debt Equity Ratio:

i) Hypothesis used= Null= There is no significant difference in the debt equity ratio of the banks under study

ii) Computed value of $t = 16.95$

iii) Critical value of t at 5 percent level of significance ($V = 5 + 5 - 2 = 8$) = 2.306

iv) Decision:- As the computed value of t is more than the critical value of t at 5 percent level of significance. Therefore, the null hypothesis is rejected and it is concluded that there is a significant difference in the debt equity ratio of the banks under study.

H2: There is no significant difference in the capital gearing ratio of the PNB and BOB:

"The capital gearing ratio is also known as 'capitalization ratio' or 'leverage ratio' indicates the proportion of equity share capital and fixed income

bearing securities to total capital employed in the business “Chandra Prasanna (2004).

The interbank comparison as shown by table 1.2 reveals that the average of the capital gearing ratio was high in PNB at 15.28 denoting that the bank followed a debt financing policy. The capital of PNB was high geared and the bank was bearing a fixed charge in the form of interest which reduces the profitability of the bank. This situation can be favourable but becomes risky at the time of recession. On the other hand the average of capital gearing ratio in BOB was 0.19 times indicating that the fixed cost bearing capital was very less in comparison to the variable cost bearing capital and the management of the bank was very much cautious and not taking any risk. The management of the bank, in order to increase the profitability should adopt a debt financing policy and raise the funds through fixed cost bearing capital.

The coefficient of variation in PNB showed a consistent trend at the higher side as it was 6.84 percent while in the case of BOB; the fluctuation was high as the coefficient of variation was 32.41 percent which should be controlled by the management of the bank.

Test of Significance (t test):

- i) Hypothesis:- Null hypothesis i.e. there is no significant difference in the capital gearing ratio of the banks under study has been used to apply t test
- ii) Calculated value of t for two sample means=32.05
- iii) Table value of t at 0.05 level of significance (for V=8) =2.306
- iv) Decision: - The null hypothesis is rejected because the calculated value of t is more than the table value and it is concluded that the difference in capital gearing ratio of both the banks is significant.

H3: There is no significant difference in the proprietary ratio of the PNB and BOB:

The Proprietary ratio measures a relationship between Equity and the Total Assets of the business. The objective of computing this ratio is to measure the proportion of the total assets financed by the Equity or Proprietors' funds. Tulsian (2010).

It is evident from the table 1.3 that both the banks were highly depending on borrowed capital to acquire the assets. The average of the proprietary ratio in PNB was 0.06 times while for BOB it was 0.11 times which means that 94 percent of the total assets in PNB were financed through borrowed capital and 89 percent of the total assets in BOB were financed through borrowed funds. It does not show a satisfactory position and the management of both the banks should try to increase the ratio by increasing the owner's funds. Both the banks have shown a consistent trend as the coefficient of variation in PNB was 8.33 percent while in BOB it was 9.09 percent. Though a consistent trend is good

but this consistency should be after increasing the ratio.

Test of Significance for two sample means:

- i) Null Hypothesis Used:- There is no significant difference in the proprietary ratio of the banks under study
- ii) Calculated value of t for two sample means=10
- iii) Critical value of t at 5 percent level of significance=2.306
- iv) Decision: The difference is significant because the calculated value of t is more than the table value. Hence, it is concluded that the mean values of PNB and BOB differ significantly.

H4: There is no significant difference in the solvency ratio of the PNB and BOB:

Debt ratio or external equity to total assets ratio or total liabilities to total assets ratio or debt to total funds ratio. Sarngadharan and Kumar (2011). A firm's solvency ratio is computed dividing total liabilities by total assets.

A comparative study of solvency ratio of both the banks shows that the solvency ratio was high in both the banks. The average of the solvency ratio of PNB was 0.94 times while for BOB it was 0.89 times. The assets of both the banks were more than the external liabilities showing a solvency position of banks, but the management of the banks should try to bring down the ratio by increasing owner's funds and paying off the external liabilities. The ratio showed a consistent trend through out the period under study as the coefficient of variation for PNB was 0.53 percent while for BOB it was 1.12 percent. The consistent trend is better but it should be towards lower side not at the upper side.

Test of Significance for Solvency Ratio (t test):

- i) Null Hypothesis:- There is no significant difference in the solvency ratio of the banks under study
- ii) Calculated value of t for two sample means = 9.875
- iii) Table value of t at 5 percent level of significance = 2.306
- iv) Decision: The calculated value of t is more than the table at 5 percent level of significance. Therefore, the null hypothesis is rejected and it is inferred that the solvency ratio of both the banks differ significantly.

H5: There is no significant difference in the fixed assets to net worth ratio of the PNB and BOB:

It can be observed from the table 1.5 that the fixed assets to net worth ratio in PNB fluctuated within the range of 17.88 times to 15.32 times. The fixed assets to net worth ratio in BOB showed an increasing cum decreasing trend during the period of study. The average ratio shown in PNB indicates inefficiency of management and it is suggested that

the management should try to decrease this ratio. The average of the ratio in BOB was 4.37 times which can be regarded satisfactory.

The coefficient of variation was 5.72 percent in PNB and 4.86 percent in BOB and the management of both banks should try to maintain this consistency but after reducing the ratio.

Test of Significance for Fixed Assets to Net worth Ratio:

i) Null Hypothesis : There is no significant difference in the fixed assets to net worth ratio of the banks under study

ii) Calculated value of t for two sample means = 27.98

iii) Critical value of t at 5 percent level of significance=2.306

iv) Decision: The null hypothesis is rejected because the calculated value of t is more than the table value. Hence, it is concluded that the difference in fixed assets to net worth ratio of the banks under study is significant.

H6: There is no significant difference in the fixed assets to long term funds ratio of the PNB and BOB:

It can be noted from the table 1.6 that the fixed assets to long term funds ratio in both the banks was more than one in all the years under study. In PNB, the average of the ratio was 1.02 times denoting that some part of short term borrowings was used by the bank towards the financing the fixed assets. But, in the case of BOB, the average of the ratio was 3.69 which show that a major part of the fixed assets was financed through the short term borrowings. It shows an inefficient management. It is suggested that the management of both the banks should try to bring down the ratio and keep the ratio one or less than one and finance the working capital out of long term borrowings. The consistency in the ratio was almost same for both the banks but this consistency should be maintained after reducing the ratio.

Test of Significance (t test) for Fixed Assets to Long Term Funds Ratio:

i) Hypothesis used : There is no significant difference in the fixed assets to long term funds ratio of the banks under study

ii) Computed value of t for two sample means =23.44

iii) Critical value of t at 5 percent level of significance (V=8) =2.306

iv) Decision: Since the calculated value of t is more than the table value, hence the null hypothesis is rejected and it is concluded that the difference in fixed assets to long term funds ratio is significant.

Results and Recommendations:

Results:

The study reached to the following results:

1. The total debts and equity of both the banks showed an increasing trend during the whole period of study.

2. The coefficient of variation of both the banks showed a consistent trend but in PNB, it was consistent towards higher side and it can be suggested that the consistency should be brought towards the lower side.

3. The computed value of t is more than the critical value of t at 5 percent level of significance. Therefore, the null hypothesis is rejected and it is concluded that there is a significant difference in the debt equity ratio of the banks under study.

4. The null hypothesis is rejected because the calculated value of t is more than the table value and it is concluded that the difference in capital gearing ratio of both the banks is significant.

5. Both the banks were highly depending on borrowed capital to acquire the assets.

6. The difference is significant because the calculated value of t is more than the table value. Hence, it is concluded that the mean values of PNB and BOB differ significantly.

7. A comparative study of solvency ratio of both the banks shows that the solvency ratio was high in both the banks.

8. The calculated value of t is more than the table at 5 percent level of significance. Therefore, the null hypothesis is rejected and it is inferred that the solvency ratio of both the banks differ significantly.

9. The fixed assets to net worth ratio in BOB showed an increasing cum decreasing trend during the period of study. The average ratio shown in PNB indicates inefficiency of management and it is suggested that the management should try to decrease this ratio.

10. The null hypothesis is rejected because the calculated value of t is more than the table value. Hence, it is concluded that the difference in fixed assets to net worth ratio of the banks under study is significant.

11. The calculated value of t is more than the table value, hence the null hypothesis is rejected and it is concluded that the difference in fixed assets to long term funds ratio is significant.

Recommendations:

The study recommends the following:

1. The management of the bank PNB should try to reduce the burden of long term borrowings and accordingly reduce the debt equity ratio.

2. The management of the bank, in order to increase the profitability should adopt a debt financing policy and raise the funds through fixed cost bearing capital.

3. The management of both the banks should try to increase the ratio by increasing the owner's funds.

4. The management of the banks should try to bring down the ratio by increasing owner's funds and paying off the external liabilities.

5. The average ratio shown in PNB indicates inefficiency of management and it is suggested that the management should try to decrease this ratio.

6. It is suggested that the management of both

the banks should try to bring down the ratio and keep the ratio one or less than one and finance the working capital out of long term borrowings.

7. The consistency in the ratio was almost same for both the banks but this consistency should be maintained after reducing the ratio.

Table 1: Debt Equity Ratio of the Banks under Study (From 2006-07 to 2010-11) (Ratio in Times)

Years	PNB	BOB
2006-07	18.16	7.53
2007-08	15.78	8.10
2008-09	17.02	8.65
2009-10	16.44	8.87
2010-11	18.74	7.95
Average	17.23	8.22
S.D.	1.09	0.48
C.V.(%)	6.32	5.89

Source: Annual Reports & Accounts the Banks under study for the period from 2006-07 to 2010-11.

Table 1.2: Capital Gearing Ratio of the Banks under Study (From 2006-07 to 2010-11) (Ratio in Times)

Years	PNB	BOB
2006-07	16.10	0.11
2007-08	13.76	0.16
2008-09	14.87	0.16
2009-10	14.90	0.22
2010-11	16.75	0.29
Average	15.28	0.19
S.D.	1.05	0.06
C.V.(%)	6.84	32.41

Source: Annual Reports & Accounts the Banks under study for the period from 2006-07 to 2010-11.

Table 1.3: Proprietary Ratio of the Banks under Study (From 2006-07 to 2010-11) (Ratio in Times)

Years	PNB	BOB
2006-07	0.05	0.12
2007-08	0.06	0.11
2008-09	0.06	0.10
2009-10	0.06	0.10
2010-11	0.05	0.11
Average	0.06	0.11
S.D.	0.005	0.01
C.V.(%)	8.33	9.09

Source: Annual Reports & Accounts the Banks under study for the period from 2006-07 to 2010-11.

Table 1.4: Solvency Ratio of the Banks under Study (From 2006-07 to 2010-11) (Ratio in Times)

Years	PNB	BOB
2006-07	0.95	0.88
2007-08	0.94	0.89
2008-09	0.94	0.90
2009-10	0.94	0.90
2010-11	0.95	0.89
Average	0.94	0.89
S.D.	0.005	0.01
C.V.(%)	0.53	1.12

Source: Annual Reports & Accounts the Banks under study for the period from 2006-07 to 2010-11.

Table 1.5: Fixed Assets to Net worth Ratio of the Banks under Study (From 2006-07 to 2010-11)

Years	PNB	BOB
2006-07	17.46	4.10
2007-08	15.32	4.15
2008-09	16.29	4.66
2009-10	15.98	4.52
2010-11	17.88	4.42
Average	16.59	4.37
S.D.	0.95	0.21
C.V.(%)	5.72	4.86

Source: Annual Reports & Accounts the Banks under study for the period from 2006-07 to 2010-11.

Table 1.6: Debt Profit Ratio of the Banks under Study (From 2006-07 to 2010-11) (Ratio in Times)

Years	PNB	BOB
2006-07	1.02	3.69
2007-08	1.04	3.57
2008-09	1.03	4.02
2009-10	1.01	3.72
2010-11	1.01	3.43
Average	1.02	3.69
S.D.	0.01	0.20
C.V.(%)	0.98	5.42

Source: Annual Reports & Accounts the Banks under study for the period from 2006-07 to 2010-11.

REFERENCES

- Andrew, Benito, 2003. The capital structure decisions of firms: is there a pecking order? BANCO DE ESPAÑA, Madrid.
- Chandra, Prasanna, 2004. Financial Management-Theory and Practice, Tata McGraw-Hill Publishing Company Limited, New Delhi, pp: 449.
- Harris, M and A. Raviv, 1991. 'The theory of capital structure', Journal of Finance, Vol. 46, pp. 297-355.
- Lawrence, D. Schall and Charles W. Haley, 1999. Introduction to Financial Management, New Delhi: Tata McGraw Hill, pp: 339.
- Rustagi, R.P., 2005. Financial Management-Theory, Concepts and Problems, Galotia Publishing Company, New Delhi, pp: 790.
- Sarngadharan and S. Kumar Rajitha, 2011. Financial Analysis for Management Decisions, Prentice Hall of India, New Delhi, pp: 107.
- ŠarlijaNataša., and Harc Martina, 2012. The impact of liquidity on the capital structure: a case study of Croatian firms. Business Systems Research, 3: 1.
- Soumadi, Mustafa, M., and Hayajneh, S. Osama, 2012. Capital structure and corporate performance empirical study on the public jordanian shareholdings firms listed in the amman stock market. European Scientific Journal October edition., 8: 22.
- Stewart, C. Myers, 2001. 'Capital structure' Journal of Economic Perspectives, 15(2): 81-102.
- Tulsian, P.C., 2010. Financial Management, S.Chand and Co. Ltd., New Delhi, edn. pp: 15-18.
- Wilson, Richard M.S. and Mchugh, Gerard, 1987. Financial Analysis - A Managerial Introduction, London : Cases Educational Limited, pp: 63.