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# A Study Of Impact On Capital Structure And Liquidity Analysis Of Profitability Towards HDFC Bank

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## Abstract

The capital structure is one of the most important strategic financial decisions of firms. Since financing decisions influence profitability and hence firm's value, this study examines the impact of capital structure on profitability of banks . In order to meet the objectives of this study a quantitative panel data methodology was employed. The data were obtained from the audited financial statements , from the period of 8 years (2010 – 2018). Of this, 75% constitute deposit and the remaining was non-deposit liabilities. The findings revealed that capital structure as measured by total debt to asset had statistically significant insignificant, though it has postive impact, whereas deposit to asset had statistically significant positive impact on capital structure. Moreover, loan to deposit, spread and asset size also had statistically significant and positive relationship with profitability. However, growth found to have statistically insignificant impact on profitability. Therefore, The bank should give due consideration to manage its debt properly, mobilize deposit sufficiently, increase loan advances, spread, and size in their financing decisions. Furthermore, it is also advised to reduce non-deposit debt financing and raise equity financing so that to keep costs of financing at minimum level and hence optimize profitability and the value of the bank. Besides, the policy maker, recommended reconsidering to raise the minimum capital requirement for banks. Finally, future researchers also recommended assessing the overall performance of banks and other business sectors in the area of this research .

**Keywords**: Capital structure, Profitability, Liquidity, Growth, Financial strength.

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## 1.INTRODUCTION

Capital structure decision is vital for every business organization. This decision is important because of the need of maximizing the returns and the impact of such decisions on the firm's ability to deal with the competitive environment. The firm can choose any proportion of debt and equity. It can issue more debt and less equity or less debt and more equity. In capital investment decision capital structure decision is the Capital Structure important one as it affects the profitability. Therefore, proper care must be given while capital structure decision is made. While comparing debt with equity, debt is less costly but it has some limitations as it affects the company's leverage after a certain limit. A debt to equity is calculated by dividing total liabilities by stockholder's equity. It indicates the proportion of debt and equity. A high debt equity ratio means company is highly levered and it is more depending on debt than equity. Due to additional interest expense, it can result in volatile earnings. [1]

Capital is considering blood of bank strength. Since, it helps banking sector to operate activities. In the event of difficulties it enables banks to operate continuously in viable and sound manners and solves the difficulties. This study examined the effect of capital structure (debt to equity) on profitability, liquidity, tangibility, interest rate and growth rate to measure performance of banking sector of Pakistan. For this study include five banks annual reports between 2005 and 2015. The research work use pooled analysis to summarize the data for correlation and regression. The result shows that there are positive significant relationships between profitability, tangibility, liquidity, interest rate, and growth rate and capital structure. The paper that major player such as policy maker, bank manager and financial analyst to understand the variables that impact that effect the Pakistani banking industries and increase competitiveness in banking industries. I have short of time and use only eleven years financial reports of five banks. Future researcher should propose to increase numbers of banking and include more variables. [2]

## 2.PROFITABILITY

Profitability is ability of a firm to make profit from all their business activities. It shows by using all the available resources in the market how efficiently the firm makes profit. In business, profit means the excess of income over expenditure and it's the measure of a firm's performance. In the context of banking industry, size of the bank may vary based on its number of branches or the volume of the business held. So, to measure their performance profitability is an absolute measure. Profitability is an index to measure efficiency. The net profit is considered as a better measure for firm's performance. In addition to the net profit, net interest margin and the return on capital employed are also considered for assessing the profitability. [3]

### 3.Concept of profitability

Profitability of a firm can be measured by its financial variables and selected ratios. In the process of performance appraisal of a business, profitability ratios can be calculated to measure the operating efficiency. The profitability ratios can be determined on the basis of either investment or sales and for this purpose a quantitative relationship between the profit and the investment or the sales is established. In the words of James C. Van Home, "Profitability ratios are of two types: those showing profitability in relation to sales, and those showing profitability in relation to investment. He further added, with all of the profitability ratios, comparisons of a company with similar companies are extremely valuable. Only by comparison are we able to judge whether the profitability of a particular company is good or bad, and why. Absolute figures give some insight, but it is a relative performance which is most important. The profitability of the company should also be evaluated in terms of its investment in assets and in terms of capital contributed by creditors and owners, as such if a company is unable to earn a satisfactory return on investments, its survival is threatened. In this section it is attempted to study the various ratios suggested for measuring the performance in relation to profitability. The following profitability variable and ratios have been computed and analyzed for selected BSE listed housing finance companies during the study period

a) Profit Before Interest and Tax
b) Adjusted Profit after Tax
c) Return on Capital Employed
d) Return on Net worth

### 4.LIQUIDITY

Decision making on capital structure is highly depends upon liquidity .it will increase long term value of firm. (Kajananthan, 2013). In Asset liquidity on capital, leverage is positively relation with liquidity assets and secures debt. it is more economic and help to take quick decision (SIBILKOV, 2007). Researchers conducted on small and medium size business shows that capital structure should more liquid. (KARANJA, 2013). 2008 to 2012 study show that liquidity and capital structure has not influence on profitability of firm .they consider other factor involve that impact on firm profit. (Velnampy.T, 2014). Long term firms were more liquid .inventory increase the leverage but cash in current assets decrease the short and long term leverage. [4]

### 5.GROWTH AND TREND ANALYSIS

Trend analysis is a technique used in technical analysis that attempts to predict the future stock price movements based on recently observed trend data. Trend analysis is based on the idea that what has happened in the past gives traders an idea of what will happen in the future. There are three main types of trends: short-, intermediate- and long-term. [5]

A trend is the general direction the market is taking during a specified period of time. Trends can be both upward and downward, relating to bullish and bearish markets, respectively. While there is no specified minimum amount of time required for a direction to be considered a trend, the longer the direction is maintained, the more notable the trend.

Trend analysis is the process of trying to look at current trends in order to predict future ones and is considered a form of comparative analysis. This can include attempting to determine whether a current market trend, such as gains in a particular market sector, is likely to continue, as well as whether a trend in one market area could result in a trend in another. Though an analysis may involve a large amount of data, there is no guarantee that the results will be correct.

### 6.Objectives of the study

- To understand the impact of capital structure in banking industry
- To assess how capital structure affects the firm efficiency(profitability)
- To examine the impact of capital structureon the financial performance of banking industry
- To analyze the interrelation between financial leverage on the financial performance of banking industry.
- To suggest the banking in order to increase their profitability through adopting a better strategic frame work of capital structure.

### 7.Significance of the study

This study have significant role to play in filling gap in understanding of the impact of capital structure and liquidity on profitability analysis of banks. And hence will serve as reference for financial managers to equip them with applied knowledge of the potential problems in financing decisions / capital structure and profitability, as well as determining their optimal level of capital structure to achieve optimum level of firm's profitability so that to meet wealth maximization goal of firms. In addition, it will serve as a base reference for other researchers in the area of corporate finance. [6]

### 8.Need for the Study

The present study focused on the impact of capital structure and liquidity on profitability of banks. Every investment decision taken by the manager affects performance of the banks. Profitability of the bank also depends upon the proportion of debt and equity in the capital structure. The difficulty associated with designing an optimum capital structure policy to enhance profitability is the primary reason for undertaking the present study.

### 9.Research Methodology

The present study is undertaken to find out the impact of capital structure and liquidity on profitability in banking industry. To measure the capital structure, capital structure ratios like, debt to total assets ratio and debt to equity ratios are used and to measure the financial performance profitability ratios return on capital employed (ROCE), net profit ratio (NP) and net interest margin (NIM) are used. Regression analysis is carried out to test the impact of capital structure on profitability where capital structure is independent variable and profitability is the dependent variable.

### 10.Data and Sample

As the study focuses on the impact of capital structure on profitability of banks India by taking a sample of 21 banks for the period of five years from 2011 to 2015. The selected 21 banks are: Axis Bank, Bank of Baroda, Canara Bank, City Union Bank, Corporation Bank, Dhanalaxmi Bank, Federal Bank, HDFC Bank, ICICI Bank, IDBI Bank, Indian Overseas Bank, Indusind Bank, Karnataka Bank, Kotak Mahindra Bank, Oriental Bank of Commerce, South Indian Bank, State Bank of India, Syndicate Bank, Union Bank of India, Vijaya Bank and Yes Bank.

## 11.REVIEW OF LITERATURE

Vitor, D.A. & Badu, J. (2012) studied the capital structure and performance of listed banks in Ghana. The results indicate a negative relationship between capital structure and financial performance. High level gearing among listed banks lead to over dependency on short term debt due to which there was high lending rate and low level of bond market activities. The regression analysis revealed that there is an inverse relationship between capital structure and banks performance in terms of return on equity and Tobin's Q.

T. &NireshVelnampy,, J.A. (2012) examined relationship between capital structure and profitability of ten listed Srilankan banks over the past 8-year period from 2002 to 2009.The data was analyzed using descriptive statistics and correlation analysis to find out the association between the variables. Results of the analysis show that there is a negative association between capital structure and profitability except the association between debt to equity and return on equity. Further the results suggest that 89% of total assets in the banking sector of Sri Lanka are represented by debt, confirming the fact that banks are highly geared institutions. The outcomes of the study may guide banks, loan –creditors.

Abbadi, S.M. & Abu-Rub, N. (2012) examined relationship between the market efficiency and capital structure of Palestinian financial institutions. ROE, ROA, total deposit to assets, total loan to assets were used to measure the impact of capital structure on bank efficiency. The impact of all these variables on bank market value was measured by Tobin's q which showed a negative effect on the market value of the bank, a strong and positive relationship between market value and ROA and bank deposits to total deposits.

## 12.The impact of capital structure ratios on profitability of the HDFC bank

**Introduction:**

Capital structure is blend of both debt and equity of an investment. To know the impact of capital structure on net profit the following analysis are considered

a)Correlation study between the dependant variable ( Net profit ) and selected predictors ( Capital structure ratios)

b)Model summary of Regression analysis

c)Analysis of variance between Dependant variable ( Net Profit) and selected predictors

**Null hypothesis :**

There is no correlation between between the selected parameters.

**Alternative Hypothesis :**

There is correlation between the selected parameters.

**Interpretation** :

The above table depicts thar there is a correlation between the total debt to assets and net profit(0.02)which is less than 0.05and there is a strong correlation between the total debt to capital employed and net profit.

**Conclusion :**

It is concluded that there is a strong relationship between the dependent (Net profit) and the predictors(Net profit to total debt, total debt to assets, total debt to capital employed.)

**Interpretation:**

This table provides the R and R2 values. The R value represents the simple correlation and is 0.998 (the "R" Column), which indicates a high degree of correlation. The R2 value (the "R Square" column) indicates how much of the total variation in the dependent variable, Net profit, can be explained by the independent variable, Net profit to total debt, total debt to assets, total debt to capital employed. In this case, 99.2% can be explained, which is very large.

**Null hypothesis :**

Regression model is not fit as per the dependent variable(Net profit) and Predictors(Net profit to total debt, total debt to assets, total debt to capital employed.

**Alternative Hypothesis :**

Regression model is fit as per the dependent variable and Predictors.

**Interpretation :**

The above table depicts that analysis of variance

**Table : Correlation analysis**

| Correlations | | | | | |
|---|---|---|---|---|---|
| | | net profit | total debt to assets ratio | Total debt to capital employed | net profit to total debt |
| Pearson Correlation And Sig (1-tailed) | net profit | 1 | | | |
| | total debt to assets ratio | 0.878 (0.002) | 1 | | |
| | Total debt to capital employed | 0.903 (0.001) | 0.979 (0.000) | 1 | |
| | net profit to total debt | 0.968 (0.000) | 0.74 (0.018) | 0.78 (0.011) | 1 |

| Model Summary[b] | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | R | R Square | | Std. Error of the | Change Statistics Durbin-Watson | | | | | Durbin-Watson | |
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | | |
| dimen-sion0 | 1 | .998a | .995 | .992 | .995 | 432.63301 | .995 275.029 | 3 | 4 | | 1.011 |
| a. Predictors: (Constant), net profit to total debt, total debt to assets ratio, total debt to capital employed | | | | | | | | | | | |
| b. Dependent Variable: net profit | | | | | | | | | | | |

| ANOVA[b] | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 1.544E8 | 3 | 5.148E7 | 275.029 | .000[a] |
| | Residual | 748685.279 | 4 | 187171.320 | | |
| | Total | 1.552E8 | 7 | | | |
| a. Predictors: (Constant), net profit to total debt, total debt to assets ratio, total debt to capital employed | | | | | | |
| b. Dependent Variable: net profit | | | | | | |

| Coefficients[a] | | | | | | |
|---|---|---|---|---|---|---|
| Model | Unstandardized Coefficients | | Standardized Coefficients | | t | Sig. |
| | B | Std. Error | Beta | | | |
| 1 | (Constant) | -11654.305 | 16492.574 | | -.707 | .519 |
| | total debt to assets ratio | 7811.324 | 5333.092 | .255 | 1.465 | .217 |
| | totAL debt to capital em-ployed | 149.244 | 241.531 | .116 | .618 | .570 |
| | net profit to total debt | 462.172 | 37.954 | .689 | 12.177 | .000 |
| a. Dependent Variable: net profit | | | | | | |

between the dependent variable (net profit) and selected Predictors(Net profit to total debt, total debt to assets, total debt to capital employed. The Sig p value is 0.000 which is less than 0.05. Hence it is concluded that the regression model is fit for predicting the financial behaviour of net profit as per the selected predictors(Net profit to total debt, total debt to assets, total debt to capital employed.)

## 13.GROWTH AND TREND ANALYSIS OF CASH EARNING PER SHARE TOWARDS HDFC BANK:

Cash Earnings per Share, also called Cash EPS, is a profitability ratio that measures the financial performance of a company by calculating cash flows on a per share basis. Cash EPS ignores' all the non-cash items impacting the normal EPS to provide the real earnings generated by the business

**Interpretation:**

The above table and graph shows that the cash EPS in the year 2010-2011 was 95.09 and then it decreases to 24.33 in the year 2011-2012 and next year onwards it moves upward to 31.03in the year 2012-2013 and it again moves upward to 38.14 in the year 2013-2014 and finally cash EPS has gradually increased from the year 2011-2018.

## 14.GROWTH AND TREND ANALYSIS OF NET PROFIT PER BRANCH TOWARDS HDFC BANK

Net profit, also referred to as the bottom line, net income, or net earnings is a measure of the profitability of a venture after accounting for all costs and taxes. It is the actual profit, and includes the operating expenses that are excluded from gross profit.

**Interpretation:**

The above table and graph shows that net profit per branch in the year 2010-11 was 1,97,70,379 and then it increases to 2,03,10,891in the year 2011-12,next year onwards it move upwards to 2,19,000 in the year 2012-13 finally in the year 2017-18 it again moved upwards to the profitable position.

**Compound Annual Growth Rate**

**Table 1: Growth Rate analysis of Selected Financial parameters**

| GROWTH RATE | CAGR% | |
|---|---|---|
| BASIC EPS | 18.87% | Positive |
| DILUTED RATIO(RS) | 18.83% | Positive |
| Cash EPS RS | -3.61% | Negative |
| Book Value [Excl. Reval Reserve]/Share (Rs.) | -3.52% | Negative |
| Book Value [Incl. Reval Reserve]/Share (Rs.) | -3.52% | Negative |
| Dividend/Share (Rs.) | -2.94% | Negative |
| Operating Revenue / Share (Rs.) | -3.99% | Negative |
| Net Profit/Share (Rs.) | -2.78% | Negative |
| Interest Income/ Employee (Rs.) | 12.38% | Positive |
| Net Profit/ Employee (Rs.) | 13.80% | Positive |
| Business/ Employee (Rs.) | 12.02% | Positive |
| Interest Income/ Branch (Rs.) | 6.62% | Positive |
| Net Profit/ Branches (Rs.) | 7.98% | Positive |
| Business/ Branches (Rs.) | 6.29% | Positive |
| Net Profit Margin (%) | 1.27% | Positive |
| Operating Profit Margin (%) | 1.27% | Positive |
| Return on Assets (%) | 1.91% | Positive |
| Return on Equity / Networth (%) | 0.77% | Positive |
| Net Interest Margin (X) | -0.13% | Negative |
| Cost to Income (%) | -1.61% | Negative |
| Interest Income/Total Assets (%) | 0.61% | Positive |
| Non-Interest Income/Total Assets (%) | -1.08% | Negative |
| Operating Profit/Total Assets (%) | #NUM! | |
| Operating Expenses/Total Assets (%) | -2.32% | Negative |
| Interest Expenses/Total Assets (%) | #NAME? | |
| Enterprise Value (Rs. Cr) | 19.75% | Positive |
| EV Per Net Sales (X) | 0.62% | Positive |
| Price To Book Value (X) | 0.93% | Positive |
| Price To Sales (X) | 1.41% | Positive |
| Retention Ratios (%) | 2.76% | Positive |

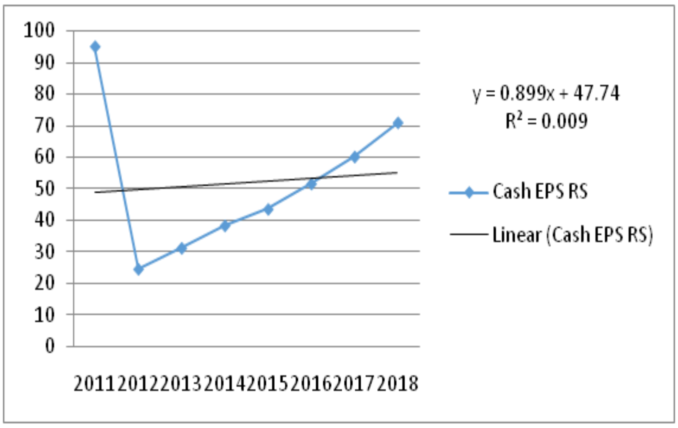
**Source : Author**

**Table 1: Cash Earnings per share of Selected Financial parameters.**

| YEARS | Cash EPS RS |
|---|---|
| 2011 | 95.09 |
| 2012 | 24.33 |
| 2013 | 31.01 |
| 2014 | 38.14 |
| 2015 | 43.38 |
| 2016 | 51.43 |
| 2017 | 60.03 |
| 2018 | 70.88 |

**source: Company website**

**Chart 1 :**




**TREND PROJECTIONS FOR FIVE YEARS :**

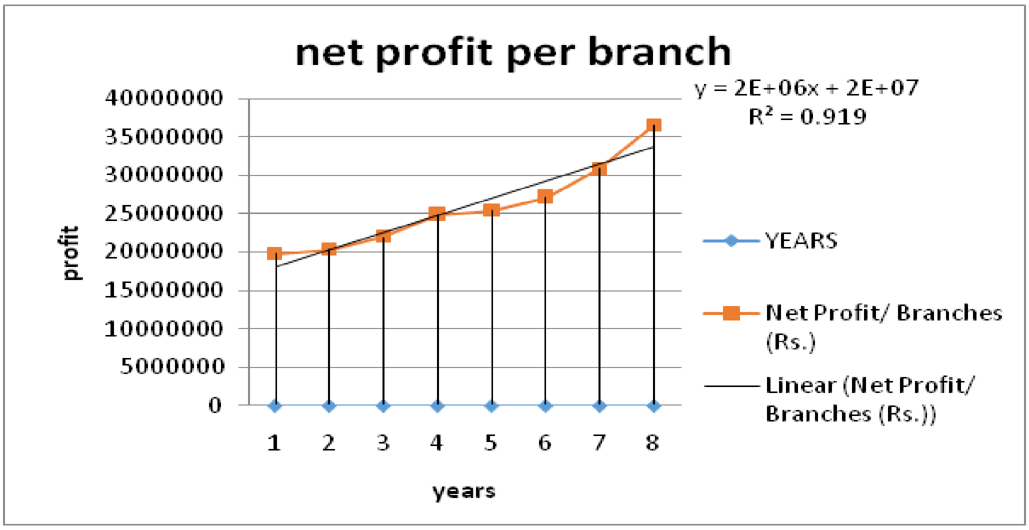
| YEARS | Cash EPS RS |
|---|---|
| 2019 | 1863.2248 |
| 2020 | 1864.124 |
| 2021 | 1865.0232 |
| 2022 | 1865.9224 |
| 2023 | 1866.8216 |

**Table 2: Net profit per branch of Selected Financial parameters**

| YEARS | Net Profit/ Branches (Rs.) |
|---|---|
| 2011 | 1,97,70,397.28 |
| 2012 | 2,03,10,891.12 |
| 2013 | 2,19,66,965.38 |
| 2014 | 2,49,14,416.99 |
| 2015 | 2,54,50,719.73 |
| 2016 | 2,72,04,011.28 |
| 2017 | 3,08,58,199.79 |
| 2018 | 3,65,29,618.34 |

**Source: Company website**

**Chart 2 :**



## 15.FINDINGS:

- The cash EPS in the year 2010-2011 was 95.09 and then it decreases to 24.33 in the year 2011-2012 and next year onwards it moves upward to 31.03in the year 2012-2013 and it again moves upward to 38.14 in the year 2013-2014 and finally cash EPS has gradually increased from the year 2011-2018.
- The net profit per branch in the year 2010-11 was 1,97,70,379 and then it increases to 2,03,10,891in the year 2011-12,next year onwards it move upwards to 2,19,000 in the year 2012-13 finally in the year 2017-18 it again moved upwards to the profitable position.
- To analyse the co-efficent of -variance in income statement of the HDFC bank.
- To analyze growth and expected trend projection of the HDFC bank

## 16.SUGGESTIONS:

- It should maximize the value of the firm.
- It should minimize the overall cost of capital.
- Bank should have liquidity in their capital structure
- Timely review of their capital structure is necessary in banking industry
- Timely review of their cost of capital of different sources (debt, equity) is necessary inbanking industry
- HDFC bank can utilize the assets in proper way toincrease the income from return on assets.
- The bank must improve its liquidity position in allyears.
- The bank can increase the income from other sourcesexcluding interest income.

## 17.Conclusion

The capital structure is negatively and the significantly associated with financial firm performance which defined by (EPS, ROE, and ROA variables). That mean using a high level of debt negatively affects a firm's return on assets, earnings per share, and return on equity.

The studies the data of only one market of developing economy so it cannot represent all the markets of transition economies. Secondly this study includes only 10 years data. To explore consistent results long time series of data could be required. Thirdly we can find the impact of capital structure on firm's performance by sector and then compare the results to know the real picture of the relationship.

Capital structure is the puzzling concept especially so in emerging markets like Turkey. Further study can be conducted by adding sales growth and business risk as independent variables. To clarify the results of our study more variables for performance measurement may be useful. Data of long time series could also be used for credibility of results. Future research can be can be processed by comparing the capital structure and firm performance of small and large firms.

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Nill

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