

Capital Structure as Determinant of Financial Performance of Commercial Banks in Ethiopia - A Case Study on Private Banks in Ethiopia

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ABSTRACT

A lot of studies have actually been done by numerous researchers both in developed and developing countries such as Ethiopia to ascertain the empirical relationship existing between capital structure and firm performance with varying samples and period as well as application of several and divergent statistical estimation. This study is based on the identification of the impact that capital structure have on the financial performance of commercial banks in Ethiopia. In this regard, secondary data is collected from varied sources especially annual reports of the private commercial banks in Ethiopia. The literature review is done in the report, and it is identified operating, and the capital structure heavily affects net profit. Apart from this, return on equity, asset and capitals employed also affected by the capital structure of the banks. Regression analysis and descriptive analysis tools are used to analyse the data that is related to the sixteen private commercial banks in Ethiopia. On analysis of data, it is identified that operating and net profit is heavily affected by the capital structure. However, in the case of return on asset, return on equity, and return on capital employed, such kind of relationship is not observed. Thus, it is concluded on the basis of entire work that capital structure have the huge impact on the operating and net profit, but it does not put any large impact on the return on asset, return on equity and return on capital employed. The study recommended that banks follow a specific policy, in order to maintain a balance in the capital structure. It is also recommended that managers must keep a keen eye on the changes that are taking place in the capital structure.

Keywords: Capital structure, Financial Performance, Commercial banks, operating profit

INTRODUCTION

In developed countries, Capital structure is one of the most important concepts related to finance that is used by most of the business firms to evaluate their business performance. Capital is a set of liabilities that are currently in the business. All these liabilities come in two categories: equity and debt. The proportion of both significantly affects the financial performance of companies. According to Pratheep kanth (2011), capital structure can be termed as a means that is usually used to finance business operations.

The ways in which business operations are financed have a vital importance for managers. This is because of the way finance determines the size of overall finance cost of the business firm. In this paper, a detailed study is carried out on the sixteen commercial banks in Ethiopia and the impact that capital structure has on their financial performance. All data related to the relevant firms will be gathered from books and

journals.

In the current paper, an attempt is made to find and understand the impact of the capital structure on the financial performance of private banks. A detailed literature review will also be done on capital structure and financial performance. It is crucial to understand the reason why capital structure has a very high impact on financial performance. Finance cost and liability load depend on the capital structure. If there is a very high amount of debt in the capital structure, then, in this case, the amount of interest will be very high for the company. If we assume the firm faces losses, then the firm will have to pay interest to the creditors. Thus, the loss of business and a further payment of a huge amount of interest will place the corporation in a bad situation (Margaritis and Psillaki, 2010).

Capital structure is the biggest factor that plays a major role in determining the cost of the capital structure of the firms (Onaolapo and

Kajols, 2010). It is not clear to most people such as researchers, governments, managers, and investors that capital structure has impact on the financial performance of the firms. Thus, it is necessary to conduct research on capital structure as determinants of firms' financial performance. It is imperative that additional research is conducted to determine the impact of the capital structure. By focusing on the Ethiopian banking industry to obtain a reliable result, banks' performance will be measured by using financial ratios, such as gross profit margin, net profit margin, return on capital employed, return on assets, and return on equity. This research aims to determine the capital structure as determinant of the financial performance of commercial banks in Ethiopia, during the period from 2011 to 2015.

LITERATURE REVIEW

Theory of Capital Structure

The capital structure considers one of the most arguable issues in the corporations; thus, when the manager makes their decision to finance a new project, they should know which factors may influence their decisions (Bilgehan, 2014). The capital structure mainly consists of debt and equity. Debt financing is the financing of the new projects by short-term debt or long-term debt, and the debt might be notes payable, bank loan, bonds, or debentures (Margaritis & Psillaki, 2010). The maker decisions chose the debt capital because the debt capital is cheaper than equity capital, and there are some advantages of debt; the cost of capital in debt is lower than required by shareholders because the risk in equity is more than the lenders. The interest on debt can be tax deductible expenses.

The traditional theory explains the relationship between debt and cost of capital (Lumby and Jones, 2007). Thus, it states that when the debt of a company increases, the gearing of that company will be increased as well. It means the cost of capital will be reduced according to the cost of debt. Hence, the market value of the corporation will increase. However, this advantage of a low-level debt may change into a disadvantage if the debt continues to increase because it increases financial risk, and the ordinary shareholders will require high returns accordingly. Therefore, the managers or decision makers should consider how to balance the capital structure, the value of the company, and the dividend policy of the corporation (Lumby, S, and Jones, 2015).

In (1958), Modigliani and Miller published their theory, denoted by M&M, throughout this paper; the capital structure irrelevance theory. M&M theory is based on some of the assumptions, such as (no taxes, no transaction, and bankruptcy costs.)

M&M addressed two propositions without any tax.

This theory says that the corporation has an optimal capital structure, which assumes a target debt ratio; thus, a certain level of debt is acceptable and beneficial due to the lowest cost and tax shields. But, the increase in leverage will associate with high bankruptcy costs (Canarella and Sullivan, 2014).

The M and M theory is the base of all theories associated with capital structure. According to Brigham & Ehrhardt (2010), M and M introduced their theory in 1958 to examine the change in a firm's value regarding the change in capital structure, and the assumption at this stage was that the capital structure market was perfect. Babalola (2012) found a positive relationship between a firm's value and the increase in debt. Luigi & Sorin (2009) stressed that the M and M theory was based on unrealistic assumptions. The M and M theory failed to describe how firms finance their businesses, but this theory motivated research into reasons for the importance of financing (Luigi and Sorin, 2009).

The tradeoff theory argues that there is a tradeoff between the tax benefits of debt and the costs of financial distress (Mac and Bhaird, 2010). After a study had been conducted by (Lopéz-Gracia, J; Sogorb-Mira, F. 2008), they found a positive relationship between the tax rate and debt. Another study examined the relationship between the profitability and debt. The result was a positive relationship (Fama, Friend, 2002). As mentioned, previous pecking order theory prefers internal source and, if it needs to use the external resources, the pecking order theory goes with debt before it selects its last choice (issuing new shares). Gonzalez, Gonzalez, (2012) found a negative relationship between profitability and debt. The advantages of the pecking order theory are that the managers have more control over the firms and it gives the company an opportunity to minimize the cost of the capital structure.

Empirical Research Result

The literature review conducted in this study

takes into account a number of contemporary academic studies dealing directly with the relationship between capital structure and financial performance. A number of articles reviewed were published studies in peer-reviewed academic journals, and some were post-graduate papers.

According to Berger and Bouwman (2013), capital structure has an impact on the gross profit margin of the business firm. Usually, when any firm approaches a bank for obtaining finance, the financial institution reviews the current capital structure. If a heavy debt burden in the balance sheet has already been identified, and the firm is not able to pay its debt on time, it will make less profit. These results in improper funding of the business operations and fewer units produced and sold in the market. Due to this, the firm earns less gross profit. Thus, it can be said that capital structure has a direct impact on the firm's performance in terms of gross profit margin.

As reported by Margaritis and Psillaki (2010), one cannot surely say that capital structure has a positive or negative impact on the gross profit margin. This is because sales are affected by a number of factors like demand and economic environment conditions. Thus, it cannot be surely said that gross profit margin is positively or negatively affected entirely by capital structure. Thus, it is very important for the business managers to make sure that they do a detailed evaluation, and on that basis, the real reason for a decline in sales is identified.

According to Muzir (2011), capital structure and operating profit margin are interlinked with each other; thus, with a change in the capital structure, the operating profit margin also gets changed. Capital structure leads to the development of finance cost in the business and, because of this, the finance cost and amount of profit earned on business declined. Finance cost is included in the non-operating expenses and, due to this reason; it does not have any impact on the operating expenses of the business firm. It can be said that finance cost has no impact on the operating profit margin of the business firm. As per views of Almajali, Alamro, and Al-Soub, (2012), finance costs are the non-operating expenses because they are not related to the production process or manufacturing activity of the business activity. Due to this reason, the finance cost is included in the category of non-operating

expenses. It can be said that there is an impact of operating expenses on the business firm operating profit margin earning capacity. Due to the less amount of finance, the firm produces fewer units and earns less profit in business. At the same time, operating expenses increase in the business. Due to this reason, operating profit margin reduces in the business because of an imbalanced capital structure. Thus, a business firm must focus on its capital structure because it is affecting the operating profit margin. Capital structure affects the overall profitability of the business firm. This is because it generates finance cost in the business due to which profits get declined in the business. It can be said that capital structure has an impact on the operating profit; it negatively affects the overall profitability of the business firm.

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According to Welch, (2011), return on capital employed is one of the most important tools used to evaluate the business performance. Return on capital employed refers to the percent return that is obtained on the capital amount that is invested in the business. If there is a higher value of return on capital employed, then it is assumed that the firm is earning a good amount of return on the invested capital.

According to Chowdhury and Chowdhury (2010), return on assets is one of the most important ratios used by managers to evaluate business performance in terms of the extent to which assets should be used. A higher value of return on asset reflects that, to a large extent, the asset is efficiently used by the firm in its business. Cheng and et al. (2010) claim that return on equity is one of the most important measures that are used to evaluate the firm's performance. Return on equity basically reveals the return that is generated on overall equity. If the return on equity is high, it is assumed that the firm is giving a good performance. Capital structure strongly affects the return on equity. This is because capital structure is the combination of debt and equity. The higher the proportion of equity in the firm's capital structure, the less will be the return on equity. Moreover, if there will be less amount of equity in the capital structure, then, in that case, there will be a high percentage of return on equity. Thus, it can be said that capital structure affects the return on equity.

METHODOLOGY

Research Design

In the current research study, an exploratory research design was used. This is used when one does not know anything about the research topic and one wants to begin with a detailed starting point. Thus, first of all, secondary data related to the company will be collected and analyzed by using the regression analysis method (Choy, 2014). Apart from this, the other research design method that is commonly used by the researcher is descriptive research. The first-mentioned is used when one to some extent knows about the research topic but intends to increase one's knowledge. There is a need to develop a broad understanding of the research topic, and therefore the exploratory research design is used in the present research.

Research Approach

According to Creswell (2009), there are three basic research approaches; these are quantitative, qualitative and mixed research approaches. The quantitative data research relies on the measurement and analysis of statistical data to produce quantifiable conclusions. Quantitative research is a means for testing objective theories by examining the relationship among variables (Creswell, 2009). Therefore, this study adopts quantitative research approach

which is numerical by using balanced panel data model to meet the research objective. Brooks (2008) stated the advantage of using panel data is to address a broader range of issues and tackle more complex problems than pure time-series or pure cross-sectional data alone.

Population, Sampling Techniques and Sample Size of the Study

In this research, the target population is the banking sector in Ethiopia. According to NBE annual report (2017/18), there are seventeen commercial banks. These are; Commercial Bank of Ethiopia (CBE), Dashen Bank S.C (DB), Awash Bank S.C (AB), Wogagen Bank S.C (WB), United Bank S.C (UB), Nib International Bank S.C (NIB), Bank of Abyssinia S.C (BOA), Lion International Bank S.C (LIB), Cooperative Bank of Oromia S.C (CBO), Berehan International Bank S.C (BIB), Buna International Bank S.C (BUIB), Oromia International Bank S.C (OIB), Zemen Bank S.C (ZB), Abay Bank (AB), Addis International Bank (ADIB), Debu Global Bank (DGB) and Enat Bank (EB). The first is publically owned and the remaining sixteen are privately owned commercial banks.

The current research sample includes sixteen private commercial banks. Five yearly financial statements of these banks are downloaded from their official web site (2011-2015), and some are analyzed by using the regression analysis method. It can be said that an appropriate sample size is used in the current research study, and reliable results will be obtained.

Data Sources and Collection Methods

While collecting data from any source of information, it must be ensured that the source is reliable and relevant. In this research, secondary data collection methods are used for the research study. The data will be collected from the financial statements of sixteen private commercial banks.

Methods of Data Analysis

There are two sorts of data analysis approaches: thematic and statistical. The thematic approach is used when the researcher wants to identify the sort of response that is given by the different types of respondents. Statistical data analysis is used in this study. In order to analyze the data, the regression analysis method will be used in the present research study (Panas and Pantouvakis, 2010) because this model reflects the variation encountered due to changes in

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independent variables. In percentage terms, this relationship can be identified. Moreover, the significant difference between the mean values of the variables is identified by using the regression analysis method.

Validity and Reliability

Validity and reliability are the main characteristics of good research. For the researcher, it is necessary to ensure that the collected data is good and valid for the current research study.

The collected data in the research must have a high level of reliability. Thus, only those data that are highly reliable must be collected for the research (Bender, 2011). Before using any data from a specific source, an evaluation of that source must be done by the researcher, in order to ensure that only the required and reliable data is taken into consideration for conducting the current research.

DATA ANALYSIS AND INTERPRETATION

In order to analyze the data set in a systematic manner, the regression analysis method was used. By using this tool, the significant difference existing between the two variables

was identified. The results are explained below.

Gross Profit

There is significant mean difference between capital structure and gross profit of the banks.

It can be seen from the below table 1 that the multiple R square value is 0.38. That means that there is a low positive relationship between the debt-equity ratio and the gross profit earned by banks. R square stood at 0.144, which means that there is a 14% change in the dependent variable due to the change in the independent variable. Adjusted R square is -0.14, which means that due to the addition of any new variable, a change of -14% can be observed in the result. The value of the level of significance is $0.52 > 0.05$, which means that there is no significant mean difference between the dependent and independent variables. The intercept value stood at 7.12 and the coefficient value at 0.015. It can be said that there is a low or moderate relationship between gross profit and capital structure. It is concluded that a change in capital structure does not result in a big variation in the gross profit of the business firm.

Table1. Analysis on gross profit and the capital structure of banks

<i>Regression Statistics</i>						
Multiple R	0.380423					
R Square	0.144722					
Adjusted R Square	-0.14037					
Standard Error	0.234231					
Observations	5					
<i>ANOVA</i>						
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>F Significance</i>	
Regression	1	0.027851	0.027851	0.507631	0.527581	
Residual	3	0.164592	0.054864			
Total	4	0.192442				
<i>Coefficients</i>						
	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	
Intercept	7.125102	1.207293	5.901718	0.009713	3.282957	10.96725
GPM	0.015281	0.021447	0.712482	0.527581	-0.05297	0.083535

Net Profit

There is significant mean difference between capital structure and net profit of the firms.

Table2. Analysis on net profit and capital structure

<i>Regression Statistics</i>						
Multiple R	0.327138					
R Square	0.107019					
Adjusted R Square	-0.19064					
Standard Error	0.376896					
Observations	5					
<i>ANOVA</i>						
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	

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Regression	1	0.051072	0.051072	0.359535	0.591028	
Residual	3	0.426153	0.142051			
Total	4	0.477225				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	3.324241	1.942635	1.711202	0.185568	-2.85809	9.506571
Net Profit	-0.02069	0.03451	-0.59961	0.591028	-0.13052	0.089134

It can be seen from the table that value of multiple R is 0.32. This means that capital structure and financial performance in terms of net profit are low and moderately correlated to each other. This means that along with a change in the capital structure, a variation will occur in the net profit of the banks. The value of R-squared is 0.10, which means that with a change in the independent variable, which is capital structure, a 10% change occurs in the net profit of banks. Thus, it can be said that R indicates the variation that may appear in the dependent variable due to a change in the independent variable. The value of adjusted R-squared is -0.19, which means that if any new variable is added to the model, a -0.19% change may be present in the values generated by the model. Adjusted R-squared only reflects the alteration that may take place in the model if any variable is added. The value of significance level is $0.59 > 0.05$, which means that there is no

Operating Profit

There is significant mean difference between capital structure and operating profit of the firms.

Table 3. Analysis on operating profit and capital structure

<i>Regression Statistics</i>						
Multiple R	0.823201					
R Square	0.67766					
Adjusted R Square	0.570213					
Standard Error	0.197403					
Observations	5					
<i>ANOVA</i>						
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	0.245769	0.245769	6.306929	0.086834	
Residual	3	0.116904	0.038968			
Total	4	0.362673				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	0.530427	1.017474	0.521318	0.638184	-2.70763	3.768484
Operating Profit	0.045393	0.018075	2.51136	0.086834	-0.01213	0.102915

In this model of regression, two variables are taken into account; out of which, one is independent and the other one is dependent - the operating profit variable is dependent and the capital structure is independent. An attempt is made to identify the relationship that exists between both variables. The table that is given above revealed that the value of multiple R is 0.82, which reflects that there is a strong and positive relationship among the dependent and

significant mean difference between the values of the dependent and independent variables. It can be said that if the capital structure of the firm will change, a big difference will be observed in the values of the dependent variable, which is net profit. It can be said that there is no significant mean difference between the values of the independent and dependent variables. The value of intercept is 3.32. This means that in case the value of all independent variables will be zero, the average basis of the sum of debt equity ratios of 16 private commercial banks in Ethiopia will be 3.32. The value of the coefficient is -0.02, which means that with a small positive change in the capital structure, the financial performance will be decreased by -0.02 points. Thus, it can be said that change in capital structure and firm profitability, in terms of profit, to a minor extent, is positively correlated with each other.

independent variables. The correlation value has a high degree of proximity with the upper level of the correlation value. Thus, it can be said that financial performance and capital structure are highly associated with each other. The R square value is 0.67, which means that, with the alteration in the value of the capital structure, 67% variation comes in the dependent variable, which is the operating profit. It can be said that the operating profit is highly affected by the

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capital structure of the business firm. Thus, it can be assumed that if negative change happened in the capital structure, then the profitability of the banks may be heavily affected. The adjusted R square value is 0.57, which means that with the addition of one variable in the model 57% change may be produced as the profitability of the business firm. The level of the significant difference value is 0.08, which is higher than alpha value 0.05. This means that there is no significant difference between the mean value of the dependent and independent variable. This means that with the small change in the independent variable, the big variation does not occur in the dependent variable. However, it must be noted that in the case of net profit there was a significant level equivalent to 0.59, and in the present case, the value of the level of significance is 0.08. The intercept value is 0.53,

ROCE

There is significant mean difference between capital structure and return on capital employed of the firms.

Table4. Analysis on return on capital employed and capital structure

<i>Regression Statistics</i>						
Multiple R	0.877543					
R Square	0.770081					
Adjusted R Square	0.693441					
Standard Error	0.086219					
Observations	5					
<i>ANOVA</i>						
	<i>Df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	0.074694	0.074694	10.04807	0.050486	
Residual	3	0.022301	0.007434			
Total	4	0.096995				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.51103	0.444396	-1.14994	0.333523	-1.92529	0.903238
ROCE	0.025025	0.007895	3.169869	0.050486	-9.9E-05	0.050148

In this current report, the variables, which study undertaken, are return on capital employed (ROCE) and capital structure, which reflected by the debt and equity ratio. Return on capital employed is the one of the most important ratio because it reflects the return that can be earned on the invested amount. Correlation value is 0.87 which is close to one and it can be said that both capital structure and measures of performance which are return on capital employed are positively related to each other. Value of correlation is indicating that there is strong and positive relationship between return that is earned on the invested capital and the capital structure. R square value is 0.77 which means that with change in the independent variable which is capital structure 77% variation

which indicates that if the case value of the independent variable is zero, the value of the dependent variable will at least stand at 0.53. The coefficient value is slightly negative, namely 0.04, and on this basis, it can be said that the operating profit only changes by 0.04 points, with a small variation in the independent variable. The coefficient values of the operating and net profit can be compared with each other. The coefficient value, in the case of net profit, is -0.02, and the operating profit value is 0.04. This means that there is no big difference on the impact of capital structure on the measures of financial performance. On the basis of the overall discussion, it can be said that the operating profit is affected by the capital structure, but there is no significant mean difference between the rate of change in both dependent and independent variables.

comes in the dependent variable which is return on capital employed. This means that return that is earned by the firms on the employed capital is affected by the capital structure. Adjusted R square value is 0.69 which reflects that with addition of the variable in the model percentage impact on return on capital employed will be 69%. Level of significance is 0.05 that is equal to value of alpha and this fact reflects that there is significant difference in the mean value of the both dependent and independent variable. It can be said that rate of change of dependent variable is higher than rate of change that happened in the independent variable. It can be said that value of the dependent variable is -0.511 when value of independent one will be zero. Coefficient value is only 0.02 which indicate

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that there is a negligible relationship among the dependent and independent variable. It can be said that return on capital employed is affected by the capital structure of the business. It is

ROA

There is significant mean difference between capital structure and return on assets of the firms.

Table5. Analysis on return on asset and capital structure

Regression Statistics						
Multiple R	0.844464					
R Square	0.713119					
Adjusted R Square	0.617493					
Standard Error	0.007036					
Observations	5					
ANOVA						
	Df	SS	MS	F	Significance F	
Regression	1	0.000369	0.000369	7.457312	0.071892	
Residual	3	0.000149	4.95E-05			
Total	4	0.000518				
Coefficients						
	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	0.010822	0.036265	0.298407	0.784868	-0.10459	0.126234
ROA	0.001759	0.000644	2.730808	0.071892	-0.00029	0.00381

In the above table, it is identified that there is a positive relationship between the dependent and independent variables. From the above model, it can be seen that the correlation value is 0.84. It can be said that there is a high relationship between the variables. This means that with a change in the capital structure, high variation comes in the firm's return on asset. R square value is 0.71, which means that with a change in the independent variable, 71% comes in the dependent variable. This again reflects that there is a high relationship between the capital structure and the return on assets. The adjusted R square value is 0.61, which reflects the fact that, with the addition of a new variable in the model, the impact of the capital structure on the return on the asset will be low. The level of significance is $0.07 > 0.05$, which means that there is no significant mean difference between the mean values of the

Return on Equity

There is significant mean difference between capital structure and return on equity of the firms.

Table6. Analysis on return on equity and capital structure

Regression Statistics						
Multiple R	0.474365					
R Square	0.225022					
Adjusted R Square	-0.0333					
Standard Error	0.088988					
Observations	5					
ANOVA						
	Df	SS	MS	F	Significance F	
Regression	1	0.006898	0.006898	0.871077	0.419505	

observed that results are revealing that return on capital employed is affected by the independent variable in terms of rate of change in mean value.

variables. It can be said that if the capital structure is changed, then the return on the asset will not change by a big percentage. The value of the intercept is 0.010, which means that when the value of the independent variable is zero, then the dependent variable value will be 0.010. The coefficient value is 0.001, which is slightly positive. It can be said that with a change in the independent variable, the dependent variable value may only change by 0.001 points, which has a negligible impact. A higher return on an asset reflects that the firm is making the best use of the assets in its business. If it is low, then it is assumed that less return is earned on the owned asset and that it is not used in the best way, in order to generate a return for the business. Research results are clearly reflecting that capital structure does not put a very high impact on the return on asset.

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Residual	3	0.023757	0.007919			
Total	4	0.030655				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	1.407658	0.458672	3.068986	0.054606	-0.05204	2.867357
Return on Equity	-0.0076	0.008148	-0.93331	0.419505	-0.03354	0.018326

It can be seen from the table that the value of multiple R is 0.47, which means that there is a positive relationship between the dependent and independent variable. It can be said that the rate by which capital structure gets changed at a low rate of return on equity will be altered. It can be observed that the value of R square is 0.22, which reflects that with a change in the firms' capital structure, return on equity to the shareholders will get changed only by 22%, which is a less percentage of change. It can be said that the return on equity to shareholders is less affected by the capital structure.

The level of significance is $0.41 > 0.05$, which means that there is no significant difference between the mean values of the variables. It can be said that the rate of change in equity is not

much high or lower, as compared to the rate at which the capital structure of the business firm is changing during a five-year time period. The intercept value is only 1.40, which, as mentioned in above models, reflects that, the value of the independent variable will be zero.

The value of the dependent variable will be -0.007. The value of the coefficient is only -0.007, which reflects that with a change in the independent variable, which is capital structure, a slightly negative variation may be observed in the dependent variable, which is return on equity. Thus, it can be said that there is no significant mean difference between the mean value of the dependent and independent variables, and they change at almost the same rate.

Descriptive Statistics

Table 7. Descriptive statistics of the variables under study

Debt equity ratio		O. profit ratio		Net profit ratio	
Mean	56.07954106	Mean	3.076035	Mean	2.163806
Standard Error	2.442087975	Standard Error	0.134661	Standard Error	0.154471
Median	58.02736111	Median	2.89441	Median	2.055539
Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	5.460674718	Standard Deviation	0.301112	Standard Deviation	0.345407
Sample Variance	29.81896838	Sample Variance	0.090668	Sample Variance	0.119306
Kurtosis	-1.774497091	Kurtosis	-1.9549	Kurtosis	3.294862
Skewness	-0.407665115	Skewness	0.807298	Skewness	1.714812
Range	13.30165409	Range	0.670549	Range	0.888796
Minimum	48.94750531	Minimum	2.822913	Minimum	1.86286
Maximum	62.2491594	Maximum	3.493461	Maximum	2.751656
Sum	280.3977053	Sum	15.38017	Sum	10.81903
Count	5	Count	5	Count	5
Return on asset		ROE		Gross profit ratio	
Mean	0.109482	Mean	0.981187	Mean	7.982032
Standard Error	0.005088	Standard Error	0.03915	Standard Error	0.098092
Median	0.112344	Median	0.953077	Median	7.997455
Mode	#N/A	Mode	#N/A	Mode	#N/A
Standard Deviation	0.011376	Standard Deviation	0.087543	Standard Deviation	0.219341
Sample Variance	0.000129	Sample Variance	0.007664	Sample Variance	0.048111
Kurtosis	-0.36623	Kurtosis	0.034962	Kurtosis	-1.05496
Skewness	-0.00228	Skewness	0.994355	Skewness	0.330958
Range	0.02987	Range	0.215459	Range	0.545317
Minimum	0.094741	Minimum	0.898833	Minimum	7.737819
Maximum	0.124611	Maximum	1.114292	Maximum	8.283136
Sum	0.547408	Sum	4.905935	Sum	39.91016
Count	5	Count	5	Count	5
ROCE					
Mean				0.892336	
Standard Error				0.06964	

Median	0.865409
Mode	#N/A
Standard Deviation	0.15572
Sample Variance	0.024249
Kurtosis	-0.37386
Skewness	-0.40635
Range	0.399531
Minimum	0.671283
Maximum	1.070814
Sum	4.46168
Count	5

The above table reflects the descriptive statistics of the data analyzed. It can be observed from the data that the mean value of the debt-to-equity ratio is 56.07, and the value of standard deviation is 5.46, which means that there is a low deviation in the value of the variable. It can be said that at big rates, the value of debt-to-equity ratio does not change. On the other hand, it can be seen that in the case of the operating profit ratio, the mean value is 3.07, and its standard deviation is 0.30, which is very low; this shows that during 5 years, no big changes were registered in the value of the variable, which is operating profit. The mean value of the net profit ratio is 2.16, which is lower than the operating profit ratio. This happened because many expenses are deducted from net profits, so a very small percentage of sales are covered. The standard deviation value of the net profit ratio is 0.34, which is minor and indicates that over the period of 5 years, a big percentage of the net profit ratio of relevant firms did not change. The mean value of return on asset is 0.10, and its standard deviation is only 0.01, which is nothing. This means that the return on asset almost remains the same during the period of five years. On the other hand, the standard deviation of the debt equity ratio is higher. This means that there is a difference in the rate at which the debt-equity ratio and the return on asset get changed. The mean value of return on equity is 0.98, and its standard deviation is 0.08, which means that the return on equity also gets changed at a slow pace during the time period of five years. A similar trend is observed in the case of return on capital employed whose average is 0.89, and its standard deviation is 0.15. The gross profit ratio mean value is 7.98, and the standard deviation is 0.21. There is a very low value of standard deviation; hence, it can be said that all variables on which analysis is undertaken are not changing at a fast rate over a five-year time period.

CONCLUSION & RECOMMENDATION

Conclusion

Based on the above discussion, it is concluded that there is no significant difference between the mean value of the debt-equity ratio and operating profit. This means that with a slight change in the capital structure, there is not a big variation in the operating profit of the business firm. It must be noted that finance cost is deducted in the income statement after computation of operating profit. Hence, the direct relationship between the variables is not reflected in the income statement. However, it can be said that capital structure, operating profit, and gross profit are linked to each other. This is because when capital structure becomes unbalanced, it directly affects the amount which may be borrowed by the business firm from banks and other entities. If there is an unbalanced capital structure, then banks do not like to offer a large amount of debt to a company. For this reason, there will be a scarcity of finance in the business, and this will affect the firm's business operations in a negative manner. In this way, the capital structure and operating profit of a business are interlinked with each other. A strong percentage change in the operating profit is also observed in relation to the debt equity ratio. It is therefore concluded that there is a significant relationship between the capital structure and operating profit earned by a firm. Thus, the overall conclusion is that the operating profit is heavily affected by the capital structure of a business.

The same trend is not observed in the case of net profit and it has been identified that there is a moderate value of correlation of 0.54. On this basis, it is concluded that the net profit and capital structure are moderately interrelated, and that the net profit is moderately sensitive to the capital structure. This happens because the finance costs and the dividends in the income statement are directly subtracted from

the operating profit, in order to compute the net profit. For this reason, the capital structure of the business is affected by the dividends. It can be seen from the relevant table in the data analysis section that a 63% variation occurs in the dependent variable, which is a net profit that is caused by a change in the capital structure. On this basis, it can be said that a moderate variation occurs in the net profit with a single change in the capital structure, because the finance cost is subtracted, in order to simply compute the net profit from the operating profit. The value of the level of significance reflects that there is no significant mean difference between the values of the variables. Hence, a slight change in the capital structure does not bring about a big variation in the net profit, reflecting that both variables are moderately correlated to each other.

In the case of return on capital employed has a positive result, there is a significant mean difference between the dependent and independent variable, as the value of the level of significance is equal to 0.05. In the case of return on equity, a moderate relationship is identified with the independent variable and with the debt equity ratio. However, in the case of ROA, a high value of correlation is identified. This reflects that ROA and capital structure are closely related to each other. Hence, it is concluded that with the change in independent variable only being medium or low-percentage, change comes in the return on equity.

In the case of return on capital employed, a significant mean difference is identified between the dependent and the independent variable. So, the final conclusion is those debt-equity ratios moderately affect the operating profit and net profit ratio, and the return on equity in comparison to the return on capital employed relative to the return on asset.

Recommendation

On the basis of the above discussion, it is recommended that banks must focus on the net profit and operating profit while making capital-structure-related decisions. If capital structure is imbalanced, then there will be a heavy cost of finance in the business. This will lead to a heavy reduction in the operating profit and net profit of banks.

Thus, it is recommended that businesses follow a specific policy, in order to maintain a balance

in the capital structure. If there is a balanced capital structure, then strong control will be maintained over the finance costs, which will lead to a decline in the operating profit and the net profit of the business. An appropriate strategy must be used that maintains a balance in the capital structure. For example, suppose there is a very low proportion of equity in the firm's capital structure, then the firm may issue shares on the primary market and can raise the amount of capital for the business. By doing this, the proportion of equity in the capital structure can be increased, and the balance can be maintained. If there is a very high proportion of equity in the firm's capital structure, then the firm can repurchase shares from the market in order to make the same balance, when it earns a high profit in a specific year. By doing so, the percentage of debt in the capital structure can be increased, and the equity can be reduced. In this way, the capital structure can be made balanced. This was the recommendation about equity. It is possible that there is a high portion of debt in the firm capital structure, then in a year, when the firm earns a huge amount of profit; its business profit amount can be used to make payment to the creditors. This means that instead of paying dividends to the shareholders, the business firm will choose to make payment to the creditors. By doing so, an overnight proportion of debt in the capital structure can be reduced to some extent, and capital structure can be made more balanced. Such kinds of steps must be taken by the business firm from time to time, so that capital structure always remains balanced and the cost of capital remains in control, which leads to an increase in operating and net profit in the business.

It is also recommended that managers must keep a keen eye on the changes that are taking place in the capital structure. This is because it is possible that the risk management system may be weak in the business firm. In that case, it may happen that capital structure may become imbalanced and the firm faces loss in its business. If the manager keeps eye on the developments that are happening in the capital structure, then over time, steps can be taken by the business firm to improve capital structure; thus, by following a proactive approach, many problems can be eliminated from the business at a preliminary stage.

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