

The Determinants of Capital Structure Decision of Commercial Banks in Ethiopia

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Abstract

The capital structure decision is at the center of many other decisions in corporate finance. Corporate financial manager is responsible to ensure low cost of capital and to maximize the wealth of shareholders. The purpose of this study is to investigate the determinants of capital structure decision in commercial banks of Ethiopia for eleven consecutive years (2010-2020) by using explanatory research design and multiple linear regressions. Quantitative research approach was utilized for secondary data analysis which is obtained from the audited financial statements of the sample banks. The study used purposive sampling technique to select eight banks from the total population of 17 commercial banks. The panel data were analysed with a fixed effect regression model. The study used descriptive statistics, correlation analysis and fixed effect multiple regression analysis to present and analyse the collected data. The findings of the study revealed that earnings volatility, profitability, non-debt tax shields, tangibility, and liquidity had the significant effect on capital structure of commercial banks in Ethiopia. But, growth and firm's size were found to have statistically insignificant effect on the capital structure. Therefore, commercial banks in Ethiopia should pay due attention to earnings volatility, profitability, non-debt tax shields, tangibility, and liquidity while articulating their optimal capital mix which can reduce the weighted average cost of capital and enhance the wealth of the shareholders.

Keywords: Commercial banks • Capital structure • Capital structure decision • Determinants

Introduction

Capital structure decisions are one of the most complex decisions facing managers. Managers are responsible to make capital structure decision that maximizes the firm value. Capital structure decision involves the selection of debt and equity securities in a balanced proportion keeping in view of different costs and benefits coupled with these securities. However, it is not an easy task and a wrong decision in the selection process of securities may lead the firm to financial distress and eventually to bankruptcy. The relationship between capital structure decisions and firm value has been extensively investigated in the past few decades. Over the years, alternative capital structure theories have been developed in order to determine the optimal capital structure [1].

The capital structure of a firm refers to the way in which a firm raised capital needed to establish and expand its business activities. It is a combination of various types of equity and debt capital a firm maintained resulting from the firms financing decisions [2]. Businesses could not exist without finance to support their fixed assets and working capital requirements. In all aspects of capital investment decision, the capital structure decision is the vital one since the profitability of an enterprise is directly affected by such

decision. Therefore, proper care and attention need to be given while determining capital structure decision were the first authors who developed capital structure theory. The MM theory advocates that under some restrictions, a firm's value would be unaffected by its capital structure [3].

The theory further postulates that, based on the assumptions of the absence of brokerage, tax and bankruptcy costs, investors can borrow at the same rate as corporations and they would tend to have the same information as management about a firm's future investment opportunities. Following this theory, many searchers adopted MM's (1958) path to develop new theory on capital structure and tried to departure from MM's (1958) assumptions. The trade-off and pecking order theories developed a slightly different hypothesis [4,5].

The capital structure decision is at the centre of many other decisions in corporate finance. Corporate financial manager is responsible to ensure low cost of capital and to maximize the wealth of shareholders. The cost of capital is minimal at optimal capital structure. But, what are the potential determinants of such optimal capital structure? This is the key question that will be answered by this research in commercial banks in Ethiopia.

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Since recent years, the concept of capital structure has been a subject of controversy among researchers and scholars. Such controversies have led to a lot of arguments on optimal capital structure decision in the finance literatures [6]. At what point optimal capital structure is reached is still not answered. A significant number of researches are conducted on the determinants of capital structure [7-10]. However, there are no unanimous findings among these studies. Furthermore, most of these empirical studies are conducted in developed countries and in some developing countries.

The determinants of capital structure of banks are still a relatively under-explored in the finance literature [11]. But, understanding the determinants of capital structure is as important for banks as for non-banks firms. Currently, there is no clear understanding on how banks choose their capital structure and what factors influence their corporate financing behaviour [12]. Thus, the lack of agreement about what would qualify as optimal capital structure and lack of literature in the case of Ethiopia has motivated this study.

In Ethiopia, the topic has received inadequate research attention. Only few studies were conducted in Ethiopian context. Examined the capital structure determinants in the case of insurance industry, investigated the determinants of capital structure in small scale manufacturing co-operatives, examined the determinants of capital structure in manufacturing share companies, examined determinants of capital structure of commercial banks, and examined determinants of capital structure of manufacturing firms in Ethiopia. Therefore, the main purpose of this study is to examine the relationship between financial leverage and its determinants in commercial banks of Ethiopia. This will equip financial managers with applied knowledge of determining their capital structure, and play role in filling gap in understanding of the capital structure decision.

Literature Review

Hypothesis development

Modigliani Miller assumed that the firm's average cost of capital and the value of the firm are independent of its capital structure [13]. Therefore, there is no optimal capital structure that maximizes the value of the firm (i.e. any level of leverage is as good as any other). In a perfect world, the value of the levered firm is equal to the value of un-levered firm. However, in reality, a perfect world clearly does not exist. Taxes, financial distress, asymmetric information, and conflicts between economic agents associated with the firm have an effect on the firm's capital structure. Subsequent theoretical works, thus, focus on these factors associated with market imperfections and their effects on the capital structure.

On the other hand, the trade-off theory states that the optimal capital structure can be considered as a trade-off between the benefit of debt finance and the costs of debt financing. Firms should choose a capital structure that balanced its costs and benefits of leverage [14]. The trade-off theory of the capital structure suggests that a firm's target leverage is driven by taxes, costs of financial distress, and agency conflicts. Pecking order theory claims that firms prioritize their sources of financing by internal funds, debts and issue of equity shares respectively. This theory advocates that a firm prefers finance which is readily available to it, that is, retained earnings and then moves on to other sources of finance, that is, debt and equity,

respectively. The reason for going for debt financing over equity is that debt has tax advantage as well as brings in an amount of discipline in the firm.

Agency theory focuses on the costs which are created due to conflicts of interest between shareholders, managers and debt holders. The conflicts between managers and shareholders occur due to disagreements over an operating decision. Adopt that even if shareholders or debt holders prefer liquidation of the firm, managers always choose to continue the firm's business. Capital structure is determined by the conflicts of interest between inside and outside investors [15]. Finally, signalling theory postulates that managers in exercising their choice of capital structure will send out a signal to the market or investors about the firm's prospects. According to managers, known as insiders, know the true distribution of firm returns, but investors do not. The managers prefer equity financing than debt as debt can lead to managers losing jobs if firms go bankrupt

Profitability

The relationship between leverage and profitability of a firm is one of the main theoretical controversies. Profitability is a measure of earning power of a firm and it is the primary concern of its shareholders. The effect of profitability on leverage was well explained by the "pecking order" theory that was suggested. This theory assumed that a firm has an ordered preference for financing whereby they prefer retained earnings as their main source of funds for investment which is followed by debt. The last resort sought by a firm would be external equity financing. This is due to internal funds were regarded as cheap and not subject to any outside interference. External debt was ranked next as it was seen cheaper and having fewer restrictions than issuing equity and the issuance of external equity is seen as the most costly way of financing a firm. Therefore, when firms which was profitable is seen to have more retained earnings and choose to have lower leverage, hence a negative relationship between profitability and leverage is expected.

However, according to the static trade-off theory, high profitability level gives high level of borrowing capacity. This situation promotes the use tax shield. Firms normally have to pay taxes on their profits. To avoid this, they prefer to take more debt in their capital structure as interest payments on debt are generally tax deductible. Agency costs theories also predict that profitable firms would take more debt in their capital structure to control the activities of managers. Hence, the more profitable a firm is, the more debt it will have in its capital structure. Thus, the trade-off theory hypothesizes a positive relationship between profitability and debt level [16]. Based on the above discussion, the following hypothesis is developed by the researcher.

Hypothesis 1: There is a positive and significant relationship between capital structure and firm's profitability.

Tangibility of assets

The natures of a firm's assets are expected to have an effect on capital structure decision. Also found that tangibility of asset might influence the leverage of banks. Tangible assets such as land, buildings, inventory and current assets can give guarantee to the banks for the money that banks already disburse to the debtors and

can boost the amount of debt in the capital structure [17]. However, the pecking order theory suggested a negative relationship between leverage and tangibility due to the limited information asymmetry related to tangible assets which makes equity seem to have lower cost. Furthermore, some prior empirical study revealed that the effects of the tangibility towards the banks' leverage is not significant as the increase of tangible assets held by banks might provide more collateral to back up in the event of liquidation, thus can increase more leverage spontaneously. Accordingly, the effect of tangibility towards bank's leverage is expected as follows.

Hypothesis 2: There is a positive and significant relationship between capital structure and tangibility of assets.

Earning volatility

Earning variability shows the uncertainty of future income streams and the risk. Earnings volatility is expected to negatively correlate with capital structure. When earnings volatility is high, firms are relatively incapable of issuing debt or equity because investors and lenders are unwilling to put their money in a firm with a high risk of default or bankruptcy. Firms with high earnings volatility carry the risk that their earnings level may drop below debt servicing commitment. Such unfavourable occurrences may result in re-arranging funding at a higher cost or facing the risk of bankruptcy [18].

The trade-off and pecking order theories reveal that the association between earnings volatility and debt is negative, indicating that an increase in earnings volatility is expected to increase the possibility of a firm experiencing bankruptcy. This is because an increase in the volatility of the earnings simultaneously exposes the firm to the risk of inability to repay the interest and debt. The debt level of a firm cannot directly affect this indicator, as the optimal level of debt decreases the earnings volatility [19].

Hypothesis 3: There is a negative and significant relationship between earning volatility and capital structure.

Size of the firm

The effect of firm's size on capital structure decision is controversial. Some researchers found positive relationship between size and financial leverage. When large firms are more diversified, costs for issuing new equity will be low, and probability of bankruptcy for large firms is less than smaller firms therefore size positively relate to leverage. Theories based on asymmetric information, state that large firms have to inform more to their investors therefore they prefer equity over debt. Therefore size and leverage holds negative relationship between them. Pecking order theory also agrees on negative relationship. Furthermore, in the research made, indicate that including size in their cross sectional analysis, they found that the effect of size on equilibrium leverage is 25 more ambiguous. Thus, larger firms tend to be more diversified and because of that, size may then be inversely related to the probability of bankruptcy. Based on these arguments, the researcher expected the following working hypothesis.

Hypotheses 4: There is a positive and significant relationship between capital structure and firm's size.

Growth

The relationship between growth opportunities and capital structure is controversial. The Trade-off theory predicts that firms with more growth opportunities will have less debt as there is less need for the disciplining role of debt. Firms that have growth opportunities would prefer to retain debt capacity as they might need to borrow in the future. Further, growth opportunities are capital assets that add value to a firm but cannot be collateralized and do not generate current taxable income. For this reason, the arguments put forth suggest a negative relationship between debt and growth opportunities. However, it proposes that when firms have growth opportunities, then they require more funds to grow. Given that internal resources are not sufficient, firms would then turn to external sources of finance [20].

Hypothesis 5: There is a positive and significant relationship between capital structure and firm's growth.

Non debt tax-shield

Previous studies conducted, concluded that there are other alternative tax shields such as depreciation, research and development expenses, investment deductions, etc., that could substitute the fiscal role of debt. Studied the tax effect on corporate financing decisions and provided evidence of substantial tax effect on the choice between debt and equity. He concluded that changes in the marginal tax rate for any firm should affect financing decisions. When already exhausted (with loss carry forwards) or with a high probability of facing a zero tax rate, a firm with high tax shield is less likely to finance with debt. The reason is that tax shields lower the effective marginal tax rate on interest deduction. On the other hand, Graham concluded that in general, taxes do affect corporate financial decisions, but the magnitude of the effect is mostly not large.

Hypothesis 6: There is a positive and significant relationship between capital structure and non-debt tax shields.

Liquidity

Pecking order theory expects that highly liquid firms prefer to use internal to external funding. On the other hand, less liquid firms are less likely to access debt, since bankruptcy associated costs are high.

Numerous researchers examined the relationship between liquidity and financial leverage. Some researchers found a positive relation and others reported negative relationship. Previous studies like found a significant negative relationship between liquidity and debt ratio. Firms that are comfortable in its liquidity position would prefer to finance through internal funds and would not need outside financing. Concluded that with a high liquidity, firms would go for less of debt and would prefer to finance through internal funding. Their finding was in accordance to pecking order theory, whereas got a positive relationship in their results which were as per trade-off theory which says that a firm needs to have high liquidity to service high debts.

Hypothesis 7: There is a positive and significant relationship between capital structure and liquidity position

Conceptual framework

To achieve the research objectives and to test the research hypotheses, this study developed conceptual framework. A conceptual framework is a written or visual representation of an expected relationship between variables. It depicts the relationship between the dependent and independent variables. The dependent variable is capital structure and the independent variables are firm's profitability, non-debt tax shield, earning volatility, firm's growth, tangibility of assets, firm's size, and firm's liquidity.

After careful study of empirical literatures reviewed, the following conceptual framework is formulated to show the relationship between leverage and its determinant variables (Figure 1).

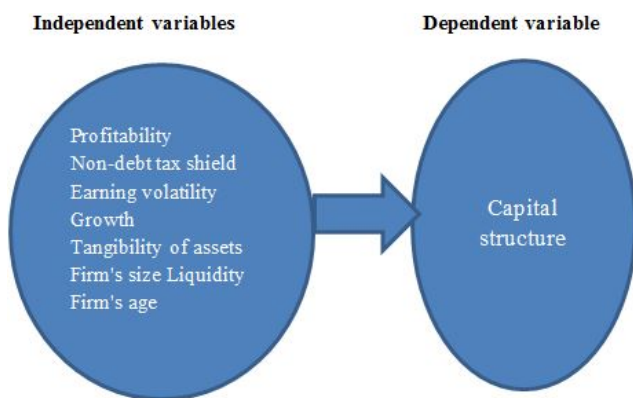


Figure 1. Conceptual framework.

Source: Compiled from literatures

Research design

The methodology used to carry out the research is based on the objectives of the paper and the availability of relevant information. To confirm the objective of this research, the study employed an explanatory research design. The primary aim of this study is to examine the determinant factors that affect capital structure of commercial banks in Ethiopia. Explanatory research is a design for testing objective theories by examining the relationship among variables.

Research approach

In this study, a quantitative research approach is used. Quantitative research is an approach for testing objective theories by examining the relationship among variables. Quantitative research is associated with a deductive approach to testing theory, often using number or fact. It is grounded in the basic attitude that knowledge about reality can also be obtained 'through the eyes of the researcher'.

Sampling design and sampling technique

The population of this study is the total number of commercial banks operating in Ethiopia. According to the 2020/2021 report of

national bank of Ethiopia, there are sixteen private banks and one stated owned commercial bank in Ethiopia. The study employed purposive sampling technique to select the required sample banks. Therefore out of the seventeen commercial banks, the researcher judgmentally selected eight commercial banks; these are; commercial bank of Ethiopia, Awash International Bank, Bank of Abyssinia, Dashen Bank, Nib International Bank, Oromia cooperative bank, United Bank, and Wegagen Bank.

Data source and collection methods

The study used secondary data sources obtained from the audited financial statements of the sample private commercial banks over a period of ten years (2011-2020). These data were obtained from national bank of Ethiopia and the private banks themselves. The study used survey method of collecting data.

Model specification

The purpose of this analysis is to examine the determinants of capital structure. The following model is formulated for this research in order to test the research hypothesis developed.

$$LEV_{it} = a + \beta_1 FSE_{it} + \beta_2 EV_{it} + \beta_3 GROW_{it} + \beta_4 LQ_{it} + \beta_5 NTAX_{it} + \beta_6 PROF_{it} + \beta_7 TAN_{it} + U_i$$

Where: β_1 to β_7 = the coefficient, in which every marginal change in each variable affects LEV correspondingly.

U_i : The error term

LEV: Financial leverage

FSE: Firm's size

EV: Earnings volatility

GR: Firm's growth

LQ: Firm's liquidity

NTAX: Non-debt tax shield

PROF: Firm's profitability

TAN: Tangibility of assets

Measurement of variables

In this study, the researchers used one dependent variable (Financial Leverage=Debt to Equity Ratio) and six independent variables such as profitability, non-debt tax-shield, growth, tangibility, size, and liquidity from most prominent and recent empirical studies. The selection measures for dependent variable (leverage, which is proxy to capital structure) and independent variables summarized as follows (Table 1).

Variables	Symbol	Measurement	Type
LEVERAGE	LEV	Total debt/Total assets of bank's	Dependent

Profitability	PROF	Operating income/Total assets	Independent
Non-debt tax-shield	NTAX	Depreciation expense/Total assets	Independent
Earnings volatility	EV	Standard deviation of operating income over mean of the earnings	Independent
Firm's growth	GROW	Percentage change In total assets	Independent
Firm's size	FSZE	Natural log of total assets	Independent
Liquidity	LQ	Current assets/Current liabilities	Independent
Tangibility	TAN	Fixed assets/Total assets	Independent

Table 1. Summary of variables definitions.

Results and Discussion

Descriptive statistics

This section presents the descriptive statistics of dependent and independent variables used in the study for the sampled commercial banks in Ethiopia. The descriptive analysis demonstrates the mean, median, maximum and minimum values and standard deviation of the dependent and independent variables over the study period (2010-2020).

According to Table 2, the mean financial leverage of commercial banks under the study was 0.866. The means 0.866 implies that out of 100% financing, around 87% of the banks in Ethiopia were financed by debts. This is due to huge amount of customer deposit. The Table 2 also shows that leverage has maximum, minimum and standard deviation of 0.937, 0.785 and 0.033 respectively. This implies that leverage for the sample period was ranged from 78.5 percent to 93.7% with a standard deviation of 3.3%.

	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
LEV	0.866411	0.867292	0.937	0.784795	0.033121	88
Ev	0.017565	0.02046	0.022159	0.010345	0.004758	88
FSE	23.64072	23.55927	32.70808	18.60105	1.819276	88
GROW	0.799566	0.238397	3.83	0.034276	0.933946	88
LQ	2.060754	2.047369	3.568802	0.47	0.749149	88
NTAX	457.2712	129.4284	4642.03	30.0582	913.3179	88
PROF	0.036938	0.036871	0.06493	0.0189	0.011293	88
TAN	0.042213	0.041147	0.08	0.01	0.018513	88

Note: LEV: Financial leverage; FSE: Firm's size; EV: Earnings volatility; GR: Firm's growth; LQ: Firm's liquidity; NTAX: Non-debt tax shield; PROF: Firm's profitability; TAN: Tangibility of assets.

Table 2. Summary of descriptive statistics for dependent and explanatory variables.

Correlation analysis among variables

According to Brooks, correlation between two variables measures the degree of linear association between them. To find the association of the independent variables with the dependent variable, Pearson product moment of correlation coefficient was used.

As shown in the Table 3 below, firm's size, growth, and tangibility are positively correlated with capital structure with a correlation coefficient 0.02294, 0.23367 and 0.467117 respectively. Earnings volatility, liquidity, non-debt tax shields, and profitability are negatively correlated with capital structure with a correlation coefficient of -0.04654, -0.57085, -0.215716 and -0.568684 respectively.

	LEV	EV	FSE	GROW	LQ	NTAX	PROF	TAN
LEV	1	-0.04654	0.02294	0.23367	-0.57085	-0.215716	-0.568684	0.467117
EV	-0.04654	1	0.022069	-0.0636046	-0.086165	0.034818	-0.05302	-0.0167807
FSE	0.02294	0.022069	1	0.080869	0.055886	0.416464	0.19108283	-0.027034
GROW	0.23367	-0.0636046	0.080869	1	0.186736	-0.1488769	-0.05452	0.23711929

LQ	-0.57085	-0.086165	0.055886	0.186736	1	0.262635	0.44564	-0.4865145
NTAX	-0.215716	0.034818	0.416464	-0.1488769	0.262635	1	0.413029	-0.234062
PROF	-0.568684	-0.05302	0.19108283	-0.05452	0.44564	0.413029	1	-0.42597
TAN	0.467117	-0.0167807	-0.027034	0.23711929	-0.4865145	-0.234062	-0.42597	1

Note: LEV: Financial leverage; FSE: Firm's size; EV: Earnings volatility; GR: Firm's growth; LQ: Firm's liquidity; NTAX: Non-debt tax shield; PROF: Firm's profitability; TAN: Tangibility of assets.

Table 3. Correlation matrix of dependent and independent variables.

Random versus fixed effect model

In order to choose and apply the appropriate model, the hypothesis was developed and tested by Hausmann specification test. The hypothesis of Hausmann specification test is:

H_0 : Random effects model is appropriate.

H_1 : Fixed effects model is appropriate.

Decision rule: Reject H_0 if p-value less than significance level 0.05. Otherwise, don't reject (Table 4).

Correlated Random Effects-Hausman Test

Equation: Untitled

Test cross-section random effects

Test summary	Chi-square, statistic	Chi-square, d.f.	Prob.
Cross-section random	31.419908	7	0.000 1

Table 4. Correlated random effects-Hausman test

Based on Hausmann specification test in the model, fixed effect model is appropriate for the estimation of the model since the p-value of the model is less than 5%.

Fixed effect regression result

The researcher used a panel regression model for the estimation in this study. Panel data involves the pooling of observations on a cross-section of units over several time periods. The Eview 9 statistical software was used to run the multivariate regression

As shown in Table 5 below, 91% of variation in capital structure is explained by the change in the selected explanatory variables. The remaining 9% of the variation in the capital structure of selected commercial banks in Ethiopia is explained by other variables which are not included the model during the study period. Beside this, F-statistics (50.638773) which is used to test the overall significance of model was presented and null hypothesis can be clearly rejected at 5% level of significant, since the p-value was (0.00000) which was sufficiently low, indicates the reliability and validity of the model at 5% level of significance.

Dependent variable: LEV

Method: Panel least, **Squares date:** 09/21/22, **Time:** 08:19, **Sample:** 20 10 2020

Periods included: 11 **Cross-sections included:** 8

Totalpanel(balanced) observations:88

Variable	Coefficient	Std. Error	t-Statistic	Prob.
c	0.952107	0.030782	30.93101	0
EV	-0.74551	0.318576	-2.34012	0.022
FSE	0.000 162	0.00 1189	0.135839	0.8923
GROW	0.00407 1	0.002669	1.525218	0.1315
LO	-0.02582	0.003193	-8.0868 11	0
NTAX	5.09 E-06	2.53 E-06	2.012702	0.0478
PROF	-1.09386	0.217826	-5.02171	0

TAN	0.275234	0.084839	3.244196	0.0018
Effects specification				
Cross-section fixed (dummy variables)				
R-squared		0.906643	Mean dependent var	0.866411
Adjusted R-squared		0.888739	S.D. dependent var	0.033121
S.E. of regression		0.011048	AKaiKe info criterion	-6.019129
Sum squaredresid		0.008910	Schwarz criterion	-5.59686
Log likelihood		279.8417	Hannan-Quinn criter.	-5.84901
F-statistic		50.63873	Durbin-Watson stat	1.72554
Prob(F-statistic)		0		
Source: Output of E views 9				

Table 5. Fixed effect model estimates.

Discussion for fixed effect regression result

The fixed effect regression result revealed that profitability (-1.093857, 0.0000) has a negative and statistically significant effect on leverage at 5% level of significance. Hence, expected hypothesis is rejected. This negative relationship is also similar with the insight of pecking order theory and empirical findings of other studies. However, the finding is contrary to the trade-off theory and the study of Jaafar et al.

Tangibility was found to have 0.2752234 coefficients of regression and 0.0018 p values. This implies that tangibility has positive and statistically significant effect on capital structure at 5% level of significance. Hence, expected hypothesis is accepted. The finding was supported by the ideas of empirical evidence. It also, consistent with the trade-off, agency cost; and pecking order theories which suggest the positive relationship between growth and leverage.

Earnings volatility was negatively and significantly correlated with capital structure. When earnings volatility is high, investors and lenders are unwilling to put their money in a firm with a high risk of default or bankruptcy. The result is in line with the suggested hypothesis and with the trade off and pecking order theory. The finding also revealed that non debt taxes shield had a positive and statistically significant relationship with leverage. The result is consistent with the researcher expectation and with the trade-off theory.

Growth (0.004071, 0.1315) was found to have a positive and statistically insignificant relationship with leverage. Hence, the suggested hypothesis is rejected. This finding is inconsistent with the researcher expectation and pecking order theory and empirical finding of studies.

Firm's size had 0.000162 coefficients of regression and 0.8923 p values which implies a positive and statistically insignificant effect on capital structure. Hence, the suggested Hypothesis is rejected. The finding is consistent with the postulates of trade-off theory. This positive relationship also reflected in the study of other scholars. Liquidity (-0.025823, 0.0000) was also found to have a negative and statistically significant relationship with leverage. The finding of the

study is consistent with the hypothesis formulated which is based on pecking order theory.

Conclusion

Since the seminal work of Modigliani and Miller, capital structure remains an important and significant issue for academicians and corporate managers. The basic question is whether there exists an optimal capital structure and what might be its determinants. Extensive research has attempted to identify these factors; however, the findings of prior empirical studies have provided varying evidence related to the impact of these factors on capital structure. Furthermore, the majority of these studies have been conducted in developed countries that have many institutional similarities.

The main objective of this study was to examine the determinants of capital structure in commercial banks of Ethiopia. To achieve the intended objective, the study used quantitative research approach. The quantitative data were collected through survey from a sample of eight banks over the time period from 2010-2020. The collected data were analyzed by employing multivariate ordinary least square model using E views. Thus, the results of the fixed effect estimation model showed the existence of the following relationship between leverage and the independent variables.

Profitability, earnings volatility and liquidity had a negative and statistically significant effect on capital structure. On the other hand, non-tax shield and tangibility were found to have a positive and significant effect. Finally, firm's size and growth opportunities were found to have a positive and statistically insignificant effect on capital structure decision. The empirical findings of the study imply that the two capital structure theories, static trade-off, and pecking order, are essentially explaining the capital structure decision of Ethiopian commercial banks.

Recommendations

The findings of the study are deemed to benefit different bodies such as investors, shareholders, managers, creditors/lenders, academicians and policy makers in the country. Therefore, based on the major findings of the study, this research suggests the following

recommendations to investors, commercial banks, lenders, policy makers and academicians.

The analyses result indicated that the variables of earnings volatility, profitability, non-tax shields, tangibility, and liquidity are significant factors of capital structure in commercial banks of Ethiopia. Therefore, the study conveys an insight to bank managers of Ethiopian commercial banks that due attention needs to be paid on the earning volatility, profitability, non-tax shields, tangibility, and liquidity while formulating their optimal capital mix which can minimize weighted average cost of capital and enhance the value of the company. This study may also give a lesson to the national bank of Ethiopia on determinants of sound capital structure decisions beyond the existence of its tight capital regulation on banks that can boost the profitability and financial health of banks.

Profitability had a negative and statistically significant relationship with leverage. Therefore, banks are recommended to use internal finance before raising debt or equity. Non tax-shield was also found to have a positive and significant influence on capital structure. This shows that commercial banks in Ethiopia are benefiting from tax advantage of interest expenses, considerably. Therefore, the financial managers of commercial banks should give substantial attention for the tax-shield variable. Tangibility was also found to be a significant factor of capital structure. Therefore, commercial banks, lenders and investors are recommended to provide loan with collateral of fixed assets.

Ethiopian commercial banks' capital is found to rely more on debt financing than on equity financing. This is an indication of business environment that investors could buy and sell their stocks and firms in the country could raise capital. Capital markets are one of the instruments that potentially switch companies' financing from short to long-term securities and investors' attention from short-term investments to long-term investments. Therefore, now is the appropriate time to research the importance and applicability of secondary market in Ethiopian.

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