

Determinants of capital structure of private commercial banks in Ethiopia

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Declaration I, the undersigned, declare that this study entitled: *Determinants of Capital Structure: an Empirical Study on Ethiopian private Banking Industry* is my original work and has not been presented for a degree in any other university, and that all sources of materials used for the study have been duly acknowledged. Declared by:

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ABSTRACT

Given the central role of market and credit risk in their core business, the success of Banks depend on their ability to identify, assess, monitor and manage these risks in a sound and sophisticated way. In order to assess and manage risks, banks must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses arising from their market, credit and operational risk exposures. The objective of this study was to find out the determinants of capital structure of private Commercial banks in Ethiopia.

The study used inferential research design. The population of this study was all the 18 commercial banks in Ethiopia. Secondary data was drawn from the financial statements of commercial banks. The data was analyzed using descriptive analysis and multiple regression analysis.

The study found that overall leverage of banks is negatively related to operating assets. In conclusion, the empirical evidence from this study suggests that size, tax and liquidity are important variables that influence banks' capital structure.

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Chapter One: Introduction

1.1 Background of the Study

The term capital structure is used to represent the proportionate relationship between debt and equity (Pandey, 2008). The various means of financing represent the financial structure of an enterprise. Traditionally, short term borrowings are excluded from the list of methods of financing the firm's capital expenditure. Capital structure decisions are one of the three financing decisions – investment, financing, and dividend decisions – finance managers have to make (Van Horne, 1989). Capital structure of a firm determines the weighted average cost of capital (WACC). WACC is the minimum rate of return required on a firm's investments and used as the discount rate in determining the value of a firm. A firm can create value for its shareholders as long as earnings exceed the costs of investments (Damodaran, 2001).

These studies pointed out the importance of the relationships among capital structure, cost of capital, capital budgeting decisions, and firm value. Although capital structure theory is a widely studied topic, subsequent to the departures from Modigliani and Miller (1958)'s irrelevance proposition, there is a long tradition in corporate finance to investigate the capital structure decisions of non-financial firms and not financial firms such as banks. The standard textbook answer is that there is no need to investigate banks' financing decisions, since capital regulation constitutes the overriding departure from the Modigliani and Miller (1958) propositions.

Taken literally, this suggests that there should be little cross-sectional variation in the leverage ratio of those banks falling under the Basel regulatory regime, since it prescribes a uniform capital ratio. In a recent study, Gropp & Heider (2009) noted that standard cross-sectional determinants of firms' capital structures also apply to large, publicly traded banks in the US and Europe, except for banks close to the minimum capital requirement. Dakito (2014) noted that banks in Ethiopia were generally well-capitalized with an overall capital adequacy ratio of 10.4% comparable or considerably above that in other emerging economies and above the 8% recommended by Basel Core Principles. Therefore, bank capital structure deserves further investigation.

A substantial literature on accounting and finance has undertaken to identify what drives one of the key corporate financial policies, the capital-structure decision. The study by Modigliani and Miller (1958) sought to examine this issue. They offered evidence that capital-structure is unrelated to the value of a firm. Five years later, the same authors relaxed the perfect market assumptions and added corporate taxes in their models (Modigliani and Miller, 1963). Consequently, they found that the value of a firm will be enhanced if the level of debt increases. They elucidated their findings by the fact that interest paid is tax-deductible and hence, firms would enjoy a debt tax shield when funding their activities by long-term debt. However, Modigliani and Miller (1963) did not take into account bankruptcy-related costs. The findings in Modigliani and Miller (1958, 1963) encouraged many researchers to explore further the drivers of corporate capital structure decisions. Until now, there has been no general agreement about the capital structure debate. As a result, it is still unclear what drives capital-structure decisions.

Early literature on the capital-structure puzzle by Myers (1984) examined different capital-structure theories. He found that drivers of firms' decisions to choose debt, equity or hybrid securities are still unknown. The findings in Myers's article challenged researchers to explore this puzzle further. Myers revisited this puzzle and found that "debt ratios provide an inappropriate framework for empirically examining the trade-off theory of capital-structure". In particular, they explained that debt (or debt to-equity) ratios are misguided and lead to poor and inconsistent results when examining the determinants of corporate capital-structure. Barclay and Smith (2005) revisited the capital-structure puzzle and concluded that different capital-structure theories lead to different and diametrically opposed decisions and outcomes.

1.2 Statement of Problem

According to Korajczyk (2003), banks and other financial institutions are specialized businesses, which capital structure is affected by a series of conditions of the financial industry, such as governmental regulations and access to insurance instruments of the Federal government, which includes deposits. Owing to these fundamental roles, banks have always been concerned with both solvency and liquidity. Given the central role of market and credit risk in their core business, the success of banks depend on their ability to identify, assess, monitor and manage these risks in a sound and sophisticated way. In order to assess and manage risks, banks must have effective ways of determining the appropriate amount of capital that is necessary to absorb unexpected losses arising from their market, credit and operational risk exposures.

The Ethiopian commercial banks adopt the Basel II capital requirements which suggest that banks should have capital adequacy ratios of at least 8%. Dakito (2014) noted that Banks in Ethiopia have 10.4% as far as capital requirements are concerned and this is way above the recommended ratio of 8%. In fact, this ratio is below some other countries such as Malaysia (12.7%) and South Africa (12.6%) (Beck *et al.* 2010). Thus given the above foregoing analysis, the given Ethiopian banking sector provides an interesting case to assess the determinants of capital structure.

In a study on determinants of capital structure of banks in Ghana, Amidu (2007) found that profitability, corporate tax, growth, asset structure and bank size influenced banks' financing or capital structure decision. Gonzalez and Gonzalez (2008) studied how bank market concentration and institutions affect capital structure in 39 countries and found that firm leverage increases with bank concentration and the protection of creditor rights, but decreases with the protection of property rights. Gropp and Heider (2009) examined whether capital requirements are a first-order determinant of banks' capital structure and found that that capital regulation and buffers may only be of second order importance in determining the capital structure of most banks. In Kenya, Olweny and Shipho (2011) studied the effects of banking sector factors on profitability of commercial banks and found that capital adequacy had a statistically significant impact on bank profitability's. These studies found that capital structure of nonfinancial institutions were

influenced by factors such as size, profitability, growth, asset structure, risk, non-debt tax shields, free cash flows, commercial trade position, age, and corporate governance. Therefore a research gap on the determinants of capital structure of commercial banks in Ethiopia. As much the banks are regulated, evidence has shown that regulation is a second-order determinant of capital structure of banks and that there are considerable similarities between banks' and non-financial firms' capital structures (Gropp and Heider, 2009). As per the researcher's access and knowledge, the researchers conducted on determinants of capital structure so far in Ethiopian case are by Ashenafi (2005) and Kibrom (2010)

Ashenafi (2005) approached the question of capital structure using data from medium firms in Ethiopia. He took variables like non-debt tax shield, economic risk, age of firms, size of firms, tangibility, profitability and growth were regressed against leverage. The results proved that non-debt tax-shield, economic risk, profitability, growth, tangibility, and age showed a negative coefficient of correlation with debt to equity ratio. Recently Kibrom (2010) also uncovered the fact that the two variables (profitability and growth) established negative relationship and the remaining four variables (tangibility, size, age and tax-shield) showed positive relationship with capital structure. As a result, profitability variable attained an inverse relationship with capital structure measure that supports Pecking order theory, but opposes the Static trade-off theory. Thus the researcher motive to conduct this research due to lack of agreement about optimal determinant of capital structure and as per the researcher knowledge lack of literature regarding private commercial banks.

This study therefore seeks to answer the following question: what are the firm specific determinants of capital structure on commercial bank of Ethiopia.

1.3. Objective

1.3.1 General Objectives

The objective of this study is to find out the determinants of capital structure of Private commercial banks in Ethiopia.

1.3.2 Specific Objectives

This study attempted to achieve the following specific objectives:

- i. To measure the effect of change in profitability on the financing mix (leverage) of Private commercial banks in Ethiopia,
- ii. To find out the extent to which variations in bank size explain the variations in debt to equity ratio of Private commercial banking business in Ethiopia,
- iii. To determine the effect of a change in growth of Private commercial banks on their leverage,
- iv. To find out the response of capital structure to the Liquidity of the Private commercial banks operating in Ethiopia,
- v. To determine the impact of tax-shield on financing decision of Private commercial banks in Ethiopia
- vi To determine the consequence of change in the tangibility of assets held by Private commercial banks of Ethiopia on the debt to equity ratio
- vii. To verify if capital structure decisions that are made in the Private commercial banks of Ethiopia provides empirical support for existing theories.
- viii. To explain which theory pertinent to Ethiopian private commercial banks.

1.3.3 Research questions (RQ)

RQ1. What determine the capital structure of banks in Ethiopia?

RQ2. Which theory explains the financing behavior adopted by Ethiopian?

1.4. Scope of the study

The scope of this study was limited to the relationship between leverage and determinants of capital structure decision of Ethiopian private commercial banks over the period 2006 to 2016 for eleven years data in order to strengthen the reliability. Seven private commercial banks were selected from the population of 17 commercial banks and represent 42.1 percent of the existing commercial banks and the main reason for delimiting to the commercial banking sector is that commercial banks share common attributes in accounting practices, corporate governance and corporate control. Also, the reason for delimiting to private commercial banks is due to their contribution to GDP, which is relatively the same as that of state-owned commercial banks in Ethiopia. To this end, this study was limited to firm-specific determinants of capital structure (profitability, growth, asset structure, liquidity, and size and tax charge) and theories of capital structure that can explain the capital structure of the Ethiopian private commercial banking industry.

1.5 Limitation of the study

The major limitations that hamper this study were resource constraint and unavailability of an active secondary market, which forced the researcher to measure the dependent variable, i.e., measures of leverage, as well as the proxies of the independent variables in terms of book values rather than market value.

1.6. Significance of the study

Studies by Weldemikael (2012) & Kibrom (2010) investigated the determinants of capital structure of firms in Ethiopia. However, to the best knowledge of the researcher, there is no study that has focused on private commercial banks of Ethiopia. Thus, this study will have a significant role to play in filling the gap in understanding of the capital structure decision for banks in Ethiopia. Such an understanding is important, because it equips financial managers with applied knowledge of determining their capital structure. As an appropriate capital structure is important to a firm, as it will help in dealing with the competitive environment within which the firm operates, and which will maximize the return of the stockholders by increasing the value of the firm. Additionally, this study will be used as an input to researchers for further research on the determinant of capital structure.

1.7. Organization of the Paper

This study is organized into five chapters. Chapter one presents research introduction, statement of the problem, objective of the study, research question, scope and limitation, and significance of the study. Following on this, chapter two of the study presents review of theoretical and empirical literatures on determinants of capital structure. Chapter three presents the research methodology. Then, chapter four present results and analysis of the study and finally, chapter five present conclusions and possible recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Capital structure refers to several alternatives that could be adopted by a firm to get the necessary funds for its investing activities in a way that is consistent with its priorities. Two major sources of financing that are available to firms are debt and equity. The mixture of debt and equity is called capital structure. Most of the effort of the financial decision making process is centered on the determination of the optimal capital structure; where the firms' value is maximized and cost of capital is minimized. This chapter presents the theoretical and empirical literature review over the capital structure theme. Section 2.2 covers definition of capital structure, section 2.2 covers theoretical review and empirical studies including those conducted in Ethiopia and section 2.3 provides conclusions and knowledge gap.

2.2. Definition of Capital Structure

There are many definitions given to capital structure of companies. Brealey and Myers(1991) defined capital structure as comprising of debt, equity or hybrid securities issued by the firm. VanHorn (1989) defined capital structure as the proportion of debt to the total capital of the firms. Pandey (2005) defined capital structure as a choice of firms between internal and external financial instruments. From the definitions given by many previous researchers, capital structure of a firm describes the way in which a firm raise capital needed to establish and expand its business activities. It is a mixture of various types of equity and debt capital a firm maintains, resulting from the firm's financing decisions. The amount of debt that a firm uses to finance its assets is called leverage.

A firm with a lot of debt in its capital structure is said to be highly levered. A firm with no debt is said to be unlevered. For example, a firm that sells Birr 20 million in equity and Birr 80 million in debts is said to be 20 percent equity-financed and 80 percent debt-financed. The firm's ratio of debt to total capital is 80 percent and is referred to as the firm's leverage. The term capital structure is used to represent the proportionate relationship between debt and equity. Debt represents the creditors' claim i.e. liabilities or borrowings. Equity includes paid-up share capital, share premium, and reserve and surplus (retained earnings).Managers, in the extent to pursue

wealth maximization objective of a firm, should examine the set of theories and at least major factors affecting the decision that help them choose the optimal capital structure. Normally firms have option of choosing debt financing, equity financing, or combination of the two, with the other option of internal financing mainly from the retained earnings. Such dealings of financing decisions are, in fact, termed as Capital Structure Decisions

2.3. Capital Structure Theories

Beginning from Modigliani and Miller (1958)'s irrelevance proposition, capital structure puzzle has drawn a lot of attention. How do firms choose their capital structure? What are the determinants of firm capital structure decisions? Numerous researches study in these questions, however, the results are still ambiguous. This Section starts with the capital structure irrelevancy theory. Following subsections give the overview of theories and empirical studies that suggest that capital structure affects firm's value.

2.3.1. Capital Structure Irrelevancy Theory **(Modigliani – Miller Theorem)**

In the 1950s, two financial economists, Franco Modigliani and Merton Miller, made significant contribution to the corporate finance and were rewarded decades later with noble Prize in economics. They came up with the new propositions to explain the capital structure theory and here starts the birth of modern capital structure theory. Their contribution was to show that, under certain assumptions (known as the MM assumptions and MM theory), the capital structure, or mix of debt and equity, does not have an impact on the overall value of the firm. Theory of irrelevancy was presented in an era when research was dominated by assumption that there is no interaction between a firm's investment and financial decisions of the firm.

Modigliani and Miller (1958) demonstrated that the market value of a firm is determined by its earning power and the risk of its underlying assets, and independent of the way it chooses to finance its investments or distributes dividends. Moreover, a firm can choose between three methods of financing: issuing shares, borrowing or spending profits (as opposed to disbursing them to shareholders as dividends). The theorem gets much more complicated, but the basic idea

is that under certain assumptions, it makes no difference whether a firm finances itself with debt or equity.

Five years later, Modigliani and Miller (1963) introduced corporate taxes into their earlier model by setting free the first assumption of no taxes. They argued that optimal capital structure can be obtained for firms with 100 percent debt financing by having the tax shield benefits of using debt. With tax introduced the value of levered firm becomes higher. This was their correction model. Some researchers felt that Modigliani and Miller failed to discuss in their article on the practical applications of their theory to individual firms and on how well the theory explains observed facts, such as debt ratios, market reactions to security issues and so on.

Thereafter, several empirical researches were conducted on the concept developed by Modigliani and Miller. In most of the later studies accepted the importance of financial leverage in affecting the overall cost of capital, the return to the shareholders and the value of a firm. They criticized the hypothesis of MM theory, and maintained that several factors such as existence of imperfectness in the market, the differences, existence of transaction cost and institutional restrictions and preferences for the present income over the future to affect the capital structure study. These have relevance in affecting the value of a firm and were ignored by MM. Accordingly, if capital structure is irrelevant in a perfect market, then imperfections which exist in the real world must be the cause of its relevance. In the next section we look at how, when assumptions in the M&M model are relaxed, imperfections arise and how they are dealt with. Subsequent literatures placed much emphasis on relaxing the assumptions made by Modigliani and Miller, in particular considering agency costs (Jensen and Meckling, 1976; Myers, 1977; Harris and Raviv, 1991), signaling (Ross, 1977), asymmetric information (Myers and Majluf, 1984; Myers, 1984), product/input market interactions (Brander and Lewis, 1986; Titman, 1984), corporate control considerations (Harris and Raviv, 1988) and taxes (Bradley et al., 1984). The current state of capital structure comprises a wide variety of theoretical approaches but no theory is universally accepted and practically applied (Myers, 2001; Harris and Raviv, 1991). According to Myers (2001).

“There is no universal theory of the debt-equity choice and no reason to expect one. There are several useful conditional theories however”.

The major reason why financing matters include taxes, differences in information and agency costs. The different theories of optimal capital structure depend on which economic aspect and firm characteristic we focus on.

2.4 Theories on Capital Structure

The theoretical principles underlying the capital structure, financing and lending choices of firms can be described either in terms of a static trade-off choice or pecking order framework.

2.4.1 Trade-Off Theory

An important motive of trade-off theory of capital structure is to explain the way in which firms can typically be financed partly with debt and partly with equity. Trade-off theory states that there are benefits of financing with debt i.e. tax shield benefit, agency benefit and there are also costs of funding with debt e.g. costs of financial distress, agency costs. Therefore the firm that is maximizing its value will focus on offsetting costs against benefits of debt when making decision about how much debt and equity to use for financing its business. Ross et al (2008) argue that firm can optimize its value at a point where marginal costs of debt and marginal benefits of debt are balanced.

According to Myers (1984), each firm that follows trade-off theory has target debt and it gradually moves toward its target debt. Target leverage is determined by balancing the cost and benefits of leverage but structure of target leverage is not clear. (Frank & Goyal, 2009) argue that this target debt can be classified into two ways. First the target debt may be static which might be identified by single period trade-off between costs and benefits of debt and is called static trade-off theory. Second the target debt may be adjusting over time with change in magnitude of costs or benefits of debt. While examining the US firms, Huang and Ritter, (2009) say that US firms moving toward their target leverage with moderate speed. US firms take 3.7 years average period to achieve their targeted capital structure in the condition of any deviation from the target debt. Leary and Robert (2005) showed the behavior of US firms, in time of market friction, adjusting their leverage as if they follow dynamic trade-off policy. Consistent with trade-off model, Cook and Tang, (2010) argue that firms moving faster toward target debt rate in the country where economic condition are good as compared to country where economic conditions are bad.

Graham and Harvey (2001) indicate that about 80 percent of chief financial officers confirms having target leverage. Antoniou et al (2008), report that firms have target leverage ratio. Firms that are experiencing higher market to book value ratio, tend to have low target debt ratio (Hovakimian et al 2004).

2.4.2 Pecking Order Theory

Pecking order theory of the corporate capital structure has long root in the literature given by Myers in 1984. Pecking order theory predicts the hierarchy of preference in which firms prefer internal financing e.g. retained earnings to external financing and prefers debt to equity. There are two parts of definition given by Myers (1984). First part of definition emphasizes the preference of internal financing to external financing and second part enlightens the preference of debt to equity. What does it mean to prefer internal financing? Does this mean that firm uses all available sources of internal funding before switching to debt or equity? Or does it mean that other things remain constant; firm will mostly use internal financing before any external one? (Frank & Goyal 2009) argue that last two questions produce strict and flexible modes respectively to interpret first part of definition. If we take strict interpretation, the theory could be more testable. But taking flexible interpretation, any testing of theory will depend on change in other things.

The second part of POT's definition is even more difficult to interpret because it relates to the preference of debt to equity. If we apply the strict mode of interpretation, then we will say that firm will never issue any equity if the debt is feasible (Frank & Goyal 2009). But it has become crystal clear that researchers have rejected the strict interpretation of POT's definition and recent papers have stuck with flexible mode. Now a question arises that how does firm decide about debt capacity? Or what are the indicators that determine boundary of debt? To determine the limit of debt in pecking order theory many recent papers have used factors commonly used in testing of trade-off theory (Frank & Goyal 2009). If we start from second part of POT's definition, we may not be able to differentiate between POT and TOT. Although the investors are afraid of mispricing of both debt and equity, yet debt is considered as less risky as compared to equity because creditors' amount is secured with collateral in the condition of bankruptcy and they will get a fixed amount of return. So according to POT the company should issue the debt if

necessary, and issue equity in last if the need for fund is not fully satisfied by retained earnings and debt (Ross, et al 2008).

Myers (1984) argues that company does not have any target debt equity ratio to maintain, instead the companies decide on the basis of their need for funds after looking to the internal financing. There are two kinds of equity one internal and at top and other is external and at bottom of preference as source of finance. Thus firms' gearing/leverage ratio depends upon past cumulative requirement of fund. It means if requirement for fund has been exceeding the retained earnings or if firm could not generate enough cash flow to reinvest then that firm should have more debt. Now the question is why profitable (less or unprofitable) firms tend to borrow less (more)? POT simply answers that it is because profitable firms have internal source of finance and vice versa. So they do not feel much need for external financing. Barry et al (2008), show that there is no any target debt equity ratio, leverage depends upon the need, level of leverage can be higher and lower depend upon change in other factors. Frank & Goyal (2009) suggest profitable and older companies have low leverage level because of good retained earnings history.

Tong and Green (2005) investigate the behavior of Chinese firm according to TOT and POT hypotheses and find results consistent with POT. Shyam-sunder and Myers (1999) argue on the basis of statistical power of hypothesis of POT, that trade-off model can be rejected. Chirinko and Singha (2000) argue that (shyam-sunder and Myers, 1999) generate misleading conclusion of their study. Fama and French (2002) argue that no single theory can explain the determinant of capital structure thus we cannot reject any of them. Myers (2003) claims —there is no universal theory of capital structure and no reason to expect one|| .

2.4.3 Signaling Theory

Another capital structure theory is the signaling theory which can be best explained by the use of two hypotheses; information asymmetry hypothesis and the implied cash flow hypothesis, Myers & Majluf (1984) assumed that the firm's managers have superior information about the true value of the company. If management has favorable information that is not yet reflected in market prices, the release of such information will cause a larger increase in stock than in bond prices. To avoid diluting the value of existing shareholders, managers that believe their shares to be undervalued will choose to issue debt rather than equity, conversely, managers will time a new

equity issue if the market price exceeds their own assessment of the stock value i.e. if the stocks are overvalued by the market. This well known propensity of companies to “time” their stock offerings helps explain the market’s systematically negative response to announcements of such offerings (Myers and Majluf,1984).

Secondly, another signaling theory hypothesis is implied cash flow hypothesis which is premised on the idea that managers know more than investors do. It claims that financing decisions are designed primarily to communicate management’s confidence in the firm’s prospects and, in cases where management thinks the firm is undervalued, to increase the value of the shares. Increasing leverage has been suggested as one obligates the firm to make a fixed set of cash payments over the term of the debt security, with potentially serious consequences on default. Issuing more debt capital can therefore serve as a credible signal of higher expected future cash flows. On the other hand, raising additional equity by a firm signal also that the net operating cash flows of current operations are disappointing. Investors associate relatively large issues of equity with more severe cash flow changes, resulting in more severe price reactions and therefore firm value (Ross, 1977).

2.4.4 Market Timing Theory (MTT)

Market timing theory tells another way to answer traditional question about how firms decide whether to finance their investments with debt or equity. Market timing hypothesis explains that selection of specific fraction of debt and equity in capital structure is depending upon mispricing of these instruments in financial markets at timing the firm needs financing for investment. In other words, contrasting the explanation of TOT and POT, marketing timing theory elucidate that firms do not care about whether to finance with debt or equity but they just choose any form of financing that appears to be overvalued by financial markets at that point in time. The company issues the equity when stock prices are high (Hovakimian et al. 2004). Graham and Harvey (2001) depict that firms consider the price appreciation of share before issuing it, and debt rating and financial flexibility before issuing debt. They argue that stock price run-up increases the chances of issuing the equity as well as dual issue. Market timing theory assumes that mispricing of financial instruments exists and firm is able enough to detect any mispricing effectively. Even though MTT has been established by others but work of Baker and Wurgler

(2002) is remarkable. Equity risk premium (cost of equity) also playing a vital role in decision of issue because in timing of low risk premium as compared to cost of debt, it will be beneficial for firms to issue equity instead of debt. Huang and Ritter (2009) show that low equity risk premium leads US firms to issue equity

2.5 Firm Level Determinants of Capital Structure

Theoretical constructs of any empirical research are peroxide indirectly through the use of firm characteristics. The firm variables discussed are profitability, growth, asset structure, risk, size, non-debt tax shield, free cash flow, commercial trade position, age.

2.5.1 Profitability

The effect of profitability on leverage was well explained by the “pecking order” theory that was suggested by Myers (1984).prescribes a negative relationship between debt and profitability on the basis that successful companies do not need to depend so much on external funding. They, instead, rely on their internal reserves accumulated from past profits.

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 (Frank and Goyal, 2003). Empirical evidence from previous studies (Al-Sakran, 2001; Al-Najjar&Hussainey, 2011) appears to be consistent with the pecking order theory. Most studies found a negative relationship between profitability and debt financing.

2.5.2 Growth

When firms have high growth potential, most of the time, their retained earnings is not enough to finance their positive NPV projects and they resort to borrowing (Hall *et al.*, 2004). Firms with high growth potential will have high debt ratios. Applying pecking order arguments, growing firms place a greater demand on their internally generated funds. Consequentially, firms with high growth will tend to look to external funds to finance the growth. Firms would, therefore, look to short-term, less secured debt then to longer-term more secured debt for their financing needs. Myers(1977) confirms this and concludes that firms with a higher proportion of their market value accounted for by growth opportunity will have debt capacity. Al-Najjar&Hussainey (2011) also found a negative relationship between growth opportunities and capital structure. However, Benito (2003) proposes the opposite. If 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, which would lead to a higher debt level in firms

2.5.3 Assets Structure

Collateral value of assets, also known as Asset Composition or Tangibility; are those assets that creditors can accept as security for issuing the debt. In an uncertain world, with asymmetric information, the asset structure of a firm has a direct impact on its capital structure since a firm's tangible assets are the most widely accepted sources for the bank borrowing and secured debts. If banks have imperfect information regarding the behavior of the firm, firms with few tangible assets find it difficult to raise funds via debt financing. The type of assets the firm holds plays a significant role in determining that firm's capital structure. The reason can be that when a large fraction of the firm's assets is tangible, assets can serve as collateral, which diminishes the risk of the lender suffering agency costs of debt.

Companies having more fixed asset can borrow more by pledging their fixed asset as collateral and mitigating lenders' risk of bearing such agency cost of debt (Ross et al 2008). Therefore firm with low agency cost can increase the debt it means trade-off theory predicts positive relationship between tangibility of assets and debt. Margaritis and Psillaki (2007) argue that TNG of firm is positively related to Leverage .Studies conducted by Jong, et al (2008) and Huang & Song (2006) also suggest the positive correlation between fixed asset and leverage.

Frank and Goyal (2009) found positive relationship between TNG and Lev level also the pecking order theory stretch that firms with few tangible assets faces larger asymmetric information problems and will therefore tend to raise more debt over time and become more levered (Frank and Goyal, 2003). However results from developing world are mixed. Shah & Khan, (2007) found significant positive relationship between TNG and Lev for Pakistani firms. Booth et al (2001) find negative relationship between TNG and Lev in ten developing countries.

2.5.4 Risk

Given agency and bankruptcy costs, there are incentives for the firm not to utilize the tax benefit of debt within the static framework model. As a firm is exposed to such costs, the greater its incentive to reduce its level of debt within its capital structure. One firm variable which impacts upon this exposure is firm operating risk, in that the more volatile firm's earnings streams, the greater the chance of the firm defaulting and being exposed to such costs. Firms with relatively higher operating risk will have incentives to have lower leverage than more stable earnings firms. Empirical evidence suggests that there is a negative relationship between risk and leverage of small firms (Weldemikael, 2012 ; Titman and Wessels, 1988; Al-Najjar&Hussainey, 2011)

2.5.5 Size

The size of the firm is a very important determinant of its profitability that is why it is included as a controlled variable. Firm size has a positive relationship with short-term debt ratio (Abor, 2008) also supported by Al-Najjar&Hussainey (2011) found positive relationship between firm size and capital structure. The relationship between firm size and debt ratio is, therefore, a matter for empirical investigation. Pecking order theory is interpreted as it predicts negative relationship between size and leverage because larger firms are well known and have longer older history of adding retained earnings in their capital structure (Frank & Goyal, 2009). Therefore firm with more retained earnings additions should have less leverage. Margaritis and Psillaki (2007) find non-monotonic relationship between SZ and Lev. They find size is negatively related to low debt ratio and positively related to mid and high debt ratios. Larger firm generates more profit as compared to small firm therefore according to pecking order theory profitable firm prefers internal financing than external one. This suggests that SZ is negatively related with debt.

2.5.6 Non-debt Tax Shields

Both the pecking order and trade-off theories imply that non-debt tax shields and leverage ratio are negatively related. Empirical studies confirm this suggestion (Huang – Song, 2002; Titman – Wessels, 1988). Unlikely, Chaplinsky and Niehaus (1993) found that non-debt tax shield is positively associated with leverage ratio in publicly traded US lodging companies.

2.5.7 Free Cash Flows

The trade-off theory suggests a positive relationship between free cash flows and debt ratio, since firms owning big amount of free cash flows are exposed to less risk and borrow more easily in capital market (Benito, 2003; Jensen, 1986). However, a negative relationship is implied by the pecking order theory, since it requires an increase in internal funds arising from free cash flows. These incremental cash flows would be regarded as a financing source (Myers, 1984; Myers and Majluf, 1984).

2.5.8 Commercial Trade Position

In the pecking order theory net commercial trade position is accepted as an internal fund, since commercial trade positions are internal funds that arise from lending and borrowing activities in the firm. In this sense, this theory suggests a negative relationship between net commercial trade position and debt ratio. Consistent with the pecking order theory, Colombo (2001) found a negative relationship between net commercial trade position and leverage ratio.

2.5.9 Age

Age of the firm is a standard measure of reputation in capital structure models. As a firm continues longer in business, it establishes itself as an ongoing business and therefore increases its capacity to take on more debt; hence age is positively related to debt. Before granting a loan, banks tend to evaluate the creditworthiness of entrepreneurs as these are generally believed to pin high hopes on very risky projects promising high profitability rates. In particular, when it comes to highly indebted companies, they are essentially gambling their creditors' money. If the investment is profitable, shareholders will collect significant share of the earnings, but if the project fails, then the creditors have to bear the consequences (Myers, 1977). To overcome problems associated with the evaluation of creditworthiness, Diamond (1989) suggests the use of

firm reputation. He takes reputation to mean the good name a firm has built up over the years; the name is recognized by the market, which has observed the firm's ability to meet its obligations in a timely manner. Hall et al. (2004) agreed that age is positively related to long-term debt but negatively related to short-term debt. Likely Kibrom (2010). Agreed that age is positively related with leverage.

2.6 Corporate Governance Level Determinants of Capital Structure

Prior research (Abor and Biekpe, 2005; Al-Najjar and Hussainey, 2009; Al-Najjar&Hussainey, 2011) found that corporate capital-structure decision is also influenced by corporate governance factors. In particular, Abor and Biekpe (2005) found a significant negative association between the size of the board of directors and debt-to-equity ratios. However, Jensen (1986) reported positive association between higher debt ratios and larger board size. Other researchers (Wen et al., 2002; Al-Najjar and Hussainey, 2009) found that there is no significant association between board size and debt-to-equity ratios. Additionally, Abor and Biekpe (2005) showed positive relationships between capital structure and board composition (percentage of outside directors), while Wen et al.(2002) found a negative association between outside directors and capital-structure. However, Al-Najjar and Hussainey (2009) found no association between the two variables. Finally, Al-Najjar and Hussainey (2009) found that insider ownership is the main corporate governance factor affecting firms' capital structure. A study by Al-Najjar&Hussainey (2011) found that corporate governance characteristics (board size and outside directorships) were the main drivers of capital structure of UK firms. Given the above mixed results, it is important to revisit this research area and examine the association between corporate governance and capital structure

2.7 summary and knowledge gap

This chapter reviewed the literature on determinants of capital structure decision, starting with the famous irrelevance theory of Modigliani and Miller (1958). However, by relaxing the theory of Modigliani and Miller's (1958) assumptions of perfect capital markets, several theoretical frameworks have been developed to explain the firm's capital structure such as static trade-off theory, pecking order theory, and agency theory.

Static trade off-theory assumes that a firm's optimal debt ratio is determined by a trade-off between the bankruptcy cost and tax advantage of borrowing, holding the firm's assets and investment plans constant. Whereas, pecking order theory is another dimension of the capital structure theories. According to this theory capital structure is driven by firm's desire to finance new investments, first internally, then with low-risk debt, and finally if all fails with equity. Therefore, the firms prefer internal financing to external financing. Agency theory focuses on the costs which are created due to conflicts of interest between shareholders, managers and debt holders. According to this theory capital structures are determined by agency costs, which includes the costs for both debt and equity issue. This shows that theories of capital structure have been resulting in different conclusions.

Similarly, the findings of prior empirical studies have provided varying evidence related to the determinants of capital structure. For instance, Buferna et al. (2005) provided evidence that trade of theory and agency are pertinent theories of the capital structure to a developing country Eldomiaty and Ismail (2009) examine the capital structure of Egyptian firms and find the evidence supporting TOT and Teker et al (2009) investigates capital structure of Turkish firm and find evidence supporting POT and TOT of capital structure, Booth et al (2001) and (Shah and Hijazi, 2004) find evidence supporting POT On the other hand, Amidu (2007) on Ghanaian banks supports the static trade-off and pecking order argument. However, in the context of Ethiopia as to the knowledge of the researcher study conducted on the capital structure of the banking industry by, Kibrom (2010) on commercial banks in Ethiopia conclude that size's relationship with financial leverage supports Static trade-off theory and Agency cost theory but contradicts with Pecking order theory.. In addition, most empirical work on capital structure has predominantly relied on quantitative analysis of secondary data to examine the determinants of capital structure. Therefore, this study will fill the gap by examining the determinants of capital structure in the context of Ethiopian banking industry.

Chapter Three

Research Methodologies

3.1 Research Design

The study used inferential research design to find out the relationship between independent variables and dependent variables of the study. Inferential research design is used in quantitative research which is used for quantifying relationships between variables Creswell (2009). This design is used to test the relationship between independent variables and dependent variables in order to come up with conclusions of the relationships between the variables.

Statistical inference is the process of making conclusions using data that is subject to random variation, for example, observational errors or sampling variations. Statistical inference makes propositions about populations using data drawn from the population via some form of random sampling. Given a parameter or hypothesis about which one wishes to make an inference, statistical inference uses a statistical model of the random process it is supposed to generate data, and a particular realization of the random process (Creswell, 2003).

3.2 Population

The population of this study is all 17 commercial banks in Ethiopia currently licensed by the National Bank of Ethiopia to operate NBE(2016).the data gathered is reliable in that it's collected from supervisory bank, the nation bank of Ethiopia.

Sampling design

The population of the study is all commercial banks registered by NBE. Currently, as per NBE (2015/2016) annual report 17 banks are operating in Ethiopia. For this study, eleven years data (2006/2016) were considered. Therefore, those private Banks which were established after 2006 and started to provide financial statement in the succeeding fiscal year were not included in this study because the researcher didn't got financial statements for eleven years. there are a total of 77 (seventy seven) observations in the regression analysis. For this reason, using purposive sampling, the selected banks are Dashen Bank s.c, Awash International Bank S.C, Bank of

Abyssinia S.C, Wegagen Bank S.C, United Bank S.C ,Nib International bank S.C and Cooperative bank of oromia S.C

3.3 Data Collection

Secondary data was drawn from the financial statements of commercial banks in Ethiopia from 2006-2016. This data is also available from the Banking Survey (2016) booklet and therefore was drawn from there. The data collected for the study from these sources include capital structure variables which include debt, equity and total assets as well as the data on determinants (independent variables in the model below).

The leverage (LEV) is total debts divided by total capital. The explanatory variables include profitability (PRE), liquidity (LQ), asset structure (AST), tax (TAX), size (SZE), sales growth (GROW).The entire variable for this study was based on book value in line with the argument by Myers (1984) that book values are proxies for the value of assets in place.

3.4 Data Analysis

Survey data collected through document review was analyzed statistically using both descriptive and inferential statistics. Descriptive statistics of the variables and different percentiles of the dependent variable were calculated over the sample period. Then, using statistical package 'EVIEW 6' OLS (ordinary least squares) multiple regressions and t-statistic were carried out to test the relationship between leverage and their potential determinants. Multiple regressions were also used to determine the most significant and influential explanatory variables affecting the capital structure of banks in Ethiopia. In connection to this, the general model for this study, as is mostly found in the existing literature is represented by;

$$Y_{i,t} = \alpha + \beta x_{i,t} + e_{i,t}$$

The subscript i representing the cross-sectional dimension and t denote the time-series dimension. The left-hand variable, represents the dependent variable in the model, which is the firm's debt ratios. Contains the set of independent variables in the estimation model, is taken to be constant overtime t and specific to the individual cross-sectional unit i . If is taken to be the

same across units, then OLS provides a consistent and efficient estimate of a and b. Therefore, the model for this study, was based on the one used by Amidu (2007) to explain the relationships between leverage and determinants of capital structure as shown below.

$$LEV_{i,t} = \beta_0 + \beta_1 PRE_{i,t} + \beta_2 GRW_{i,t} + \beta_3 TAX_{i,t} + \beta_4 AST_{i,t} + \beta_5 LQ_{i,t} + \beta_6 SZE_{i,t} + e$$

Where:

- Leverage LEV_{it} is the ratio of total debt to total capital for firm i in period t ;
- Profitability PRE_{it} is the ratio of pre-tax profits to total assets for firm i in period t ;
- Growth GRW_{it} is the percentage change in turnover for firm i in period t ;
- Taxation TAX_{it} is tax paid all over profit before interest and tax i in period t ;
- Asset structure AST_{it} is the ratio of fixed assets to total assets for firm i in period t ;
- Liquidity LQ_{it} is the ratio of liquid asset to deposits i in period t ;
- Size SZE_{it} is the log of total assets for firm i in period t ; and

3.4.1. Dependent Variable (LEVERAGE)

Various measures of capital structure have been considered in the literature, however most studies use a measure of leverage, that is a measure of the indebtedness of firms. There is no consensus on what measure of leverage should be used. A number of studies consider debt ratio as a measure of leverage (Shyam-Sunder and Myers (1999), Fama and French (2002) and Frank and Goyal (2003). In the following previous studies such as Rajan and Zingales (1995), and Ashenafi (2005), the researcher considered one measure of leverage which is Debt to Equity Ratio. Debt to Equity ratio is, therefore, given by:

$$\text{DEBT TO EQUITY RATIO} = \frac{\text{TOTAL DEBT}}{\text{Total ASSET}}$$

3.4.2. Independent Variables

I. Profitability

Profitability is a measure of earning power of a firm. The earning power of a firm is the basic concern of its shareholders. Profitability is measured in several accepted ways . (Eldomiaty & Ismail, 2009) use the ratio of operating income to total assets to measure profitability. This research also uses this to be an appropriate measure of profitability.

$$\text{PROFITABILITY} = \frac{\text{Ratio of EBIT}}{\text{TOTAL ASSET}}$$

II. Tangibility

Collateral value of assets, also known as Asset Composition, are those assets that creditors Can accept as security for issuing the debt. The tangibility of assets represents the effect of the collateral value of assets of a firm's gearing level. Tangibility is then defined as the ratio Of tangible (fixed) assets to total assets.

$$\text{TANAGIBILITY} = \frac{\text{fixed asset}}{\text{Total Assets}}$$

III. Size

Size is the measure of how large the firm's operational capacity is. Various studies have used a number of measures to capture the size of firms. Titman and Wessels (1988) and Benito (2003) use the log of total assets to measure size. Similarly, this study also finds that the log of total assets to be an appropriate measure of size.

$$\text{SIZE} = \text{Natural Logarithm of TOTAL ASSETS} = \ln(\text{Total Assets})$$

IV. Growth

Different studies have used varying measures of growth (investment opportunities). Titman And Wessels (1988, used annual percentage increase in total assets as a measure of growth. This study measures growth as a percentage increase in total assets of the commercial banks Every year.

$$\text{Growth} = \frac{T_{\text{Current year}} - T_{\text{Previous year}}}{T_{\text{Current year}}}$$

V. Liquidity

The degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price.

$$\text{Liquidity} = \frac{\text{Liquid asset}}{\text{Total Deposit}}$$

VI. Taxation

The marginal tax rate for any firm should affect financing decisions.

$$\text{Taxation} = \frac{\text{Tax Paid}}{\text{EBIT (Earning before interest and tax)}}$$

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the results of data analysis. The chapter is organized as follows. Section 4.2 presents the descriptive analysis results while section 4.3 presents the regression analysis results.

4.2 Descriptive Statistics

Table 1 provides a summary of the descriptive statistics of the dependent and explanatory variables.

The descriptive statistics of the dependent and explanatory variables for the sample banks were summarized in table 1. The total observation for the each dependent and explanatory variable was 77. Moreover, the table also shows the mean, standard deviation, minimum, median and maximum values for the dependent and independent variables

Table 4.1: Summary of descriptive statistics for dependent and explanatory variable

Variable	Mean	SD	Minimum	Median	Maximum
LEV	0.8613	0.0587	0.45	0.8760	0.92
PRO	0.0556	0.0148	-0.02	0.0580	0.08
GRO	0.2791	0.1742	-.07	0.2410	0.88
SIZE	22.606	1.0168	19.23	22.561	23.94
AST	0.0205	0.0117	0.00	0.0160	0.06
TAX	0.1695	0.0507	0.00	0.1810	0.24
LQ	0.4779	0.1747	0.18	0.485	0.91

Source: structured review of financial statement and own computation

This shows the average indicators of variables computed from the financial statements.

The mean (median) leverage of banks was 0.8613 (0.8760). This means that more than 86 per cent of the banks in Ethiopia are financed by debts. This highlights that debt ratio was high in this study. Leverage for the sample period was ranged from 45 percent to 92 percent with a standard deviation of 5.9 percent

Profitability, given as the ratio of pre-tax profits plus interest expense to total assets, registered a mean value of 0.0556 indicating a return on assets of 5.56 per cent and median of 5.8 percent with a standard deviation of 1.5 percent and profitability for the sample was ranged from -2 percent to 8 percent. This shows the existence of great variation in profit among banks in Ethiopia.

Growth was measured as the annual percentage change in total asset and this shows The mean (median) was 0.2791 (0.2410). This indicates that, on average, growth rate was 27.91 per cent during the eleven-year period and growth in total asset for sample period were ranged from -7 percent to 88 percent with standard deviation of 17.42 percent. This indicates the existence of high variation in growth rate among banks in Ethiopia.

Size, determined as the natural logarithm of total assets had a mean (median) of 22.606(22.561) with a standard deviation of 1.01.natural logarithms of total asset for sample were ranged from 19.23 to 23.94 this implies that there is a variation among private commercial banks in Ethiopia

Operating assets (fixed assets) had a mean (median) of 0.0205 (0.0160). This indicates that, the Private Commercial banks fixed assets represent only 2 percent of the total assets. Due to the nature of the business banks have high current assets, which is equal to approximately 98 percent. Tangibility of the commercial banks operating in Ethiopia, as measures by the ratio of fixed assets to total assets, ranges from 0 percent to 6 percent.

Tax charge on the other hand has a mean (median) of 0.1695 (0.1810) with standard deviation of 0.0507 tax charge sample ranged from 0.00 to 0.24 percent besides, summary of test statistic shows the mean of liquidity was mean(median) of 0.4779(0.485) with standard deviation of 17.47 percent the study examined the determinants of capital structure for seven banks over the time period from 2006-2016.

4.3 Data testing

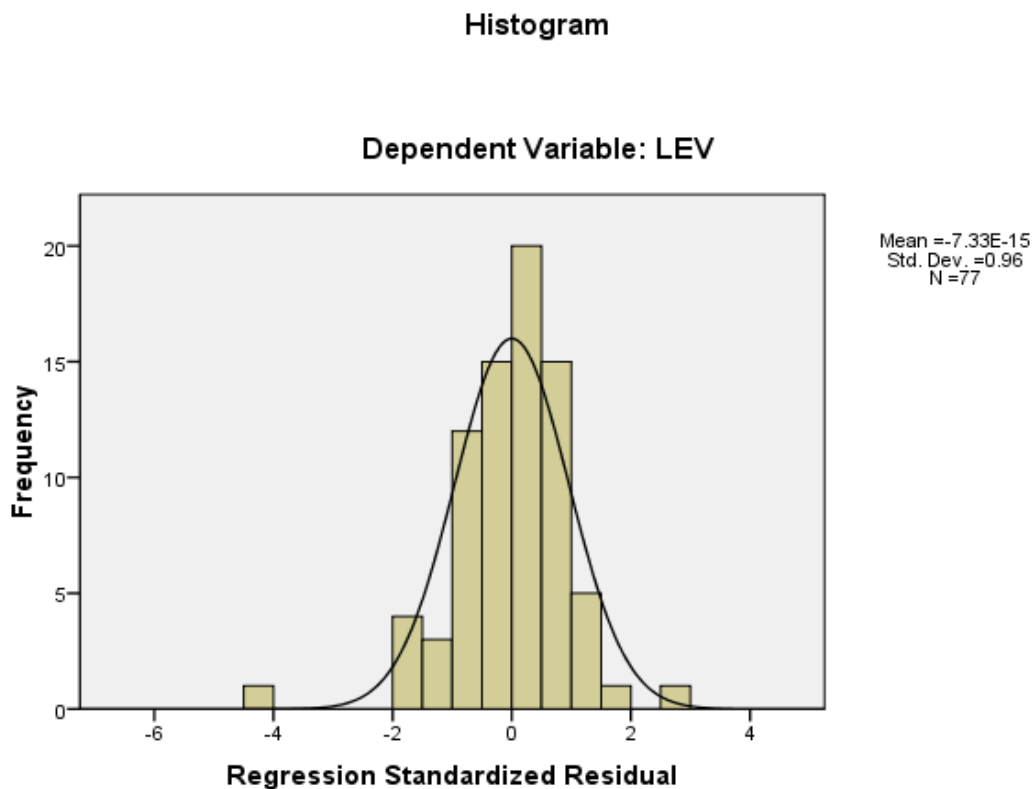
4.3.1 Tests for the Classical Linear Regression Model (CLRM) Assumptions

Different tests were run to make the data ready for analysis and to get reliable output from the research. These tests were intended to check whether the CLRM assumptions, i.e. the OLS assumptions, are fulfilled when the explanatory variables are regressed against the dependent variables. Accordingly, the following sub-section presents tests of CLRM.

4.3.1.1 Test for normality:

The normality test for this study as shown as shown in figure the mean is close to 0 and standard deviation 0.96 which is close to 1 implying that the data were consistent with a normal distribution assumption. The P-P plot figure also shows that the data are approximately normally distributed

Figure 4.1: histogram showing normal distribution of data



Normal P-P Plot of Regression Standardized Residual

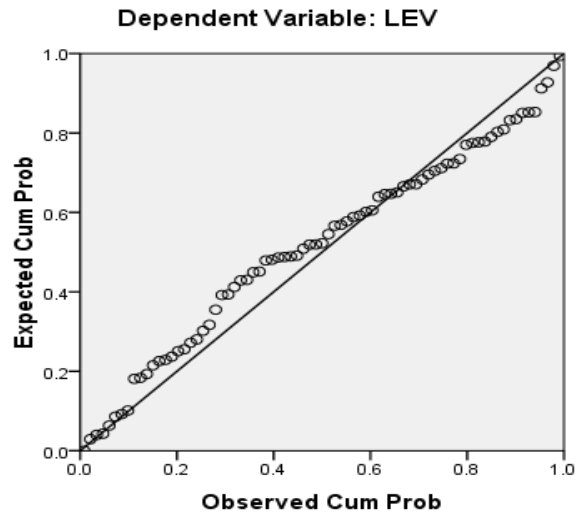


Figure 4.2: normal p-p plot of regression

4.3.1.2. Test of Multicollinearity

Multicollinearity means that there is linear relationship between explanatory variables which may cause the regression model biased Gujarati (2003). Multicollinearity can be identified by the variance inflation factor (VIF) technique, which is statistic calculated for each variable in the model. Theoretically, a VIF greater than 10 may suggest that the concerned variable is multicollinear with other in the model and may need to be excluded from the model. Hence, the VIF result in Table ,as none of the VIFs is excessively high, suggest that there is no perfect or strong collinearity between the explanatory variables

Table 4.2 :Variable Inflation Factor(VIF) Technique to detect Multicollinearity

Variable	Collinearity Statistics	
	Tolerance	VIF
PRO	.226	4.425
GRO	.420	2.381
SIZE	.327	3.058
AST	.750	1.333
TAX	.364	2.746
LQ	.716	1.396

4.4 Regression Analysis

The results of the OLS regression between leverage (dependent variables) and the six Explanatory variables are reported in Table 4.3.

Table 4.3:Firm specific analysis of determinant of capital structure

Determinant of Leverage

Explanatory Variables	Coefficient	t-statistics	prob
PRO	-0.027	-0.040	0.968
SIZE	0.34	3.685	0.000**
GRO	0.022	0.504	0.616
AST	-1.235	-2.5845	0.012***
TAX	0.515	3.249	0.002**
LQ	-0.92	-2.810	0.000**

R-squared	0.521		
Adjusted R-square	0.480	Durbin-watson stat	1.026
F-statistic	12.713		
Prob(F-statistic)	0.000		

**, significance at 1%

***.significance at 5%

Source: Researcher's own computation based on financial statements

The results indicate a negative relationship between profitability and leverage. The results, which are also consistent with previous studies (Frank and Goyal, 2009;Kibrom, 2010) show that,

higher profits increase the level of internal financing. Profitable banks accumulate internal reserves and this enables them to depend less on external funds. Even though profitable banks may have better access to external financing, the need for debt finance may possibly be lower, if new investments can be financed from accumulated reserves. This finding is consistent with the pecking order theory that suggests that profitable firms prefer internal financing to external financing.

The results also indicate a statistically significant positive relationship between size and leverage. The results suggest that the bigger the bank, the more external funds it will use. One reason is that, larger banks are more diversified and hence have lower variance of earnings, enable them to manage high debt ratios. The providers of the debt capital are more willing to lend to larger banks as they are perceived to have lower risk levels. On the other hand, smaller banks may find it relatively more costly to resolve issues of information asymmetries with the providers of capital debt, thus, may present lower debt ratios. This result supports financial theory and is consistent with the empirical evidence.

The results show a positive relation between growths on the one hand and leverage on the other hand this finding also supported by Ross, et al (2008) Growing firms place a greater demand on the internally generated funds of the firm It means pecking order theory indicates the positive relationship between growth and leverage. Consequently, banks with a relatively high growth rate will tend to look at short-term less secured debt first then to longer-term more secured debt to finance their growth.

Although, the results on Table 4.3 show a negative relation between Tangibility and leverage. For Tangibility, In this study, the sign of tangibility variable coefficient is found to be negative and statistically significant.

The result was in accordance with the expected sign which state that there is negative relationship between leverage and liquidity. This negative sign shows the inverse relationship between the liquidity and leverage. In other word it implies that every one percent change

(increase or decrease) in the bank liquidity keeping the other thing constant had a resultant change of 92 percent on the leverage in the opposite direction.

From table 4.3 result the following conclusion is made whether capital structure decisions that are made in the commercial banks provide empirical support for the existing theories.

- Profitability is found to be negatively related with bank's leverage ratio. This result is consistent with predictions of POT which states that firms prefer to finance first with internal funds before raising external financing.
- Size is found to have positive impact on the private commercial bank's financial leverage. Theoretically, STT suggested that larger firms tend to have better borrowing capacity relative to smaller firms. Hence, the analyzed result is consistent with the implementation of STT in Ethiopian private commercial banking case.
- The insignificant and positive relationship result of growth with capital structure support with applicability of POT but contradicts STT. For growing firms, internal funds may be insufficient to finance their positive investment opportunities and, hence, they are likely to be in need of external funds. According to the pecking order theory, if external funds are required, firms will prefer debt to equity because of lower information costs associated with debt issues. This results in a positive relationship between leverage and growth opportunities.
- In this study, the sign of tangibility variable coefficient is found to be negative and statistically significant this may infer the results also consistent with predictions of market timing theory. Market timing theory suggests when the stock price in the market is overvalued then based on asymmetric information, the companies issue the equity. Firms buy their own stock when price of stock is perceived undervalued. This result, tangibility supported by other studied Booth et al (2001) find negative relationship between TNG and Lev in ten developing countries but contradicts with various previous research findings. like Ross et al (2008), Amidu (2007), and Frank and Goyal (2009) which suggest that firm's borrowing capability depends upon collateralizable value of

assets (tangibility) and with theories (Static trade-off theory and asymmetric theory) which stated the positive relation between leverage and tangibility.

- The negative and statistically significant influence of liquidity in this study was consistent with a theoretical analysis of pecking order which state that high liquidity firms use internal resources instead of external to finance their projects. Therefore, this negative effect of Liquidity on leverage was also largely consistent with the empirical evidence of Deesomsak et al. (2004), Ahmed et al., (2010), and Najjar and Petrov (2011).
- Result of tax shows that there is a positive relation with leverage and statistically significant This result is consistent with Static trade-off theory for short term loan but contradicts with long term loan. Operating in a developing country, most commercial banks in Ethiopia use short term financing due to macroeconomic factors, and the characteristics of the firm. Therefore the positive result, not surprisingly does have consistency only with STT for short term financing because banks are having more advantage from the tax-shields by using more interest paying deposits. Thus, TXS does have positive significant influence on leverage ratio or capital structure of Private commercial banking sector in Ethiopia.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study in section 5.2, conclusion in section 5.3, recommendations for policy in section 5.4.

5.2 Summary of findings

The objective of this study was to find out the determinants of capital structure of private commercial banks in Ethiopia. The study used inferential research design to find out the relationship between independent variables and dependent variables of the study. The population of this study was all the 17 commercial banks in Ethiopia currently licensed by the National Bank of Ethiopia to operate among seventeen the researcher took seven that generates financial statement from 2006 onwards. Secondary data was drawn from the financial statements of National banks of Ethiopia from 2006-2015. The data was analyzed using descriptive analysis and multiple regression analysis.

Liquidity had a negative and statistically significant relationship with leverage, which was also in line the expected sign. A negative sign suggests that banks with high liquidity ratios or more liquid assets are prefer to utilize these assets to finance their investments and discourage to raise external funds. Moreover, the result for liquidity clearly supports the pecking order and agency theories. Regarding to the effect of tangibility on the capital structure of banks in this study, the result shows that as there was negative and statistically significant at 5% relationship with leverage, which is in line with the extended form of pecking order theory. Beside, the results of study indicated that bank size had statistically significant positive relationship with leverage, which was consistent with trade- off theory. The result also implies that the bigger the bank, the more external funds it will use.

In testing the consistency of the capital structure relevancy theories with the capital structure Decisions made in the sampled banks, the researcher found that profitability, growth and liquidity pertinent to POT. While size and tax pertinent to STT regarding to tangibility is pertinent to MTT.

5.3 Conclusion

This study examines the determinants of capital structure of Ethiopian Private commercial banks in Ethiopia. In contrast to early studies, the main focus is on private banks because government-owned banks like Ethiopian Commercial Bank's contribution to the GDP is four times larger than all private commercial banks in Ethiopia. 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.

From the descriptive statistics, the average (mean) debt to equity ratio (DER) of the sampled commercial banks is found to be 86.3, signifying that more than 86 per cent of the banks in Ethiopia are financed by debts. That is, the banks' financing decision is inclining to deposit (or debt) mobilization than to equity financing.

In light of the above, the main objective of this study was to examine the relationship between leverage and firm-specific (profitability, Size, growth, Assets, Tax and liquidity) determinants of capital structure decision, and to understand about theories of capital structure that can explain the capital structure of private commercial banks in Ethiopia. To achieve the intended objective, the study used inferential research design. The collected data were analyzed by employing OLS model by using SPSS.

In order to conduct the empirical analysis, one dependent variable (at book value), and six independent variables were selected from prominent previous research works on capital structure; namely profitability, Size, growth, Assets, Tax and liquidity. The results of the fixed effect estimation model showed the existence of the following relationship between leverage and six independent variables.

From the analysis of the data analyzed for this study, as can be seen in the table above, the model estimated gives the following result. The estimated model above has an R² and Adjusted R² 52.1% and 48% respectively as its coefficient of variation. This indicates that the variations or changes in the capital structure of the understudied bank in Ethiopia are not only determined by the

dependent variables selected for this study. This is further supported by the F-Statistic which is given at 12.71 and significant at 1% level of significance from the F-Statistic Prob. This shows that the coefficients of the variables in our model are statistically different from zero. The Durbin-Watson Statistic estimated at 1.08 indicates that there is no trace of serial correlation in the error terms of our model which may render it a spurious regression.

5.4 Recommendation

From the finding the researcher obtains result based on that the under listed recommendation suggested:

The study recommends that through this study, it is hoped that major players such as bank managers, financial analysts and policy maker will have better understanding about the factors which may influence the capital structure of the Ethiopian banking sector and enhance competitiveness in the banking sector. Therefore, banks should pay greater attention to these significant variables in determining their capital structure This analyses indicated that the variables of size, liquidity, Ast and Tax were significantly related to leverage ratio..

The analysis R2 gives a result of 52.1% this implies that the variable which studied not give optimal determinant of capital structure so banks must research other than the studied variables in order to optimize the determinant of capital structure.

Appendixes

Year	Bank	LEV	PRO	GRO	SIZE	AST	TAX	LQ
2005	DB	0.929	0.044	0.278	21.953	0.013	0.176	0.360
2006	DB	0.915	0.055	0.329	22.238	0.013	0.204	0.311
2007	DB	0.910	0.058	0.329	22.522	0.016	0.202	0.344
2008	DB	0.907	0.063	0.296	22.781	0.012	0.189	0.474
2009	DB	0.907	0.057	0.243	22.999	0.011	0.186	0.593
2010	DB	0.909	0.057	0.269	23.237	0.013	0.189	0.518
2011	DB	0.905	0.065	0.187	23.408	0.013	0.187	0.526
2012	DB	0.895	0.074	0.195	23.586	0.015	0.185	0.597
2013	DB	0.896	0.065	0.127	23.706	0.016	0.158	0.629
2014	DB	0.881	0.069	0.112	23.812	0.027	0.160	0.603
2015	DB	0.881	0.065	0.127	23.932	0.028	0.144	0.575
2005	AIB	0.898	0.04	0.258	21.523	0.034	0.174	0.446
2006	AIB	0.897	0.054	0.327	21.806	0.030	0.206	0.362
2007	AIB	0.887	0.069	0.297	22.066	0.026	0.199	0.362
2008	AIB	0.876	0.064	0.258	22.296	0.027	0.199	0.477
2009	AIB	0.883	0.05	0.333	22.583	0.023	0.184	0.642
2010	AIB	0.882	0.064	0.237	22.796	0.029	0.204	0.662
2011	AIB	0.871	0.071	0.273	23.037	0.025	0.202	0.523
2012	AIB	0.874	0.051	0.183	23.163	0.025	0.166	0.319
2013	AIB	0.883	0.053	0.354	23.601	0.027	0.152	0.273
2014	AIB	0.882	0.059	0.243	23.819	0.029	0.161	0.229
2015	AIB	0.873	0.059	0.140	23.823	0.036	0.144	0.336
2005	BOA	0.877	0.056	0.298	21.445	0.017	0.182	0.467
2006	BOA	0.858	0.058	0.378	21.765	0.013	0.218	0.359
2007	BOA	0.881	0.046	0.198	21.946	0.012	0.185	0.376
2008	BOA	0.902	0.027	0.257	22.175	0.015	0.045	0.415
2009	BOA	0.891	0.047	0.283	22.424	0.014	0.175	0.600
2010	BOA	0.891	0.051	0.147	22.561	0.012	0.172	0.576
2011	BOA	0.891	0.058	0.159	22.708	0.012	0.189	0.477
2012	BOA	0.889	0.061	0.132	22.832	0.012	0.145	0.553
2013	BOA	0.890	0.060	0.233	23.041	0.026	0.128	0.490
2014	BOA	0.864	0.059	0.109	23.145	0.026	0.114	0.302
2015	BOA	0.867	0.054	0.212	23.338	0.063	0.110	0.211
2005	WB	0.889	0.053	0.418	21.203	0.013	0.184	0.481
2006	WB	0.887	0.057	0.398	21.538	0.011	0.181	0.372
2007	WB	0.884	0.060	0.541	21.97	0.009	0.214	0.485
2008	WB	0.853	0.068	0.185	22.14	0.010	0.183	0.608
2009	WB	0.857	0.066	0.241	22.356	0.011	0.222	0.782

2010	WB	0.868	0.069	0.122	22.471	0.014	0.239	0.774
2011	WB	0.864	0.069	0.404	22.81	0.014	0.241	0.695
2012	WB	0.807	0.071	0.035	22.845	0.035	0.205	0.397
2013	WB	0.823	0.059	0.245	23.064	0.033	0.176	0.594
2014	WB	0.814	0.055	0.109	23.168	0.047	0.148	0.375
2015	WB	0.823	0.054	0.189	23.341	0.046	0.135	0.248
2005	UB	0.854	0.056	0.592	20.794	0.010	0.198	0.56
2006	UB	0.881	0.056	0.490	21.193	0.009	0.181	0.486
2007	UB	0.835	0.058	0.365	21.504	0.015	0.179	0.492
2008	UB	0.856	0.058	0.489	21.902	0.010	0.184	0.567
2009	UB	0.888	0.048	0.431	22.261	0.009	0.181	0.687
2010	UB	0.892	0.060	0.267	22.498	0.007	0.208	0.693
2011	UB	0.883	0.061	0.310	22.768	0.008	0.194	0.590
2012	UB	0.874	0.070	0.137	22.896	0.011	0.179	0.697
2013	UB	0.879	0.062	0.135	23.024	0.018	0.148	0.552
2014	UB	0.867	0.053	0.189	23.197	0.015	0.129	0.379
2015	UB	0.882	0.051	0.209	23.387	0.023	0.103	0.244
2005	NIB	0.871	0.052	0.389	21.273	0.006	0.223	0.379
2006	NIB	0.859	0.056	0.170	21.43	0.015	0.205	0.300
2007	NIB	0.837	0.057	0.286	21.681	0.016	0.201	0.370
2008	NIB	0.836	0.061	0.400	22.018	0.012	0.207	0.540
2009	NIB	0.848	0.061	0.317	22.293	0.012	0.223	0.708
2010	NIB	0.846	0.063	0.242	22.510	0.012	0.225	0.743
2011	NIB	0.835	0.065	0.191	22.685	0.011	0.211	0.710
2012	NIB	0.815	0.068	0.163	22.836	0.011	0.191	0.673
2013	NIB	0.817	0.073	0.104	22.936	0.013	0.164	0.316
2014	NIB	0.817	0.059	0.175	23.097	0.020	0.156	0.242
2015	NIB	0.836	0.056	0.233	23.307	0.023	0.134	0.184
2005	CBO	0.126	-0.010	0.000	18.669	0.004	0.000	8.187
2006	CBO	0.452	-0.020	0.749	19.228	0.018	0.000	0.910
2007	CBO	0.689	0.010	0.881	19.860	0.021	0.000	0.543
2008	CBO	0.781	0.030	0.606	20.334	0.024	0.160	0.671
2009	CBO	0.847	0.015	0.508	20.745	0.029	0.231	0.459
2010	CBO	0.893	0.035	0.729	21.293	0.020	0.174	0.460
2011	CBO	0.901	0.044	0.413	21.639	0.025	0.188	0.624
2012	CBO	0.886	0.054	0.468	22.023	0.024	0.189	0.502
2013	CBO	0.893	0.051	0.780	22.6	0.020	0.232	0.894
2014	CBO	0.852	0.078	0.124	22.718	0.017	0.228	0.324
2015	CBO	0.871	0.060	0.569	23.168	0.010	0.243	0.330

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.069	.203		.338	.736		
	PRO	-.027	.687	-.007	-.040	.968	.226	4.425
	GRO	.022	.043	.064	.504	.616	.420	2.381
	SIZE	.034	.009	.533	3.685	.000	.327	3.058
	AST	-1.235	.478	-.247	-2.584	.012	.750	1.333
	TAX	.515	.159	.445	3.249	.002	.364	2.746
	LQ	-.092	.033	-.275	-2.810	.006	.716	1.396

a. Dependent Variable: LEV

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