ANALYSIS OF CAPITAL STRUCTURE: THE CASE OF WEGAGEN BANK SHARE COMPANY IN ADDIS ABABA

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Abstract

The study assessed the role of capital structure and its impact on different activities of Wegagen Bank S. C. It generally intended to assess the role and to examine the impact of increasing reserve in National Bank of Ethiopia (NBE) on returns, customers' willingness to deposit and liquidity problems. Capital structure is the way a firm finances its assets through some combination of debt, equity, or hybrid securities. The firm's choice of how much debts it should have relative to equity is capital structure decision. Such a decision has many implications for the firm and is far from being settled issues either in theory or in practice. An appropriate capital structure is a critical decision for any business organization. Capital structuring may have multi-faceted roles and impacts in business firms like Wegagen Bank. These aspects of the structuring endeavours could contribute to both positive and negative roles as well as impact on the part of the firm under consideration. The study employed descriptive survey method using interviewing techniques and documentary analysis. It also used purposive sampling technique. Both interview guide and documentary analysis checklist were the tools used to collect both primary and secondary data. The study then employed both quantitative data analysis techniques (such as vertical analysis, horizontal analysis, and ratio analysis supported by univariate statistical techniques) and qualitative data analysis methods. The findings of the study show that the Bank is generally characterized by high degree of inflexibility, decreasing shareholders' EPS and increased cost of capital, a combination of factors that has affected its efforts of securing the required amount of debt for financing its operations, being liquid enough to meet its debt obligations, and its liquidity state is considered to be unsatisfactory, albeit it has shown some sort of improvement since 2009, has been consuming more of its equity finance, fulfills both liquidity and reserve requirements imposed by the National Bank of Ethiopia, has also experienced a declining pattern of debt-equity ratio, and then the Bank's capital structure is exercising high debt proportion. Therefore, Bank's capital structure has been dominated by debt or has a mix of more of debt than equity. Thus, concerned officials of the Bank, the NBE, and policy makers at different levels in the country should consider this package of empirical findings and the conclusions reached while working on issues related to capital structure of such marketing and banking firms in various socio-economic contexts. It is also suggested that further studies on the creditors' and the shareholders' attitudes towards and perception of the existing capital structure of the Bank and/or other private and government owned firms using some of the influential theories of capital structuring both vertically and horizontally in Addis Ababa in particular and in Ethiopia in general.

Introduction

Capital structure has been a major issue in financial management ever since Franco Modigliani and Merton Miller published their article titled "The Cost of Capital, Corporation Finance and the Theory of Investment". In 1958 and 1963, they showed that given frictionless markets, homogeneous expectations, etc., the capital structure decision of the firm is irrelevant. This conclusion depends entirely on the assumptions made. By relaxing the assumptions and

analysing their effects, the theory seeks to determine whether an optimal capital structure exists or not, and, if so, what could possibly be its determinants. If capital structure is not irrelevant, then there is also another thing to consider: the interaction between financing and investment (Lachmann, 1978).

Financing and investment are two major decision areas in a firm. In the financing decision, the manager is concerned with determining the best financing mix or capital structure for his firm. Song (2001) argues that capital structure could have two effects. First, firms of the same risk class could possibly have higher cost of capital with higher leverage. Second, capital structure may affect the valuation of the firm, with more leveraged firms, being riskier, being valued lower than less leveraged firms. If we consider that the manager of a firm has the shareholders' wealth maximisation as his objective, then capital structure is an important decision, for it could lead to an optimal financing mix which maximises the market price per share of the firm.

An appropriate capital structure is a critical decision for any business organization. The decision is important not only because of the need to maximize returns to various organizational constituencies, but because of the impact such a decision has on an organization's ability to deal with its competitive environment as well (Shahjahanpour & Simerly, 2011). The prevailing argument, originally developed by Modigliani and Miller (1958) is that an optimal capital structure exists which balances the risk of bankruptcy with the tax savings of debt. Once established, this capital structure should provide greater returns to stockholders than they would receive from an all-equity firm.

In finance, capital structure refers to the way a firm finances its assets through some combination of debt, equity, or hybrid securities. A firm's capital structure is then the composition or 'structure' of its liabilities. A firm's choice of how much debts it should have relative to equity is known as capital structure decision. Such a choice has many implications for a firm and is far from being settled issues either in theory or in practice. A firm's capital structure is really just a reflection of its borrowing policy. Should we borrow a lot of money, or just a little? At first glance, it probably seems that debt is something to be avoided. After all the more debt a firm has, the greater is the risk of bankruptcy. What we learn is that debt is really double-edged sword, and, properly used debt can enormously beneficial to the firm. A good understanding of the effects of debt financing is important simply because the role of debt is so misunderstood, and many firms (and individuals) are too conservative in their use of debt. In addition, these firms sometimes make errors in the opposite direction; they are becoming too much heavily in debt,

with bankruptcy as the unfortunate consequence. Striking the right balance is what the capital structure issue is all about.

The striking activities may include altering the firm's existing capital structure which is known as capital restructuring. As the assets of a firm are not directly affected by a capital restructuring, we can examine the firm's capital structure decision separately from its other activities. This means that a firm can consider capital restructuring decision in isolation from its investment decisions (Firer et al., 2004). Thus, this study aims to examine the role of capital structuring and its impact on the activities of Wegagen Bank S.C. in Addis Ababa, Ethiopia.

Statement of the Problem

Capital structuring may have multi-faceted roles and impacts in business firms like Wegagen Bank. These aspects of the structuring endeavours could contribute to both positive and negative roles as well as impact on the part of the firm under consideration.

Capital structure has both positive and negative roles in the operations or activities of the banks. A profitable business will experience a higher return on equity (ROE) as borrowing increase (Ward & Prince, 2006). The same authors postulate that the impacts of debt or leverage, since a profitable business firm is able to earn at a higher rate than it paying for borrowed funds. This assumption may lead to another assumption which assumes that all firms should ensure that their capital structures are greatly weighted towards a higher level of debt. However, there is a limit to the amount of debt a firm should take on (De Wet, 2004). Debt and equity are the principal sources of funding for a business firm. The proportional distribution of these two sources of funding depends on how a firm decided to divide its cash flow between a *fixed component* which is utilized for obligations towards debt capital, and a *residual component* which belongs to equity shareholders. Therefore, the firm's financial debt affects the firm's value (Sharma, 2006).

Capital structure of banks can be affected by credit risk, profitability and risk. Amidu and Hinson (2006) explanatory study of the Ghanaian banks cane be a case in point. They examined how credit risk affects a bank's capital structure, profitability and lending decisions. The results of the study showed that capital structure (equity to total assets) of banks was found to be positively related to the banks' credit risk, profitability and risk; but not to the banks' size, liquid assets and lending.

Moreover, capital structure affects the firms' marketing strategy and customers' satisfaction. Understanding the link between capital structure and customer mindset metrics provides an alternative, customer-focused perspective on the consequences of capital structure decisions. Here the focus is on customer satisfaction as the focal customer mindset metric for two reasons. First, prior research provides evidence of the positive effect of customer satisfaction on various performance metrics, including loyalty, purchase intent, and repurchase behaviour (e.g., Mittal and Kamakura 2001; Seiders et al., 2005), accounting metrics such as profitability and sales (e.g., Anderson, Fornell, & Lehmann 1994 cited in Srinivasan et al., 2009), and financial market metrics such as shareholder's value and risk (e.g., Fornell et al., 2006; Gruca & Rego, 2005; Tuli & Bharadwaj, 2009 quoted in Srinivasan et al., 2009). Second, unlike other mindset metrics such as purchase intent, there is a well-established and often used firm-level database on customer satisfaction scores (such as the American Consumer Satisfaction Index).

The same authors in 2009 argued that capital structure had had impacts on customers' satisfaction through two routes; *the marketing effort route* and *the direct route*. The fundamental premise of the *marketing effort route* is that a firm's capital structure impacts a firm's marketing strategy, specifically its advertising, research and development, and corporate social responsibility initiatives[1], which, in turn, impact customers' satisfaction. Consistent with Zhao et al. (2010) and Joshi and Hanssens (2010), *the direct route* captures any effect of capital structure on customer satisfaction *over and beyond* the indirect effect through marketing effort route. This captures, for example, customer's and employee's anxiety concerning firm's potentially defaulting on its outstanding debt and the decreased ability of a highly leveraged firm to respond to competitive actions.

Song, Vadakkepatt and Lehmann, in their forthcoming research-based article, indicate the effects of capital structure (i.e., a firm's mix of debt and equity) on customers' satisfaction. These authors dealt this by giving a specific emphasis on the mediating role of a firm's marketing effort.

However, one of the major objectives of financial management in such business firms is maximizing shareholder's value and, hence, the relationship between capital structure and firm's value has become a key issue (Rayan, 2008). Therefore, at this juncture, a number of issues can be raised in the form of questions which, in turn, require empirically-based answers.

This paper thus emphasizes on the analysis of the capital structure of Wegagen Bank. It then tries to examine the role of capital structuring and its impact on the activities of the Bank. To this end, the study raised the following basic research questions:

- What is the impact of Wegagen Bank's increasing reserve in the National Bank of Ethiopia (NBE on its capital structure)?
- What is the impact of the increasing reserve on its liquidity (solvency) problem?
- What is the impact of the increasing reserve on customers' willingness to deposit in Wegagen Bank?
- What types of factor prevent the Bank from making optimal (target) capital structure?
- How could the Bank make optimal capital structure for each fiscal year?
- How does the Bank choose how much debt should be relative to equity?
- How the mixture chosen will affect both the risk and the value of the Bank? and
- How does the Bank decide one capital structure is better than any other?

Objective of the Study

The general objective of the study is to assess the role of capital structure and its impact on different activities of the Wegagen Bank S. C. It generally intends to assess the role and to examine the impact of increasing reserve in National Bank of Ethiopia (NBE) on return, customers' willingness to deposit and liquidity problem. More specifically, it aims

- To assess the relationship between assets of the Bank and its capital structure;
- To examine the Bank's capital structure in isolation from its investment decisions or its other activities; and
- To investigate the Bank's choice of how much debt should be relative to equity.

Significance of the Study

The study was undertaken to identify the problems of making optimum capital structure of the business firms, particularly financial and banking sector. Thus, it is believed that the study would have paramount importance role for financial policy makers in general and all commercial banks as well as to Wegagen Bank in particular in solving its problems and ambiguities and to improve its decision making in such specific areas. It is also hoped that the study would give some information and knowledge for practitioners, especially financial decision makers to know the past financial performance and problems faced and also to project assumed future result. Moreover, it may contribute to the knowledge reservoir of literature financial management and economics. Therefore, some of the findings of this empirical study may initiate further studies in

the financial and baking sector or in different contexts both in Addis Ababa and elsewhere in the country.

Scope of the Study

The scope of this study is limited to the Head Office of Wegagen Bank in Addis Ababa. The study also delimits its scope to the consideration of only debt-equity financing source which is listed on its balance sheet for the consecutive four Fiscal Years starting from 2007 to 2010.

Organization of the Paper

This paper consists of five parts. The first part of this study introduced the background of the study, the problem statement, including sub-problems or research questions to be addressed, general and specific objectives as well as description about the scope of the study. Second part presents a review of literature and relevant theories as well as empirical research associated with the problem addressed in this study. Next, the paper presents the research design and methodology, tools and procedures used for data collection and analysis. The fourth part is on analysis of the data and presentation of the results of the study. Finally, it offers a summary and discussion of the student researchers' major findings, and puts together these findings in line with their implications for practice of capital structure in the financial and banking sector, and to suggest recommendations for action and gray of areas in the topic for future research endeavour.

Literature Review

The study presents thematic reviews of relevant literature which are organized around a topic or issue, rather than the progression of time. The literature review is organized in such a way that it presents and discusses pertinent themes or topics which seem to be included in this type of study. This section presents review of both conceptual/theoretical and empirical literature on such issues as capital structure and some major theories, guiding principle of capital structure decision, the target or optimal capital structure, reserve requirements as a powerful tool, ratio analysis for capital structure, ratios as well as limitations of ratio for capital analysis.

In corporate finance, there exists a large body of literature that examines the financing behaviour of firms, reflected by their capital structure. Capital structure is the mixture of debt and equity financing. Its choice and determinants, however, related to many different factors. Hence, scholars in the field developed numerous theories to analyze alternative capital structures.

Modigliani and Miller (1958) were the pioneers in the theoretically examining the effect of capital structure on the firm value. In the perfect capital market, the capital structure does not affect a firm's value. It is the theory of capital structure irrelevance that a firm's value depends on the ability of its assets to create value, and is irrelevant if the assets originate in internal capital or external capital. Let us consider historical development of the concept of capital structure and then some major theories developed regarding capital structure.

The Modigliani-Miller theorem (or M & M model), proposed by Franco Modigliani and Merton Miller, forms the basis for modern thinking on capital structure, though it is generally viewed as a purely theoretical result since it disregards many important factors in the capital structure decision. The theorem states that, in a perfect market, how a firm is financed is irrelevant to its value. This result provides the base with which to examine real world reasons why capital structure *is* relevant (i.e. a company's value is affected by the capital structure it employs). Some other reasons include: bankruptcy costs, agency costs, taxes, and information asymmetry. This analysis can then be extended to look at whether or not there is, in fact, an optimal capital structure - the one which maximizes the value of the firm.

In order to discuss about capital structure in a perfect market, it is worth considering a perfect capital market (no transaction or bankruptcy costs; perfect information); firms and individuals can borrow at the same interest rate; no taxes; and investment decisions aren't affected by financing decisions. Modigliani and Miller made two findings under these conditions. Their first 'proposition' was that the value of a company is independent of its capital structure. Their second 'proposition' stated that the cost of equity for a leveraged firm is equal to the cost of equity for an unleveraged firm, plus an added premium for financial risk. That is, as leverage increases, while the burden of individual risks is shifted between different investor classes, total risk is conserved and hence no extra value created. Their analysis was extended to include the effect of taxes and risky debt. Under a classical tax system, the tax deductibility of interest makes debt financing valuable; that is, the cost of capital decreases as the proportion of debt in the capital structure increases. The optimal structure then would be to have virtually no equity at all.

If capital structure is irrelevant in a perfect market, then imperfections which exist in the real world must be the cause of its relevance. Research in the capital structure field is mostly dominated by five theories: the pecking order theory, trade off, agency cost, life stage theory,

and information asymmetry. The theories below try to address some of the above-stated imperfections, by relaxing assumptions made in the M&M model.

Theory of Pecking Order

Business firms have a particular preference order for capital used to finance their businesses. One of the most influential theories of corporate finance is theory of pecking order. This theory tries to capture the costs of asymmetric information. It states that companies prioritize their sources of financing (from internal financing to equity) according to the law of least effort, or of least resistance, preferring to raise equity as a financing means "of last resort". Hence, internal financing is used first; when that is depleted, then debt is issued; and when it is no longer sensible to issue any more debt, equity is issued. This theory maintains that businesses adhere to a hierarchy of financing sources and prefer internal financing when available, and debt is preferred over equity if external financing is required (equity would mean issuing shares which meant 'bringing external ownership' into the company). Thus, the form of debt a firm chooses can act as a signal of its need for external finance.

Therefore, according to the pecking order theory, there is no target capital structure. The firms choose capitals according to the following order of preference: internal finance, debt, and equity. Myers and Majluf (1984) argue that there exists information asymmetry between managers (insiders) and investors (outsiders). They further argue that managers have had more inside information than investors and act in favour of old shareholders. Owing to the information asymmetries between the firm and potential investors, the firm will prefer retained earnings to debt, short-term debt over long-term debt and debt over equity. The same aforementioned authors also argued that if firms issue no new security but only use it's retained earning to support the investment opportunities, the information asymmetric can be resolved. This implies that issuing equity becomes more expensive as asymmetric information insiders and outsiders increase. Firms whose information asymmetry is large should issue debt to avoid selling under-priced securities. The capital structure decreasing events such as new stock offering leads to a firm's stock price decline.

The pecking order theory states that firms generally prefer to finance with internal funds. Ideally, a firm would have a debt ratio equal to zero. However, only firms that have enough internal funds can reach this long run equilibrium. Firms that are most likely to achieve a well-established source of internal equity are older, mature firms. Small, young or growing firms, that

lack own resources, will have to rely on debt (and equity) financing. In the short run, the debt ratio tends to deviate from zero. In the short run, the theory suggests that firms increase or decrease their debt ratio if they have a negative free cash flow or a positive free cash flow respectively.

Finally, pecking order theory (Myers, 1984; Myers & Majluf, 1984) advocates that companies in their capital structure decisions have not been searching for a target debt ratio, but the level of debt is determined by the need to finance growth opportunities; when internal finance is exhausted.

Trade-off theory of Capital Structure

The trade off theory was the earliest and most recognized theory of capital structure which explains the formulation of capital structure. Modigliani and Miller (1963) developed their trade off theory which assumed that there are optimal capital structures by trading off the benefits and costs of debt and equity. The main benefit of debt is tax deductibility of interest and the costs are bankruptcy cost (Kim, 1978) and agency cost (Jensen & Meckling, 1976; Myers, 1977).

Modigliani and Miller assume perfect and frictionless capital markets to prove their irrelevance theorem, which was later generalized by Stiglitz (1974). According to the irrelevance theorem, the firm's financing policy should not affect the firm's value or its cost of capital. The firm's value is solely determined by its investment decisions. This obviously implies that there are no interactions between corporate finance and investment decisions. A logical conclusion is that firm's financing and investment decisions can be analysed separately. The M&M irrelevance theorem of capital structure, though based on the unrealistic assumption of perfect capital markets, shows that market imperfections are a requisite for capital structure to matter. By introducing market imperfections, firms seem to get an optimal, value-maximising debt-equity ratio by trading off the advantages of debt against the disadvantages. On the other side, the pecking order theory (Myers, 1984; Myers and Majluf, 1984) contradicts the existence of financial targets, and states that firms follow a financing hierarchy: internal funds are preferred above external financing and if the latter becomes necessary, safe debt is preferred over risky debt and equity issues are at the lowest end of the pecking order. In spite of ongoing debate, there are still no clear-cut answers as to how firms make their financing decisions.

This theory indicates the exposure of the firm to bankruptcy and agency cost against tax benefits associated with debt use. Bankruptcy cost is a cost directly incurred when the perceived

probability that the firm will default on financing is greater than zero. One of the bankruptcy costs is liquidation cost, which represents the loss of value as a result of liquidating the net assets of the firm. Another bankruptcy cost is distress cost, which is the cost a firm incurs if stakeholders believe that the firm will discontinue.

Trade-off theory, therefore, allows the bankruptcy cost to exist. It states that there is an advantage to financing with debt (namely, the tax benefits of debt) and that there is a cost of financing with debt (the bankruptcy costs and the financial distress costs of debt). The marginal benefit of further increases in debt declines as debt increases, while the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. Empirically, this theory may explain differences in Debt/Equity (i.e. **D/E**) ratios between industries, but it doesn't explain differences within the same industry.

According to the trade-off theory, companies' capital structure decisions point towards a target debt ratio, where debt tax shields are maximized and bankruptcy costs associated with the debt are minimized. Hence, Jalilvand and Harris (1984) strongly argue that companies are expected to look for a target debt ratio.

Modigliani and Miller (1963), on the other hand, took taxation under consideration and proposed that the firms should employ as much debt as possible. Companies have an advantage in using debt rather than using internal capital, as they can benefit from debt tax shields. This tax shield allows firms to pay lower tax than they should, when using debt capital instead of using only their own capital. Finally, the theory argues that the more debt is, the more a firm's value is created.

In summary, static trade-off theory suggests that firms in infancy, go-go and adolescence cannot afford debt as their bankruptcy costs are high, and their earnings are too low to use the tax benefit of increasing interest payments. In the prime and stable stages, the larger, more predictable earnings make the tax shield advantage of debt more beneficial. Bankruptcy costs are also smaller in the prime and stable life stages. In the stages from aristocracy to death, firms are likely to experience a decrease in earnings (and, hence, a decrease in the tax shield benefit of debt) and as a result might be inclined to use less debt. Static trade-off theory thus suggests that the proportion of debt in a firm's capital structure should follow a low-high-low pattern over the

firm's life stages. However, recent studies have shown a focus shift from the trade off theory to pecking order theory (Quan, 2002; Mazur, 2007).

Agency Cost Theory

Jensen and Meckling (1976) identified the existence of the agency problem. They proposed that there are two kinds of agency costs - **agency costs of equity** and **debt**. The conflicts between managers and shareholders leads to agency costs of equity, and the conflicts between shareholders and debt-holders leads to agency costs of debt. Usually, managers are interested in accomplishing their own targets which may differ from the firm value. The owners may try to monitor and to control the managers' behaviours. These monitoring and control actions result in agency costs of equity. When a lender provides money to a firm, the interest rate is based on the risk of the firm. A manager may tempt to transfer value from creditors to shareholders. These monitoring and control actions result in agency cost of debt.

There are three types of agency costs which can help explain the relevance of capital structure. These are:

- **Asset substitution effect**: As D/E increases, management has an increased incentive to undertake risky projects. This is because if the project is successful, shareholders get all the upside, whereas if it is unsuccessful, debt holders get all the downside. If the projects are undertaken, there is a chance of firm value decreasing and a wealth transfer from debt holders to share holders.
- **Underinvestment problem (or Debt overhang problem**): If debt is risky (e.g., in a growth company), the gain from the project will accrue to debt holders rather than shareholders. Thus, management has an incentive to reject positive projects, albeit they have the potential to increase firm value.
- **Free cash flow**: Unless free cash flow is given back to investors, management has an incentive to destroy firm value through empire building and perks, etc. Increasing leverage imposes financial discipline on management.

Capital Structure Life Stage Theory

One of the five sub-theories proposes that capital structure may be influenced by the organizational life stage of a firm, as financing needs may change with the changing circumstances of the firm (Damodaran, 2001). There has been a great deal of research into both

organisational life stage theory and capital structure theory, but relatively little into how the two theories may relate to one another. In order to lay a theoretical framework for our study, we review capital structure life stage theory.

Some theorists have approached the problem of how organisational life stage relates to capital structure from different perspectives. Bender and Ward (1993), for example, focused on the trade-off between business risk and financial risk, positing that business risk reduces over the life stages of a firm, allowing financial risk to increase.

Hovakimian, Opler and Titman (2001) offered a similar view, stating that 'firms should use relatively more debt to finance assets in place and relatively more equity to finance growth opportunities', and should, therefore, use progressively more debt in their financing mix as they mature. This is supported by Damodaran (2001) who proposed that expanding and high-growth firms would finance themselves primarily with equity, while mature firms would replace equity with debt.

Life stage theory of capital structure would seem to suggest, therefore, that debt ratios should increase as the firm progress through the early life stages. Empirically, however, little work has been done to support or refute this idea. Most of the evidence for and against appears in the context of other arguments. In their analysis of the venture-capital financing of biotech ventures, for example, Morgan and Abetti (2004) argue that high technology ventures are so risky that they can only be financed by 'venture capital and private equity sources', a view that supports the theory that riskier firms in the infancy, adolescence and go-go life stages should use more equity.

So far, research conducted on these issues has suggested, in line with static trade-off theory, that debt ratios should follow a low-high-low pattern over the firm's life. Firms in infancy, go-go and adolescence have a high business risk and cannot afford financial risk, while firms in prime and stable can afford the extra risk that accompanies debt financing. Firms in the declining life stages would again experience a growth in business risk and would need to decrease their exposure to debt.

Information Asymmetry Theory

Stephen Ross developed the information asymmetry theory of capital structure by removing another assumption underlying Modigliani and Miller's value invariance theory, namely, that

'the market possesses full information about the activities of firms' (Ross, 1977). If instead, we assume that managers possess information about the firm's future prospects that the market does not have, then managers' choice of a capital structure may signal some of this information to the market, according to the same author.

Increasing leverage, Ross reasoned, would signal to the market that the firm's managers are confident about being able to pay interest in future. Hence, they are confident about prospects for future earnings. Increasing leverage would, therefore, increase the value of the firm by signalling to investors the size and stability of future cash flows. Fama and French (1988), on the other hand, countered by pointing to the fact that more profitable firms tend to have lower levels of debt. They argued that increasing debt actually signals poor prospects for future earnings and cash flow as there will be less internal financing available to fund development.

Therefore, while it has been argued that information asymmetries decrease over the lifetime of a firm (Baeyens & Manigaart, 2003), there is insufficient clarity on exactly how signaling (within the context of information asymmetries) affects capital structure decisions. Thus, we cannot look directly to information asymmetries, and how they change over time, as an explanation of why capital structure.

In conclusion, much of the ground-breaking work in the field of corporate finance has focused on why firms choose differing proportions of debt and equity to finance their operations. Today, there are five major sub-theories within capital structure theory which attempt to explain why capital structure matters and how it contributes to the overall value of the firm. None of the research has proved conclusive, however, and the question is still vigorously debated.

Guiding Principle of Capital structure Decision

A financial manager has to plan the pattern of capital structure for the firm in such a way that owner's interest is maximized. Accordingly, that pattern of capital structure should be chosen which may minimize cost of capital and maximize value of the stocks. Broadly speaking, there may be three fundamental patterns of capital structure in a new concern. These are: financing of capital requirements exclusively by equity stock; financing of capital requirements by equity, preferred stock; and financing of capital needs by equity, preferred stock and bonds.

While choosing a suitable pattern of capital structures for the company, a financial manager should keep into consideration some fundamental principles. These principles are militant to each other (Srivastava, 2003).

Cost Principle

Cost principle is the first guiding principle for making decision on type of capital structure to choose among other types of the structure. According to this principle, ideal pattern of capital structure is the one that tends to minimize cost of financing and maximize earning per share (EPS) (Srivastava, 2003).

Risk Principle

As known, business firms operate in risk prone working environment. Risk principle suggests that such a pattern of capital structure should be devised so that the company does not run the risk of bringing on a receivership with all its difficulties and losses (Srivastava, 2003).

Control Principle

The designing of capital structure in a business firm considers control principle. While designing appropriate capital structure for the company and for that matter choosing different types of securities, a finance manager should also keep in mind that controlling position of residual owners remains undistributed (Srivastava, 2003).

Flexibility Principle

According to flexibility principle, the management should strive toward achieving such combinations of securities that management finds it easier to manage sources of funds in response to major changes in need for fund. Not only are several alternatives open for assembling required funds but also bargaining position of the corporation strengthened while dealing with suppliers of funds (Srivastava, 2003).

Timing Principle

Timing is always important in financing and more particularly in a growing concern. The principle is sought to be adhered to in choosing the types of funds so as to enable the company to seize market opportunities and minimize cost of raising capital and obtain substantial savings.

Depending on business cycles, demand of different securities oscillates. In time of boom, when there is all-round business expansion and economic prosperity; investors have strong desire to invest. It is easier to sell equity shares and raise ample resources. However, in periods of depression, bonds should be issued to attract money because investors are afraid to risk their money in stock which is more or less speculative. Thus, timing may favour debt at one time and common stock (preferred stock) at other time (Srivastava, 2003).

The Target or Optimal Capital Structure

Firms should first analyze a number of factors and then establish a target capital structure. This target might change over time as conditions change, but at any given moment, management should have a specific capital structure in mind. If the actual debt ratio is below the target level, expansion capital should generally be raised by issuing debt, whereas if the debt ratio is above the target, equity should generally be issued.

Capital structure policy involves a trade-off between risk and return using more debt raises the risk borne by the stockholders. However, using more debt generally leads to a higher expected rate of return on equity. Higher risk tends to lower a stock's price, but a higher expected rate of return it raises. Therefore, the optional capital structure must strike a balance between risks and return so as to maximize the firm's stock price.

Four primary factors influence capital structure decisions. These include: business risk, the firm's tax position, financial flexibility, and managerial conservatism or aggressiveness. Let us describe each of them one by one.

Business risk: on the riskiness inherent in the firm's operations if it used no debt. The greater the firm's business risk, the lower its optimal debt ratio.

The firm's tax position: A major reason for using debt is that interest is deductible, which lowers the effective cost of debt. However, most of a firm's income is already sheltered from taxes by depreciation tax shields, by interest on currently outstanding debt, or by tax loss carry-forwards, its tax rate will be low. So, additional debt will not be as advantageous as it would be to a firm with a higher effective tax rate.

Financial flexibility: It is also the ability to raise capital on reasonable terms under adverse conditions. Corporate treasures know that a steady supply of capital is necessary for stable operations, which is vital for long-run success. They similarly know that when money is tight in the economy, or when a firm is experiencing operating difficulties, suppliers of capital prefer to provide funds to companies with strong balance sheets. Therefore, both the potential future need for funds and the consequences of shortage influence the target capital structure - the greater the probable future need for capital and the worse the consequences of a capital shortage, the stronger the balance sheet should be.

Managerial conservatism or aggressiveness: Some managers are more aggressive than others; hence, some firms are more inclined to use debt in an effort to boost profits. This factor does not affect the true optimal or value maximizing capital structures but does influence on the manager's determined target capital structure.

The above-stated four factors largely determine the target capital structure. But operating conditions can cause the actual capital structure to vary from the target (Brigham and Houston, 2001).

Reserve Requirements as a Powerful Tool for Capital Structure

Reserve requirements are considered to be a powerful tool for capital structure. The reserve requirement (or cash reserve ratio) is a central bank's regulation that sets the minimum reserves each commercial bank must hold (rather than lend out) of customer deposits and notes. It is normally in the form of cash stored physically in a bank vault (vault cash) or deposits made with a central bank.

The required reserve ratio is sometimes used as a tool in monetary policy for influencing the country's borrowing and interest rates by changing the amount of funds available for banks to make loans with.

Reserve requirements are also a powerful instrument of monitory policy to effectively and efficiently control the country's central bank reserve without keeping too much or too little cash. It has to balance between profitability and safely.

In a liquidity crisis, the reserve requirements offer an avenue for maintaining bank solvency. In non-crisis situations, they can be used to ease or tighten financial market. If the federal

government reduces reserve requirements, almost all of the freed reserves are invested banks, easing credit conditions and stimulations the economy.

High reserve requirements, for instance, tend to increase the federals control over bank deposit multiplication. Required reserves are a pool of funds that can be tapped in a liquidity crisis. Required reserve reduces the profit of institutions compelled to hold them. (Smith, 1991)

Ratio Analysis

There are many ratios that can be calculated from the financial statements of a business firm pertaining to a company's performance, activity, financing and liquidity. Some common ratios include the price-earnings ratio, debt-equity ratio, earnings per share, asset turnover and working capital. There is a tool used by individuals to conduct a quantitative analysis of information in a company's financial statements. This is ratio analysis. Ratios are calculated from current year numbers and are then compared to previous years, other companies, the industry, or even the economy to judge the performance of the company. Ratio analysis is thus predominately used by proponents of fundamental analysis.

The purpose of calculating financial ratio is to assess the position and performance of a business. An assessment of current and past position and performance is useful in determining whether or not the managers of the business have used the resources available in the efficient and effective manner. It can also help in formulating views about the future which should be extremely valuable when making decisions. Ratios are important and widely used as tools of financial analysis.

Users of Ratio Analysis

Ratio analysis is used by three main groups such as managers, credit analyst, and stock analyst. Managers, who employ ratio analysis of their companies' financial statements, help them to analyze, control and thus improve their respective firm's operations.

Credit analyst, including bank loan officers and bond rating analysis, who analyze the ratio help them to ascertain a company's ability to pay its debt; and stock analyst, who are interested in company's efficiency, risk and growth prospect employ ratio analysis in general.

Capital Structure Ratios

The term capital structure refers to the extent to which a firm employs debt and capital to finance its operation. These ratios are used to identify sources of funds in that they indicate whether the firm finances all its sources from debt or equity or not. One measure of the degree of risk resulting from debt financing is provided by these ratios. Debt to equity ratio and debt to asset ratio are among the ratios that reflect capital structure.

Debt to Equity Ratio

Investors and creditors are interested not only in the short run liquidity of a company but also in its solvency or in its ability to remain in business over the long run. The capital structure of a company is a focal point in making this determination. All companies need to make a minimum investment by the owner to start a new business. Many businesses benefit by incurring debt, however, finding the right mix of debt and equity is an important factor to a business in managing working capital in the short run. One common measure of long run viability is debt equity ratio.

$$\text{That is, Debt – Equity Ratio} = \frac{\text{Total debt}}{\text{Total Equity}}$$

The ratio of debt to equity varies according to the nature of the business and the volatility of cash flows. An electric utility, with very stable cash flows, will usually have a higher debt ratio than a machine tool company, whose cash flows are far less stable. A comparison of the debt ratio for a given company with those of similar firms gives us a general indication of the credit worthiness and financial risk of the firm (Van Horne, 1998).

Debt Ratio

The debt ratio which is the ratio of total debt to total assets measures the percentage of the firm's assets financed by creditors (borrowing).

$$\text{i.e., Debt Ratio} = \frac{\text{Total debt}}{\text{Total assets}}$$

The total debt includes current liabilities and long-term debt. Creditors prepare low debt ratios because the lower the ratio, the greater the cushion against creditors' losses in the event of

liquidation. The owners, on the other hand, can benefit from leverage because it magnifies earnings, and thus, the return to stockholders. But too much debt often leads to financial difficulty, which eventually might cause bankruptcy (Weston et al., 1996).

Limitations of Ratio

While ratio analysis can provide useful information concerning a company's operations and financial condition(s), it does have certain limitations that necessitate care and judgment. Many large firms operate in different divisions and in different industries, and for such companies it is difficult to develop a meaningful set of industries, on average. Therefore, ratio analysis is more useful for small, narrowly focused firms than for large, multidivisional ones.

Most firms want to be better than average. However, a mere attainment of average performance is not necessarily good. As a target of high-level performance, it is best to focus on the industry leaders' ratio (bench-marking helps in this regard).

Inflation may have badly destroyed firms' balance sheet recorded value are often substantial different from "true" value. Further, since inflation affects depreciation charge and inventory cost, profit are also affected. Thus, a ratio analysis for one firm over time, or a corporative analysis of firms of different age, must be interpreted with judgment. Firms can employ "window-dressing" techniques to make their financial statement look stronger. It is difficult to generalize about whether a particular ratio is "good" or "bad".

A firm may have some ratios that look "good" and others that look "bad" which, in turn, make it difficult to tell whether or not the company is balanced, strong or weak. However, statistical procedures can be used to analyze the net effect of a set of ratios. Many banks and other lending organizations use such procedures to analyze firms' financial ratio, and then to classify them according to their probability of getting into financial troubles.

Therefore, ratio analysis is useful, but analysts should be aware of these problems and make adjustments as necessary. Ratio analysis conducted in mechanical, unthinkable manner is dangerous, but if it is used intelligently and with good judgment, it can provide useful insights into firm's operations (Brigham & Houston, 2001).

Research Design and Methodology

Research Design and Methods

The study employed descriptive survey method using interviewing techniques. In addition, documentary analysis was used to generate secondary data from pertinent documents produced by the Bank. In order to collect relevant data for the study under consideration, both primary and secondary data were collected from respective sources.

Sampling Methods

As the study is on capital structure of Wegagen Bank S. C. and only the concerned personnel may give us the required data and/or information, we resorted to employ purposive sampling technique (which is one type of non-random sampling) in collecting the data.

Data Collection: Tools and Procedures

In this study, both interview guide/protocol and documentary analysis checklist were used to collect both primary and secondary data which could be suitable for the successful accomplishment of the research design. The primary data was collected by holding formal and structured interviews with key informants who are highly-posted official (s) of the Bank in order to get first-hand pieces of information from the reliable sources. Besides, secondary data was collected from the Company's documents, various types of literature, company's annual reports, published and unpublished materials of the Bank using the checklist.

Methods of Data Analysis

The study employed both quantitative and qualitative data analysis methods. The quantitative data were analysed using vertical analysis, horizontal analysis, and ratio analysis supported by univariate statistical techniques such as frequency distribution to produce tables with frequencies and percentages, figures and graphs as required according to the objectives and nature of variables under investigation in the study.

Data Presentation, Analysis and Interpretation

This part of the paper is classified into two main parts based on the sources of the data used for the analysis. Accordingly, the first part of the data presentation, analysis and interpretation is on

data gathered from the officials of Wegagen Bank through structured interviews. The second part presents data generated from documentary analysis of pertinent and different types of documents of the Wegagen Bank Share Company and other related literature.

As any type of business firm, the Bank also needs financing to keep existing projects going and to take new projects. As can be understood from the Finance and Treasury Department's responses, based on different sources of the assessment studies conducted on the financial statements of Wegagen Bank, the Bank has got intricate problems, as stated by concerned officials of the Bank:

> The interest of the Bank is to increase its sources of finance; it doesn't consider any risk associated with it. The Bank doesn't consider its ability to pay creditors' interest and to repay the principal. This means that, the probability of the Bank's failure to pay creditors' interest and the principal is very high for the future even if it doesn't confront ant solve this problem to date. Therefore, inflexibility of the Bank is high to meet the changing conditions.

As it can be understood from the above excerpts taken from the structured interviews, the finance manager has to be concerned with how to determine the best and reasonable finance mix or capital structure for the Company. That is, the manger's decision to finance a project with debt and equity must consider the ability of the Company to pay creditors' interest, its flexibility to meet changing conditions and risk associated with choices of each sources of finance. If the financial manager does this properly, the Bank can operate without facing any difficulties.

There are also many factors that affect the Bank from raising the required equity capital. As per their response from one of the Bank's Managers, the absence of capital market decreases the Bank's Earning per Share (EPS) of the existing shareholders and increases in cost of capital. In addition, the behaviour or attitude of the society to involve in investment is also the other factor in raising the required amount of equity capital.

On the other hand, factors that affect raising the required debt are the expansion of the branch networks, the attitude of the society in choosing bank and the level of income. Similarly, the existing competition among banks and also government's regulations like that of huge reserve required by National Bank of Ethiopia also affect amount of debt that will be used to finance its assets.

The following tables show vertical and horizontal analyses made on Wegagen Bank's Balance Sheets for the last four years starting from the Fiscal Year 2007 up to the Fiscal Year 2010.

Table 1- Wegagen Bank S .C. Balance Sheet of Vertical Analysis of the Data (as of June 30, 2007 for the Year ended on June 30, 2010 (Eth. Birr)

	2007		2008		2009		2010	
Description	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**	**Amount**	**%**
Assets	-	-	-	-	-	-	-	-
Cash &Bank Balance	486043345	13.97	785096919	19.03	1953689386	38.17	1130263762	19.68
Reserve in NBE	131388527	3.78	393388527	9.54	528388527	10.32	598388527	10.42
Deposit in Foreign Banks	702374258	20.18	624911230	15.15	433470784	8.47	1107079525	19.28
Treasury Bills in NBE	-	-	-	-	-	-	199990000	3.48
Loans and Advances	2060606127	59.21	2207928130	53.53	1983747131	38.76	2375625606	41.37
Stocks of supplies	6094277	0.18	10370787	0.25	10334237	0.20	29083956	0.51
Other Assets	43757435	1.26	45989245	1.11	134754442	2.63	202190283	3.52
Deferred Charges	597068	0.02	815801	0.02	16289148	0.32	16546518	0.29
Leasehold Land	15835026	0.45	15835026	0.38	15835026	0.31	15835026	0.28
Property, Plant and Equipment.	33629327	0.97	40556241	0.98	41802778	0.82	66933372	1.17
Total Asset	**3480325390**	**100.00**	**4124891906**	**100.00**	**5118311459**	**100.00**	**5741936575**	**100.00**
Liabilities								
Deposit from Customers.	2236583813	64.26	2567876386	62.25	3550855857	69.38	3815751230	66.45
Deposit from Financial Institutions.	487087044	14.00	398453771	9.66	177526300	3.47	107047487	1.86
Other Liabilities	153783036	4.42	228878979	5.55	251652599	4.92	329984826	5.75
Margin Held on Letters of Credit	144467640	4.15	260159917	6.31	214384740	4.19	332174840	5.79
Provision for Taxation	41305813	1.19	51153448	1.24	75499105	1.48	94187072	1.64
Leasehold Land Payable	13892078	0.40	12920604	0.31	11978274	0.23	11065089	0.19
Total Liabilities	3077119424	88.41	3519443105	85.32	4281896875	83.66	4690210544	81.68
Capital & Reserves								
Paid up Capital	233139000	6.70	370825000	8.99	517618000	10.11	633170000	11.03
Share Premium	5241450	0.15	9679450	0.23	14243500	0.28	21415250	0.37
Legal Reserve	73622138	2.12	108331528	2.63	153482102	3.00	209317331	3.65
Special Reserve	7972089	0.23	12484693	0.30	15619220	0.31	20317764	0.35
Retained Earnings	83231289	2.39	104128130	2.52	135451762	2.65	167505686	2.92
Total Capital and Reserves	403205966	11.59	605448801	14.68	836414584	16.34	1051726031	18.32
Total Capital, Reserves and Liabilities	**3480325390**	**100.00**	**4124891906**	**100.00**	**5118311459**	**100.00**	**5741936575**	**100.00**

Source: Wegagen Bank, Annual Reports, 2007-2010.

As shown in Table 1, Wegagen Bank's capital structure illustrates a mixed appearance. In the years 2007and 2008, it was in liquid state but the Bank had shown some sort of improvement in the consecutive years. It can be concluded that the Bank is liquid enough to meet its debts obligations because its total asset to total liability was found to be **1.13:1** which is more than the minimum acceptable standard ratio **1:1.** In addition, this finding is below the generally desired ratio of **2:1** which is again considered as satisfactory.

Regarding vertical analysis of the Bank's data as of June 30, 2008; the findings indicate that the Bank has failed to meet its obligations of debts. We can conclude that the Bank is liquid enough to meet its obligations because its total asset to total liability was found to be 1.17:1 which is more than the minimum acceptable standard ratio **1:1.**

In the same framework, the vertical analysis of the data collected from the Bank as of June 30, 2009 comes up encouraging improvement. One could observe this in Table 1 in that Wegagen Bank had been trying its best to be in at status of encouraging improvement. The Bank showed its ability of solving its liquidity problems because the current total asset to total-liability had become **1.2:1.**

At the positive side of the continuum, one can also notice such an improvement in the Bank's endeavour to solve its problem of liquidation in 2010. The vertical analysis of the data as of June 30, 2010 is a case in point. The data analysis of these data showed that total asset-to-total liability ratio was found to be **1.22:1**. If we scrutinize the findings of the study based on the data generated for the last three years, the overall trend of the vertical analyses has shown an improvement to solve liquidity problems on the part of Wegagen Bank.

Table 2 shows data as of June 30, 2007 for horizontal analysis of the Wegagen Bank Share Company. Its liquidity also increases. In the case of the horizontal analysis of the data as of June 30, 2008; **total asset to total debt ratio** increases by 3.54% from the base year of 2007. Based on this finding of the study, it is assumed that the Bank's liquidity problem will increase.

The horizontal analysis of the data as of June 30, 2009 further reveals that Wegagen Bank has used more of the equity finance. The **total asset to total debt ratio** increases by 5.3% from the base year of 2007 and this shows that the Company has been using more of equity financing than debt financing to finance its asset.

Table -2 Wegagen Bank S. C. Balance Sheet Horizontal Analysis for the Years June 30, 2007 - June 30, 2100

	2007		2008		2009		2010	
Description	Amount	%	Amount	%	Amount	%	Amount	%
Assets								
Cash & Bank Balance	486043345	100.00	785096919	61.52	1953689386	301.96	1130263762	132.54
Reserve in NBE	131388527	100.00	393388527	199.41	528388527	302.16	598388527	355.43
Deposit in Foreign Banks	702374258	100.00	624911230	-11.03	433470784	-38.28	1107079525	57.62
Treasury Bills in NBE	-	100.00	-	-	-	-	199990000	0
Loans and Advances	2060606127	100.00	2207928130	7.15	1983747131	-3.73	2375625606	15.288
Stocks of supplies	6094277	100.00	10370787	70.17	10334237	69.573	29083956	377.23
Other Assets	43757435	100.00	45989245	5.10	134754442	207.96	202190283	362.07
Deferred Charges	597068	100.00	815801	36.63	16289148	2628.2	16546518	2671.3
Leasehold Land	15835026	100.00	15835026	0.00	15835026	0	15835026	0
Property, Plant &Equipment	33629327	100.00	40556241	20.60	41802778	24.305	66933372	99.033
Total Asset	**3480325390**	**100.00**	**4124891906**	**18.52**	**5118311459**	**47.064**	**5741936575**	**64.983**
Liabilities								
Deposit from Customers.	2236583813	100.00	2567876386	14.81	3550855857	58.762	3815751230	70.606
Deposit from Financial Institutions.	487087044	100.00	398453771	-18.20	177526300	-63.55	107047487	-78.02
Other Liabilities	153783036	100.00	228878979	48.83	251652599	63.641	329984826	114.58
Margin Held on Letters of Credit	144467640	100.00	260159917	80.08	214384740	48.396	332174840	129.93
Provision for Taxation	41305813	100.00	51153448	23.84	75499105	82.781	94187072	128.02
Leasehold Land Payable	13892078	100.00	12920604	-6.99	11978274	-13.78	11065089	-20.35
Total Liabilities	**3077119424**	**100.00**	**3519443105**	**14.37**	**4281896875**	**39.153**	**4690210544**	**52.422**
Capital and Reserves								
Paid up Capital	233139000	100.00	370825000	59.06	517618000	122.02	633170000	171.58
Share Premium	5241450	100.00	9679450	84.67	14243500	171.75	21415250	308.57
Legal Reserve	73622138	100.00	108331528	47.15	153482102	108.47	209317331	184.31
Special Reserve	7972089	100.00	12484693	56.61	15619220	95.924	20317764	154.86
Retained Earnings	83231289	100.00	104128130	25.11	135451762	62.741	167505686	101.25
Total Capital and Reserves	**403205966**	**100.00**	**605448801**	**50.16**	**836414584**	**107.44**	**1051726031**	**160.84**
Total Capital, Reserves and Liabilities	**3480325390**	**100.00**	**4124891906**	**18.52**	**5118311459**	**47.064**	**5741936575**	**64.983**

Source: Wegagen Bank, Annual Reports, 2007 - 2010.

In addition, horizontal analysis of the data as of June 30, 2010 collected from the Bank's documents indicates its efforts to reduce the problems of debt financing and financial risk so that

the Bank can increase equity sources of finance in its day-to-day activities. **The total asset to the total debt ratio** of the Bank was found to increase by 7.96% when compared to that of the base year of 2007. Thus, Wegagen Bank has been trying its best to reduce its debt financing and its financial risk by increasing its equity sources of finance since 2007.

Liquidity Requirements

With respect to the liquidity requirements, the National Bank of Ethiopia (NBE) has laid down the directive that enforces any bank in Ethiopia to maintain at least 15% of its total liabilities. From this percentage, the bank should cover at least 5% of the requirements by primary reserves (cash and bank balance in the NBE) and at most 10% by secondary reserve (balance held in licensed banks in Ethiopia).

In the banking business, liquidity requirements are imposed on banks by the central bank of a given country, like the National Bank of Ethiopia. The trend of the liquidity requirements in the sample bank is presented in Table 3. This table shows the trend of liquidity requirements for the sampled cross-sectional years beginning from the year June 30, 2007 to the year ended June 30, 2010.

Table - 3 Trend of Liquidity Requirements of Wegagen Bank S.C. over the Last Four Years: June 30, 2007 - June 30, 2010 (Eth. Birr).

Description	2007		2008		2009		2010	
	Amount	%	Amount	%	Amount	%	Amount	%
Reserve in NBE	131388527	4.27	393388527	11.18	528388527	12.34	598388527	12.76
Legal reserve	73622138	2.39	108331528	3.08	153482102	3.58	209317331	4.46
Special reserve	7972089	0.26	12484693	0.35	15619220	0.36	20317764	0.43
Total primary reserve	212982754	6.92	514204748	14.61	697489849	16.28	828023622	17.65
Deposit in foreign bank	702374258	22.83	624911230	17.76	433470784	10.12	1107079525	23.6
Treasury bill in NBE	_	-	-	-	-	-	199990000	4.26
Deposit in local bank	486043345	15.80	785096919	22.31	1953689386	45.63	1130263762	24.10
Total secondary reserve	1188417603	38.63	1410008149	40.06	2387160170	55.75	2437333287	51.97
Total liabilities	**3077119424**	**100.00**	**3519443105**	**100.00**	**4281896875**	**100.00**	**4690210544**	**100.00**

Source: Wegagen Bank, Annual Reports, 2007 – 2010.

From Table 3, it could be clearly observed that the Bank had had no problem of liquidity requirements. That is to say, it has already fulfilled the liquidity requirements in both primary and secondary requirements. Therefore, it can be said that the Bank is very reliable in its ability

to honour its debt (obligations) because in all the years considered in the study, the data which had been extracted from the audited balance sheets showed the existence of excess liquid assets in both primary and secondary reserves. However, it is not advisable to have excess reserve. Therefore, the Bank has to try to reduce this excessive reserve in some allowable investment areas.

Reserve Requirements

Historically, many countries restricted entry into the banking business by granting special charters to select firms. While the practice of granting charters has become obsolete, many countries effectively limit or prevent foreign banks or subsidiaries from entering their banking markets and thereby insulating their domestic banking industries from foreign competition. One of the forms of bank regulation consists of laws enforcing mandatory cash reserves requirement on the part of the banks. Minimum cash reserves have been a long-established form of bank regulation. The requirements that each bank maintain a minimum reserve of base money has been justified on the grounds that it reduces the bank's exposure to liquidity risk (insolvency), aids the central bank's efforts to maintain control over national money stocks (by preserving a more stable relationship between the outstanding quantity of base money (which central banks are able directly to regulate, and the outstanding quantity of bank money), and it helps the central bank to secure government revenue. In contrast, some economists have challenged the concept of legal reserve requirements by arguing that they are not necessary for effective monetary control. More than a dozen countries, unlike Ethiopia, had got encouraged by such an argument, abolished mandatory reserve requirements starting in the mid-1980s.

According to the National Bank of Ethiopia (NBE) (2010), any licensed bank is expected to maintain 5% of its demand, saving and time deposit in balance held with NBE. Deficiencies in reserve balance, however, are subject to penalty. The penalty will be assessed at a rate twice the current average rate of interest fixed on loans and advances from time to time based on deficiency in reserve to be computed over the period covered by the report.

Table 4 presents summary of the trend of the amount of the reserve requirements on the part of Wegagen Bank for the years commencing from the year 2007 to the year 2010. It is shown that the Bank has met it required reserves (i.e. five percent of the total deposit) in National Bank of Ethiopia (NBE).

Table - 4 Trends of Wegagen Bank Reserve Requirements over the Last Four Consecutive Years: June 30, 2007 - June 30, 2010 (Eth. Birr).

Year	Required reserve (5%)	Total deposit	Actual	Excess (deficit)
2007	111829191	2236583813	131388527	19559336
2008	128393819	2567876386	393388527	264994708
2009	177542793	3550855857	528388527	350845734
2010	190787562	3815751230	598388527	407600966

Source: Wegagen Bank, Annual Reports, 2007-2010.

According to the qualitative findings of the study, the maintenance of reserve requirements on the part of the Bank has paramount importance in solving its problem in insolvency during a liquidity crisis. One of the senior officials in the Share Company's Finance and Treasury Department had such opinions, as the official stated: "Increasing the reserve with the National Bank of Ethiopia offers avenue for maintaining bank insolvency during a liquidity crisis. In non-crisis situation, they can be used to easy or tighten financial market." From qualitative analysis of this excerpt of interviews, we can understand that if the Federal Government of Ethiopia reduces the amount of reserve requirements, almost all of the freed reserve is then invested in banks, easing credit conditions and stimulating the economy.

From Table 4, it can be seen that the Bank has met its required reserve in the National Bank of Ethiopia (NBE). Nevertheless, the reserved cash in the National Bank has been found to be excess in all those years. Therefore, excess reserve should be invested in some alternative and productive investment areas like treasury bills; they could have generated significant earning to the Bank. As clearly observed, the Bank has incurred high opportunity cost in failing to invest its idle cash with regard to excess reserve. Thus, Wegagen Bank has to assess short-term and long-term investment opportunities and should then invest its idle cash to maximize the wealth of its shareholders.

Capital Structure Ratio Analysis

In order to facilitate the analysis of capital structure of the Bank, let us consider ratio analysis as well as leverage ratios of the Share Company.

Ratio Analysis

A firm's balance sheet contains many items that (taken by each of them separately) have no clear meaning. Financial ratio analysis is a way of appraising their relative importance. The ratio of

current assets to current liabilities, for example, gives the analyst an idea of the extent to which the firm can meet its current obligations. This is known as a liquidity ratio. Financial leverage ratios (such as the debt–asset ratio and debt as a percentage of total capitalization) are used to make judgments about the advantages to be gained from raising funds by the issuance of bonds (debt) rather than stock. Activity ratios, relating to the turnover of such asset categories as inventories, accounts receivable, and fixed assets, show how intensively a firm is employing its assets. A firm's primary operating objective is to earn a good return on its invested capital, and various profit ratios (profits as a percentage of sales, of assets, or of net worth) show how successfully it is meeting this objective.

Generally, ratio analysis is used to compare a firm's performance with that of other firms in the same sector or with the performance of sector in general. It is also used to study trends in the firm's performance over time and thus to anticipate problems before they develop to full-fledged scale. Therefore, ratio analysis applies to a firm's current operating posture. But, a firm must also plan for future growth. Next, let us consider leverage ratios which are important inputs for financial ratio analysis of the data collected from the Bank.

Leverage Ratios

Leverage ratios measure the extent of the firm’s total debt burden. They reflect the Company’s ability to meet its short and long term debt obligations. Leverage ratios are thus computed either by relating the debt and equity (stock holders) items or debt (creditors) and total asset items from the balance sheet.

Debt – Equity Ratio

Debt-equity ratio measures the balance of fund provided by creditors and shareholders. It is calculated by dividing the total debt to total owners’ equity. As illustrated in Table 5 and Figure 1, the trends of the debt-equity ratios for the years starting from 2007 to 2010 have shown a decreasing pattern.

Table -5 Trends of Debt- Equity Ratio over the Last Four Years: June 30, 2007- June 30, 2010 (Eth. Birr).

Description	Years			
	2007	2008	2009	2010
Total debt	3,077,119,424	3,519,443,105	4,281,896,875	4,690,210,544
Total equity	403,205,966	605,448,801	836,414,584	1,051,726,031
Debt-equity ratio	7.63	5.81	5.12	4.46

Source: Wegagen Bank, Annual Reports, 2007-2010.

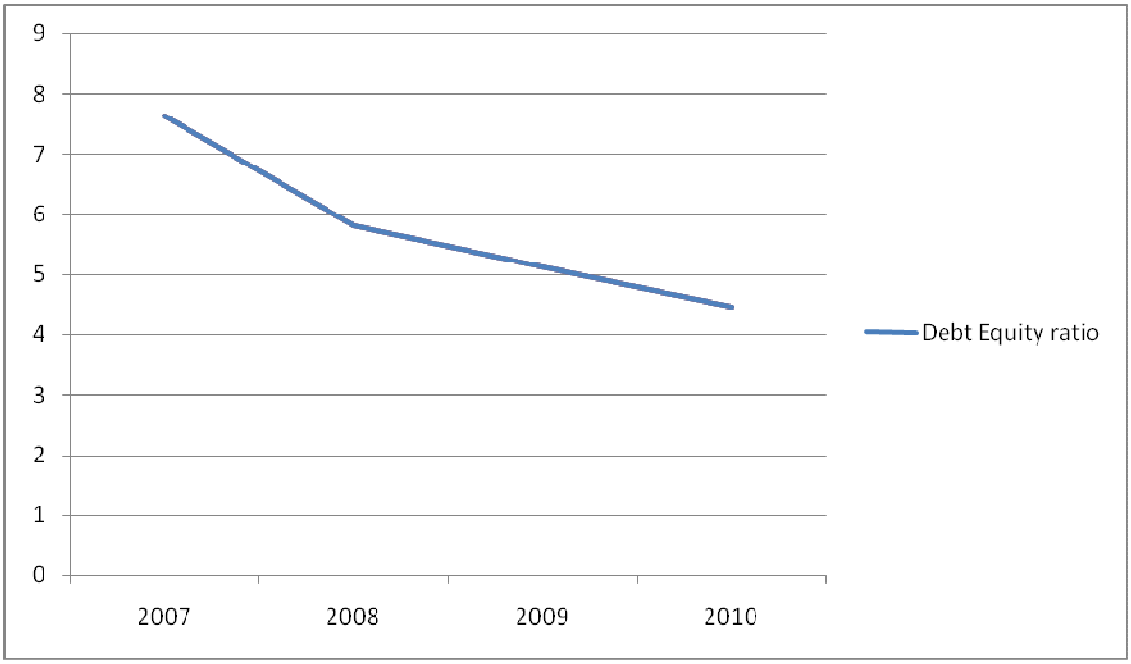

Figure 1-- Debt-Equity Ratios

Source: Own survey, 2011.

As indicated above, on average, the debt equity ratio was found to be about 5.76. This ratio shows that creditors have covered 84.31% financing which is very high contribution. This shows that lenders' have contributed more funds than owners, that is, lenders' contribution is 5.76 times that of the owners' contribution. This indicates that, from the point view of creditors, it represents an unsatisfactory situation since a high portion of debt provides a low margin of safety for them. During the period of low profit, the debt servicing will prove to be high burdensome for the share Company. However, from the shareholders' point of view, there is an advantage during the period of good economic activities. This high debt-equity ratio will provide high rate

of earnings to shareholders' when the cost of capital is less than the Company's overall rate of return on investment.

Debt Ratio

It is debt-to-total asset ratio which measures the proportion of borrowed funds used to acquire the Company's asset. The following debt-to-total asset ratios of the Wegagen Bank are calculated based on data collected for the last four years 2007-2010. The calculation is given as follows:

Debt ratio= Total liability/Total Asset

Debt-asset ratio also measures how much of the Bank's assets are financed by creditors. Table 6 and Figure 2 show the trends of debt ratios of the Bank for the last four years starting from 2007 to 2010.

Table 6 – Trends of Debt-Ratios of Wegagen Bank over the Last Four Years: June 30, 2007 - June 30, 2010 (Eth. Birr).

Item	Years			
	2007	2008	2009	2010
Total debt	3,077,574,424	3,519,443,105	4,281,896,875	4,690,210,544
Total asset	3,480,280,390	4,124,891,893	5,118,311,459	5,741,936,575
Debt ratio	0.88	0.85	0.84	0.81

Source: Wegagen Bank S.C., Annual Reports, 2007-2010.

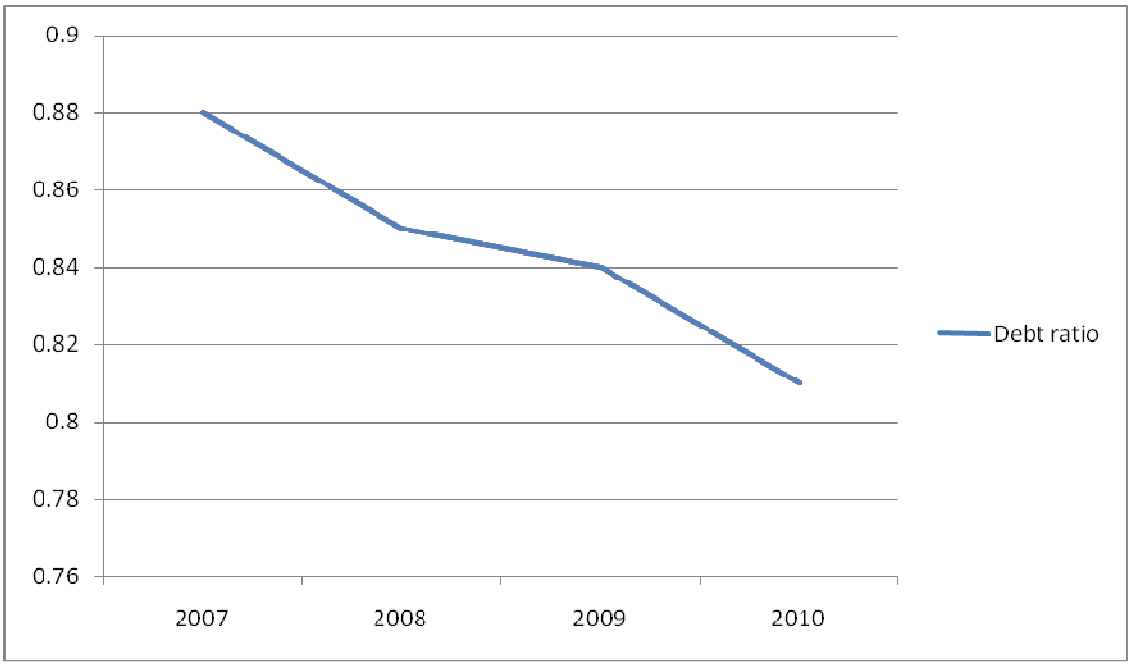

Figure 2 -- Debt Ratio of Wegagen Bank S.C.

Source: Own survey results, 2011.

As indicated in Table 6, the debt ratio was found to be 0.87, on average. It represents that 84.31% of the total assets are financed by using debt or external sources and finance. The remaining, 15.69% represent equity sources of finance. In this ratio, we can say that the claim of creditors is greater than that of the shareholders. This high debt ratio introduces inflexibility in the Bank's operations to the extent of increasing interference and pressure from creditors. This also capacitates Wegagen Bank to borrow funds on very restrictive terms and conditions. Sources and finance are highly dependent on debt; it is exposed to financial risk like credit risk, liquidity risk and foreign exchange risk. During a period of low profit, because of this high debt ratio, it suffers great strains and it cannot even pay the interest charge of creditors.

Summary, Conclusion and Recommendation

Summary

Wegagen Bank Share Company needs source of finance to engage in its operational activities and for the achievement of its objectives. The long term source of financing of the Bank (that is equity and debt) showed increasing growth rate from year to year and the Bank also tried to have much source of finance. The interest of the Bank is to increase its source of financing; it doesn't consider risk associated with the source of financing such as financial and business risk.

The Bank has high inflexibility to changing conditions in striving towards achieving such combinations of securities. Hence, the management of the Bank finds it easier to manage sources of funds in response to major changes in need for fund.

The absence of capital market and the behaviour or attitude of the society to involve in investment is main factors that affect the bank in raising the required equity capital. The expansion of the branch network, the attitude of the society in choosing banks, the level of income, competition among the banks and government regulations are also other main factors that affect raising the required debt.

There has been more and more increase in the total asset-to-total liability ratio (to measure liquidity) in Wegagen Bank Share Company throughout the four years. The minimum standard for total asset-to-total liability ratio is 1:1. However, the ratio has shown a decreasing trend which is unsatisfactory one for those years considered.

The leverage ratio has decreased throughout the four years. Based on the leverage ratios calculated for the Bank, the Company has total debt burden. Thus, Wegagen Bank may not be able to meet its short and long term debt obligations.

The Bank has fulfilled rules and regulations set by the by National Bank of the Ethiopian Government concerning liquidity and reserve requirements. But the amount of cash reserved by the Bank in the NBE has been excess in all those years.

Finally, Wegagen Bank S.C. is exercising high debt proportion in its capital structuring; that is, lenders' contribution is much higher than that of the owners.

Conclusion

The objective of the study was to assess the role of capital structure and its impact on different activities of the Wegagen Bank S. C. It generally intended to assess Bank's capital structuring role and to examine its impact on returns, customers' willingness to deposit and liquidity problem.

By way of conclusion, the Bank is generally characterized by high degree of inflexibility, decreasing shareholders' EPS and increased cost of capital, a combination of factors that has affected its efforts of securing the required amount of debt for financing its operations, being liquid enough to meet its debt obligations, and its liquidity state is considered to be

unsatisfactory albeit it has shown some sort of improvement since 2009, has been consuming more of its equity finance, fulfills both liquidity and reserve requirements imposed by the National Bank of Ethiopia, incurs, high opportunity cost in failing to invest its idle cash at the NBE, has also experienced a declining pattern of debt-equity ratio, and then the Bank's capital structure is exercising high debt proportion.

In order to increase its sources for financing its operations without considering risks associated with such endeavours, Wegagen Bank gets involved in debt. In addition, in this framework, there is a high degree of inflexibility to cope up with the changing conditions. The absence of capital market decreases the existing shareholders' Earning per Share (EPS) which, in turn, increases cost of capital.

In the Bank, combined effects of factors affect its efforts to generate the required amount of equity capital. The society's attitude or behavior to get involved in investment is the other factor which have created problem in raising the required amount of equity capital for the Bank's operations. Similarly, the expansion of the branch office's networks, the attitude of the society in choosing bank, and the level of income on the part of the dwellers of the city of Addis Ababa have combined and, consequently, limited Wegagen Bank' required debt from various sources for structuring its capital. In addition, the existing competition among banks and the Ethiopian Government's regulations, particularly the huge amount of reserve requirements in the NBE seriously affect the amount of debt to finance its assets.

The vertical analysis of the Bank's balance sheet shows that it has been experiencing up and down for the last for years. For example, in the years 2007 and 2008, Wegagen Bank was in liquidity state. However, it has started some sort of improvement in solving this problem since 2009.

On the contrary, the Bank is liquid enough to meet its debt obligations because its total asset to liability was found to be a bit greater than the minimum acceptable standard ratio (**1:1**) and below generally desired ratio (or satisfactory level). Thus, the Bank's liquidity state is considered to be unsatisfactory. The overall trend of the vertical analysis has shown an improvement to solve the existing liquidity problem of Wegagen Bank Share Company.

The horizontal analysis, on the other hand, clearly indicates that the Company has been utilizing more of its equity finance (i.e. as the total assets to total debt ratios have shown an increase for the last four consecutive years.

Regarding liquidity requirements, Wegagen Bank has no problem of fulfilling the requirements because it has already fulfilled both primary and secondary requirements imposed by the NBE under the auspices of the Ethiopian Government. Therefore, the Bank has excess liquidity assets in both primary and secondary reserves which should be channeled and reduced by legally permitting the Company to invest such resources in allowable areas.

Moreover, the Bank fulfills its imposed reserve requirements which may play significant role in solving its problem of liquidity crisis. Nevertheless, this has some repercussions on bank's investment activity, its efforts of easing credit conditions and stimulating the country's economy. Consequently, the Bank incurs high opportunity cost in that it has failed to invest its huge amount of idle case at the NBE. It is concluded that the Bank has to assess short- and long-term investment opportunities in order to do so and then to maximize the stakeholders' wealth.

With regards to capital structuring in terms of debt-equity ratio, the Wegagen Bank Share Company has experienced a decreasing trend of debt-equity ratio from 5.18 in 2007 to 4.46 in 2010. The Bank, on average, has had 5.76 debt-equity ratio during those four years of operations. Therefore, the leaders' contribution was 5.78 times that of the shareholders during the said time period. Wegagen Bank's debt ratio (i.e. debt-to-total asset ratio) was, on average, 0.87. This means that about 84% of the total assets are financed by using debt or external sources of finance; while 16% of accounts for equity as sources of financing its overall operations. The latter ratio, in turn, indicates that the creditors' claim is greater than that of the shareholders during those years.

On the whole, Wegagen Bank is on the verge of risk in terms of a number of pertinent factors that should be considered in deciding on the type of capital structure to follow. Even if the Bank doesn't experience the risks (both financial and business risks) to date, it does not mean that the situation will not occur in the future. This implies that the Bank is not in a good position to consider one of the basic guiding principles (risk principle) in capital structure formation.

The inflexibility of the Bank is high in response to major changes in need for funds. The Company is not using the flexibility principle in capital structure which implies that the bargaining position of the Bank is not good while dealing with suppliers of funds.

Ass there is an increase in asset-to-total liability ratio, it can be concluded that the Bank is improving its capacity to overcome liquidity problems. The decrease of the leverage ratios may

indicate that the Bank has been trying its best to finance its assets more from equity than it does from debt. These are favorable conditions for the Bank, unlike the existing condition..

The Bank abides to the rules and regulations set by the Ethiopian Government concerning liquidity and reserve requirements set by NBE. Although fulfilling the liquidity and reserve requirements is advantageous for the operation of the Bank, the excess amount of cash kept above the requirements is not advisable. The excess reserve of Wegagen Bank in the NBE implies that the Bank has been inefficient in investing its idle cash in alternative and legally permitted investment areas.

The bank is also exercising high debt proportion; that is, the lenders' contribution is much higher than that of the owners'. From the point view of creditors, this represents an unsatisfactory situation since a high portion of debt provides a low margin of safety for them. During the period of low profit, the debt servicing will prove to be high burdensome for the Company. However, from the shareholders' point of view, there is an advantage during the period of good economic activities. This high debt-equity ratio provides high rate of earnings to the shareholders' when the cost of capital is less than the Company's overall rate of return on investment. In conclusion, the Bank's leverage ratios clearly show that it has suffered from great strains which may tantamount to its failure to pay the creditors' interest charges. Therefore, Wegagen Bank Share Company's structure has been dominated by debt or has a mix of more of debt than equity in financing its operations. Thus, concerned officials of the Bank, the NBE, and policy makers at different levels in the country should take into account this package of empirical findings and the conclusions reached while working on issues related to capital structure of such marketing and banking firms in various socio-economic contexts.

Recommendations

Based on the data-supported empirical findings and conclusions made, the researchers forward the following recommendations:

- The Bank's finance manager, in his decision to finance projects with debt and equity should consider:
  - The Bank's ability to pay the creditors' interest and to repay its principal;
  - Its inflexibility to meet changing conditions;
  - Risks associated with choosing each sources of finance;

- Although the Bank fulfills its required level of reserve set by the NBE, it should reduce its excess reserve and then invest it in some short-term investment like treasury bills and in other non-fixed income securities; and
- The Bank has to reduce its debt in order to reduce its financial risk and business risk by performing one or more of the following:
  - The Bank should pay some of its debt;
  - The Bank should put more of its profits back into the Company (that is increasing the amount of its retained earnings);
  - The Bank should increase its assets from new equity contribution; and
  - The Bank shall issue additional shares.

- As the financial objective of the Bank is to maximize the value of its assets, the management body of Wegagen Bank, therefore, has to give due attention in determining the best and reasonable financing mix for the achievement of its objective. That is, the decision to finance its operations with debt or equity capital has to consider financial risks associated with choices of each source of financing.
- Even if the leverage ratio is decreasing, it does not mean that the bank is free of risk. So, the researchers recommend that the bank should prepare itself to overcome unforeseen risks some time in the future.
- It is also suggested that further studies on the creditors' and the shareholders' attitudes towards and perception of the existing capital structure of Wegagen Bank and/or other private and government owned firms using some of the influential theories of capital structuring both vertically and horizontally in Addis Ababa in particular and in Ethiopia in general.

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