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DEPARTMENT OF BANKING AND FINANCE

THE IMPACTS OF FINANCIAL LEVERAGE ON FIRM'S INVESTMENT

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The undersigned certify that they have supervised the student EWALD MUKARO'S dissertation entitled, **The Impacts of Financial Leverage on Firms' Investment,** submitted in partial fulfillment of the requirements of the Bachelor of Commerce (Honours) Degree in Banking and Finance at the Midlands State University.

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DEDICATION

To My Family for their steady fast love.

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Jeremiah 2 vs. 8: I will be with you and I will rescue you.

ABSTRACT

In this research a theoretical and an empirical framework that helps to analyze the impacts of financial leverage on firms with Zimbabwean firms under spotlight. Economists continue to debate the wisdom of adjusting capital structuresto certain specific optimal capital needed to influence investment decisions. Experts on the subject have marshaled theoretical and practical arguments, but did not reach a consensus leaving way for further study on the subject matter however this research has managed to evaluate on the subject in question looking in areas covering the effects of debt in the capital thus, giving suggestions on the way forward for firms in constructing a sustainable and sound financial stability to finance investment projects. The issue of agency participation in firms in the context of assumed roles by managers, can result in reduced investments and venture. In principle, the adverse effects of debt among firms vary according to the growth status and the components of the business capital structure. Firms with different growth levels have different impact of leverage on investments. Literature showed that leverage has a significant effect on firms performances and operations and such differ according to industry structures. The study adopted a model from Aivizian et al 2005 who studied Canadian firms on the impacts of leverage on investments patterns. From the sample, 25 firms were selected according to their price to earnings ratios with 135 observations for a period of 2010 to 2014. On firms with high growth, the impact is different from low growth firms. For capital structure, it is a managerial perspective which requires thorough analysis for them to choose the optimal level of capital balancing between leverage and equity. Financial risk may arise as a result of too much debt as internal rate of return won't be able to cover interests and principal amounts to service the obligation. This has an effect on firms price of stock on the ZSE which influence investors attitudes henceforth firms' investment patterns.

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LIST OF ACRONYMS

ZSE -   Zimbabwe Stock Exchange

MM -   Modiglian and Miller

IRR -   Internal Rate of return

RBZ -   Reserve Bank of Zimbabwe

DE-   Debt to equity

ROA-   Return on assets

ROE-   Returned earnings

LEV-   Leverage

CF-   Cashflow

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Essential to this study is to avail the platform that latches out the assessment of financial leverage and its implications to the firms in their bid to achieve their audacious investment goals.The section hence tries to highlight the targets of the study which shape the foundation of the examination. The foundation of the study is also included especially to maintain what fortified the stimulus for the exploration. Also engaged is the announcement of the issue which illuminates the issue proliferate and problem under study. Centrality of the study, suspicions, extent of the study and its confinements are too touted in predicament to explain in a nutshell the circumstances hindering exploration progress and the commitment portrayed as recipient to the organizations The organization of the study proceeds on to wrap up and give a summary of the chapter, and insight to the progressive chapters.

1.1 Background of the study

One of major significant choices going up against a firm in corporate world is the components of its capital structure. Since the work of Modiglian (1958) numerous questions have been committed to the amount of debt (that is the relative measure of obligation in the capital structure) a firm ought to tackle and why. Leverage and equity are some of the main sources of primary funding in any institution. The proportion of such sources significantly relies on how firms decide on to divide its revenues between the two broad categories that is debt and equity. Any changes in firms leverage affect the investments and henceforth the value of the company (Sharma, 2006). There is a negative effect of high levels of debt on company's financial performance and growth (Meyers 1977).

Depending on the capital structure, a firm can be exposed to various risk profiles hence an optimal capital structure is needed to be adopted. This is when business adopts enough debt in its capital structure that would possibly return more than the cost of capital when they invest. The question on the importance of a firm'sdecision of capital structure is not well known. Yet, fundamentally, it concerns the effect of the aggregate business sector estimation of the firm (total market value) which comprises of joined estimation of its obligation and its value. Market analysts generally trusted that expanding an association's influence, which is expanding the extent of obligation in its organization's capital structure, would suggest improved market value of the firm and investment opportunities to a point. But beyond that

point, further increases in leverage would increase firm's cost of capital, decrease firm's value and investment decisions negatively (White 1992).

Investment is a pivotal economic objective in the corporate financial administration. Such an action prompts the nation's financial improvement; give the general population access to dispense their needs through employment. Firms require capital for financing their projects. Among the diverse sources leverage is a less expensive source on account of its most reduced expense of capital. The choice of a firm is of three classes that can be received by the company's administration other than the financing choice and net allocation choice. The investment choice affects the organizations' benefit structure, in addition in their level of liquidity and comprises of spending the budgetary assets for the buy of genuine and money related resources for the firm. Keeping in mind the end goal to pick up a more stable financial position and development of abundance of firms' proprietors, speculation choices are made to amplify wealth and firm esteem. On the other hand, this offers ascend to organization issues. The speculation choice and the financing choice are associated that is, the venture choice is embraced in the connection to the level of financing source yet the choice to put is likewise pivotal with a specific end goal to ascertain the level of financing capitals and the requirement for discovering their sources.

Recent history has been particularly unkind to the policies which the Reserve Bank of Zimbabwe (RBZ) tried to implement despite them looking lucrative in context at their onset. The country has been experiencing a recession for over ten years despite the fact that the monitory authorities were putting measures to try to control and improve the economic welfare of the country. In the period 1997 to 2007cumulative inflation amounted to 3.8 billion % with real gross domestic product at 38%. Hyperinflation has thus robbed ordinary financial institutions of their capital. The result has been lack of savings and liquidity issues within firms in Zimbabwe. All these problems crop up on the heels of poignant retrogressive economic vendetta which have seen many firms being devoured by liquidity issues to finance their investment projects. Most firms thus were left with few options to finance their investment activities. Liquidity crunches were exprienced as general price levels sky rocketed, caught the central bank unprepared and large transaction uptake had to be lowered by introduction of huge denomination notes. As hyperinflationary environment was witnessed there was an issue of capital challenges within both listed and non-listed companies. Debt financing was showing an increase, but in real terms it was falling cause of

inflation. Also financial institutions were not willing to offer term loans and borrow long to firms. During such inflationary distress times, there was no bank lending due to negative real interest rates, surplus units were reluctant to save due to the time decay or value on money.

Majority of Zimbabwe companies were continuing to show a drastic fall in their investments there by marking a fall in new business ventures and company values. The major issue was of financing and the type of debt (leverage) to undertake therefore the effect of debt structure in capital influencing investment decisions of firms. The question on hand now is, of the use of leverage in the capital structure to improve profitability and its influences on firms' investment decision.

1.2 Statement of the problem

In the corporate world of business, corporate firms play a very significant contribution to the growth of the economy. In summary, leverage was recently seen as a dark force as it was thought that enormous amounts of debt lead to financial distress. Many studies have centered on how leverage affects growth, profitability and firms' values, mainly focusing on profitable firms in developed economies with profitable listed companies. This has left a research gap on how debt to equity in the capital structure in firms with low growth, less profitable and doing business in developing economies in Africa like Zimbabwe can manage their investments. This research seeks to bridge that research gap by exposing the impacts of debt financing on firms' investment decisions as it forms part of capital combined with shareholders' equity and returned earnings.One of the level headed discussions in corporate fund is the extent to which money related influence influences company's speculation choices- investment.

1.3 Objectives of the study

This research seeks to examine the impact of financial leverage on firm's investment levels especially when faced with varying economic and business environments and how investment decisions are influenced. In support the primary objective, secondary objectives are as follows

- To analyze the effects of financial leverage on profitability, growth and firm size
- To establish why firms choose certain levels of financial leverage.
- To find the determinants of capital structure of firms in Zimbabwe.
- To find if ZSE listed firms are at an advantage of using debt finance.

1.4 Research Questions

The objective of the study gave rise to research questions as follows:

- Why leverage is of importance in affecting profitability,growth and firm size?
- How financial leverage does affect listed firms in Zimbabwe?
- How indebtness is measured and what is the optimal level for financial leverage?
- How is leverage related to its determinants?

1.5 Significance of the study

Whilst many journals have been written on financial leverage and company values, the effect of leverage on firms' investment has been quite unique in its own context. This research provides an insight into the implications of financial leverage and firms' investment in Zimbabwe. The government through this research can benefit by looking at the macroeconomic aspects that influence investments and how such impact is affected by local firms' capital structure with high debts. The government through mainly the central bank can look into policy formulations that are investor friendly with low costs of borrowing in the financial sector. The study can be a benefit to the Confederation of Zimbabwe Industry (CZI), which it can use for assessing the effectiveness of debt to equity mixture for both listed and non-listed firms, so as to facilitate a safe, sound and harmonious environment through policy formulation on the capital structure. For regulatory authorities, the research will be pointing out issues constraining firms to grow and expand, and recommend appropriate solution in terms of debt equity ratio. The study will be an assist to small medium enterprises (SMEs) who would want to expand their operations through debt financing. This research will also act as guide to financial managers in designing an optimal capital structure to maximize firm's market values and minimize the agency cost. Firms can also devise strategically ways of exploring growth opportunities through leverage, which will act as their basis for choosing the optimal debt that will yield desired firms goals and objectives. The research can also be used by other researchers in their studies on the impacts of financial leverage using it for reference sake, as well as the researcher as well to gain an in-depth analysis and knowledge how debt to equity ratios in firms influence investment decisions.

1.6 Assumptions of the study

The following assumptions have been made in an attempt to

- The study assumes that all facts and figures collected in secondary collection exercise are accurate.

- The study assumes that macro-economic variables like interest rates ,taxes and output remain constant during period of study

- The study assumes that investment opportunities vary among firms under study.

1.7 Delimitations of the study

The research is mainly focused on the companies both listed and non-listed on the ZSEwith the most significant aim of the research being the effects of financial leverage on firms investment decision. The research is done basing on published financial statements, investment trends and monetary policies reviewed prior dollarisation, thus the study is sure to consider quantitative data which includes under the time of the study and this would be utilized for investigation andmodeling.

1.8 Limitations of the study

The validity of the finding might be impaired by the below factors:

- Some information might not be representative of reality and this will produce inaccurate research.

- Quantitative information might be inadequate to explain real situation under investigation because there are some other unquantifiable variables, but equally important as the quantifiable.

- Inadequate sources of information can affect the results of the study in that some essential information might be left out because of unavailability.

- Unreliability of some of the data implies that some of the data could be biased and thus would result in maybe wrong conclusions

- Time constraints, limits the research from being done adequately thus would lack the absolute accuracy of results.

1.9 Definition of terms.

Financial leverage-refers to the degree to which firms utilizes borrowed funds/debts.

Investment–buying or making an advantage with the desire of capital gratefulness, profits (benefit), premium income, rents, or some mix of these.

Capital-initial amount need to venture into a specific business.

1.10 Organization of the study

Chapter one has established the framework whereupon the examination will be done, with the presentation of the study and purpose of the research as stipulated in the goals of the study. The next chapter will primarily be for literature review or theoretical and conceptual framework. It will contain a number of sub-sections explaining concepts and principles that fit most with the thrust of the research topic. This will put the research topic into context by synchronizing it with existing views, facts and findings by previous researchers on similar studies. Quantitative methods are used in collecting and processing data for the research. Chapter three will follow looking at method of the research where a model will be developed in concern with asset bubbles and determinant variables. Following will be chapter four which basically presents and analyses data under the period of investigation. The fifth chapter will thus analyze the findings derived in chapter four and goes on to conclude and give recommendations.

CHAPTER 2 : LITERATURE REVIEW

2.1 Introduction

In this corporate world of finance many theories explain the relationships and linkages between financial leverage and investments decisions and patterns. This chapter adds to the synchronization of writing ready to the push of the subject, hence it looks to give a hypothetical structure of the study. Consideration will be given to clarifying ideas and principals that fit most with the fundamentals and determinants of both leverage and investments and their linkages and effects on various firms. The chapter will attempt to synthesis the various theories postulated on capital structure and investment, integrating their relationship to the main aim of the research.

2.2 Capital Structure: An overview.

According to Firer et al, 2004 capital structure is defined as the relative amounts of debt and equity a firm utilizes for financing all its operations or activities. The researcher defined it as a combination of equity, debt and all other securities in which a firm uses to finance its existing assets. Capital structure decisions within a firm are made internally hence firms uses or choose different levels of optimal capital structures. The Net Income approach puts forward the argument that leverage or capital structure can affect the cost of capital and hence the value of the firm. Recent research (David and Olorumfemi, 2010) found that the overall cost of capital will be reduced and the value of the firm increased as the ratio of debt in a firm's capital structure is increased. David and Olorumfem went on to state that as the ratio of debt is increased in the capital structure the weighted average cost of capital (WACC) falls and approaches the cost of debt. The optimum capital structure exists and will be attained when the value of the firm is maximized. This occurs when the WACC is at its minimum.

The traditional theory like the Net income approach, assumes that an optimal capital structure does exist and depends on the level of gearing (Zhanje and Kwesu, 2003). The argument is based on the reasoning that since interest on debt is tax deductible, as debt is moderately increased, the weighted average cost of capital falls leading to an increase in the value of the firm. The weighted average cost of debt will fall because the moderate increase in debt does not increase the overall risk of the firm and hence the shareholders will not increase their required rate of return. However, as more and more debt is employed, an optimal point will be reached. Any further increase in the debt ratio result in an increase in weighted average

cost of capital as the overall risk of the firm is increased and the shareholders will ask for an increase in the required rate of return on capital. Some researchers have found evidence in support of positive relationship between optimal capital structure and investment patterns between firms. There is direct correlation between leverage and company investment decision as concluded by Sharma (2006). Assets that increase level of debt finance can result in increased earnings per share and returns on equity. Theoretically, optimal capital structure implies that equity and debt combination will mean capital cost is at its minimum Glen et al (1994).

2.3.1 Capital Structure and Financial Leverage

An association's capital structure alludes to the blend of its budgetary assets accessible for carrying on the business and is an important determinant on how the business works. As financial is questionable, basic asset for all organizations, suppliers of the fund have the capacity to apply control over firms. Obligation and value are the two noteworthy classes of financing for a business. While obligation holders apply lesser control over the organization, and don't decide how the business is run, they acquire a settled rate of return and are ensured by contractual commitments. The contractual commitments direct what return is to be paid for the fund and when it is expected. Value holders are the remaining inquirers of all the business' profits, bearing the vast majority of the danger and having more prominent control over choices (Kochhar, 1997).

The capital structure of a firm is depicted as the segments of its wellsprings of financing, comprehensively sorted as equity and obligation fund (Brockington, 1990). Value (equity) fund is that back gave by the proprietors of the business and it is the risk bearing finance. Value money holders possess a bit of the firm designated in shares and they are qualified for a piece of the benefit of a business, alluded to as a profit. It is on the other hand, not obligatory to pay a dividend all the time as the organization may hold the benefits for financing development of its operations. Equity proprietors additionally partake in the dangers of the business and are the last to advantage when a business is twisted up after obligation holders have been paid.

Debt fund, is account produced through obtaining from outer sources, for example, banks or from issues of securities, all of which pull in an altered return. Obligation may be short term, repayable over periods shorter than one year, or long haul, repayable over periods longer than one year. The bank does not pick up a control of the business, but rather is paid a predefined

cost for the utilization of his assets, called interest(premium). The borrower has a contractual commitment to pay the interest and to reimburse the main when due. Damodaran (1999), characterized influence as a financing system intended to expand the rate of profit for proprietor's venture by producing a more noteworthy profit for acquired assets than the expense of utilizing the assets.

2.2.2 Measurement of Financial Leverage

Bierman (1999) postulated that debt can be measured in four ways. The static measure of debt using book values is the proportion of debt to the total value of capital or debt to the sum of debt and common stock. A second measure of indebtness is the static measure of obligation utilizing business sector values and is characterized as the extent of obligation to aggregate capital or the entirety of obligation and normal stock, with the obligation and value taken at business sector esteem. It is estimated as in the same path as the first measure as above. The streams measure of indebtness uses premium and pay and it is estimated as the proportion of the profit before interest and expense (EBIT) to the enthusiasm for the period.

This proportion demonstrates firms' obligation adjusting limits and demonstrates the number of times the interest charges for the period are secured by assets that are customarily accessible for the interest installment. The fourth measure is the flows measure of leverage, utilizing cash flows and utilizes the proportion of money inflows (pay including deterioration and other non-money costs) and money surges (as far as installment of obligation). It quantifies the capacity of a firm to back its obligation commitments of paying the hobby and obligation essential as they fall due. Nivorozhkin, (2000) expressed an essential worry over the utilization of book qualities versus business sector values information, in the estimation of indebtness and liked to utilize business sector values , as they give a more precise portrayal without bounds cashflows and their related risks. This however presents an issue experienced when business sector costs changes. Financial leverage in the modern world has its own merits and demerits which are outlined below:

2.2.4 Advantages of financial leverage

Debt financing provides small and medium enterprisesproprietors with a more noteworthy level of funds related opportunity than equity financing. Obligation commitments are constrained to the advance reimbursement period, after which the loan specialist has no further claim on the business, though value speculators' case does not end until their stock is

sold. Moreover an obligation that is paid on time can improve a growing company's credit assessment and make it much less demanding to get debt of funding later on.

Leverage permits the founders to hold ownership and control of the organization. As opposed to equity financing, the business visionaries have the capacity to settle on key choices furthermore reinvest organization benefits.Obligation financing is likewise simple to direct, as it for the most part does not have the mind boggling reporting necessities that go with a few types of financing. Obligation additionally tends be less unreasonable for developing firms over a long haul, however more costly in the event that they acquire short than value financing.

2.2.5 Disadvantages of financial leverage

The main demerit of debt financing is that it requires a growing firm to make regular installments usually monthly of the principal and interest. Growing firms often experience deficiencies in cash flows which turns be difficult to adhere to such regular payments henceforth may default. Most lenders posefirm punishments for missed or late installments, which may incorporate charging late expenses, taking ownership of security, or calling the advance due right on time. Small firms' credit rating may decrease and their ability to obtain loans in the future may be slim if they fail to make payments on the loan. Another disadvantage is that its availability is often limited to well establish business, with better credit ratings so as to minimize risks of default.Since lenders principally look for security for their assets, it can be troublesome for dubious organizations to get credits. Also the measure of cash little firms may be capable get through obligation financing is liable to be constrained, so they may need to utilize different wellsprings of subsidizing too.

2.3 Theories of capital structure

Modigliani and Miller (MM) (1958) capital structure hypothesis gave an essential kick off in the creating of hypothetical system inside which different speculations were made from. Modigliani and Miller (1958) finished up to the comprehensively known hypothesis of capital structure unimportance where firms' money related influence does not have an immediate connection with association's quality and venture choices. According to Zhanje and Kwesu (2003), the MM theory is based on the proposition the capital structure is irrelevant to the value of the firm. The other proposition is that leverage increases the firm's expected earnings but does not increase the value of the firm because the increase in the earnings is offset by the increase in the required rate of return. Their theory was based on many

assumptions like there were no transactions costs, investors have homogeneous expectations, stocks and bonds are traded in perfect markets and that the debt of firms and individuals are riskless, whereas, their assumptions did not hold in the corporate world. The vicinity of insolvency expenses and great assessment treatment of interest installments lead to the idea of an ideal capital structure which expands firm esteem in the meantime minimizing its aggregate expense of capital.MM however challenged that view in their article in 1958.They contended that market values, the acquiring force of an organization's genuine resources and that if the organization's capital investment program is held settled and certain different suppositions are fulfilled, the consolidated market value of the organization's obligation and value is autonomous of its decision of capital structure. Since Modigliani and Miller distributed their capital structure irrelevancy paper, much consideration has concentrated on the rationality of these assumptions which incorporate the nonappearance of taxes, insolvency costs, and different imperfections that exist in this present world. In view of these flaws, an organization's decision of capital structure surely affects its aggregate business sector esteem. Case in point, considering expenses in their investigation Modigliani and Miller (1963) suggested that organizations ought to use however much obligation as could be expected because of duty deductible premium installments. Additionally, the estimation of a levered firm surpasses that of an unlevered firm by a sum equivalent to the present estimation of the assessment funds that emerge from the utilization of obligation.

Rather than the tax benefits on the utilization of obligation account DeAngelo and Masulis (1980) recommended that organizations have courses other than the enthusiasm on obligation to safe house salary, for example, devaluation, investment tax credits and tax loss carry forwards. The advantage of tax shields on interest installments urges firms to tackle more obligation, additionally expands the likelihood that profit in a few years may not be adequate to counterbalance all expense reasonings. Subsequently, some of them may be repetitive including the tax deductibility of interest installments. So firms with extensive non-obligation tax-shields in respect to their normal income incorporate less debt in their capital structure. This perspective proposes that non-tax shields are the substitute of the tax shields on debt finance, and along these lines, the relationship between non-tax shields and leverage ought to be negative.If capital structure is irrelevant in a perfect market, then imperfections which exist in the real world must be the cause of its relevance suggested by MM in their 1958 paper. The theories below try to address some of these imperfections, by relaxing

assumptions made in the M&M model. These theories include the pecking order theory, trade off theory, agency cost theory, life stage theory and the free cash flow.

2.3.1 Agency Cost theory

This theory looks to clarify the relationship between two or more people. As per Hendriksen and Breda (1999, p. 139), "one of these two individuals is an agent of the other, called principal − from there the name of the agency theory. The agent undertakes to do certain tasks for the principal; the principal undertakes to remunerate the agent" In this relationship it is normal that the operators will settle on choices that aim at the interests of the principal ,on the other hand, as indicated by Eisenhardt(1989, p. 59), principal and agent are occupied with a corporative conduct however have diverse objectives and distinctive demeanors/attitudes with connection to risk. Jensen and Meckling(1976, p. 5), characterize an organization relationship as "a contract by which one or more persons (the principal(s)) contract another person (the agent) to execute some service in favor of them and which involves delegating to the agent some authority of decision making".According to the agency theory, a higher level of debt increases the shareholders' wealth because of its disciplinary effect on the managers' behavior. There are many types of inherent conflicts of interest in this theory that is manager-to shareholder and creditor-to-shareholder conflicts. In, manager-to-shareholder, the shareholders expect managers to maximize their value, and when debt increases, shareholders can bind managers to service the debt obligation.

Thus when leverage increase, a huge part of generated cash flows should be used in paying debt obligations. In this case shareholders reduce the free cash flow in the company and disapprove managers from investing in sub optimal or overinvestment. The administrators will lose their substantial investments in the event that they neglect to satisfy their commitments of debt, and this will bring about bankruptcy (Jensen & Meckling, 1976). The theory likewise offers another perspective point to clarify the high productivity and debt proportion relationship. In a benefit bitable firm, it is more helpful for directors to keep low obligation proportion in light of the fact that free money streams are not dedicated to obligation installment and can be utilized for administration's hobbies, and along these lines chiefs are sans then from obligation adjusting/installment weights. This reasons misfortune in shareholder's stock worth and it is called office hypothesis. On the financial specialist side, clashes existent in the relationship in which the foremost is spoken to by the investor in

venture assets and which representatives controls so that the executive of this asset, who is constituted in the operators, deals with his assets.

In specific circumstances, as indicated by the Agency Theory, the director of a investment fund, on accepting the assets from the financial specialist, can settle on decisions that produce an increment of his utility in hindrance of the utility of the speculator. In the event that the director of a venture asset is compensated by method for a settled installment freely of the gainfulness of this asset then there won't be thought processes in him to attempt to amplify the arrival of the financial specialists. On the other hand, if this chairman is compensated by method for the charging of an expense on the gainfulness of the portfolios that he controls he will be slanted to deal with the advantages in a manner as to bring about more prominent and more serious dangers with the intuit of getting more noteworthy return (Sharma, 2006).

Subsequently incorporating the organization costs into the static exchange off hypothesis implies that a firm decides its capital structure by exchanging off the assessment point of preference of obligation against the office expense of value. The most well known capital structure model is the static exchange off hypothesis, which guarantees that expense shields advantages of an obligation financing should be balanced for money related pain costs that ascent with expanding obligation levels, making an ideal capital structure that compare both strengths. Forseberg (2000) found that as obligation proportion diminishes as office expense on the grounds that an expanding extent of proprietorship by administration and that those organizations with less shareholders have more obligation than firms with numerous shareholders. Issuing value means moving far from that ideal and ought to in this manner be deciphered as dreadful. The size of this impact ought to be identified with the extent of taxation rate.

Over-investment is another possible agency problem where the problem is between managers and shareholders (Cantor, 1988). Supervisors perceive chances to extend the business regardless of the fact that that implies undertaking poor tasks and diminishing shareholder welfare. Administration's capacity to do this strategy is constrained by the accessibility of income and further fixed by the financing of obligation. Leverage is henceforth, a route for overcoming the overinvestment issue demonstrating a negative relationship between and investment for firms with low growth opportunities. Whether debt financing impel firms to make over-investment or under-investment is debatable. Taking loans commits a firm to pay cash as interest and principal and managers are forced to serve such commitments. However,

too much debt is considered to be bad as it may lead to financial distress and agency problems.

2.3.2 Pecking order Theory

According to Meyers (1984), due to adverse selection, firms prefer internal sources of finance to external sources of finance. When outside funds are necessary, firms prefer debt to equity because of lower information costs associated with debt issues. It depends on two noticeable assumptions. In the first place, the managers are all around vested with their own organizations' prospects than are outside speculators. Second, managers act to best advantage of the shareholders. Under these conditions, a firm will infrequently renounce positive net present value investments if tolerating those strengths firms to issue underestimated value to new financial specialists. This thus gives a method of reasoning to firm to value financial slack, such expansive money and unused obligations limit. Conversely firms utilize more obligation to overcome data asymmetry and flag better prospects, Ross (1997). All the more particularly the pecking request hypothesis predicts that organizations like to utilize interior financing when accessible and pick obligation over value when outside financing is required. It is a standout amongst the most influential theories of leverage where equity is once in a while issued. These thoughts were refined into key testable expectation by Shyam-Sunder and Meyers (1999).

2.3.3 Life Stage Theory

The capital base of a company can be a result of the life stage in which the firmis, since its financing need may evolve as a company's circumstances do(Bender et al, 1993).They also maintain business risk reduces as time progresses allowing financial risk to increase. They should therefore continue to accommodate more leverage in their financial capital structure as they mature. Frielinghaus et al 2005 also concluded that capital structure life stage theory asserts that more debt should be utilized by a firm as they mature. Life stage model postulates in line with the Static trade off theory, that leverage ratios should follow a high low trend in the life of a company. This theory argues that firms will adjust their business techniques as per the inside and external situations they have encountered in the past or hope to experience later on.

Bender and Ward 1993 added that adjustments to long term techniques could either build or decline the firm income, for instance firms at a certain stage may choose to grow or scale back their operations on the grounds that administration suspect that such activities could

enhance profitability. Likewise, corporate officials could choose to build or abatement the company's level of financial leverage keeping in mind the end goal to enhance their profit.

2.3.4 Free Cash Flow Theory

Another condition of theory of capital structure is the theory of free cash flow which states that high leverage levels leads to a rise in firm value notwithstanding the risk of financial distresses, when a company's working money streams(cash flows) surpasses its profitable investment opportunities (Meyers, 2001). Clashes shareholders and managers over payout arrangements are particularly serious when a firm produces free cash flows. The issue comes when they have to inspire managers to disseminate the free cash flows among the shareholders as opposed to contributing it at beneath the expense of capital or squandering it on hierarchical inefficiencies. As indicated by Jensen (1986), leverage can be utilized as a controlling gadget that submits the supervisors to pay out free cash among shareholders that can't be productively reinvested inside the firm. Grossman and Hart (1982) observed that debt can make a motivating force for managers to work harder, expend less perquisites, settle on better investment choices, when liquidation is exorbitant for them, maybe they may lose the advantages of control and reputation. These results propose that a high obligation proportion may be hazardous for a firm, yet it can likewise include esteem by putting the firm on an eating regimen.

2.3.5 The Market timing Theory

The market timing theory of capital structure argues that their equity issues in the sense that they issue new stock price is perceived to be overvalued, and buy back own shares when there is undervaluation.Subsequently,fluctuations in stock prices affect firm's capital structures. There are two versions of equity market timing that lead to similar capital dynamics.The first assumes economic agents to be rational.Firms are assumed to issue equity directly after a positive information release which reduces the asymmetry problem between the firm's management and stockholders.The decrease in information asymmetry coincides with the an increase in stock price.In response, firms create their own timing opportunities.The second theory assumes the economic agents to be irrational. Due to irrational behavior there is a time-varying mispricing of stock of the firm. Managers issue equity when they believe its cost, are irrationally low and repurchase equity when they believe its cost is irrationally high. It is important to know that the second version of market timing does not require that the market actually be inefficient. It does not ask managers to

successfully predict stock returns. The assumption is simply that managers believe that they can time the market.

2.4 Capital Structure, Financial Leverage and its Determinants.

Previous theories imply that, depending upon firms' characteristics, the optimal capital structure varies across firms. Below are the firms' specific factors that vary across firs which influence debt to equity in the capital structure.

2.4.1 Profitability

The tradeoff hypothesis suggests a positive relationship between of leverage and profitability since high productivity promotes the utilization of debt and gives a motivation to firms to profit the advantage of tax shields on interest installments. The pecking order hypothesis proposes that companies want to utilize internally generated funds and reserves when accessible and pick debt over equity when outer financing is required. Subsequently, this hypothesis proposes a negative relationship between of profitability and debt. Toy et al, (1974) reported a negative relationship between profitability and leverage in their study. In asymmetry information models of Ross (1977) profitable firms are anticipated to have higher leverage while Titman and Wessel (1988) and Farma and French (2002) demonstrate this is not a typical finding. Leverage observes returns and debt to be contrarily connected**.**

2.4.2 Growth

According to the tradeoff theory, companies with future growth opportunities, which have intangible assets, have a tendency to get not as much as organizations holding tangible assets on the grounds that development opportunities can't be collateralized. This discovering recommends that there is a negative connection between leverage and growth opportunities have more adaptability to contribute sub-ideally accordingly, confiscate riches from obligation holders to shareholders. So as to control these organization clashes, firms with high development opportunities ought to get less.

Growing firms have excess of positive net value projects while mature firms may have an abundance of funds. Jensen and Meckling,(1976) recommend that a specific capital structure can come about because of utilizing debt as a checking and controlling device for managers. Furthermore, Jensen (1986) points out that moderate firms have an a lot of excess cash that directors may choose to use for the determination of ideal capital structure, individual perquisites and other positive present worth tasks. On the off chance that a firm issues

obligation, director will possess an expanding rate of the company's stock. Besides, excess money will be decreased and debt contract and bondholders will go about as observing and controlling agents over the manager's behavior.

2.4.3 Company size

The pecking order theory suggests a negative relationship between company size and debt ratio, because of information asymmetry which is severe for large companies. Owing to this, large firms should borrow less due to their ability to issue informational sensitive securities. Rajan and Zingales (1995) research of firms in G-7 nations observed that huge firms have a tendency to be more broadened and diversified hence, have lower productivity of default. Rajan and Zingales' contention is steady with the forecasts of the exchange off hypothesis which recommends that substantial firms ought to obtain more on the grounds that these organizations are more enhanced, less, and have generally bring down insolvency costs.Furthermore, large firms likewise have lower agency expenses of debt for instance; moderately lower monitoring expenses on account of less volatile cash flow and simple access to capital markets. These discoveries recommend a positive relationship between the size and influence.

2.4.4 Industry

The relationship between industry enrollment and capital structure has received extensive consideration. Harris and Raviv (1991)noted that it is for the most part acknowledged that organizations in a given industry will have comparative ratios while leverage proportion differ crosswise over industries. Schwartz and Aronson (1967) reported a relationship between industry and capital structure in five commercial enterprises. These concentrates all found that particular commercial ventures have a typical influence proportion which extra time is moderately steady.

2.4.5 Taxation

Tax shields benefit in the debt finance may either may either be reduced or even eliminated when a firm is reporting an income that is consistently low or negative. Consequently, the burden of interest payments would be felt by the firm .DeAngelo and Masulis (1980) proposed that non-debt tax shields are the substitute of tax shields on debt financing. So firms with larger non-debt tax shields, ceteris paribus, are expected to use less debt in their capital structure.

2.4.6 Legal Regulation

Managers must follow several rules and regulations when making financial decisions. These statutory requirements may include minimal size of share capital, requirements on equity, limitations on the distribution of profits as dividends and minimum size of mandatory dividends. When those regulations affect every company, special attention the legal regulation when making financial decision should be adhered to in the regulated industries. The firm opts for equity and debt strategically to influence the result of the regulatory procedure. The whole legal system affects the financing decisions of firms to a certain degree (Benjamin and Friedman, 1985).

2.4.7 Shareholder Preference

There also exist an impact of shareholder preferences on capital on capital structure due to separation of ownership and control;it plays a vital role in the literature on SMEs and enterprenuership. Barton et al,1989 argued that financing decision in the SMEs are determined to larger extend by the owners values, business objectives and aspirations. The survey conducted by Romano et al, (2000) confirmed such a relationship.

2.4.8 Risk Management Considerations

Smith et al 1987 argued that hedging reduces the probability of default and thus also expected costs of financial distress, and therefore raises the debt capacity of the firm. Interest rate risk and foreign exchange risk both interacts with financial decision that companies may minimize firms can reduce the variability of their cash flows by matching the interest rate exposure of cash, the liabilities to that of their assets(Faulkender,2005).Matching the currencies of cash inflows and out flows reduces the variability of cash flows in a similar fashion. Graham et al 2001 shows that companies use foreign dominated debt as a natural hedge against foreign currency devaluation. Risk management practices also explain the choice between short term and long term debt.

2.4.9 Tangibility

Myers and Majluf (1984) contended that organizations may think that its invaluable to offer secured obligation on the grounds that there are a few expenses connected with issuing securities about which the company's directors have preferred data over outside shareholders. Hence issuing obligation secured by the property with known qualities keeps away from these expenses. This discovering recommends a positive relationship in the middle of

unmistakable quality and influence in light of the fact that organizations holding resources can delicate these advantages for loan specialists as security and issue more obligation to exploit this open door. Besides, the discoveries of Jensen and Meckling (1976) and Myers (1977) recommend that the shareholders of exceptionally utilized firms have a motivator to contribute sub ideally to confiscate riches from the association's obligation holders. However, obligation holders can limit this crafty conduct by compelling them to display substantial resources as guarantee before issuing advances, yet no such control is feasible for those tasks that can't be collateralized.

2.4.9.1 Liquidity

The Tradeoff hypothesis proposes that organizations with higher liquidity proportions ought to get more because of their capacity to meet contractual commitments on time. In this way this hypothesis predicts a positive linkage in the middle of liquidity and influence. On the hand, the pecking request hypothesis predicts a negative relationship in the middle of influence and liquidity on the grounds that a firm with more prominent liquidities likes to utilize inside created reserves while financing new speculations.

2.5 The Relationship between Financial Leverage and Investment

For a long time, the relationship between leverage and investment opportunities has been a theme of enthusiasm among finance researchers. Lang et al., (1996) and Aivazian et al., (2005) demonstrated that debt and investment are adversely related. There are few good reasons to believe that at low to moderate debt ratios, further increases in debt ratio lower the required rate of return for initiating investment projects and therefore, more highly leveraged firms should invest more considering the impact of leverage on cost of capital. Under the first Modigliani proposition, influence and venture were not related. On the off chance that a firm had productive venture opportunities, it could get subsidizing for these open doors paying little respect to the way of its monetary record. In any case, the capital structure writing has contended that obligation to value and venture opportunities are firmly related.

Some authors have concentrated on the effect of leverage influence on investments. They came to clashing conclusions utilizing different methodologies. It is imperative to separate between over-investment and under investment. As indicated by Myers (1977), high leverage overhang diminishes the motivating forces of the shareholder-administration coalition in control of the firm to put resources into positive net present value of investment opportunities, since the advantages gather to the bondholders as opposed to the shareholders.

Subsequently, profoundly levered firm are less inclined to explore significant development opportunities as contrasted with firm with low levels of influence. A related underinvestment hypothesis fixates on a liquidity impact in that organizations with extensive obligation duty contribute less regardless of what their development opportunities. Hypothetically, regardless of the fact that leverage makes potential underinvestment impetuses, the impact could be reduced by the firm remedial measures. At last, influence is brought down if future development opportunities are perceived adequately early.

Modigliani and Miller (1958) contended that the investment policy of a firm ought to be construct just in light of those components that will boost profitability, revenues or cash flows of a firm. Many empirical literatures have tested the leverage irrelevancy hypothesis of Modigliani and Miller. The irrelevancy suggestion of Modigliani and Miller will be legitimate just if the ideal business sector presumptions basic their examination are fulfilled. On the other hand, the corporate world is described by different business sector defects, because of exchange expenses, Institutional Confinements and lopsided data. The collaborations between administration, shareholders and obligation holders will produce grindings because of organization issues and that may result to under-speculation or over-venture motivating forces. As expressed before, one of the primary issues in corporate finance is whether leverage effectively affects investment arrangements and policies.

Furthermore, Jensen (1986) argues that firms having more internally generated funds than positive net present value investment opportunities, the presence of debt in the firms' capital structure may force managers to utilize the funds in servicing the debt which could have been utilized in investing in negative net present value projects at the detriment of shareholders interest. Such situation can be coined as the over-investment problem. Hence debt financing can be utilized as an instrument to curtail the over-investment problem by forcing managers to pay out excess funds to service debt. Hence for these types of firms debt financing has a positive impact on the value of the firm.

Whited (1992) has demonstrated how investment is more delicate to cash flows in firms with high leverage when contrasted with firms with low leverage. Cantor (1990) demonstrated that investment is more sensitive to profit for high levered firms. Kopcke and Howrey (1994) have used accounting report variables as particular regressors in the speculation mathematical statement and contend that these impacts are not imperative. There is backing for both the over-speculation and under-venture hypotheses in the surviving observational writing. As

needs be, Mc Connell and Servaes (1995) have analyzed a vast example of non-budgetary United States firms for the years 1976, 1986 and 1988.They demonstrated that for high development firms the connection between corporate esteem and influence is negative, though that for low development firms the connection between corporate esteem and influence is absolutely corresponded. Likewise the assignment of value possession between corporate insiders and different sorts of financial specialists is more essential in low development than in high development firms.

Lang *et al* (1996) has use a pooling regression to estimate the investment equation and most of other studies have also used a pooling regression method. They have shown that there is a negative relation between leverage and future growth at the firm level and for diversified firms, at the business segment level. Also debt financing does not reduce growth for firms" known to have good investment opportunities. But it is negatively related to growth for firms whose growth is either not recognized by the capital market. Childs et al (2005) argued that financial flexibility encourages the choice of short-term debt thereby dramatically reduces the agency costs of under-investment and over-investment. However the reduction in the agency costs may not encourage the firm to increase leverage, since the firm's initial debt level choice depends on the type of growth options in its investment opportunity set. Previous studies that have shown relationship between leverage and growth, such as McConnell and Servaes (1995) and Lang *et al* (1996) have use a pooling regressions to identify the impact of leverage on growth. Such an approach may not fully growth opportunities. Aivazian*et al* (2005) analyzed the impact of leverage on investment on 1035 Canadian industrial companies existing at the end of 1999. The data files cover the period from 1982 to 1999. They found a negative relationship between investment and leverage and that the relationship is higher for low growth firms rather than high growth firms.

2.5.1 Empirical review

The impacts of financial leverage on firms' investment decisions ranges from a wide range of tested findings in and around the world markets. Many findings were found ranging from a direct relationship between financial leverage and investment of the firm and in contrary with this.

2.5.2 Capital structure and Investment linkages

Lang et al., (1996) demonstrated that there was a negative relationship between leverage and future growth at the firm level and for diversified firms. They analyze a large sample of US

industrial firms over the period 1970-1989 and found that for only firms with weak growth opportunities, that are Tobin's q less than one, there is a strong relationship between leverage and investment.

Ahn, Denis and Denis (2004) tested the relationship between leverage and investment in diversified firms, defined as those firms reporting at least two segments operating in different 3-digit SIC codes. comprising 8674 firm-years and 24 400 segment-years over the period 1982 through 1997 and their findings suggest that higher leverage appears to impose a greater constraint on investment in the high q segments of diversified firms than in the low q segments.

Moreover, Aivazian et al., (2005) analyzed the impact of leverage on investment on 1035 Canadian companies over 1982 to 1999. They established a negative relationship between investment and leverage and that the relationship is higher for low growth firms rather than high growth firms. The paper tested the robustness of these results using alternative empirical models and also employed the instrumental variable approach to deal with the endogeneity problem inherent in the relationship between leverage and investment. The results provide a support to agency theories of corporate leverage.

Dang Viet Anh (2007) studied the interactions between the firm's financing and investment decisions in the presence of underinvestment and overinvestment incentives. The finding shows that high-growth firms control underinvestment incentives by reducing leverage but not by shortening debt maturity ex ante. The paper also documented a negative effect of leverage upon investment ex post, supporting the hypothesis that leverage has a disciplining role for firms with limited growth opportunities. The paper uses an unbalanced panel of UK firms that was collected from DataStream which is a database that maintains both cross-sectional and time-series company accounting and financial data. The sample included 1,683 firms. Data on the interest and all the data are collected from 1995 to 2003.

Odit and Chittoo (2008) attempted to explore the relationship between financial leverage and investment decisions of Mauritian firms using firm level panel data which comprises of 27 firms all listed on the SEM, sampled over a 15 year period from 1990 to 2004. The results revealed a significant negative relationship between leverage and investment for low growth firm.

Hite(1977)demonstrated a positive relationship because given the level of financial leverage ,an investment increase would lower financial risk and hence the cost of bond financing. Dotan and Rotan(1988) also show a negative relationship because they asserted that investment increase would raise financial risk and hence the cost of bond financing how the investment increase affects financial risk and the sub suitability between tax shields and hence; financial may depend on firm-specific factors. Daddon and Senbets(1988) hypothesis on the relationship between bond financing and capital investment which is conditional on from specific variables such as tax shield, retention ability, capital intensity and insider equity ownership.

Furthermore, Frank and Huyghebaert (2008) exploited some of the specific characteristics of private firms to investigate the nonlinear and multi period aspects of theoretical asymmetric information and agency models explaining the leverage and investment relation. They used the fixed-effects regression based on a sample of 64,246 private firm-years between 1996 and 2005 which support both multi-period and non-linear implications of credit constraints as they reveal a negative impact of leverage on investment expenditures, which reduces in the debt level but never turns positive. Overall, they find no support for the agency model of underinvestment in their sample of private enterprises.

Singania and Seth (2010) examined the effect of financial leverage and investment opportunities in India. The sample they used consists of 963 companies that are listed on the Bombay Stock Exchange (BSE) for the period 2004-2008. The findings of this paper suggest that there is an inverse relation between the debt ratio of the companies and their growth when tested by the pooling method of the panel data..

2.5.7 The relationship between financial leverage and its determinants

Upneja and Dalbor in 2001 found out that there was a positive relationship between growth opportunities and debt ratio. They argued that lodging firms are capital intensive and are different from other industries. Lodging firms could finance fixed assets with debt more conveniently. In general, there is a negative relationship between growth opportunities and debt ratio. Their study showed that there was no significant relationship between debt ratio and growth opportunities.

Chiang et al (2001) examine the relationship between capital structure and performance of firms in property and construction sector in Hong Kong showing that high gearing is

negatively related with performance and profit margin. Margaritis and Psillaki (2007) find that there is an inverse causal relationship that exists between efficiency and leverage. They concluded that the effect of efficiency on leverage is positive at low to mid leverage levels and a negative at high leverage ratios. However, Myers (2001), writing on capital structure concluded that there is no universal theory of the debt to equity choice.

Wald (1999) has shown a significant positive relationship between firm size and leverage for firms in USA, the UK and Japan and an insignificant negative relationship for firms in Germany and a positive relationship for firms in France.Chen (2004) has shown a significant negative relationship size and long term leverage for firms in China. Several empirical studies have reported a significant positive relationship between leverage and firm size (Marsh, 1982; Baue, 2004; Deesomsak et al, 2004)

2.6 Summary

Literature gathered covered the impact of capital structure on firms' investments as it is perceived and practiced in other economies other than Zimbabwean environment. This is the main area of the study to find out how financial leverage affects investment opportunities and decisions of the company. The next chapter looks at research methods used and adopted and used in the data collection as well as the relevancy of tools used in data collection.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology used by the study in carrying out the study. This entails presentation of methods that were utilized in the collection and analysis of data in order to meet the objectives of the project these include model specification, justification of variables used and the estimation procedure. The linear and non-linear regression model will be used to econometrically present analysis of the tools that were used in the data collection and this is crucial as the credibility of research findings is justified by the reliability of methods used in the data collection and analysis process.

3.2 Research Design

The study specifies methods and techniques adopted for gathering and investigating required data. It gives a system of the examination arrangement of activity. Hence; quantitative analysis of secondary data will be used by the researcher in an attempt to fulfill the objectives of the research. The researcher will utilize econometric procedures to estimate the resultant equation of variables using Econometric software called STATA version 12.1. The study employed a linear and nonlinear regression model since the researcher suspects both a nonlinear and linear relationship on firms with high growth and low growth form the experimental study.

3.3 Research Population

This refers to the population under experimental research. The research centered mainly on companies on the ZSE, from period of 2009 to 2014. Aivizian et al (2005) used the a sample size of 25 listed firms. In this study, all the ZSE listed firms were used for research population.

3.4 Research Sample

A sample is a piece of a substantial population that is chosen to produce results for the whole population. The characteristics of this sample was synonymous with the whole populace under study.From the total population, the sample selected was stratified by the industrial sector in order to understand the characteristics of the subsets . In the study, the sample taken were holding firms listed on ZSE and out of that only 25 firms were chosen after running a sample size calculation with sample size calculator. To demarcate firms with high and low growth, the study employed price to operating-earnings (P/E) ratio. This ratio is obtained by

dividing the stock price at the end of the period by the operating earnings per share for these years. Price earnings per share were utilized in the study because it is being calculated before interest payments. Hence the earnings figure is unaffected by leverage. Firms with negative earnings were discarded from the sample that is, 10 firms were removed from the list. Firms with high P.E ratio were classified under high growth opportunities and those with low P.E were classified under low growth opportunities firms (below the median P.E ratio). This method was adopted by McConnell and Servaes (1994).

3.5 Model Specification

Correlation analysis is used to depict the extent to which one variable is straightly related with another. The analyst utilized net speculation as an intermediary and as a needy variable to locate the noteworthy impact effect of leverage on investment.

The study adopted a model approach from AvizianGe and Qui (2005), using a reduced form of investment equation to estimate the impacts of debt on investment using panel data. This is as follows:

$$I_i t/K_{i,t-1} = \alpha + \beta (CF_{it}/K_{i,i}) + \beta_1 Q_1_i + \beta_2 LEV_i + \beta_3 ROA_i + \beta_4 RETE_i + \mu_{1,t} + \varepsilon_i$$

Where:

$I_i t$ –represents the net investment of firm I during the period t

K_i-the net fixed assets

CF_i-the cashflow of firm i during time t

$Q_{i,i}$-is the Tobin's q

LEV_i-is the leverage during time t for firm i.

ROA_i-is the profitability of firm i

$RETE_i$-retained earnings of the firm i

$B_1, \beta_2, \beta_3, \beta_6$= regression coefficients

ε=error term of the regression.

μ-individual effect of the firm i

α-is the constant

3.3.1 Justification of the model

The model was adopted from Aivazian et al. (2005) who studied the determinants of investments of Canadian companies listed considering five determinants: Sales, Cash flow, Debt, Growth opportunities and a Dummy variable multiplied by the debt which has a value of 0 when growth opportunities are low, corresponding to situations where the Tobin's Q ratio is less than 1, and the value of 1 when companies have high growth opportunities corresponding to situations where the Tobin's q is above 1. To test the relevance of non-observable individual effects, Aivizian et al, used the Lagrange Multiplier test, assuming their non-correlation with the explanatory variables.

3.4 Variable Description and Justification

This study has been made by converting the collected data into relative measures such as ratios, percentages rather than absolute one. For analysis, the degree of association between LEV, RETE, ROA, CF and SALES the Lagrange multiplier test was adopted.

3.4.1 Net Investment

The study utilized the meaning of net investment as the total assets and financial goods that are acquired by firms in hope of future economic returns. Net investment was found by dividing returns on assets, by the total net assets of the firm.

3.4.2 Leverage

The studyutilized the same meaning of leverage as Lang et al (1996), consisting of the proportion of total liabilities to the book value of aggregate assets. Book value debt gives an excess of weight to the deviations on equity. The book value of leverage does not reflect previous deviation in the market valuation of the firm. In the event that leverage has a huge negative impact on investment, two policies can be embraced. To start with, it would imply that capital structure assumes an imperative part in the company's investment decisions; second, it can likewise be clarified by an agency issues between the agents and the shareholders. On the off chance that directors are overburdened by debt they may surrender investments which may yield positive net present values. Additionally there will be backing for both the underinvestment and overinvestment theory.

3.4.3 Tobin's Q

The researcher used Prefect and Wiles (1994) simple Q (market value + liabilities / book value of assets) as a proxy for growth opportunities. Market value estimation of the firm is the whole of aggregate liabilities, the estimation of value shares and the evaluated estimation of inclination shares. The business sector estimation of inclination offer is ascertained as inclination isolated increase by ten which measures development opportunities and it, think about the estimation of an organization given by money related business sector with the estimation of an organization, Tobin's q would be 1.0 if Tobin q is more prominent than 1.0 then the business sector quality is more prominent than the estimation of the organizations record resources. This proposes the business sector quality mirrors some unmeasured or unrecorded resources of the organization. High Tobin's q qualities urge organizations to put more in capital in light of the fact that they are worth more than the value they paid for them. Then again, if Tobin's q is less than 1, the market value is less than the recorded value of the assets of the company.

3.4.4 Profitability (ROA)

Profitability in the study was measured using return on assets as a proxy. Earnings after tax plus interest subtracting tax on interest dividend. Profitability highlights operating efficiencies of the aggregate amounts over investment of a company. Henceforth, investment in assets contributes to the profitability such that high levels of profitability in firms with high growth can be used as a proxy.

3.4.5 Cash flow

These refers to the generated revenues by a firm, mainly estimated as aggregate of all earnings before items like depreciation and is of significance to firms growth strategies. Companies with high revenue streams have a better finance cushion to finance themselves on important investments hence investment is directly linked to internal funds. In other words it can be refered to as the excess amount to finance all positive net present valued projects. To eliminate size effects, book value of assets are utilized in the same way as by Lehn and Paulson (1989) and Lan et al (1991).

3.4.6 Returned Earnings (RETES)

Returned earnings represent the measure of business investment funds implied for sloughing back. These are the most supported wellsprings of money for corporate firms. There is a huge

distinction in the utilization of inside produced stores by the exceedingly gainful corporate with respect to the low beneficial firms.

3.4.7 Constant

The constant is the intercept. This is that amount/value that is absorbed by the dependent variable if the independent variable took a value of 0. Gujarrati (2005) noted that the constant value will be large if the numbers of observations are low and the numbers of explanatory variables are few. Whether the constant has a statistically significant figure or not, the constant does not have an economic impact (Demissie, 2012).

3.4.8 Regression Coefficients

These are regression parameters for each explanatory variable showing the strength and type of relationship that explainable variable has on the dependent variable. A positive relationship means that the associated regression co-efficient will be positive and a negative relationships negative. Near zero value means that there is a weak relationship.

3.5 Diagnostic Tests

After estimating the model, its relevancy will be evaluated before; the model can be adopted for forecasting reasons. The linear regression model shall be used through an econometric software package called Strata version 12.1. The diagnostic check is employed through testing for Multicollinearity (correlation matrix).

3.51 Multicolinearity

Multicolinearityrefers to the existence of "perfect", or exact, near perfect linear relationship among some or every illustrative variable of a relapse model (Damodar Gujarati 2004) The study is going to utilize the correlation matrix to identify the vicinity of multicolinearity.If it is observed to be available and serious it will be adjusted by including or dropping some logical variables which are highly correlated.

3.5.2 Heteroskedasticity

This refers to the unequal variances of the disturbance or error term. Heteroskedasticity does not have core stipulated principles but only few guidelines. Hypothesis testing was that the model that does not suffer from heteroskedasticity and model suffer from heteroskedasticity.

3.5.3 Hausman Specification test

It is a statistical hypothesis test which evaluates consistency of an estimator when compared to alternative. This test is performed when using panel data only. In panel data we have RE and FE estimates model to calculate panel data. The hausman test, test which model between the two is most significant by analyzing the R-squared values to see which model is more related to explain the panel data. It helps researchers evaluate if a statistical model corresponds to data.

3.5.4 Lagrange Test

It's a statistical tool of simple hypothesis that a parameter of interest is equal to some particular value. The Lagrange test is a test used to find which model is effective for calculating panel data between pooled effects model and random effects model. A high chi-square value indicates the appropriateness of a specific model between the two.

3.6 Data Sources and Characteristics

The researcher concentrated on 25 listed Zimbabwean holding companies on ZSE.This study uses data from annual report of Zimbabwean public-listed holding companies for 2012-2014 trading period. This was selected on the basis that recent developments in the market may be addressed. The financial statements were prepared following the US GAAP. The listed companies represent the driving industrial force in Zimbabwe so the sample may do well in capturing aggregate leverage in the country's listed companies. Although many firms are listed on the ZSE not all financials were taken because some firms were not operational up to 2014. As a result, the final sample set consists of a balanced panel of 25 listed companies categorized into two namely firms with high growth and low growth opportunities selected basing on Tobin q and price earnings ratio to demarcate the class of firms Quantitative data was obtained from ZSE website and the official website African Financials

3.7 Data Presentation and Analysis Plan

A regression analysis was used to determine the pattern and strength of relationship that exist between capital structure (financial leverage) and firm investment under study. Regression analysis is a statistical technique that is used to determine the value relationship between a dependent and an independent variable. Regression analysis is one of the most pervasive of all statistical analysis methods due to its generality and applicability although it does not account for cause and effect relationships

3.8 Summary

This section of the study focuses on the research methodology which gave the general framework on how the study was organized as well as the methods used for data collection. Data was collected from a secondary source. The different tools gave more data, some outside the scope of the study but the researcher attempted, as much as possible, to sieve data and remain with relevant data only. This was done to enable critical assessment, analysis and data presentation, forming the basis of the study in the next chapter.

CHAPTER 4: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In this chapter, the regression results of the analysis of the firms' net value and financial leverage are presented and analyzed. Estimates of the coefficient were done using econometric packages called Stata version 7.1 These results will include summary of original results obtained from stata and e-views and shall also be displayed in the appendix. The figures for ROA, RETURN ON EQUITY, LEVERAGE (DE) and CASHFLOW that were used for all companies that were used for this research are also presented in the appendix.

4.2 Diagnostic Test Results

After running the model and carrying out the necessary tests, the following results have been obtained.

4.2.1 Heteroskedasticity Test Results

Using the Breusch Pagan test, the results show that there is homoscedasticity thus it does not suffer from heteroskadasticity problems. The Cook-Weisberg/ BreuschPeganregressed the independent variables upon residuals. Refer to Appendix 5 for full heteroskedasticity results. Since the Ch2 (1.22) is greater than Prob (0.2686) , we do not reject the null hypothesis, thus the model does not suffer from heteroskedasticity and there is a constant variance among fitted variables for investment. Therefore, disturbance terms have equal variances.

4.2.2 Multicollinerity Test Results

Multicollinearity is validated using the pair wise correlation among regressors. Paul Allison postulated that multicollinearity is a case where there are high correlations amongst regressors. Multicollinearity exists if the independent variable coefficient is greater than 0.8. From the results in table 4.1, it is evident that there is no correlation between variables since figures are below 80%. Thus we reject the hypothesis that there is correlation either near or perfect.

Table 4.1 Correlation among variables for the whole sample

	Investment	Cash flow	Roa	Leverage	Roe	Tobin q
Investment	1.0000					
Cash flow	0.3974	1.0000				
Roa	0.0597	-0.0255	1.0000			
Leverage	0.1405	0.1979	-0.0255	1.0000		
Roe	0.3984	0.3977	0.1527	0.4751	1.0000	
Tobin q	0.0918	0.0729	0.0875	0.0206	0.1420	1.0000

4.3 Presentation of results

This section portrays the result from regression estimation results for the whole sample, firms with low growth and high growth. Firms with high and low growth were selected basing on the criteria of Tobin q and price earnings ratio. This ratio is obtained by dividing the stock price at the end of the period by the operating earnings per share for these years. The study utilized the operating earnings per share because it is calculated before interest payments, hence the earnings figure is unaffected by leverage. This method was also adopted by McConnell and Servaes (1994).

From panel data set, we can obtain two dimensions of the data (cross section and time series) and with observations for several time periods for each individual firm. In cross section, the fixed effects are absorbed into the unobservable component of the model, which may cause statistical difficulties, especially if these individual-specific effects are correlated with observed characteristics used in the modeling of the behavior. On the other hand, in a panel study, one can relatively easily differentiate the individual fixed effect from purely random unobserved heterogeneity.

In the study if a decision to treat the unobserved effect as random variables is opted, a decision whether they are uncorrelated with the explanatory variables should be made. If we can assume the unobserved effect is uncorrelated with all explanatory variables, then the random effects method is appropriate. But if the fixed effects are correlated with some explanatory variables, the fixed effects method (or first differencing) is needed; if RE is used, then the estimators are generally inconsistent. Comparing the FE and RE estimates can be a test for whether there is correlation between the unobserved effect and the explanatory

variables, assuming that the idiosyncratic errors and explanatory variables are uncorrelated across all time periods. Hausman (1978) first suggested this test.

4.4.1 Whole Sample Results

Table 4.2 below shows the econometric results for the whole sample of 135 observations. It shows the pooled estimates, random effect estimates and fixed effects estimates. Standard errors are shown in brackets. Two tests are performed in order to identify which methodology is appropriate. First, to compare pooled estimates and random effects estimates, the Lagrange Multiplier test is was done. With a large chi-square test, showing a low p-value, we reject the null hypothesis that the pooled model effect is appropriate .Second, to compare random effect estimate with fixed effects model, the Hausman specification test is performed. If the model is correctly specified and if the individual effects are uncorrelated with the independent variables, the fixed and random effect should not be different. A high Chi-square is indicative of appropriateness of the fixed effect model.

Table 4.2 Regression results for whole sample: Independent Variable (Net Investment)

Variable	Pooled effect	Random effect	Fixed effect
Constant	137.31 (81,57)	138.92 (83.18)	660.55 (285.69)
Leverage	-1.93 (2.94)	-1.97 (2.994)	-8.19 (5.40)
Cash flows	0.0097 (0.0029)	0.009 (0.0029)	0.006 (0.003)
Roa	2.84 (6.89)	2.95 (7.05)	8.29 (82.06)
Roe	13.5 (4.5)	13.21 (4.58)	-52.99 (12.56)
Tobin q	8.2981	8.15	2.66

		(26.08)	(26.11)	(24.74)
LM test	Chi2(1)=0.6 P=0.2184			
Hausman test	P=35.97			
		R^2=0.0193	R^2=0.25	

Table 4.3 Correlation among Independent Variables (net investment)

	Investment	Cash flow	Roa	Leverage	Roe	Tobin q
Investment	1.0000					
Cash flows	0.3974	1.0000				
Roa	0.0597	-0.0851	1.0000			
Leverage	0.1405	0.1979	-0.0255	1.0000		
Roe	0.3984	0.3977	0.1527	0.4751	1.0000	
Tobin q	0.0918	0.0729	0.0875	0.0206	0.1420	1.0000

Table 4.2 above shows the regression results from pooled, random and fixed effects estimates for the whole model. Due to a large chi-square in 0.6 denoting a low p-value of 0.2184, the pooled effect is rejected in favor of random effect model. After the Hausman test, a high chi-square value of 35.97 proved the validity of the fixed effect model leading to the rejection of the appropriateness of random effects model since it assumes that the error term is uncorrelated with dependent variable. Serial correlation among variables was tested and no variable was above 0.8, as shown by table 4.3.

4.4.2 Leverage

Leverage takes the co-efficient of -8.19 and is statistically not significant 0.133 to net investment (table 4.2).A 1 unit increase in leverage ratio leads to an 8.19 decrease in net investment. This implies that as leverage increase, firms in our sample struggle to increase investment. In fact, net investment decreases, as firms tend to be become more dependent on debt as a source of long term financing.

4.4.3 Growth

Tobin q was the proxy used to measure growth, and has taken the co-efficient of 2.66. This means that a 1 unit increase in growth of firms in the sample leads to an 2.66 increase in net investment though it is not statistically significant. It can be note that firms have a propensity to expand the scale of the business and management's ability to carry out such a policy is constrained by the availability of cash flow, and this constraint can be further tightened via financial leverage. The issuance of debt engages the firms to pay cash as interest and principal, forcing managers to service such commitments with the funds that may have otherwise been allocated for investment projects.

4.4.4 Cash flow

Cash flow has a point estimate of 6% which implies that it is significant variable to influence net investment. This shows that cash flow facilitates the availability of internally generated funds, for firms to finance their investment projects.

4.5 Results for Low-Growth Firms

Table 4.4 brings out regression results of firms with low growth for pooled ,random and fixed effects estimates (see Appendix 8) .To identify which empirical methodology is suitable, pooling, random or fixed effect regression is most suitable, the LM test of random effect model. The null hypothesis is that individual effect is ui is 0.A low co-efficient for pooled regression on the constant leads to the rejection of the pooled estimates in favor of random. However, fixed effect estimations are accepted due to the high P-chi-square value of 0.24 from the Hausman test, greater than 0.13 from the LM test, therefore the fixed effect is most appropriate in estimating the investment equation.

Table 4.4 Regression results for low growth firms

Variable	Pooled effects	Random effects	Fixed effects
Constant	95.36 (35.86)	93.45 (45.93)	96 (95.22)
Leverage	0.23 (5.14)	0.335 (5.74)	0.237 (11.23)
Cash flow	-0.0136 (0.0131)	-0.010 (0.153)	0.0004 (0.231)
Roe	-10.89 (13.45)	-16.63 (19.54)	7.87 (32.10
Roa	0.44 (9.71)	0.32 (9.82)	0.28 (11.25)
Tobin q	-23.56 (85.156)	-27.22 (87.49)	-12.77 (18.88)
LM test	Chi2 (1)=0.13		
Hausman test	Chi2=0.24		

Table 4.5 shows correlation among variables

	Investment	Cash flow	Roa	Leverage	Roe	Tobin q
Investment	1.0000					
Cash flow	-0.1710	1.0000				
Roa	-0.0349	0.0290	1.0000			
Leverage	-0.0590	0.2034	0.3348	1.0000		
Roe	0.0007	0.0632	-0.2267	0.0484	1.0000	
Tobin q	-0.0701	0.1066	0.3470	0.6316	-0.0012	1.0000

Table 4.5 shows correlation among independent variables for firms with low growth selected from the sample. There is no near or perfect linear relationship among the independent variable of net investment.

4.5.1 Leverage

Leverage has taken the co-efficient of 0.23 from pooled effect estimate, and 0.335, 0.23 for random and fixed effect respectively. The regression co-efficient from pooling is smaller than those from the random and fixed effects model models suggesting that ignoring individual firms' effects leads to an underestimation of the impact of financial leverage on investment. According to fixed effect, leverage is significant at 0.013 with a 0.237 co-efficient. An increase by 1% of debt will lead to a 23.7% increase in net investment for firms with low growth. This implies that leverage increase in low growth firms increase investment because firms do not have an adequate asset cushion for financing their projects. Thus, these firms tend to become more dependent on debt as a source of finance to finance their projects.

4.5.2 Cash flow and Retained earnings

Cash flow and retained earnings are positively related with investments with co-efficient of 0.0004 and 7.87 respectively although not statistically significant. It implies that firms with low growth are underutilizing their fixed assets. These co-efficient implies that the issuance of debt engages the firms to pay cash as interest and principal with availability of free cash flow and internally generated funds.

4.5.3 Return on assets

The co-efficient value of ROA is 0.28 and is not statistically significant but positively related with investment. A 1% increase in return on assets will mean a 28% increase in their net investments. It indicates the operating efficiency of the employed funds over investment is positive. High ROA is also attracting funds from investors for expansion and growth.

4.5.4 Tobin q

From the table it can be observed that the Tobin's as a proxy for growth has a co-efficient of -12.77 which implies that it is negatively related with investment and is not statistically significant

4.6 Results of High Growth Firms

The regression results are shown in table 4.6 for firms with high growth in the sample. (See appendix 11). These were firms selected because of their high price to earnings ratios and high tobinqs above 1. To identify which empirical methodology is appropriate, pooling, random and fixed effect model, the LM test was done to test pooled against random model. The null hypothesis was that individual effect is 0. A low R-squared for pooled estimate 13.12 it is rejected in favour of random effects. The fixed effects estimates were chosen , after running the hausman test. Below is a summary of full regression, results for firms with high growth.

Table 4.6 regression results for high growth firms.

Variable	Pooled effects	Random effects	Fixed effects
Constant	-2156	-2156.78	2240.9
Cash flow	0.02 (0.008)	0.024 (0.008)	0.204 (0.01)
Roa	13.59 (13.9)	13.59 (13.9)	-42.8 (153.21)
Leverage	6.25 (7.05)	6.25 (7.05)	10.47 (18.1)

Roe	-9.83	-9.84	-53.03
	(9.54)	(9.54)	(21.03)
Tobin q	1814.016	1814.01	2672.39
	(706.71)	(706.7)	(1272.35)
LM test	Chi2 (2)=1.00		
Hausman Test	Chi2=6.19	R^2=34.24	R^2=43.66

Table 4.7 Correlation among independent variable (net investment)

	Investment	cash flow	Roa	Leverage	Roe	Tobin q
Investment	1.0000					
Cash flow	0.5668	1.0000				
Roa	-0.0894	-0.3374	1.0000			
Leverage	-0.0051	-0.0015	-0.0587	1.0000		
Roe	0.2533	0.4194	-0.0040	0.5234	1.0000	
Tobin q	0.5459	0.4982	-0.1288	-0.1013	0.4075	1.0000

The P value low as 0.001 in pooled regression, random effects model is selected with a high Wald chi-square of 26.85 and a low Chi-square from the Lagrange Test of 1%. Secondly, the hausman specification test result is 6.19 for random and fixed effect model appropriateness. A higher R^2 from fixed effect of 43.66 (43.66% of the variables explain the impact of leverage in the model) than 34.24 from random leads to no rejection of the null hypothesis of fixed effect model being appropriate. Table 4.7 shows the correlation among the independent variables for net investment, of which there no near or perfect correlation among variable for firms with high growth.

4.6.1 Leverage

Debt to equity has taken the co-efficient of 10.47 and is statistically insignificant with a p-value of 0.56. The logic is that leverage is not significant in firms with high growth because their investment opportunities are already recognized by the capital market which consists of private and corporate savings that are being used through new capital issues. These firms can obtain funds easily from the capital market and does not depend only on financial leverage to boost their investments. Leverage has little impact or no significant impacts on investments for firms with high growth.

4.6.2 Cash flow

Cash flow has taken the co-efficient of 0.020 and a p value of 0.065 which is statistically insignificant, has no desired impact on high growth investment. One of the possible reasons could be that since leverage has no impact on their investment, high growth firms have other sources of financing their investment opportunities like issuing ordinary shares and returned earnings. However, a 1% increase in cash flow can result in 2% increase in investment (insignificant change) due to heavy demand for their products in national and international market.

4.6.3 Roa

Return on assets is negatively correlated to investments for firms with high growth taking a negative co-efficient of -42.8 and being statistically insignificant. This is because return on invested assets has no influence in decisions made on running projects by high growth firms.

4.6.4 Tobin q

The Tobin q is statistically significant at 4% and the co-efficient is 26.39. This gives an indication of further growth opportunities. An increase in growth by 1% will lead to a 4.5% increase in investment. Return on earnings is negatively correlated with the co-efficient of – 53.03 and a p value of 0.018.

4.7 Conclusion

The study broadens prior observational studies on the relationship between leverage and firms'. It inspected the relationship for 25 ZSE cited firms for the time of 2010 to 2014. Earlier hypothetical work posits that financial leverage can have either a positive or a negative effect on the value of firms in light of its impacts on corporate investment choices.

The examination is spurred by the theoretical work of Myers (1977), Jensen (1986), Stulz (1988, 1990), and by experimental work of McConnell and Servaes (1990). As expressed in the study, the book value of debt contrasted with the market value definition for reason mentioned in the study. The expectation from the study was that for low growth firms the connection between corporate value and leverage is likewise negative yet measurably significant though for high growth firms the connection between corporate esteem and influence is negative however insignificant. The study has demonstrated that leverage has a noteworthy negative impact on investment, proposing that capital structure assumes an essential part in the organizations' investments arrangements. Firms in the sample selected utilizing the PE proportion (ratio) and Tobin q values for growth. While the negative relationship persists for low growth firms, this is not the situation for high growth firms. The econometric results recommend that the negative relationship between debt and investment is not statistically noteworthy for high growth firms. The study outcome is in accordance with that of Aivazian et al(2005).

CHAPTER 5: SUMMARY, RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

The essential objective of any study is to investigate a problem, observe the findings and then make recommendations for the rectification of the problem investigated. The main aim of the study was to find the out the impact of leverage on the firms' investments patterns of companies listed on the Zimbabwe Stock Exchange make analysis of the results together with the recommendations. Chapter 5 seeks to conclude the study, addressing the major objective of the empirical research, which is recommending to stakeholders and policy makers courses of action that maybe pursued as remedial measures on effects of financial leverage on firms investments, thus summarizing, concluding, recommending and making suggestions of future studies. To the observed study results buy a way of summary, conclusions, recommendations and suggestions for future studies.

5.2 Summary of the Study

The aim of the study was to explain if there is a linkage between firms' investment and financial leverage. The introduction of the study, the background of the capital structure was brought in light. The degree of impact of financial leverage on firms' investment was brought into light through econometric investigation. The technique used was ordinary least squares covering the observations of financial results of 2010 to 2014.In the second chapter , the study explained looked at the theoretical and empirical literature on the effects of financial leverage on firms investment and also the determinants of capital structure. It also reviewed some empirical researches done by other scholars in other countries as well as Sub Sahara Africa. The empirical researches in chapter two formed the basis on which chapter three of the study is based on.

The study went on to research methodology where it highlighted the methodology used in the statistical test of the linear relationship that exists between leverage and firms' investment where it focused on linear regression techniques of pooled, random and fixed effects models, and secondary data were used in the research. In the same chapter, tests for linear relationships were in the regression model were performed like the hausman and Lagangian multiplier test. Results obtained based on the research methodology used in chapter four were presented and analyzed in chapter four.

The study looked at the data presentation and analysis. Tests on Stata were done and results were presented in tabular form and print out s and were interpreted. The results obtained showed that there is a positive relationship between financial leverage and investment in firms with high growth and negative in firms with low growth. After realizing the results, policy recommendations based on these results will be given in this chapter.

5.3 Conclusions

From the results presented above, the following can be deduced;

- ❖ Variables like sales and Tobin q were found to be not that significant in determining firms' investments.
- ❖ Debt was found to be significant on the impact of firm investments; therefore the capital structure can be influenced by the life stage of the firm since its financing needs may change as the firm's circumstances do (Bender et al, 1993).
- ❖ Variables determined in the study influence significant variations in the investment of firms hence policy makers need to consider other factors not discussed in the study when making decisions.
- ❖ There are many theories that determine the capital structure of the firm and these include life stage theory, free cash flow theory, market timing theory, pecking order theory, agency cost theory and the tradeoff theory.
- ❖ There are many problems associated with debt financing and these include that of the tradeoff theory where Myers (2001) postulates that debt offers a firm tax shields. Firms will employ more debt to alleviate high tax burden thereby causing a fall in company profitability and value.
- ❖ There are some advantages if a firm goes for debt financing as those found by successful firms that pursue higher levels of debt in order to gain tax benefit and ultimately enhance profitability and investments prospects.

However Wessles 1988 postulated that firms should rely on external sources for funds since they can place reliance on internal sources. Therefore for all the firms under the study before going for debt let them utilize their internal sources first.

5.4 Recommendations

Considering the research findings, which clearly showed that for listed firms in Zimbabwe only cash flows, ROA and Leverage were found to be significant in the analysis of financial

leverage and firms' investment for the period 2010 to 2014 trading period. Upon these results the study has the following recommendations.

5.4.1 Policy Instrument.

The significance of financial leverage in determining firms' investments shows that it is a strategic and effective policy instrument for any operating firm. More debt will result in decrease in profits therefore the reported profits would be reduced. In such sense, firms ought to take debt up to certain level that maximizes their operations and investment prospects. This will lead to enhanced productivity by firms, resulting in increased profits which will fuel investors' expectations which will trigger upward movement in stock market returns.

5.4.2 Long term debt and its usage.

Firms should undertake more or long term debt (term loans and working capital loans) than short term. Due to liquidity crisis in our country, firms get their funding through the use of short term debts that is overdrafts which are usually expensive. The loans that are offered by most, financial institutions are short term to be repaid in 6 months. Lack of financial players offering concessionary term loans at prevailing market rates is hampering firms from investing. Obligations that are short disallow investments that have long maturity days. It should be reiterated here that long term debts are relatively cheap. Firms should also take into consideration, the costs associated with debt which include lending rates, agency costs, and bankruptcy can be compared against the tax benefits of debt

5.4.3 Managerial Initiative.

It plays a huge role hence there is need for proper and sound decision making on capital structure. Most studies in developing countries shows that an increase in debt would reduce the investments of firms however in developed countries, with firms with high growth, debt and investment had a positive relationship. As such, there is no universal theory to explain capital structure as Myers (2001), postulated. He went on to say that management choices and decisions are affected by interpretations of information asymmetry, taxes and agency costs

5.4.4 Leverage and Stock listing

Literature focuses out a few points of interest a firm can extricate from having its shares quoted on a stock trade. Securities exchanges permit proficient risk sharing and give instructive stock costs. The data contained in stock costs enhances assignment of investments and pave way for setting up powerful administrative remuneration plans. At the same time

the stock exchange might likewise give anger of hostile takeovers and by exposing managerial decisions (Allan 1993) to the market's evaluation**.**

5.4.5 Financial Leverage chance and leverage risk

Firms use debt in their operations because it paves way for firms to increase their performances and returns on equity funds. Henceforth ,such effect of leverage would apply if when return on debt is lower than rate of return on investment as postulated by Watkins, 2002. When the rate of interest on debt is lower than IRR for the company such that the firm will be in a position to pay principal, interest and retain excess to owners. Leverage risk is therefore arises when firms fail to meet contractual obligations as a result of low returns not enough to cover interest. To avoid liquidation /closure, managers will have to use shareholders' equity funds to finance the repayment of the debt.

5.5 Suggestions for Future Study

As a result of financial resources and time constraint, the study was not exhaustive .The study has highlighted that leverage has a negative impact on investment implying that the components of capital structure plays a significant role in companies' investment decisions. The sample under study was divided making use of price to earnings ratio and the tobin q values for growth. A negative relationship exists in firms with high growth whilst in firms with low growth have a positive relation between leverage and investment. The econometric results showed there is negative relationship between leverage and investment in which they are in line with those results produced by Aivizian et al (2005). However it is eye catching if another researcher adopt a simultaneous equation model whereby leverage affects level of investments and vis versa. That will be a study on its own.

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APPENDIXES

Appendix 1 Regression Results whole sample

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. regress investment cashflow roa leverage roe tobinq
```

Source	SS	df	MS		
Model	10547820.2	5	2109564.05		
Residual	34952282.4	119	293716.659		
Total	45500102.6	124	366936.311		

```
Number of obs =     125
F( 5,   119) =    7.18
Prob > F      = 0.0000
R-squared     = 0.2318
Adj R-squared = 0.1995
Root MSE      = 541.96
```

investment	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
cashflow	.0097614	.0029888	3.27	0.001	.0038432	.0156796
roa	2.846843	6.893577	0.41	0.680	-10.80313	16.49681
leverage	-1.934046	2.944255	-0.66	0.513	-7.763966	3.895873
roe	13.50629	4.501973	3.00	0.003	4.59193	22.42064
tobinq	8.298193	26.08357	0.32	0.751	-43.34987	59.94626
_cons	137.3161	81.57455	1.68	0.095	-24.20969	298.8418

Appendix2

```
Random-effects GLS regression                    Number of obs      =        125
Group variable: observation                      Number of groups   =         25

R-sq:  within  = 0.0193                          Obs per group: min =          5
       between = 0.6681                                         avg =        5.0
       overall = 0.2318                                         max =          5

                                                 Wald chi2(5)       =      34.19
corr(u_i, X)   = 0 (assumed)                     Prob > chi2        =     0.0000
```

investment	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
cashflow	.0098432	.0029949	3.29	0.001	.0039733	.0157131
roa	2.95607	7.05459	0.42	0.675	-10.87067	16.78281
leverage	-1.971064	2.994989	-0.66	0.510	-7.841135	3.899008
roe	13.21494	4.58051	2.89	0.004	4.237307	22.19258
tobinq	8.159511	26.11112	0.31	0.755	-43.01735	59.33637
_cons	138.9246	83.18133	1.67	0.095	-24.10783	301.957

sigma_u	51.995181					
sigma_e	478.92989					
rho	.01164913	(fraction of variance due to u_i)				

APPENDIX 3 LM test

```
Breusch and Pagan Lagrangian multiplier test for random effects

        investment[observation,t] = Xb + u[observation] + e[observation,t]

        Estimated results:
                           Var      sd = sqrt(Var)

              investm~t    366936.3      605.7527
                      e    229373.8      478.9299
                      u    2703.499      51.99518

        Test:  Var(u) = 0
                            chibar2(01) =      0.60
                       Prob > chibar2 =    0.2184
```

Appendix 4:Fixed effects estimates

Fixed-effects (within) regression   **Number of obs   =   125**

Group variable: observation   **Number of groups =   25**

R-sq: within = 0.2520   **Obs per group: min =   5**

between = 0.6798   avg = 5.0

overall = 0.1153   max = 5

F(5,95)   = 6.40

corr(u_i, Xb) = -0.9285   Prob> F = 0.0000

```
------------------------------------------------------------------------
investment |   Coef.  Std. Err.    t   P>|t|   [95% Conf. Interval]
-----------+------------------------------------------------------------
cashflow |  .0064685  .0031709   2.04  0.044   .0001735   .0127636
roa |  8.292356  82.06852   0.10  0.920   -154.6343   171.219
leverage |  -8.191953  5.40506  -1.52  0.133   -18.92235  2.538448
roe |  -52.99645  12.5623  -4.22  0.000   -77.93578  -28.05712
tobinq |  6.241399  25.79777   0.24  0.809   -44.97366  57.45646
_cons |  660.5522  285.6987   2.31  0.023   93.36871  1227.736
-----------+------------------------------------------------------------
sigma_u|  1056.0453
sigma_e|  478.92989
rho |  .82941179   (fraction of variance due to u_i)
------------------------------------------------------------------------
```

F test that all u_i=0: F(24, 95) = 2.39   Prob> F = 0.0015

Appendix 5 hausman test

```
              ---- Coefficients ----
          |      (b)         (B)            (b-B)      sqrt(diag(V_b-V_B))
          |    random       fixed        Difference         S.E.
----------+-------------------------------------------------------------------
cashflow |   .0098432     .0064685        .0033746              .
roa |   2.95607      8.292356       -5.336287               .
```

```
leverage |   -1.971064     -8.191953          6.220889                 .

roe |    13.21494     -52.99645          66.21139                 .

tobinq |    8.159511      6.241399          1.918112          4.033069

------------------------------------------------------------------------

                            b = consistent under Ho and Ha; obtained from xtreg

              B = inconsistent under Ha, efficient under Ho; obtained from xtreg


chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)

                  =    35.97
```

APPENDIX 6 Regression Results for low growth firms.

```
. regress investment cashflow roa leverage roe tobinq

      Source |       SS           df       MS            Number of obs =        45
-------------+----------------------------------        F(  5,     39) =      0.26
       Model |  19701.2346          5  3940.24691        Prob > F       =   0.9317
    Residual |  589405.344         39  15112.9575        R-squared      =   0.0323
-------------+----------------------------------        Adj R-squared  = -0.0917
       Total |  609106.578         44  13843.3313        Root MSE       =   122.93


  investment |      Coef.   Std. Err.        t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
    cashflow |   -.0136742     .013107    -1.04   0.303    -.0401856    .0128372
         roa |   -10.89266    139.4576    -0.08   0.938    -292.9722    271.1869
    leverage |    .3834601     5.14833     0.07   0.941    -10.03002    10.79694
         roe |    .4419955    9.714644     0.05   0.964    -19.20773    20.09172
      tobinq |   -23.56903    85.15678    -0.28   0.783    -195.8149    148.6768
       _cons |    95.36446    35.86954     2.66   0.011     22.81146    167.9175
```

Appendix 7 Xtset test for panel data and variables

```
. xtset observation year
      panel variable:  observation (strongly balanced)
       time variable:  year, 2010 to 2014
               delta:  1 unit
```

Appendix 8 full regression model for random effects

```
Random-effects GLS regression              Number of obs     =          45
Group variable: observation                Number of groups  =           9

R-sq:  within  = 0.0015                     Obs per group: min =          5
       between = 0.1839                                    avg =         5.0
       overall = 0.0313                                    max =           5

                                           Wald chi2(5)      =        0.62
corr(u_i, X)   = 0 (assumed)               Prob > chi2       =      0.9872
```

investment	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
cashflow	-.0100604	.015323	-0.66	0.511	-.0400929	.0199721
roa	-16.63883	169.5425	-0.10	0.922	-348.9359	315.6583
leverage	.3351142	5.746771	0.06	0.953	-10.92835	11.59858
roe	.3267276	9.822542	0.03	0.973	-18.9251	19.57856
tobinq	-27.22193	87.49654	-0.31	0.756	-198.712	144.2681
_cons	93.45563	45.93388	2.03	0.042	3.42688	183.4844
sigma_u	57.868527					
sigma_e	124.81988					
rho	.17691412	(fraction of variance due to u_i)				

Appendix 9 Lagragian Multiplier Test

```
Breusch and Pagan Lagrangian multiplier test for random effects

        investment[observation,t] = Xb + u[observation] + e[observation,t]

        Estimated results:
                            Var      sd = sqrt(Var)

            investm~t    13843.33        117.6577
                    e       15580        124.8199
                    u    3348.766        57.86853

        Test:   Var(u) = 0
                        chibar2(01) =       0.13
                      Prob > chibar2 =     0.3603
```

Appendix 10

APPENDIX 9 Hausman Specification Test

---- Coefficients ----

	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	RANDOM	fixed	Difference	S.E.
cashflow	0100604	.000472	.0105324	.
roa	16.63883	74.87445	58.23562	.
leverage	.3351142	.237913	.0972012	.
roe	.3267276	.2853264	.0414012	.
tobinq	-27.22193	-34.77442	7.552488	.

b = consistent under Ho and Ha; obtained from xtreg

B = consistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients constant

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)

$= 0.24$

Appendix 11 fixed effects estimates

```
xtreg investment cashflowroa leverage roe tobinq, fe
```

```
Fixed-effects (within) regression          Number of obs     =        45

Group variable: observation               Number of groups  =         9
```

```
R-sq:  within  = 0.0058                          Obs per group: min =          5

between = 0.0029                                                avg =        5.0

overall = 0.0029                                                max =          5


F(5,31)            =        0.04

corr(u_i, Xb)  = -0.1917                          Prob> F          =     0.9992


--------------------------------------------------------------------------------

investment |    Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]

-------------+------------------------------------------------------------------

cashflow |    .000472   .0231665      0.02   0.984    -.0467763    .0477203

roa |  -74.87445   32.1953     -0.23   0.817     -727.917     578.1681

leverage |    .237913   11.23621      0.02   0.013    -22.67848     23.1543

roe |   .2853264   11.25458      0.03   0.080    -22.66855     23.2392

tobinq |  -12.77442    18.885     -0.32   0.752     -256.8469    187.298

    _cons |   96.00682   95.22257     1.01   0.321    -98.20089    290.2145

-------------+------------------------------------------------------------------

sigma_u|  56.812487

sigma_e|  124.81988

rho |  .17161404    (fraction of variance due to u_i)

-----------------------------------------------------------------------------
---

F test that all u_i
```

Appendix 12 pooled estimate(High Growth firms)

```
regress investment cashflowroa leverage roe    tobinq


          Source        SS       df      MS              Number of obs =      40

                  F( 5,    34) =    5.37

          Model   16549387.5    5  3309877.51      Prob> F       =  0.0010

          Residual  20953268.2  34 616272.595

          R-squared    =  0.4421

          Adj R-squared=  0.3591
```

```
         Total   37502655.8    39   961606.558            Root MSE     =  785.03
```

```
         investmentCoef.   Std. Err.      t     P>t    [95% Conf.   Interval]
```

```
         cashflow    .0246869 .0084455     2.92  0.006  .0075236 .0418503

         roa          13.59109  13.92209    0.98  0.336  -14.702    41.88417

         leverage     6.25745   7.055611    0.89  0.381  -8.081278  20.59618

         roe         -9.847224  9.54718    -1.03  0.310  -29.24943  9.554981

         tobinq       1814.016  706.7132    2.57  0.015   377.8025  3250.23

         _cons       -2156.783  888.3794   -2.43  0.021  -3962.187 -351.3791
```

Appendix 13 random effects (high growth)

. xtreg investment cashflowroa leverage roe tobinq, re

Random-effects GLS regression   Number of obs   = 40

Group variable: observation   Number of groups = 8

R-sq: within = 0.3424   Obs per group: min =   5

between = 0.7642   avg =   5.0

overall = 0.4413   max =   5

Wald chi2(5)   =   26.85

corr(u_i, X)   = 0 (assumed)   Prob> chi2   =0.0001

investmentCoef. Std. Err.   z   P>z   [95% Conf.   Interval]

cashflow	.0246869	.0084455	2.92	0.003	.008134	.0412399
roa	13.59109	13.92209	0.98	0.329	-13.6957	40.87787
leverage	6.25745	7.055611	0.89	0.375	-7.571295	20.08619
roe	-9.847224	9.54718	-1.03	0.302	-28.55935	8.864906
tobinq	1814.016	706.7132	2.57	0.010	428.8841	3199.149
_cons	-2156.783	888.3794	-2.43	0.015	-3897.975	-415.5916

sigma_u   0

sigma_e   765.9524

rho   0   (fraction of variance due to u_i)

Appendix 14 fixed effects models

d-effects (within) regression   Number of obs   =   40

Group variable: observation   Number of groups =   8

R-sq: within = 0.4366   Obs per group: min =   5

between = 0.0000   avg =   5.0

overall = 0.0924   max =   5F(5,27)   =   4.18

corr(u_i, Xb) = -0.7463   Prob> F   =   0.0061

investmentCoef. Std. Err. t   P>t   [95% Conf. Interval]

cashflow	.0204826	.0106309	1.93	0.065	-.0013302	.0422954
roa	42.80485	153.214	0.28	0.782	-357.1747	271.565
leverage	10.47156	18.10215	0.58	0.68	-26.67098	47.6141
roe	53.03091	21.03445	2.52	0.018	96.19004	9.871776
tobinq	2672.391	1272.35	2.10	0.045	61.74446	5283.038

_cons   .204.406 2075.932   1.07 0.295   6476.867   2042.056

sigma_u   183.2549

sigma_e   765.95

rho   .666808   (fraction of variance due to u_i)

F test that all u_i=0:   F(7, 27) =   1.24   Prob> F = 0.3138

Appendix 15 Hausman test

        ---- Coefficients ----

    | (b)   (B)   (b-B)   sqrt(diag(V_b-V_B))

    | random fixed   Difference   S.E.

-------------+--

cashflow | .0246869 .0204826   .0042044   .

roa | 13.59109 -42.80485   56.39593   .

 leverage| 6.25745   10.47156   -4.214112   .

roe | -9.847224 -53.03091   43.18368   .

tobinq | 1814.016   2672.391   -858.3749   .

----

  b = consistent under Ho and Ha; obtained from xtreg

  B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)

           =   6.19