

**THE RELATIONSHIP BETWEEN FIRM LEVERAGE AND
FINANCIAL PERFORMANCE OF SUGAR PROCESSING
COMPANIES IN WESTERN KENYA REGION**

BY

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**A RESEARCH PROJECT REPORT SUBMITTED TO THE
UNIVERSITY OF NAIROBI SCHOOL OF BUSINESS IN PARTIAL
FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF
THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION
(MBA)**

OCTOBER 2011

DECLARATION

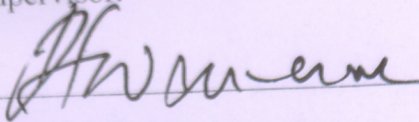
I declare that this research project is my original work and has never been submitted anywhere for a degree or qualification of the same in any other university or institute of higher learning.

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ACKNOWLEDGEMENTS

I am indeed grateful for the tireless efforts of my supervisor Dr. Wanjare J.M. and the Financial Managers of Muhoroni Sugar Company, Nzoia Sugar Company, Mumias Sugar Company, Sony Sugar Company and Chemelil Sugar Company for their technical input in the process of developing this project.

DEDICATION

I dedicate this work to my family members; my dear wife Lilian Adhiambo Ochieng and son Emmanuel Dan Odhiambo who gave me the moral and financial support during this period of study and research. May the almighty God bless you.

ABSTRACT

The subject of the study represents a well discussed topic in corporate governance area. Identifying the optimal capital structure of the companies and its determinants is a main issue in financial theory, as it has an important influence on companies' performance. The leverage of sugar companies in western Kenya region, based on the total debt and the total assets, is the object of a dynamic analysis for the period 2006 to 2010 using mainly descriptive statistics. It emphasizes the use of ratio analysis such as Return on Assets, Return on Equity, Operation Profit Margin, Net Profit Margin and Earnings per Share to identify the financial performance of the firm by applying a pooling cross-section analysis. Moreover, the leverage variable has been analysed in correlation with other financial performance ones in order to identify the potential of anticipation for future financing options for sugar companies in Kenya. The regression analysis result demonstrated that there is a significant weak negative relationship between firm's leverage and Return on Assets and the same for Net Profit Margin. The results also showed that for Return on Equity and Operation Profit Margin, there is a significant no relationship between them and the firm's leverage. Using the pooled cross-section figures for financial performance, the study found out a significant no relationship with the leverage of the firm. The study recommends that a further study should be done incorporating all the sugar companies in Kenya and the period under study to be increased to include major climate changes that would affect the industry's performance.

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NSE Nairobi Stock Exchange

OLS Ordinary Least Square

GPM Operating Profit Margin

RI Residual Income

ROA Return on Assets

ROC Return on Capital

ROE Return on Equity

ROI Return on Investment

ROS Return on Sales

SMBs Small and Medium Size E-surprises

USAID United States Agency of International Development

LIST OF ABBREVIATIONS AND ACRONYMS

EAT	Earnings after Tax
EBIT	Earnings before Interest and Tax
EPS	Earnings Profit Share
GDP	Gross Domestic Product
ICT	Information and Communication Technology
IT	Information Technology
KAM	Kenya Association of Manufacturers
NPM	Net Profit Margin
NSE	Nairobi Stock Exchange
OLS	Ordinary Least Square
OPM	Operating Profit Margin
RI	Residual Income
ROA	Return on Assets
ROC	Return on Capital
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
SMEs	Small and Medium Size Enterprises
USAID	United States Agency of International Development

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Capital structure refers to the firm's financial framework which primarily consists of the debt and equity used to finance the firm. It is a topic that continues to keep researchers in the field. From the initial work of Modigliani and Miller (1958) on capital structure, there has been additional three conflicting theories of capital structure developed. These includes: static trade-off, pecking order, and agency cost theories.

The static trade-off theory of capital structure (also referred to as the tax based theory) states that optimal capital structure is obtained where the net tax advantage of debt financing balances leverage related costs such as financial distress and bankruptcy, holding firm's assets and investment decisions constant (e.g., Baxter, 1967 and Altman, 1984). According to Myers (1984), firms adopting this theory could be regarded as setting a target debt-to-value ratio with a gradual attempt to achieve it. Myers (1984), however, suggests that managers will be reluctant to issue equity if they feel it is undervalued in the market. The consequence is that investors perceive equity issues to only occur if equity is either fairly priced or over priced. As a result investors tend to react negatively to an equity issue and management is reluctant to issue equity.

Pecking order theory (also referred to as the information asymmetry theory) proposed by Myers (1984) states that firms prefer to finance new investment, first internally with retained earnings, then with debt, and finally with an issue of new equity. Myers (1984) argues that an optimal

capital structure is difficult to define as equity appears at the top and the bottom of the 'pecking order'. Internal funds incur no flotation costs and require no disclosure of the firm's proprietary financial information that may include firm's potential investment opportunities and gains that are expected to accrue as a result of undertaking such investments.

The agency cost theory of capital structure states that an optimal capital structure will be determined by minimizing the costs arising from conflicts between the parties involved. Jensen and Meckling (1976) argue that agency costs play an important role in financing decisions due to the conflict that may exist between shareholders and debt holders. If companies are approaching financial distress, shareholders can encourage management to take decisions, which, in effect, confiscate funds from debt holders to equity holders. Informed debt holders will then require a higher return for their funds if there is potential for this transfer of wealth. Debt coupled with interest payments, may reduce the agency conflict between shareholders and managers. Debt holders have legal redress if management fails to make interest payments when they are due, hence managers concerned about potential loss of job, will be more likely to operate the firm as efficiently as possible in order to meet the interest payments, thus aligning their behaviour closer to shareholder wealth maximization.

Researchers continue to analyze capital structure and try to determine whether optimal capital structures exist. An optimal capital structure is usually defined as one that will minimize a company's cost of capital while maximizing firm value. Therefore capital structure decision has a great effect on the success of the company. Precisely how companies decide the amount of debt and equity in their capital structures remains a puzzle. Do traditional capital structures of an

industry influence the companies' managers or are there other reasons behind their actions in capital structure? The answers to these questions are important, because the actions managers take will have an impact on the performance of the firm, as well as influence how the investors will perceive the company.

In developing countries, company financing decisions involve a wide range of policy issues. At the macro level, they have implications for capital market development, interest rate and security price determinations, and regulation. At the micro level, such decisions affect capital structure, corporate governance and company development (Green, Murinde and Suppakitjarak 2002). Knowledge about capital structures has mostly been derived from data from developed economies that have many institutional similarities (Booth *et al*, 2001). Many studies on corporate financing policy and impact of debt on performance focus on firms from developed countries where there are corporate and personal taxes and developed financial markets (e.g. Barton and Gordon, (1988), Bettis, (1983), Bradley, Jarrell, and Kim, (1984), Capon, Farley, and Hoening (1990), and Titman and Wessels (1988)). It is important to note that different countries have different institutional arrangements, mainly with respect to their tax and bankruptcy codes, the existing markets for corporate control, and the roles banks and securities markets play. There are also differences in social and cultural issues and even the levels of economic development. These differences actually warrant taking a thorough look at the issue from the perspective of developing economies, especially within the context of East Africa.

The few studies on developing countries have not even agreed on the basic facts. Singh and Hamid (1992) and Singh (1995) used data on the largest companies in selected developing

countries. They found that firms in developing countries made significantly more use of external finance to finance their growth than is typically the case in the industrialized countries. They also found that firms in developing countries rely more on equity finance than debt finance. These findings seem surprising given that stock markets in developing countries are invariably less well developed than those in the industrial countries, especially for equities. However, in an Indian study, Cobham and Subramaniam (1998) used a sample of larger firms and found that Indian firms use substantially lower external and equity financing. In a study of large companies in ten developing countries, Booth et al. (2001) also found that debt ratios varied substantially across developing countries, but overall were not out of line with comparable data for industrial countries. In the last decade, most countries have shifted their development strategies towards a greater reliance on private companies and on the use of organized capital markets to finance these companies. This underlines the importance of research on the functioning and financing of private companies in a wide range of institutional environments, particularly in developing countries (Green, Murinde and Suppakitjarak, 2002).

1.1.1 Firm Leverage and Financial Performance

Leverage refers to debt securities the firm issues in order to raise the needed capital (Rao, Al-Yahyaee, and Syed, 2007). The existence of a relationship between firm profitability and capital structure can be explained in terms of the pecking order theory (Abor and Biekpe, 2005). The theory holds that firms prefer internal sources of finance to external sources. The order of preference is from the one that is least sensitive and risky, to the one that is most sensitive and most risky that arise because of asymmetric information between corporate insiders and less well informed market participants (Myers, 1984). Availability of internal funds depends on

profitability as well as liquidity (Mazur, 2007). By this token, profitability firms with access to retained earnings can rely on them as opposed to depending on outside sources. Murinde et al. (2004) observed that retentions are the principal source of finance. Titman and Wessels (1988) and Barton et al. (1989) agreed that firms with high profit rates, all things being equal, would maintain relatively lower debt ratios since they are able to generate such funds from internal sources.

According to static trade-off theory, using equity results to moving away from the optimum capital structure and should therefore be considered uneconomical to the firm. Therefore, higher profitability decreases the expected costs of distress and let firms increase their tax benefits by raising leverage; therefore, firms should prefer debt financing because of the tax benefit. However, it increases the risk of bankruptcy and financial distress (Scott, 1977). Pecking Order Theory argues that, informational asymmetry, which firm's managers or insiders have about the firm's returns or investment opportunities, increases the leverage of the firm with the same extent. Robb and Robinson (2009) agree with Miller and Modigliani (1963) that the gains from leverage are significant, and that use of debt increases the market value of a firm. Financial leverage has a positive effect on the firm's return on equity provided that the earnings powers of the firm's assets (the ratio of the earnings before interest and taxes to total assets) exceeds the average debt to the firm (Obert and Olawale, 2010).

1.1.2 Sugar Industry in Western Kenya

According to Waithaka (2009), Sugarcane is grown on the fairly flat regions in Western and Coast regions. About 85% of the total cane supply is from small scale growers whilst the

remaining is from nucleus estates of the sugar processing companies. Kenya has seven major factories with an annual production capacity of between 550,000 and 600,000 tones of sugar. By-products from the factories include molasses mostly for alcohol production, baggase for power generation and filter press mart for fertilizer. Statistics show that Kenya's demand for sugar is higher than supply, leaving a gap for more investment in the sector. There exists potential for Kenya to become self-sufficient in sugar production and also produce surplus amounts for export. These make the sugar industry a major sector in Kenya.

1.2 Statement of the problem

Studies on the effect of debt on returns have generated mixed results ranging from those supporting a positive relationship hypothesis to those opposing it (Obert and Olawale, 2010). They argue that some did not come up with any effect on returns, that is, they found out that firm's leverage did not portray any relationship with the financial performance of a firm. Empirical studies from some emerging markets such as Dare and Sola (2010), San and Heng (2011) and Robb and Robinson (2009) agree with Miller and Modigliani (1963) that the gains from leverage are significant, and that use of debt increases the market value of a firm. This study therefore, attempted to find out the relationship by anlysing a capital structure question from a Kenyan environment. Kenya differs from developing countries previously studied as it has a developing capital market which may not be efficient and has also gone through a period of political instability.

Capital structure studies in Kenya like Kilonzo (2003) surveyed the relationship between Financial Structure and Performance of Micro and Small Enterprises in Nairobi, Munene (2006)

looked at the impact of Profitability on Capital Structure of Companies Listed at NSE, and Kanyuru (2010) studied the relationship between Capital Structure and Financial Performance of Firms listed at NSE. However, no study has investigated the influence of leverage on financial performance of sugar industry in Kenya. The industry for a long time has been characterized with very low performance and majority of them having financial challenges forcing some like Miwani Sugar company to go under. Most of the sugar factories in Kenya are operating in the western region. The study therefore endeavor to find the answer to the following research questions: to what extent are the sugar processing companies levered and how leverage relates to financial performance of sugar processing companies in Western Kenya.

1.3 Objectives of the study

The study sought:

1. To determine the extent of leverage in sugar manufacturing companies in Western Kenya
2. To establish the relationship between leverage and financial performance of sugar manufacturing Companies in Western Kenya

1.4 Significance of the study

This study examined the effect of financial choices (capital structure) of Sugar manufacturing firms in Western Kenya. A study of this is an important research area that needs to be explored. By comparing the capital structures of sugar manufacturing companies both large and medium sized in Western Kenya, this study report should be relevant in the Kenyan context given the important role the agricultural and private sector is expected to play as the engine of growth in Western region and Kenya at large. Kenya's recently developed Medium Term National Private

Sector Development Strategy which articulates government's commitment to facilitating private sector-led growth. It is expected that the findings of this study should have important policy implications for Kenyan sugar companies.

1.1 Introduction

Finding the instruments to optimize the performance of a company, including by the choice of the combination of own and borrowed resources, as well as identification of capital structure determinants represents two of the most important themes in corporate governance and useful approach for each investor on a capital market. The Capital Markets Authority (CMA), the Kenya Association of Manufacturers (KAM) and other regulatory bodies that are responsible for the licensing, regulation and supervision of operators in the capital markets, including policy formulation, monitoring and evaluation can make informed decisions on the basis of the findings. Western Kenya being a region with densely population, rich agricultural resources and a well developed human resource (USAID report, 1982), should benefit from this study by helping investors interested in this region to make justified decision.

The study should in addition make a significant contribution to the growing body of research on capital structure and performance especial in a region a way from the main floor of the stock market and major financial institutions. The findings may also be used as a source of reference for other researchers. In addition, academic researchers may need the study findings to stimulate further research in this area and as such form a basis of good background for further researches.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The review of literature involves the systematic identification, location and analysis of documents containing information related to research problem being investigated (Mugenda and Mugenda, 2003). The broad objective of this study is to determine the role of capital structure on financial performance of sugar manufacturing companies in Western Kenya. In light of this, this chapter reviews the theories of capital structure, firm leverage and financial performance of a firm, empirical studies on capital structure and financial performance. The rest of the chapter will review the conceptual framework of the study.

2.2 Capital Structure Theories

There are different theories of capital structure. David Durand propounded the net income approach of capital structure in 1959 (Durand, 1959). This approach states that firm can increase its value or lower the cost of capital by using the debt capital. Net operating income approach is converse to this approach. This approach contends that the value of a firm and cost of the capital are independent to capital structure. Thus, the firm cannot increase its value by judicious mixture of debt and equity capital. These are two extreme approaches to capital structure making it a puzzle.

Solomon developed the intermediate approach to the capital in 1963. This traditional theory of capital structure pleads that value of the firm does increase to a certain level of debt capital and

after then it tends to remain constant with a moderate use of debt capital, and finally value of the firm decreases (Solomon, 1963). Thus the theory holds the concept of optimal capital structure.

The modern theory of capital structure began with the celebrated paper of Modigliani and Miller published in 1958 (Harris and Raviv, 1991). In this paper, they supported the net operating income approach and rejected the traditional theory of capital structure. They argue in their first proposition that the market value of any firm is independent to its capital structure and is given by capitalizing its expected return at the rate appropriate to the risk class (Modigliani and Miller, 1958). It means that the increased expected rate of return generated by debt financing is exactly offset by the risk incurred, regardless of the financing mix chosen (Rao et al, 2007). This theory later became known as the "theory of irrelevance". It was theoretically very sound but was based on the assumptions of perfect capital market and no tax world, which were not valid in reality. So, this was corrected in 1963. In correction they incorporated the effect of tax on value and cost of the capital of the firm (Modigliani and Miller, 1963); and argued that, in the presence of corporate tax, the value of the firm varies with the variation of the use of the debt due to the tax benefit on interest bill (Baral, 1996).

In 1976, Miller propounded the next version of irrelevancy theory of capital structure. He pleaded in his presidential address to Annual Meeting of American Finance Association held on September 17, 1976 in Atlanta City, New Jersey (Baral, 2004) that capital structure decisions of firms with both corporate and personal taxes are irrelevant (Miller, 1977). In 1974, Myers and Pogue developed three theories; the lenders chickens out first, the managers chickens out first, and the shareholders chickens out first- of debt capacity (Myers and Pogue, 1974). The third

theory-the shareholders chickens out first-pleads the optimal capital structure. In the 1970s, a number of scholars developed debt capacity theory. One of them is Scott's multi-period model of debt is considerable debt capacity theory. This theory argues that the capital structure of non-bankrupt firm is a function of expected earnings and the liquidating value of its assets and the optimal level of debt is an increasing function of liquidating value of the firm's assets, the corporate tax rate, and the size of the firm (Scott, 1976). Martin and others summarized the debt capacity theories developed by different scholars during 1970s and concluded that the value of the firm is maximized when marginal benefit of debt is equal to the marginal cost of debt (Martin and others, 1988).

Pecking Order Theory is developed by Myers and Majluf (1984) which states that capital

Three other main theories were also developed from the late 1970s which are the Trade-off theory, the Pecking-Order theory and the Agency theory. Each theory has tried to explain the reasons behind the choice between debt and equity finance.

the least expensive source first (Myers, 1984) and (Brealey and Myers, 2000). The pecking order

relationship between asymmetric information and investment and financing

2.2.1 Trade-Off Theory

Trade-off theory claims that a firm's optimal debt ratio is determined by a trade-off between the bankruptcy cost and tax advantage of borrowing, holding the firm's assets and investment plans constant. The goal is to maximize the firm value for that reason debt and equity are used as substitutes. According to this theory, higher profitability decreases the expected costs of distress and let firms increase their tax benefits by raising leverage; therefore, firms should prefer debt financing because of the tax benefit. However, it increases the risk of bankruptcy and financial distress (Scott, 1977). Therefore, based on this theory, firms would prefer debt over equity until the point where the profitability of financial distress starts to be important. This theory could be

applicable for large firms which are more likely able to generate high profits. Since small firms are less likely to have high profits, they may not have an option to choose debt financing for the tax shields advantage (Petit and Singer, 1985). The theory therefore suggests that firms with substantial amount of intangible assets should rely on equity financing, whereas those firms having tangible assets should rely heavily on debt financing (Harris And Raviv, 1990). According to Myers, Trade-off theory is easily accepted because it explains why firms do not use excessive debt (Myers, 1984).

2.2.2 Pecking Order Theory

Pecking Order Theory is developed by Myers and Majluf (1984) which states that capital structure is driven by firm's desire to finance new investments, first internally, then with low risk debt, and finally if all fails, with equity. Therefore, the firms prefer internal financing to external financing. It basically states that firms will consider all methods of financing available and use the least expensive source first (Myers, 1984) and (Brealey and Myers, 2000). The pecking order theory discusses the relationship between asymmetric information and investment and financing decisions. According to this theory, informational asymmetry, which firm's managers or insiders have about the firm's returns or investment opportunities, increases the leverage of the firm with the same extent. So due to the asymmetric information and signaling problems associated with external financing, the financing choices of firms follow an order, with preference for internal over external finance and for debt over equity. This theory is applicable for large firms as well as small forms (Bas, Muradoglu and Phylaktis, 2009). Since small firms are opaque and have important adverse selection problems that are explained by credit rationing; they bear high information costs (Psillaki, 1995). Also, Pettit and Singer (1985) discuss that since the quality of

small firms' financial statements vary, small firms usually have higher levels of asymmetric information. Even though investors may prefer audited financial statements, small firms may want to avoid these costs. Therefore, when issuing new capital, those costs are very high, but for internal funds, costs can be considered as none. For debt, the costs are in an intermediate position between equity and internal funds. Therefore, firms prefer first internal financing (retained earnings), and then debt and they choose equity as a last resort. The important difference is that the equity is divided into two parts, namely, internal equity and external equity. Pecking order theory suggests that firms issuing debt send a positive signal about their future prospects. This also shows that the company has more investment opportunities and growth prospects than it can handle with internally generated funds. The reasoning behind this is that managers who are unsure of future profitability will not subject the firm to bankruptcy risks. Therefore, only those firms that are confident of their ability to repay obligations will issue debt. In summary, according to signaling theory in finance, equity is issued to spread risk amongst equity holders, while debt is issued to avoid sharing wealth (Roa et al, 2007). That means, signaling theory is consistent with shareholder wealth maximization and therefore has wide support.

2.2.3 Agency Theory

Agency theory focuses on the costs which are created due to conflicts of interest between shareholders, managers and debt holders. According to Jensen and Meckling (1976), capital structures are determined by agency costs. They discuss that optimal capital structure is the result of trade-off between the benefit (discipline of management) and cost (excess risk-taking by shareholders) of debt financing. Following Jensen and Meckling model, other models, such as Harris and Raviv (1990) and Stulz (1990) emerge based on agency costs. In their models, the

conflicts between managers and shareholders occur due to disagreements over an operating decision. Harris and Raviv (1990) adopt that even if shareholders or debt holders prefer liquidation of the firm, managers always choose to continue the firm's business. This model provides rights to shareholders to force liquidation if cash flows are poor. On the other hand, Stulz (1990) assumes managers always prefer to invest all usable funds even if paying out cash is better for shareholders. So debt constrains the amount of free cash flow available for profitable payments. Therefore, capital structure is determined by the conflicts of interest between inside and outside investors. However, for small firms, agency conflicts between shareholders and lenders may be particularly severe (Ang, 1991). Since in small firms managers are mostly the owners, there are no or very few agency costs of equity. So, small and medium enterprises are required to provide some kind of guarantees materialized in collateral. The type of assets that a firm has determines the cost of financial distress. For instance, if a firm invests largely in land, equipment and other tangible assets, it will have smaller costs of financial distress than a firm relying on intangible assets.

In recent study, Frank and Goray (2003) tested the pecking order theory over the 1971 through 1998 period. They found that in contrast to Pecking order theory, internal financing is not sufficient to cover investment spending on average, external financing is heavily used, and debt financing does not dominate equity financing. On the issue of determinants of capital structure, Bancel and Mittoo (2004) found that large firms are less concerned about bankruptcy costs, and high-growth firms consider common stock as the cheapest source of funds and use windows of opportunity to issue common stock. Chen (2004) found that Chinese firms prefer short-term finance and have substantially lower amount of long-term debt. However, this result is to be

viewed in the context of developing nature of Chinese economy. This paper also concluded that the trade-off model or the pecking order hypothesis, based on Western settings, fail to explain the capital structure preferences of Chinese firms. This could also be true from this present study on companies in Kenya. This may be due to the fact that the Kenyan Financial market is in a developing stage and unlike Western countries which are stable politically; Kenya has been experiencing some instability in political environment which makes the economy to be unstable.

The use of debt therefore reduces the amount of tax to be paid by the firm and increases the value of the firm by such a benefit. In addition to the

2.3 Firm Leverage and Financial Performance of a Firm

2.3.1 Firm leverage

Leverage refers to debt securities the firm issues in order to raise the needed capital (Rao, Al-Yahyaee, and Syed, 2007). Modigliani and Miller theory of 1963 assumes that a firm's value is maximized when it employs more of debt in its capital structure than equity. When debt is used in the capital structure, the average cost of capital is reduced and profitability enhanced (Modigliani and Miller, 1963). Leverage is a financing strategy designed to increase the rate of return on owner's investment by generating a greater return on borrowed funds than the cost of using the funds. Leverage would be positive if return on assets (ROA) is greater than the before-tax interest rate paid on debt. Negative leverage occurs when a firm generates a return on assets (ROA) that is less than the before-tax interest on debt (Damodaran, 1999).

According to Rao and Hoeg (2011), corporate performance can be measured by variables such as Return on Assets (ROA), Return on Equity (ROE), Return on Investment (ROI), Earnings per Share (EPS), Dividend Yield, Profitability Ratio, Growth in Sales, etc. The major advantage of using debt is its low cost compared to the cost of equity. The actual cost of debt to the firm is the after-tax cost of debt, which is the market interest rate less the marginal tax rate proportion. The actual cost of debt would therefore be:

$$K_d = I(1-t) \dots \dots \dots (1)$$

Where K_d = Cost of debt

I = Interest rate payable (Market interest rate)

t = The marginal tax rate

(Correia et al., 2005).

The use of debt therefore reduces the amount of tax to be paid by the firm and increases the return to shareholders whilst the use of equity does not enjoy such a benefit. In addition to the tax advantage, the cost of debt is generally low as compared to equity due to the lower risk associated with debt as debt holders has the first claim in the case of insolvency (Damodaran, 1999). Debt also makes planning easy because interest cost on debt is usually fixed which allows efficient planning as the cost will be known (Obert and Olawale, 2010). As long as the interest on debt is lower than the return that can be earned on the funds supplied by creditors, this excess return accrues to the owners of the firm as their benefit of using debt (Bernstein, 1993). Though debt has its fair portion of benefits, it does not come without costs. The major costs associated with debt include bankruptcy, agency costs and loss of flexibility (Damodaran, 1999).

2.3.2 Financial Performance of a Firm

According to San and Heng (2011), corporate performance can be measured by variables which involve productivity, profitability, growth or, even, customers satisfaction. These measures are related among each other. Financial measurement is one of the tools which indicate the financial strengths, weaknesses, opportunities and threats. Those measures are return on investment (ROI), residual income (RI), earning per shares (EPS), dividend yield, price earnings ratio, growth in

sales, market capitalization and others (Barbosa and Louri, 2005). One of the most fundamental facts about businesses is that the operating performance of the firm shapes its financial structure. It is also true that the financial situation of the firm can also determine its operating performance. The financial statements are therefore important diagnostic tools for the informed manager. Management researchers prefer accounting measures of performance, such as return on equity (ROE), return on investment (ROI), and return on assets (ROA), along with the variability in these returns measures. Researchers from finance and economics seem to prefer market returns or cash flow measures along with their variability as performance measures. Some performance measures in previous studies typically measure accounting rate of return (Rao et al., 2007). According to there study, the idea behind this measure is perhaps to evaluate performance from a management standpoint. They argue that return on investment (ROI), return on capital (ROC), return on assets (ROA) and return on sales (ROS) are essentially efficient measures. That is, how well management is using the assets as measured in currency terms to generate accounting returns per currency of investment, assets or sales. Return on assets (ROA) and return on equity (ROE) are the most frequently used performance measures in prior studies for example Carter, (1977), Rao et al., (2007) and Obert and Olawale, (2010)

2.4 Empirical Studies on Firm's Leverage and Financial Performance

Capital structure is closed linked with corporate performance (Tian and Zeitun, 2007). Studies on the effect of debt on returns have generated mixed results ranging from those supporting a positive relationship hypothesis to those opposing it (Obert and Olawale, 2010). They argue that some did not come up with any effect on returns, that is, they found out that capital structures did not portray any relationship with the returns of a firm. Empirical studies from some emerging

markets such as Dare and Sola (2010), San and Heng (2011) and Robb and Robinson (2009) agree with Miller and Modigliani (1963) that the gains from leverage are significant, and that use of debt increases the market value of a firm. Financial leverage has a positive effect on the firm's return on equity provided that the earnings powers of the firms assets (the ratio of the earnings before interest and taxes to total assets) exceeds the average debt to the firm (Obert and Olawale, 2010). Dare and Sola (2010) conducted a study on the impact of capital structure on corporate performance in the Nigerian petroleum industry and found out that the leverage ratio has significant positive effect on both the earnings per share and dividend per share and concluded that management should do more to improve on leverage ratio. San and Heng (2011) investigating the relationship of capital structure and corporate performance of firm before and during financial crisis of 2007 on construction companies in Main Board of Bursa Malaysia (exchange market) found a mix relationship. For big companies Return on Capital (ROC) with Debt to Equity market value (DEMV) and Earnings per Share (EPS) with Long-term debt to Common equity (LDCE) have a positive relationship whereas EPS with Debt to Capital is negatively related.

Other studies such as Obert and Olwale (2010) and Rao et al. (2007) found out a negative relationship between capital structure and corporate performance. Their results are inconsistent with the capital structure theory by Modigliani and Miller (1963). Gleason, Mathur and Mathur (2000) Using data from retailers in 14 European countries, which are grouped into four cultural clusters, showed that capital structures for retailers vary by cultural clusters. Using both financial and operational measures of performance, it showed that capital structure influences financial performance, although not exclusively. A negative relationship between capital structure and

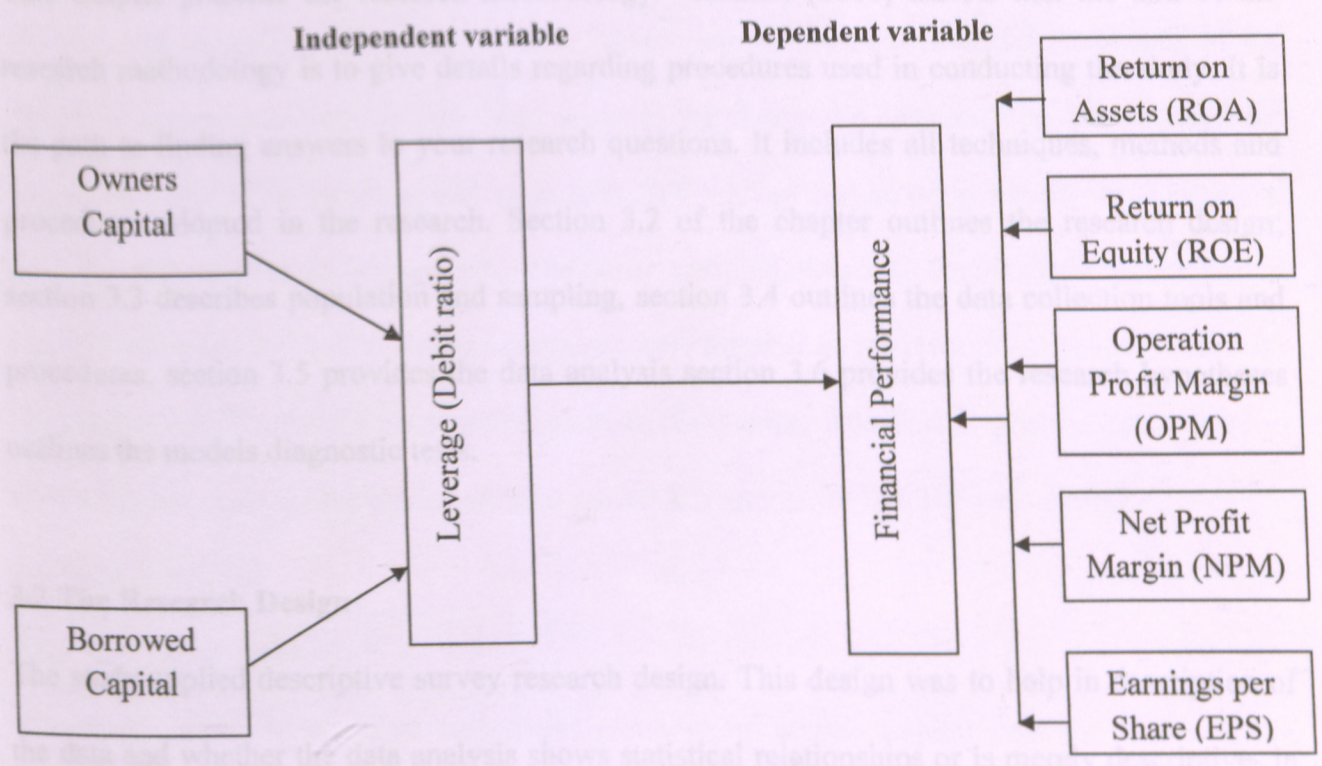
performance suggests that agency issues may lead to use of higher than appropriate levels of debt in the capital structure, thereby producing lower performance. Phillips and Sipahioglu (2004) using data collected from 43 UK quoted organisations which possess an interest in owning and managing hotels, tested Modigliani and Miller's (1958) capital structure irrelevancy theorem . Empirical analysis revealed no significant relationship between the level of debt found in the capital structure and financial performance. These results are consistent with Modigliani and Miller's theorem. Ebaid (2009) using three of accounting-based measures of financial performance (i.e. return on equity (ROE), return on assets (ROA), and gross profit margin), and based on a sample of non-financial Egyptian listed firms from 1997 to 2005 the results reveal that capital structure choice decision, in general terms, has a weak-to-no impact on firm's performance.

In conclusion, exactly how managers set the proportions of debt and equity used in firm's capital structure continues to remain a puzzle. It could be reasoned that firms within the same industry would have similar capital structures and behave in similar manner. However, this may be far from being the case since the empirical evidence shows that debt-to-equity ratios continue to vary even between companies within the same industry. This study therefore looked at how the capital structure of a firm relate to its financial performance in the Kenyan set up within the sugar industry which has not been done before.

2.6 Conceptual Framework

This study was guided by the following perceived conceptual framework.

Figure 1.0 Perceived Conceptual Framework for relating leverage to financial performance of sugar companies in Western Kenya



Source: Researcher- September 2011

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology. Kothari (2008) asserts that the aim of the research methodology is to give details regarding procedures used in conducting the study. It is the path to finding answers to your research questions. It includes all techniques, methods and procedures adopted in the research. Section 3.2 of the chapter outlines the research design; section 3.3 describes population and sampling, section 3.4 outlines the data collection tools and procedures, section 3.5 provides the data analysis section 3.6 provides the research hypotheses outlines the models diagnostic tests.

3.2 The Research Design

The study applied descriptive survey research design. This design was to help in description of the data and whether the data analysis shows statistical relationships or is merely descriptive- in this case the financial performance of sugar processing companies in Western Kenya in relation to their capital structures.

3.3 Population and Sampling

For the purpose of this study, population was defined in terms of the number of registered sugar manufacturing companies in Western Kenya as on June 30, 2011. According to data from Kenya Sugar Board directory, there are 9 registered sugar companies in Western Kenya.

The target population for this study was 9 companies from Nyanza and Western region. Applying census survey technique, all the 9 companies depending on the availability of information were sampled for the study.

3.4 Data collection

The data set comprised of secondary data. These were the audited financial statements of the respective companies obtained from the offices of the financial managers. The data required for the calculations of the ratios as shown in table 1(Variables and proxies) below, were extracted from the audited financial statements. The study sampled observations for the five-year period between 2006 and 2010. The finance managers were targeted as the respondents because they are conversant with financial issues affecting their companies. Attached is a cover letter used in requesting the manager for copies of the financial statements for the five-year period.

3.5 Data Analysis

3.5.1 Conceptual Model

The study model is based on two major components namely capital structure and financial performance of manufacturing companies in Nyanza and Western Kenya region. The study conceptualizes that financial performance of manufacturing companies in Nyanza and Western Kenya region is a function of their capital structures. Equation (1) below presents the conceptual model for this relation:

$$fPERF = f(EQUITY, DEBT)..... (2)$$

Where:

- fPERF = Financial Performance
- DEBT = Borrowed Capital maturing after one year.

3.5.2 The Analytical Model

The study used a panel regression model for estimation. Panel data involves the pooling of observations on a cross-section of units over several time periods (Abor, 2008). He argues that a panel data approach is more useful than either cross-section or time-series data alone. One advantage of using the panel data set is that, because of the several data points, degrees of freedom are increased and collinearity among the explanatory variables is reduced, thus the efficiency of economic estimates is improved. Panel data can also control for individual heterogeneity due to hidden factors, which if neglected in time-series or cross-section estimations leads to biased results (Baltagi, 1995). The panel regression equation differs from a regular time-series or cross-section regression by double subscript attached to each variable. The general form of the model can be specified as:

$$Y_{it} = \alpha + \beta X_{it} + \epsilon_{it} \dots \dots \dots (3)$$

Where the subscript I denote the cross-sectional dimension and t represent the time-series dimension. The left-hand variable, Y , represent variable in the model, which is the firm's financial performance ratios. X contains the independent variable which is the firm's debt ratio, α is the constant and β represents the coefficient which measures association between financial performance ratios and debt ratios and ϵ is the error disturbance term.

3.5.3 Operational Variables

The operational variables in this study were as shown in table 1 bellow.

Table 1: Variables and Proxies

VARIABLE	PROXIES	FORMULAE
Capital Structure (Independent Variable)	Debt Ratio	Total Debt/Total Assets
Financial Performance (Dependent variables)	Return On Assets (ROA)	Operating profits (EBIT)/Total Assets
	Return On Equity (ROE)	Net Profit(EAT)/Owners Capital(Equity)
	Operation Profit Margin (OPM)	Operating profits (EBIT)/Net Sales
	Net Profit Margin (NPM)	Net Profit(EAT)/Net Sales
	Earnings Per Share (EPS)	Earnings after tax and preference dividend/Number of Owners shares

Data was analyzed by ranking all the companies in descending order by the debt ratio. The debt ratio measures the proportion of total assets financed by firm's creditors. The higher this ratio, the greater the amount of debt used to generate profits. Debt ratio is calculated by dividing total debt by total assets. It was also used as the principal explanatory variable in regression analysis. Return on Assets (ROA) and Return on Equity (ROE) are the most frequently used performance measures in prior studies. Such studies include Obert and Olwale (2010), Rao et al. (2007) and Pratheepkanth (2011). ROA was used in this study as the performance measure as it is a commonly used indicator of managerial performance (Rao et al, 2007). In addition to ROA, for the companies in each of the groups, other financial measures, namely operating profit margin (OPM), return on equity (ROE), net profit margin (NPM) and earnings per share (EPS) were computed for the five years 2006-2010. All this explanatory proxies were averaged over the five years to minimize the measurement error due to random year-to-year fluctuation in variables.

The standard deviation of these performance measures was also obtained in order to assess the volatility.

In order to gain more insight in the relationship between financial leverage and performance, a regression analysis was performed using equation (3) above. The debt ratio as mentioned above was used as principal explanatory variable. The financial performance which is the dependent variable was presented by the proxies as shown in table 1. All the dependent variables were pooled cross-section for estimation. The relationship measurement between each of the dependent variables on the independent variable was solved using the Ordinary Least Square (OLS) method.

3.6 Research Hypotheses

The study sought to test the following hypotheses:

1. *Leverage has no influence on the companies ROA.*
2. *Leverage has no influence on the companies ROE.*
3. *Leverage has no influence on the companies OPM.*
4. *Leverage has no influence on the companies NPM.*
5. *Leverage has no influence on the companies EPS.*
6. *There is no relationship between Leverage and Financial Performance of companies.*

3.7 Diagnostic Tests

To establish the significance of individual variables in each of the models, T-test was applied at both 95% and 99% levels of confidence. T-test was applied in order to determine whether to accept or reject the hypothesis.

The analysis and results of the study which have been discussed under the previous sections in line with the research objectives. The presentation starts by giving findings about the extent of leverage among the studied firms, followed by results on the relationship between leverage and financial performance of the firms.

4.2 Extent of leverage

Graph 1: Leverage among the 5 Sugar companies for the years 2006 to 2010



Leverage of the firm in financial terms refers to the use of debt to acquire additional assets. In this study it is measured using debt ratio which is total debt divided by total assets. This ratio helps to measure the extent of leverage in the studied firms. Using a bar graph in Graph 1 above,

CHAPTER FOUR

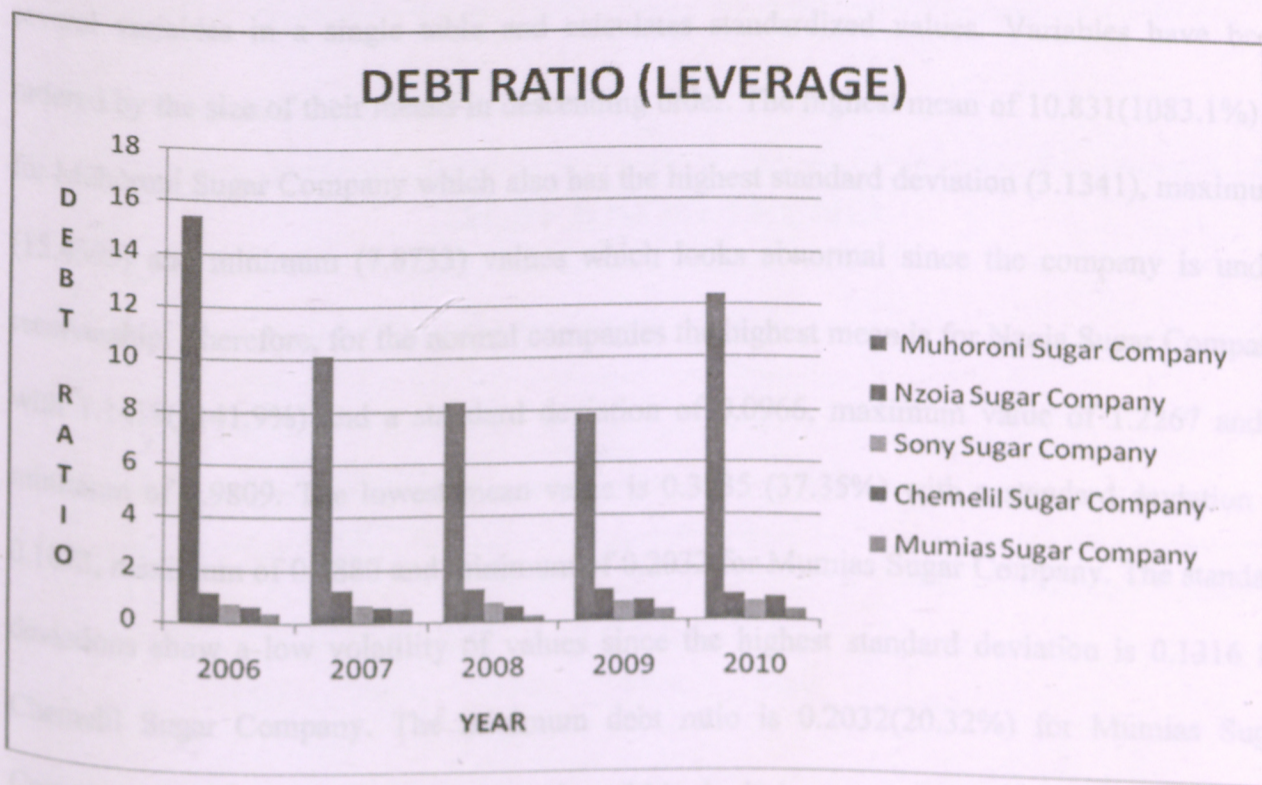
DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis and results of the study which have been discussed under key sub sections in line with the research objectives. The presentation starts by giving findings about the extent of leverage among the studied firms, followed by results on the relationship between leverage and financial performance of the firms.

4.2 Extent of leverage

Graph 1: Leverage among the 5 Sugar companies for the years 2006 to 2010



Leverage of the firm in financial terms refers to the use of debt to acquire additional assets. In this study it is measured using debt ratio which is total debt divided by total assets. This ratio shows at a glance the extent of leverage in the studied firms. Using a bar graph in Graph I above,

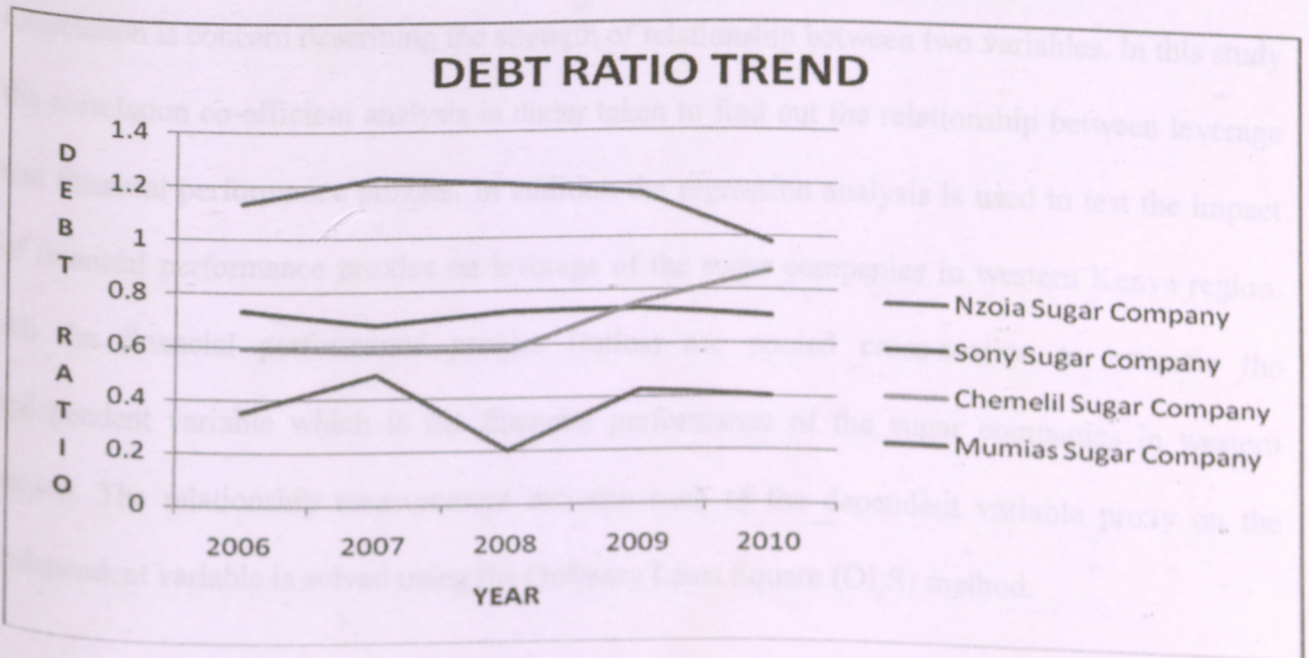
the extent of debt usage among the studied sugar companies can be seen at a glance. The graph shows that all the companies have used debt to finance their operations in all the 5 years, though the level of usage varies from one company to another. Each company on average has maintained their level of debt usage all through the years. Muhoroni Sugar Company has the highest level of debt ratio which is above 1 (100%) showing that total debt is more than total assets. The company is insolvent and has been under receivership since the year 2000. Mumias Sugar Company has the lowest level of debt usage which looks stable over the years.

The descriptive statistics shown in table 2 below displays univariate summary statistics for several variables in a single table and calculates standardized values. Variables have been ordered by the size of their means in descending order. The highest mean of 10.831(1083.1%) is for Muhoroni Sugar Company which also has the highest standard deviation (3.1341), maximum (15.4505) and minimum (7.8733) values which looks abnormal since the company is under receivership. Therefore, for the normal companies the highest mean is for Nzoia Sugar Company with 1.1419(1141.9%) and a standard deviation of 0.0966, maximum value of 1.2267 and a minimum of 0.9809. The lowest mean value is 0.3735 (37.35%) with a standard deviation of 0.1073, maximum of 0.4880 and minimum of 0.2032 for Mumias Sugar Company. The standard deviations show a low volatility of values since the highest standard deviation is 0.1316 for Chemelil Sugar Company. The minimum debt ratio is 0.2032(20.32%) for Mumias Sugar Company which indicates that all companies within the industry use some debt.

Table 2 -Leverage (Debit ratio) Statistics

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N statistics
Muhoroni Sugar Company	10.8310	3.1341	15.4505	7.8733	5
Nzoia Sugar Company	1.1419	0.0966	1.2267	0.9809	5
Sony Sugar Company	0.7113	0.0237	0.7308	0.6744	5
Chemelil Sugar Company	0.6770	0.1316	0.8723	0.5804	5
Mumias Sugar Company	0.3735	0.1073	0.4880	0.2032	5

Graph 2: Debt ratio trend analysis



Graph 2 shows the trend of the use of debt compared with the total assets for the four stable companies within the industry from 2006 to 2010. Mumias Sugar Company had major drop in

the year 2008 and become stable in debt usage for the following years 2009 and 2010. The rest of the companies show a somewhat stable trend on debt usage.

4.3 Leverage and Financial performance

The financial performance ratios; Return On Assets (ROA), Return On Equity (ROE), Operation Profit margin (OPM), Net Profit Margin (NPM) and Earnings Per Share (EPS) which are the explanatory proxies, was computed for every company for the five years 2006-2011. Trend analysis was performed for the period from year 2006 to 2010 for all the proxies and for each company. All the proxies have been averaged so that the error due to random year-to-year fluctuation is reduced and the standard deviation, maximum statistics and minimum statistics for each is shown to assess the volatility.

Correlation is concerned describing the strength of relationship between two variables. In this study the correlation co-efficient analysis is undertaken to find out the relationship between leverage and financial performance proxies. In addition the regression analysis is used to test the impact of financial performance proxies on leverage of the sugar companies in western Kenya region. All the financial performance proxies (ratios) are pooled cross-section to estimate the independent variable which is the financial performance of the sugar companies in western region. The relationship measurement between each of the dependent variable proxy on the independent variable is solved using the Ordinary Least Square (OLS) method.

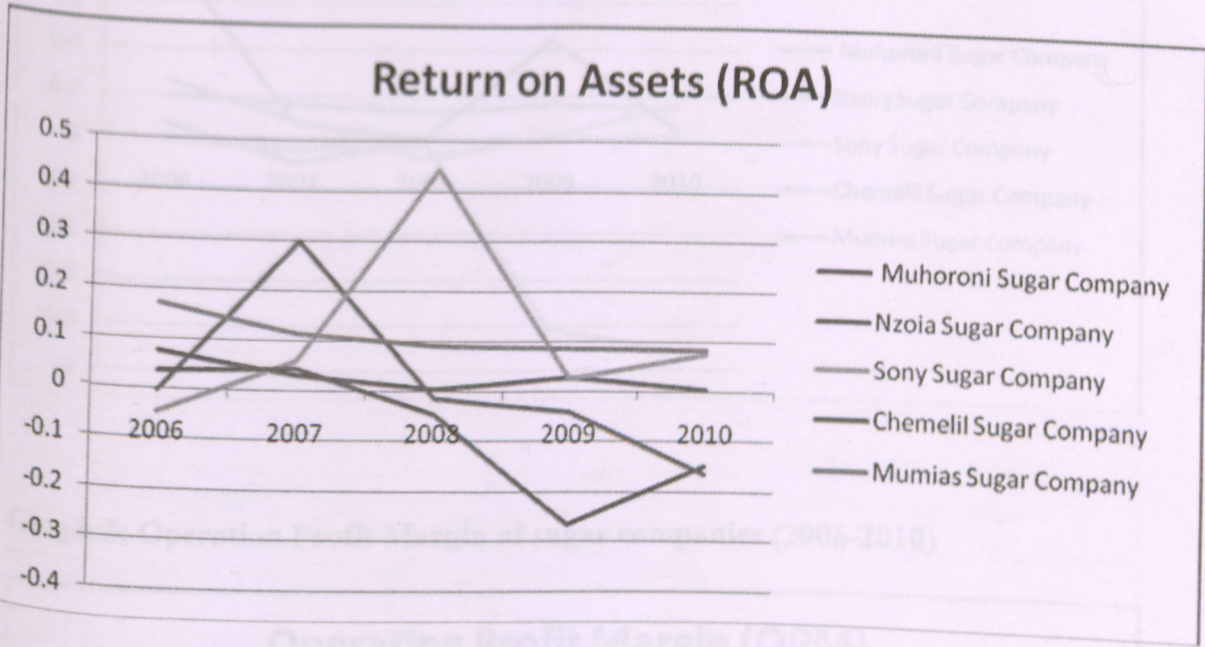
4.3.1 Trend analysis for the financial performance of sugar companies

Graph 3 shows the trend of Return on Assets of Chemelil Sugar Company and Muhoroni Sugar Company have been declining from 2007 but Chemelil has taken a positive turn 2010. Sony

Sugar Company had a major increase in 2008 at about 45% and declined to below 5% in the year 2009. For Mumias Sugar Company and Nzoia Sugar Company the has been slit decline over the five year period.

Return on Equity (ROE)

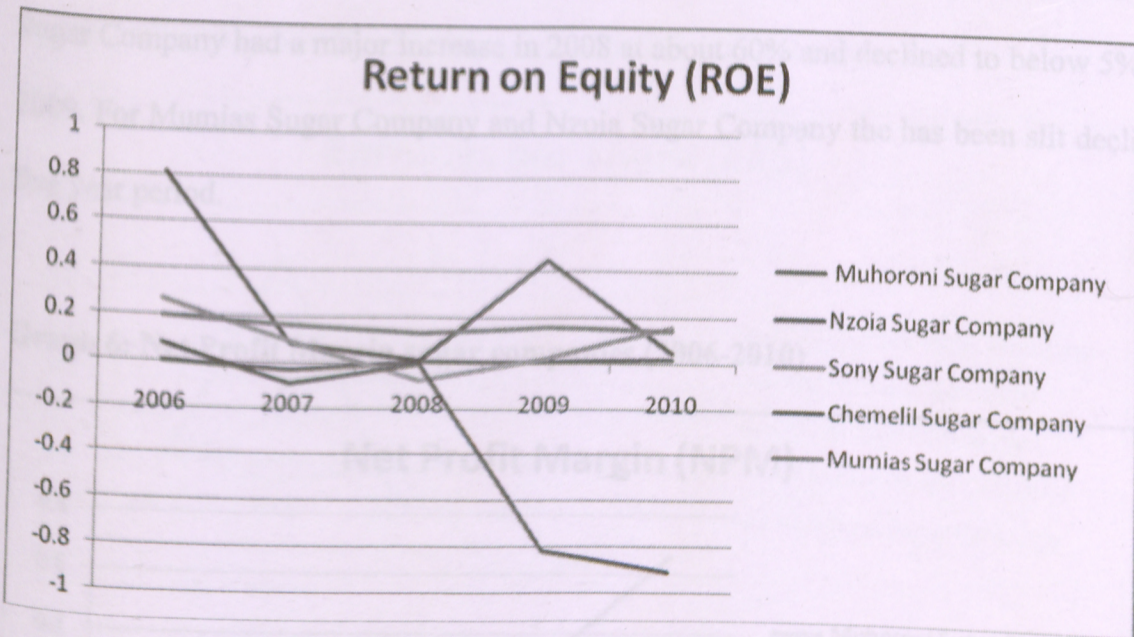
Graph 3: Return on Assets of sugar companies (2006-2010)



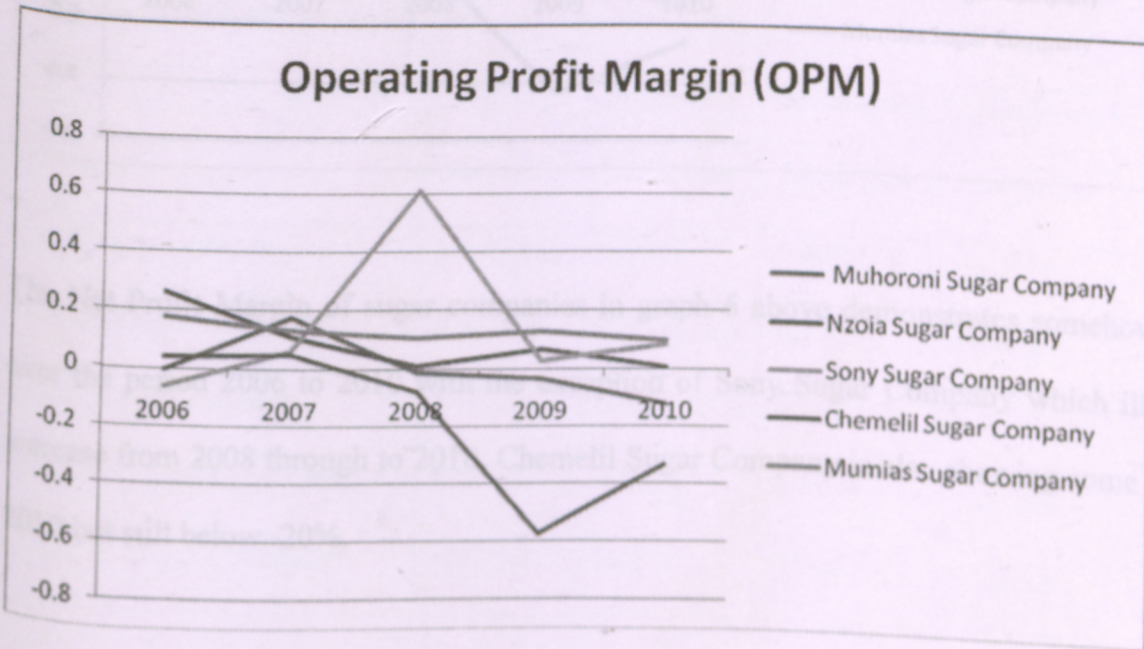
Operating Profit Margin (OPM)

Return on Equity for Chemelil Sugar Company shown in graph 4 below point up a main decline in 2009 and has maintained the returns below 0% since 2008 to 2010. Nzoia Sugar Company demonstrates decline in ROE from 2006 to 2008 with a major increase in 2009 and thereafter a decline in 2010. The rest have illustrated somewhat stable ROE with Mumias Sugar Company maintaining their performance just slightly below 20% throughout the five year period.

Graph 4: Return on Equity of sugar companies (2006-2010)

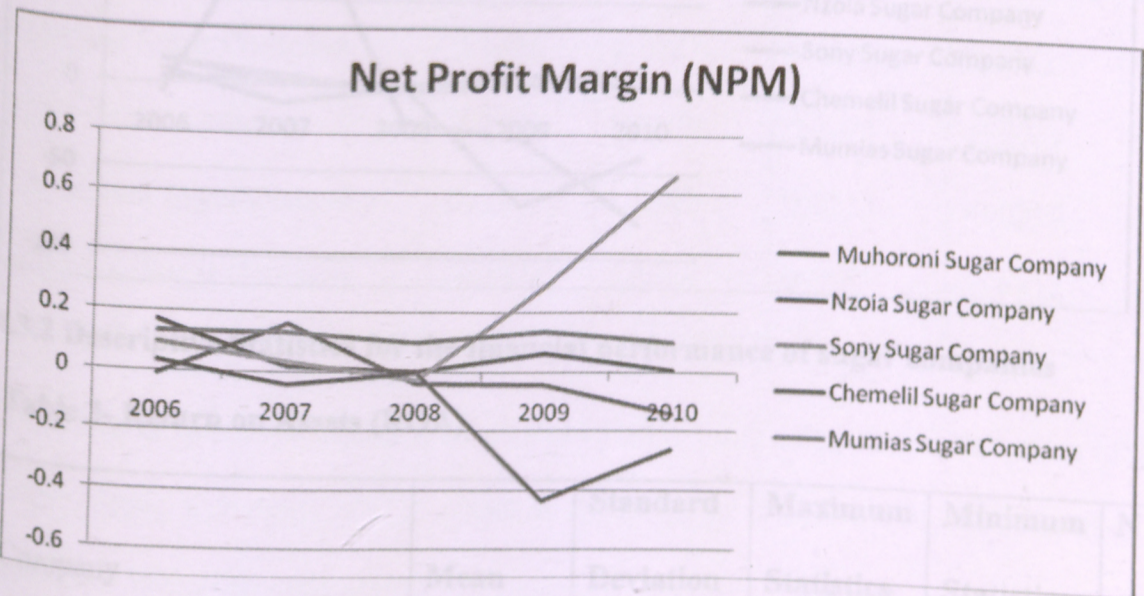


Graph 5: Operation Profit Margin of sugar companies (2006-2010)



Graph 5 shows the trend of Return on Assets of Chemelil Sugar Company and Muhoroni Sugar Company have been declining from 2007 but Chemelil has taken a positive turn 2010. Sony Sugar Company had a major increase in 2008 at about 60% and declined to below 5% in the year 2009. For Mumias Sugar Company and Nzoia Sugar Company the has been slit decline over the five year period.

Graph 6: Net Profit Margin sugar companies (2006-2010)

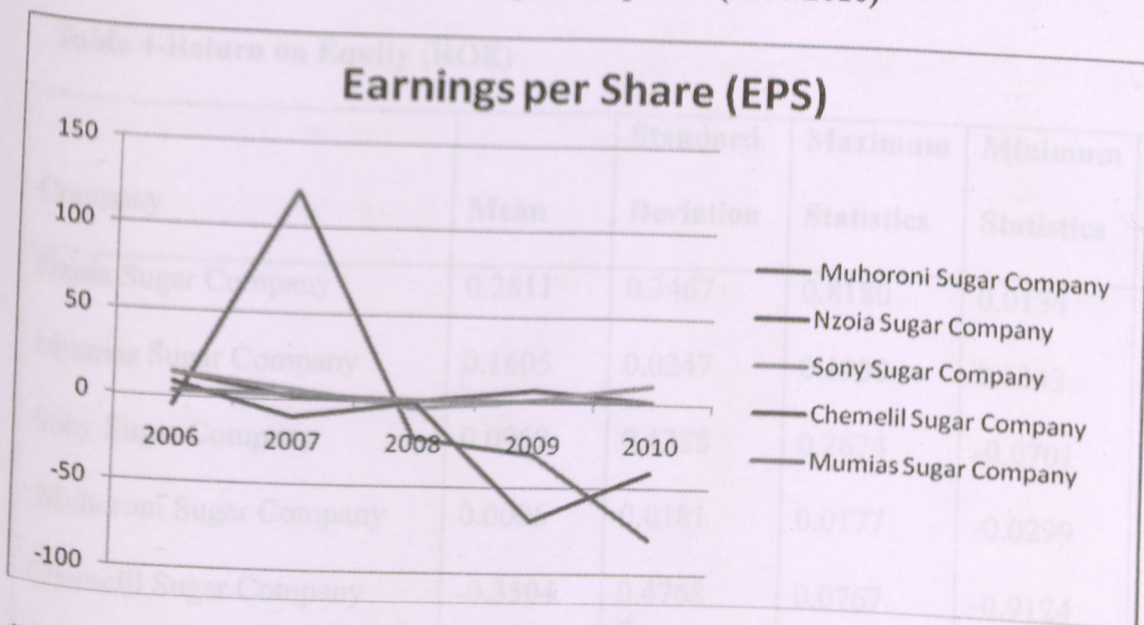


The Net Profit Margin of sugar companies in graph 6 above demonstrates somehow a decline over the period 2006 to 2010 with the exception of Sony Sugar Company which illustrates an increase from 2008 through to 2010. Chemelil Sugar Company is also showing some increase in 2010 but still below -20%.

Graph 7 shows that there has been decline in Earnings per share for Muhoroni Sugar Company and Chemelil Sugar Company from 2008 with a major decline for Chemelil Sugar Company in

2009 and main increase for Muhoroni in 2007. The rest of the companies some stable earnings per share all through the period of 2006 to 2010.

Graph 7: Earnings Per Share of sugar companies (2006-2010)



4.3.2 Descriptive Statistics for the financial performance of sugar companies

Table 3- Return on Assets (ROA)

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N statistics
Sony Sugar Company	0.1099	0.1918	0.4427	-0.0475	5
Mumias Sugar Company	0.1098	0.0376	0.1734	0.0838	5
Nzoia Sugar Company	0.0270	0.0292	0.0739	0.0023	5
Muhoroni Sugar Company	0.0149	0.1712	0.2994	-0.1633	5
Chemelil Sugar Company	-0.0770	0.1310	0.0427	-0.2663	5

Table 3 shows the mean of return on assets for the companies over the five years. The highest mean is 10.99% for Sony Sugar company with the highest standard deviation of 19.18% and

maximum value of 44.27% and a minimum value of -4.75% which indicates a high volatility of the values of this company. It is followed by Mumias Sugar Company at 10.98% with a standard deviation of 3.76% showing a low volatility of their values.

Table 4-Return on Equity (ROE)

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N statistics
Nzoia Sugar Company	0.2811	0.3467	0.8180	0.0134	5
Mumias Sugar Company	0.1605	0.0247	0.1980	0.1343	5
Sony Sugar Company	0.0959	0.1288	0.2674	-0.0701	5
Muhoroni Sugar Company	0.0006	0.0181	0.0177	-0.0299	5
Chemelil Sugar Company	-0.3504	0.4768	0.0767	-0.9124	5

The mean of Return on Equity is illustrated in table 4 indicating the highest value of 28.11% for Nzoia Sugar Company with a standard deviation of 34.67% demonstrating high volatility compared with other companies.

Table 5-Operating Profit Margin (OPM)

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N statistics
Sony Sugar Company	0.1439	0.2681	0.6131	-0.0633	5
Mumias Sugar Company	0.1283	0.0302	0.1766	0.0984	5
Nzoia Sugar Company	0.0909	0.1044	0.2607	0.0061	5
Muhoroni Sugar Company	0.0005	0.1106	0.1786	-0.1250	5

Chemelil Sugar Company	-0.1789	0.2699	0.0508	-0.5748	5
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Table 5 shows the mean and standard deviation for the sugar companies with the highest mean being 14.39% for Sony Sugar Company and the lowest mean of -17.89% for Chemelil Sugar Company both with standard deviation of about 27%.

Table 6- Net Profit Margin (NPM)

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N statistics
Sony Sugar Company	0.2111	0.2787	0.6612	-0.0271	5
Mumias Sugar Company	0.1207	0.0181	0.1364	0.1007	5
Nzoia Sugar Company	0.0532	0.0714	0.1726	0.0029	5
Muhoroni Sugar Company	-0.0151	0.1114	0.1632	-0.1427	5
Chemelil Sugar Company	-0.1420	0.2006	0.0353	-0.4354	5

Net profit margin statistics are revealed by table 6 pointing out that the highest mean is 21.11% for Nzoia Sugar Company and the lowest being Chemelil Sugar Company with -14.2%.

Table 7-Earnings per Share (EPS)

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N statistics
Sony Sugar Company	5.4908	7.1360	14.0624	-3.9047	5
Nzoia Sugar Company	4.9848	6.1477	14.5055	0.2378	5
Mumias Sugar Company	1.7199	1.0524	2.9934	0.7934	5

Muhoroni Sugar Company	-2.9540	74.4906	120.7039	-79.2115	5
Chemelil Sugar Company	-22.3642	31.7906	8.1251	-69.0470	5

Table 7 shows the descriptive statistics of Earnings per Share for the companies with Sony Sugar Company having the highest mean of Sh. 5.50 per share and Muhoroni Sugar Company having a negative mean of Sh 2.95 and a very high standard deviation of Sh. 74.49 indicating very high volatility.

Table 8-Financial Performance

Company	Mean	Standard Deviation	Maximum Statistics	Minimum Statistics	N Statistics
Sony Sugar Company	0.1402	0.0939	0.2446	0.0617	5
Nzoia Sugar Company	0.1298	0.0257	0.1697	0.1065	5
Mumias Sugar Company	0.1130	0.1346	0.3313	0.0072	5
Muhoroni Sugar Company	0.0002	0.0937	0.1528	-0.1033	5
Chemelil Sugar Company	-0.1871	0.2623	0.0470	-0.5248	5

The financial performance ratios have been pooled cross-section to give values for Financial Performance for the companies. In the process of pooling the performance measure of Earning per Share as been excluded since the measure is in shillings and the rest are ratios or in percentages. Pooling values in shillings and percentage will not make sense, so the ratios pooled cross section include Return on Assets, Return on Equity, Operation Profit Margin and the Net Profit Margin. Sony Sugar Company demonstrates the highest mean figure of 0.1402 (14.02%)

and Chemelil Sugar Company having a mean of -0.1871 with the highest standard deviation of 0.2623 showing somehow high volatility compared with other companies values.

4.3.3 Correlation Analysis

Muhoroni Sugar Company figures have a very high volatility especial in debt ratios which is the independent variable proxy. As mentioned it was found out that the company has been under receivership since the year 2000 and because of this, its values were not incorporated in the correlation and regression analysis. Table 9 shows statistics of the leverage ratio being correlated with the financial performance ratios.

	-0.0822	0.0068
Net Profit Margin (NPM)	-0.3948	0.1559

Table 9 shows that there is a negative relationship between leverage and all the financial performance ratios. Return on Assets has correlation co-efficient of -0.3772 and the co-efficient of determination is 0.1423 illustrating that only 14.23% of variance in leverage is accounted by return on assets. Net Profit Margin also demonstrates a correlation co-efficient of -0.3948 and its coefficient of determination is 0.1559 indicating that 15.59% of variance in leverage is accounted by Net Profit Margin. We can say that for the two variables, Return on Assets and Net Profit Margin; have a weak negative relationship with the leverage or debt ratio of the company. There is almost no relationship between leverage of the firm and Return on Equity, Operation profit margin, Earnings per Share and pooled values of financial performance since their Co-efficient of Determinations are almost zero.

Table 9: Correlation statistics

Leverage correlated with	Correlation Co-efficient (r)	Coefficient of Determination R^2
Return on Assets (ROA)	-0.3772	0.1423
Return on Equity (ROE)	-0.0968	0.0094
Operating Profit Margin (OPM)	-0.0822	0.0068
Net Profit Margin (NPM)	-0.3948	0.1559
Earnings per Share (EPS)	-0.0778	0.0061
Financial Performance	-0.0191	0.0004

4.3.4 Regression Analysis

Regression analysis is used to test the impact of financial performance on leverage of Sugar processing companies in western Kenya region. The analysis is performed using equation (3) above applying the ordinary least square (OLS) method; the following results were obtained as shown in table 10 below. The statistics show that there is a negative linear relationship between the financial performance variables and the leverage variables since the entire coefficient (β) values are negative. As indicated under correlation analysis, the relationship between Leverage of the firm and Return on Assets and Net Profit Margin can be confirmed to a weak negative relationship since their coefficient values are -0.1058 and -0.1871 respectively. Return on Equity

and Operation Profit Margin illustrates no relationship with the firm leverage in line with the findings under correlation analysis. Earnings per Share shows coefficient of -3.2793 indicating strong negative relationship which is insignificant since the P-Value is 0.6579. For the pooled cross section figures of financial performance it shows no relationship with leverage of the firm since the coefficient in this case is -0.0096 also confirming the findings under correlation analysis.

Table 10: Regression Statistics

	Constant α	Coefficient β	P- Value
Return on Assets (ROA)	0.1192	-0.1058	0.0319
Return on Equity (ROE)	0.1081	-0.0845	0.0536
Operating Profit Margin (OPM)	0.0747	-0.0394	0.0329
Net Profit Margin (NPM)	0.1966	-0.1871	0.0448
Earnings per Share (EPS)	-0.1618	-3.2793	0.6579
Financial Performance	0.0559	-0.0096	0.0319

4.3.5 Hypotheses Analysis

To establish the significance of individual variables in each of the models, a diagnostic T-test was applied at both 95% and 99% levels of confidence. The T-test was applied in order to determine whether to accept or reject the hypothesis. Table 10 shows the P-Values of the test and it illustrates that at 99% level of confidence all the relationships are insignificant since there P-Values are greater than 0.01 confirming the test at 95% level of confidence. Applying the T-test at 95% level of confidence shows that the relationship between leverage and Return on Assets,

Return on Equity, Operation Profit Margin, Net Profit Margin and the pooled figures of financial performance are significant since their P-Values are less than 0.05. Earnings per Share relationship with firm's leverage is insignificant since its P-Value is greater than 0.05.

CHAPTER FIVE

The results indicates a weak negative relationship between Return on Assets(ROA) and Net Profit Margin (NPM) and the independent variable proxy -debt ratio, which illustrates that the research hypothesis 1: Leverage has no influence on the company's ROA and 4: Leverage has no influence on the company's NPM are false. In addition the results show that there is no relationship between Return on Equity (ROE), Operation Profit Margin (OPM) and the pooled cross-section values of financial performance and leverage. It therefore shows that the research hypothesis 2: Leverage has no influence on the companies ROE, 3: Leverage has no influence on the company's OPM and 6: There is no relationship between leverage and financial Performance of companies are true according to the results of the study. Results show that no conclusion can be made on Earnings per Shares since the data is inadequate for this hypothesis testing.

These results are consistent with several studies that were done in developing countries. Obert and Olwale (2010) and Rao et al. (2007) found out a negative relationship between capital structure and corporate performance. Ebaid (2009) using three of accounting-based measures of financial performance (i.e. return on equity (ROE), return on assets (ROA), and gross profit margin), and based on a sample of non-financial Egyptian listed firms from 1997 to 2005 the results reveal that capital structure choice decision, in general terms, has a weak-to-no impact on firm's performance. The findings of this study does not support the theoretical foundation of this study as was put forward by Modigliani and Miller in 1958 and corrected in 1963. The theory

suggests that the use of debt leads to an increase in the value of a firm by reducing the cost of capital and magnifying returns to owners. The inconsistency can be attributed to high interest rates and high cost of funds prevailing in Kenya.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary, conclusion and recommendations of the study on the relationship between leverage and the financial performance of sugar processing companies in the western Kenya region from the key findings.

5.2 Summary

The study found out the extent of debt usage among the sugar companies in western Kenya region and the relationship that exist between their debt usage and financial performance. This was done by collecting data from the major sugar processing companies in the western Kenya region. The region covered the whole of Nyanza and Western provinces including Kericho County in Rift valley province. Companies targeted for the study included all the public, government owned and private companies within the region, that is, a census technique was used to collect secondary data used in the study. The data collected from the finance managers of the firm were the company's copies of their financial statements from 2006 to 2010, from which the leverage ratio (debt ratio) and financial performance ratios such as Return on Asset, Return on Equity, Operation Profit Margin, Net Profit Margin and Earnings per Share were calculated to give the independent variable and the dependent variables of the study.

Data was obtained only from the public companies; the private companies were not willing to give out their financial performance data due to panic of information leakage to their competitors. This challenge made the finding to be based on 62.5% respondent rate which was considered fairly adequate for the study.

The results of the study shows that all the sugar processing companies uses debt as a major source of finance the mean debt ratio for the firms are above 50% over the five year period from 2006 to 2010, except for Mumias Sugar Company which has a mean debt ratio of 37.35%. Muhoroni Sugar Company has shown a mean debt ratio of 1083.1% over the period of study since it is insolvent and has been under receivership through the period of study. Nzoia Sugar Company has a mean of 114.19% which also so that it is insolvent but it showed some improvement in the 2010 data and the major debt owner is the government of Kenya who have no interest in putting the company under receiver manager. Trend analysis also shows that the debt ratio levels for most companies have been somehow maintained throughout the period with the exception of Mumias Sugar Company which quoted company in the Nairobi Stock Exchange and have more access to financial markets.

In analysis of the financial performance of the companies it was shown from the performance measures trend analysis over the five years. The trend analysis revealed that except for Mumias Sugar Company, most of the company's performances have either been declining or unstable. Chemelil Sugar Company has shown very low and declining performance over the period under study with Sony Sugar Company illustrating some very high performance followed by a heavy

drop like in the year 2008-2010. Mumias stable performance can be attributed to the company be a public limited company with shares trading in the public stock market.

The relationship between the leverage and financial performance of the sugar processing companies in western Kenya region has been illustrated by the regression results to be negative since all the variables correlation coefficients are negative. Return on Assets (ROA) shows a weak negative relationship which is significant at 95% level of confidence indicating that the research hypothesis 1: *Leverage has no influence on the company's ROA* is false for sugar companies in western Kenya region. From the results, it shows that there is a weak negative impact from use of debt by a company on its return on assets. This is the same case with Net Profit Margin (NPM) ratio of the sugar companies in western Kenya region, That is, there is a weak negative relationship between this ratio and leverage of the firm. The relationship between Return on Equity (ROE), Operation Profit Margin (OPM) and the overall financial performance measures with the firms leverage shows no relationship from the results confirming that research hypotheses 2, 4 and 6 to be true. Earnings per Share (EPS) results show strong negative relationship from the regression result which is insignificant from the p-value results. Therefore, for the research hypothesis 5: *Leverage has no influence on the companies EPS*, there is no sufficient data to reject or accept the hypothesis.

The findings of this study does not support the theoretical foundation of this study as was put forward by Modigliani and Miller in 1958 and corrected in 1963. The theory suggests that the use of debt leads to an increase in the value of a firm by reducing the cost of capital and

magnifying returns to owners. The inconsistency can be attributed to high interest rates and high cost of funds prevailing in Kenya.

5.3 Conclusion and Recommendations

This paper studies the relationship between the firm leverage and financial performance of sugar processing companies in western Kenya region. A line model has been developed to estimate the effect of variation in firm's leverage to the variation in the firm's financial performance. Various proxies are used to examine whether a relationship exist between the two main variables. The results show that there is no relationship between the firm leverage and financial performance of sugar companies in western Kenya region. In the interim, the result also indicates that there is weak negative relationship between the various financial performance proxies and the firms leverage. Different financial performance proxies will respond differently to the proxy of leverage. Only Return on Assets (ROA) and Net Profit Margin (NPM) have a significant weak negative relationship with the firm's leverage. Comparatively, Return on Equity (ROE) and Operation Profit Margin (OPM) have significant no relationship with the firm's leverage.

The Earnings per Share (EPS) from the results show an insignificant strong negative relationship with the firm's leverage and more data is required to confirm the relationship. Overall, for the pooled cross-section values of financial performance of the sugar companies the results demonstrates a significant no relationship with the firm's leverage. This implies that the use of debt to finance sugar processing companies have no impact in their financial performance. This may be due to the absence of a well developed and very liquid debt market, sugar companies are

dependent on banks and government owned, on government for debt financing. Since most the sugar companies are government owned, their management are politically influenced and this could be the reason for poor performance over the years. In some cases the production cost to the companies are more than the revenue leading to outright losses. The government has been giving debt to these firms and these debts are not being serviced making the accrued interest increase the total amount of debt used in the calculation of leverage. The introduction of more private companies and no proportionate increase in production of sugar cane (raw material) as created shortage of sugar cane in turn affecting performance in the industry. Kenya is an emerging economy, using high amounts of debt in an economy that is in the nascent stage of development is fraught with risks.

The limitation of this study is that the population is only focus on sugar companies in western Kenya region and data analyzed were form the public companies from the region. In fact there are other sugar companies which are privately owned as well as others outside western Kenya region. Therefore, the result may not represent the result of the whole sugar industry in Kenya. In order to get more convincing and precise results, the time series data should cover a longer period and data should be collected from all the sugar companies both private and public throughout the nation of Kenya. In addition more new variables of the firm's leverage and firm's performance can be captured in the model in order to obtain comprehensive results. Sugar being an agricultural product, the time series data should cover periods of major climatic variations for this affects production of raw materials and in turn the performance of the firm.

Currently the sugar cane production is lower compared to the consumption of sugar in Kenya; this has made the sugar companies to reduce the maturity period of sugar cane to about 14 months from the initial 24 months. The result of this is lower rate of sugar produced from the same amount of sugar processed according to the initial maturity period. The Kenya Sugar Research Authority should look into ways introducing a sugar cane species that has early maturity and increased sugar production from the same amount of the sugar cane processed.

The entry of more private firms in the industry as forced the industry to harvest all the available sugar cane in the country and this means that the companies will have to wait for the young cane in farms to mature. In the process of waiting, there will be a continuous shortage of sugar products in the market which translates to high market prices of the products. The sugar industry for a long time has been monopolized by government owned companies and the Government policy on sugar industry including financing could be the main cause of the problem the industry is in today. To solve this mess, all the major players including farmers should come together to strategize the way forward for the industry or else all the companies will go Muhuroni Sugar company way; being insolvent.

The Kenya Sugar Board which is the regulatory body of the Sugar Industry, established on 1st April, 2002, under the Sugar Act 2001, succeeding the defunct Kenya Sugar Authority, and whose mandate as stipulated in Section 4 (1) and 4 (2) of the Sugar Act 2001 is to regulate, develop and promote the Sugar Industry, co-ordinate the activities of individuals and organizations within the industry and to facilitate equitable access to the benefits and resources of the industry by all interested parties should organize for an urgent stakeholders forum to look

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into the problems facing the industry currently or else the industry is headed for a collapse looking at there performances.

Observations above show that there is enough use of debt within the industry which should lead to more investment thus improving financial performance. This is not the case for the studied firms since the study has shown that there is no significant relationship between use of debt and the firm's financial performance. Further research could try to find out other factors which could be motivating the use of debt within the sugar industry; in other words, the determinants of capital structure within the sugar industry in the western Kenya region.

Altman, E., (1984) "A Further Empirical Investigation of the Bankruptcy Cost Question", *Journal of Finance* 39, 1067-1089.

Ang, J., (1991) "Small business uniqueness and the theory of financial management", *Journal of Small Business Finance* 1, pp.1-13

Bancel, L. and Mitrova, U. (2004) "Cross-Country Determinants of Capital Structure Choice: A Survey of European Firms", *Financial Management* Vol. 33, No. 4, pp. 103-132.

Bergasse, K., Bufema, K. and Hodgkinson, L. (2008). "Determinants of Capital Structure Evidence from Libya," *Research Paper Series No. 2003/08*, Management School, University of Liverpool, Liverpool, Great Britain.

Haltagi, B.H., (1995) "Econometric Analysis of Panel Data", Chichester: Wiley.

Beral, K. J. (2004) "Determinants of Capital Structure: A Case Study of Listed Companies of Nepal," *Journal of Nepalese Business Studies* Vol. 1 No. 1 Dec. 2004.

Beral, K. J., (1996) "Capital Structure and Cost of Capital in Public Sector Enterprises in Nepal," Ph.D thesis, Delhi University.

Barbosa, N., & Loufi, H. (2005). Corporate Performance: Does Ownership Matter? A comparison of Foreign- and Domestic-Owned Firms in Greece and Portugal. *Review of Financial Organization*, 2(1), 73-102.

REFERENCES

- Abor, J., (2007) "Debt policy and performance of SMEs: Evidence from Ghanaian and South African firms", *Journal of Risk Finance, The*, Vol. 8 Iss: 4, pp.364 – 379.
- Abor, J., (2008) "Determinants of the Capital Structure of Ghanaian Firms" *African Economic Research Consortium, Nairobi*, Research Paper 176.
- Abor, J. & Biekpe, N. (2005) "What determines the capital structure of listed firms in Ghana?" *African Finance Journal*, 7 (1).
- Altman, E., (1984) "A Further Empirical Investigation of the Bankruptcy Cost Question", *Journal of Finance* 39, 1067-1089.
- Ang, J., (1991) "Small business uniqueness and the theory of financial management", *Journal of Small Business Finance* 1, pp.1-13
- Bancel, L. and Mittoo, U. (2004) "Cross- Country Determinants of Capital Structure Choice: A Survey of European Firms", *Financial Mangement Vol. 33*, No. 4, pp. 103-132.
- Bangassa, K., Buferna, K. and Hodgkinson, L. (2008) "Determinants of Capital Structure Evidence from Libya," *Research Paper Series No. 2005/08*, Management School, University of Liverpool, Liverpool, Great Britain.
- Baltagi, B.H., (1995) "*Econometric Analysis of Panel Data*", Chichester: Wiley.
- Baral, K. J. (2004) "Determinants of Capital Structure: A Case Study of Listed Companies of Nepal," *Journal of Nepalese Business Studies Vol. 1* No. 1 Dec. 2004.
- Baral, K. J., (1996) "Capital Structure and Cost of Capital in Public Sector Enterprises in Nepal," Ph.D thesis. Delhi University.
- Barbosa, N., & Louri, H. (2005). Corporate Performance: Does Ownership Matter? A comparison of Foreign- and Domestic-Owned Firms in Greece and Portugal. *Review of Industrial Organization* , 27(1),73-102.

- Barton, S.L. and Gordon, P.J. (1988) "Corporate Strategy and Capital Structure," *Strategic Management Journal* 9, 1988, pp. 623-632.
- Barton, S.L. and Matthews, C.H. (1989) 'Small Firm Financing: Implications from a Strategic Management Perspective', *Journal of Small Business Management*, 27(1): 1-7.
- Bas, T., Muradoglu, G., and Phylaktis, K., (2009) "Determinants of Capital Structure in Emerging Markets" Cass Business School, London.
- Baxter, N., (1967) "Leverage, Risk of Ruin and the Cost of Capital", *Journal of Finance* 22, 395-403.
- Beck, T. and Fuchs, M. (2004) "Structural Issues in the Kenyan Financial System: Improving Competition and Access", *World Bank Policy Research Working Paper* 3363, July 2004.
- Bettis, R.A., (1983) "Modern Financial Theory, Corporate Strategy and Public Policy: Three Conundrums," *Academy of Management Review* 8, pp. 406-415.
- Booth, L., Aivazian, V., Demircug-Kunt, A. and Maksimovic, V. (2001) "Capital Structures in Developing Countries", *Journal of Finance*, 55(1): 87-130.
- Bradley, M., Jarrel, G.A. and Kim, E. H. (1984) "On the Existence Of An Optimal Capital Structure: Theory And Evidence". *The Journal of Finance*, 39: 857-80.
- Brealey, R.A. and S.C. Myers, (1996) "Principles of Corporate Finance", 5th Edn., McGraw-Hill, USA., pp: 447-473.
- Capon, N., Farley, J. and Hoenig, S. (1990) "Determinants of Financial performance: A Meta Analysis," *Management Science*, pp. 1143-1159.
- Carter, J. R., (1977) "The Search for Synergy: A Structure Performance Test", *Review of Economics and Statistics*, 59, 279-289.
- Chen, J., (2004) "Determinants of capital structure of Chinese-listed companies", *Journal of Business Research* 57, 1341-1351.
- Cobham, D. and R. Subramaniam. (1998) "Corporate finance in developing countries: New evidence for India". *World Development*, 26(6): 1033-47.
- Correia C, Flynn D, Uliana E, Wormald M (2005). *Financial Management*. Lansdowne: Juta and Co.
- Damodaran A (1999). *Applied Corporate Finance*. New York: John Wiley and Sons, Inc.
- Dare, F.D. and Sola, O. (2010) "Capital Structure and Corporate Performance in Nigeria

Petroleum Industry: Panel Data Analysis," *Journal of Mathematics and Statistics* 6 (2), pp 168-173.

Demirguc-Kunt, A., and Levine, R. Eds. (2001) "*Financial Structure and Economic Development*", Cambridge, Mass.: MIT Press.

Durand, D. (1959) "*Cost of Debt and Equity Funds for Business: Trends and Problems of Measurement*", In *The Management of Corporate Capital*, Edited by Ezra Solomon. New York: The Free Press.

Ebaid, E. I. (2009) "The impact of capital-structure choice on firm performance: empirical evidence from Egypt", *Journal of Risk Finance*, Vol. 10 Iss: 5, pp.477 - 487

Frank, M. and Goray, V., (2003) "Testing the Pecking order Theory of Capital Structure," *Journal of Financial Economics* Vol. 67, pp. 217-248.

Gleason, K. C. and Mathur, L. K. and Mathur, I (2000) "The Interrelationship between Culture, Capital Structure, and Performance: Evidence from European Retailers", Bentley College, Waltham, MA USA

Green, C.J., V. Murinde and J. Suppakitjarak. (2002) "Corporate Financial Structure in India", *Economic Research Paper No. 02/4*. Centre for International, Financial and Economics Research, Department of Economics, Loughborough University, Loughborough.

Harris, Milton and Arthur Raviv. (1991) "The Theory of Capital Structure", *Journal of Finance*, 46 : 297-355.

Harris, M. & Raviv, A. (1990). Capital structure and the informational role of debt, *Journal of Finance* 45, 321-349.

Jensen, M., and Meckling, W., (1976) "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics* 3, 305-360.

Kanyuru, M. M., (2010) "The Relationship between Capital Structure and Financial Performance of Firms listed at NSE," Unpublished MBA dissertation, School of Business; University of Nairobi.

Kenya Association of Manufacturers (KAM), (2011) "Directory", (<http://www.kam.co.ke/?itemId=7>).

Kilonzo, B. M., (2003) "The Relationship between Financial Structure and Performance of Micro and Small Enterprises in Nairobi," Unpublished MBA dissertation, School of Business; University of Nairobi.

Kinyua, J.M., (2005) "An empirical investigation of Capital Structure Determinants for Small &

Medium Sized Enterprises in Kenya," Unpublished MBA dissertation, School of Business; University of Nairobi.

Kothari, C.R., (2008) "*Research Methodology: Methods and Techniques*". Second Edition, New Age International Ltd. New Delhi, India.

Martin, John D. and others. (1988) "*The Theory of Finance: Evidence and Application.*" Chicago: The Dryden Press.

Mazur, K. (2007) "The determinants of capital structure choice: evidence from Polish companies." *Int Adv Econ Res*, 13.

Miller, Merton H. 1977. "Debt and Taxes." *Journal of Finance* 32:261-275.

Modigliani, F. and M. Miller. (1963) "Corporate income taxes and the cost of capital: A correction". *American Economic Review*, 53: 443-53.

Modigliani, Franco and Merton H. Miller. (1958) "The Cost of Capital, Corporation Finance and the Theory of Investment." *American Economic Review* 48:261-297.

Mugenda, O. M., and Mugenda, A. G., (2003) "Research Methods-Quantitative and Qualitative," Nairobi-Kenya, African Centre for Technology Studies.

Mugdlwa, N. (2009) "Size and Other Determinants of Capital Structure in South African Manufacturing Listed Companies", *MTECH: CMA Dissertation*, Nelson Mandela Metropolitan University.

Munene, K. H., (2006) "Impact of Profitability on Capital Structure of Companies Listed at NSE," Unpublished MBA dissertation, School of Business; University of Nairobi.

Murinde, V., J. Agung and A.W. Mullineux. (2004) "Patterns of corporate financing and financial system convergence in Europe". *Review of International Economics*, 12(4): 693-705.

Mwaka, C., (2006) "Financial Structure & Growth of Small & Micro Enterprises in Nairobi," Unpublished MBA dissertation, School of Business; University of Nairobi.

Myers, Steward C. and Gerald A. Pogue. (1974) "A Programming Approach to Corporate Financial Management" *Journal of Finance* 29 : 579-599.

Myers, S.C. (1984) "The capital structures puzzle". *Journal of Finance*, 39: 575-92.

Myers, S.C. and N.S. Majluf. (1984) "Corporate financing and investment decisions when firms have information that investors do not have". *Journal of Financial Economics*, 13: 187-221.

- Ngugi, R., Amanja, D., and Maana, I., (2009) "Capital Market, Financial Deepening and Economic Growth in Kenya," (<http://www.csae.ox.ac.uk/conferences/2009-EDiA/papers/513-Isaya>).
- Obert, M., and Olwale, F. (2010) "Does debt really matter on the profitability of small firms? A perspective on small manufacturing firms in Bulawayo, Zimbabwe," *African Journal of Business Management*, Vol. 4 (9), pp. 1709-1716.
- Pandey, I.M., (1999) "*Financial Management*". 8th Edn., Vikas Publishing House PVT Ltd. New Delhi, India, pp: 529-559.
- Pettit, R. and R. Singer. (1985) "Small business finance: A research agenda". *Financial Management*, 14(3): 47-60.
- Psillaki, M. (1995). "Credit rationing and small and medium sized firms: a tentative of Linkage", *Revue Internationale PME* 8, 67-90.
- Rajan, R. & Zingales, L. (1998) "Financial dependence and growth", *American Economic Review* 88, 559-587.
- Rao, N.V., Al-Yahyaee, K. H. M., Syed, L.A.M. (2007) "Capital structure and financial performance: evidence from Oman". *Indian journal of Economics and Business*.
- Republic of Kenya (2011) "Economic Survey 2011 Report"; Ministry of Planning and National Development, Nairobi.
- Pratheepkanth, P. (2011) "Capital Structure And Financial Performance: Evidence From Selected Business Companies In Colombo Stock Exchange Sri Lanka", *International Refereed Research Journal*, Vol.- II, Issn 2231-4172
- Zulu, J. (2010) "Kenya Economic Update", *Country Economic and Economic Management Unit Africa Region, World Bank Report*
- Robb A, Robinson DT (2009). The capital structure decision of new firms [online] Available: (<http://papers.ssrn.com/so13/papers.cfm?abstract-id=1345895>) [Accessed: 17 October 2009].
- San, O. T. and Heng, T. B. (2011) "Capital Structure and Corporate Performance of Malaysian Construction Sector," *International Journal of Humanities and Social Science*, Vol. 1, No. 2; February 2011.
- Scott, J. (1977). Bankruptcy, secured debt and optimal capital structure, *Journal of Finance* 32, 1-19.
- Scott, James H. (1976) "A Theory of Optimal Capital Structure". *Bell Journal of Economics* 7: pp.33-54.

- Shyan, R. C. and Chen, H. L. (2008) "The research on the effects of Capital Structure on Firm Performance and evidence from the non-financial Industry of Taiwan," National Kaohsiung First University of Science and Technology.
- Singh, A. (1995) "Corporate Financial Patterns in Industrializing Economies: A Comparative Study". *IFC Technical Paper No. 2*. International Finance Corporation, Washington, D.C.
- Singh, A. and J. Hamid, (1992) "Corporate Financial Structures in Developing Countries". *IFC Technical Paper No. 1*. International Finance Corporation, Washington, D.C.
- Solomon, Ezra. (1963) "*The Theory of Financial Management*". New York: Columbia University Press.
- Stulz, R. (1990). "Managerial discretion and optimal financing policies", *Journal of Financial Economics* 26, 3-27.
- Tian, G. G., & Zeitun, R. (2007). "Capital structure and corporate performance: evidence from Jordan". *Australian Accounting Bussiness and Finance Journal* , 1(4).
- Titman, S. and R. Wessels. (1988) "The determinants of capital structure choice". *Journal of Finance*, 43(1): 1-19.
- USAID (1982) "*A Strategy of the Development of four Districts in Western Kenya*," USAID report for the USA and Kenyan Government.
- Van Horne, J.C., (2002) "*Financial Management and Policy*". 12th Edn., Prentice-Hall of India Private Ltd. New Delhi, pp: 253-287.
- Zutt, J. (2010) "Kenya Economic Update", Poverty Reduction and Economic Management Unit Africa Region, *World Bank Report*

APPENDICES

APPENDIX I: COVER LETTER

Micah Odhiambo Nyamita
School of Business
Faculty of Commerce
University of Nairobi
P.O. Box 30197-00100
Nairobi.
June 30, 2011.

Dear Respondent,

THE RELATIONSHIP BETWEEN FIRM LEVERAGE AND FINANCIAL PERFORMANCE OF SUGAR PROCESSING COMPANIES IN WESTERN KENYA REGION

I am a postgraduate student at the University of Nairobi pursuing Masters Degree in Business Administration. In partial fulfillment of the requirements of the degree, I am carrying out a Finance Research Project on the above mentioned topic.

The purpose of this letter is to kindly request you to provide information to the best of your Knowledge about your business by giving me a copy of the firm's Financial Statement for the five year period-2006 to 2010. The information in provided will be treated with confidentiality and in no instance will your name be mentioned in this research and will not be used for any other purpose other than for this research.

Your assistance in facilitating these will be highly appreciated.

Yours Faithfully

.....

Odhiambo Micah Nyamita

REG NO: D61/70888/2008

.....

Supervisor

**APPENDIX II: LIST OF SUGAR COMPANIES IN WESTERN KENYA
REGION**

Butali Company

Chemelil Sugar Company

Kibos & Allied Sugar Company

Muhoroni Sugar Company

Mumias Sugar Company

Nzoia Sugar Company

Soin Sugar Company

Sony Sugar Company

West Kenya Sugar Company