ANALYSIS OF CAPITAL STRUCTURE DECISIONS AND FINANCIAL PERFORMANCE OF SUGAR FIRMS

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DECLARATION AND APPROVAL

Declaration by the Student

I hereby declare that this thesis report is my original work and has not been submitted in the same form or any other form to this or any other university or college for any examination.

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ABSTRACT

Capital structure decisions help to maximization of the value of the firm; but in most cases these capital structure decisions if they are inappropriate the performance of firms shall remain in jeopardy. The sugar industry play a significant role in socio-economic development of the economy. It is estimated that six million Kenyans derive their livelihood directly or indirectly from the sugar industry. Despite these dependence most of the sugar firms in western Kenya are facing myriad of problems that hurt their profitability, sales volume and financial leverage. The purpose of this study was to determine the effect of Capital Structure decisions on financial performance of Sugar firms in Western Kenya. The study objectives are: examine the effect of loan financing on financial performance, determine the effect of debenture financing on financial performance, assess the effect of preference share capital financing on financial performance, assess the effect of ordinary share capital financing on financial performance, and evaluate the effect of institutional capital (Retained Earnings) financing on financial performance of sugar companies in western Kenya. The research was directed by Trade-Off and Pecking order Theories. The study adopted the use of descriptive survey study design. The study unit of analysis was the 11 sugar companies in western Kenya, from which a target population of 149 employees were used. The study sample size was 109 respondents selected using Fischer formula and simple random sampling was adopted. Both primary and secondary sources of data were used. Primary data was collected using questionnaires and interview guide. Secondary data was obtained from the Kenya Sugar Board Annual reports, Finance departments of the sugar companies and the Sugar survey manuals/financial reports using the secondary data collection sheet. Data analysis was done using both descriptive and inferential statistical tools and the results thereof interpreted. The study findings revealed that: one unit increase in cane maintenance loan causes 0.225 unit change in financial performance of the sugar firms in western Kenya. For cane development loans a unit increase in their use causes 0.224 unit increase in financial performance of the sugar firms. Further it is observed that a unit increase in the use of factory rehabilitation loans causes 0.429 increase in financial performance and for machinery and equipment loans a unit increase in its use causes 0.219 unit increase in financial performance in the sugar firms in western Kenya. The capital structure decisions (Loan financing, Debenture financing, preference share capital, ordinary share capital, institutional capital) account for 63.1% ($R^2 = 0.631$, $p < .05$) of discrepancy in the outcome (financial performance). The ANOVA results showed that regression was significant for modeling with $F_{(3, 94)} = 46.502$ being significant statistically ($p < 0.05$). The variables' coefficients, the study found that the constant term (B = 12.51, $p < .05$), loan financing (B = 0.633, $p < .05$), Debenture financing (B = .481, p = .038), preference share capital (B=0.578; p=0.028); ordinary share capital (B=0.442; p= 0.011) and Institutional Capital (B = 0.467, p =.019). All these variables (predictors) were found to be statistically significant and positively predicted the financial performance of the sugar firms, since in all their p-values, ($P < 0.05$). Hence as various forms of capital structure decreases so is the financial performance of the sugar firms in western Kenya. The study concludes that sugar firms should embrace the use of capital structure decisions to improve on their financial performance.

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ABBREVIATIONS AND ACRONYMS

COMESA-Common Market Eastern and Southern Africa

EPS-Earnings per Share

EBITDA- Earnings Before Interest Taxation Dividends and Amortization

GOK-Government of Kenya

IPO- Initial Public Offer

KSB-Kenya Sugar Board

MOA-Ministry of Agriculture

NEDC-Non-Employment of Debt Capital

NSE-Nairobi Securities Exchange

PBT-Profit before Tax

ROAA-Return on average Asset

ROA-Return on Asset

ROE-Return on Equity

SMES-Small and Medium Enterprises

SPSS-Statistical Package for Social Sciences

SUCAM-Sugar Campaign for Change

WACC- Weighted Average Cost of Capital

OPERATIONAL DEFINITION OF TERMS

Advances- These are sources of short-term financing by sugar firms and they are to be repaid within less than a year for financing working capital.

Bills- These are securities issued by central banks to sugar firms and have maturities of a year or less as source of debt finance.

Bonds- These are securities that are issued by central bank to sugar firms having long-term investments and have maturities of 10 to 30 years from their issue date as source finance

Capital Structure Decisions-These are combination of decisions that Sugar Firms managers make involving loan financing, Debenture financing, preference share capital financing, Ordinary share capital financing and Institutional(Retain Earnings).

Capitalization ratio-This ratio compares sugar firms' total debt to total capitalization (capital structure). It reflects the extent to which a company is operating on its equity.

Credit risk- It is the risk of default on a debt that may arise from sugar firms failing to make required payments in time.

Debentures- These are debt instruments used by sugar companies to be issued with a loan. The loan is issued to them based on their reputation at affixed rate of interest.

Debt financing decision- This is a financing decision where sugar firms acquire both loans and advances, debentures, bonds, bills and notes to boost production.

Debt-Equity Financing Decision- This is fraction of the sugar firm's total liabilities of a company to its total shareholder equity.

Equity financing decisions- It is a financing decision where sugar firms receives capital from ordinary shares, preference shares and retain earnings.

Financial Gearing- This refers to the ratio or percentage of debt financing used by sugar firms' with respect to equity financing

Financial Performance-These are combination of performance involving sugar firms' profitability, sales volume, and financial gearing.

Financial Risk Decision- This risk arises on account of the use of debt or fixed interest bearing securities in the sugar firm's capital.

Level of Profitability -It is the excesses of sugar firm's incomes over the expenses

Liquidity risk-It is a financial risk that for a certain period of time a given financial asset, security or a commodity of sugar firms cannot be traded quickly enough in the market without impacting the market price.

Loans-These are sources of long-term financing by sugar firms and usually they take more than one year for financing fixed assets.

Market risk-It is the possibility of sugar firms experiencing losses due to factors that affect the overall performance of the financial market in which they are involved.

Notes-   These are securities issued by central bank to sugar firms with maturities from 2 to 10 years as source of finance.

Ordinary shares- These are shares in sugar firms that are owned by the people who have a right to vote at the company's meeting.

Preference shares-These are shares owned by sugar firms which entitle the holder to affixed dividend, whose payment takes priority over that of ordinary share dividends.

Profitability – This is excesses of the Sugar Firms incomes over the expenses.

Retained profit-It is a profit forgone by sugar firms' shareholders for re-investment.

Sale volume-This is an amount or numbers of units of that are sold by the sugar firms the expectation of future growth.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The capital structure is the overall sources of finance used by a company in financing its operations ranging from retained earnings to equity and debt finance. The major sources of capital are Loan and Equity with loan holders and equity holders as names given to investors in the company. A company capital structure is made up of its liabilities (Dybvig and Wang, 2002; and Gunasekaran, 2010) emphasizes the fact that capital structure analyses the ability of a business entity to deal additional loan or to invest in more funds after all other cash obligations have been met. The decision on capital structure therefore is directed towards the achievements of maximum shareholders wealth or value of the Firm, implying that the firm must determine the optimal Capital Structure that will maximize the value (Morris 2001). On the other hand, profitability of a firm is as a result of the capital structure decisions that a firm comes up, this decisions whether short term or long term affect the profitability of a firm while at the same time increase the risk of the firm investment ventures. This is due to the fact that capital structure comprises of debt and equity, debt increases the risk of future earnings while enabling a firm to expect high returns (Muzir, 2011).

The capital structure decision has been built on the theory of Modigliani and Millers capital structure relevance theory, pecking order theory, trade off theory and agency cost theory and approaches. In Modigliani and Millers capital structure relevance theory, capital structure indeed matter in determining the value of a firm. The theory is based on the fact that in many jurisdictions interest on debt is an allowable expense hence tax shield. Based on this assertion, sugar firms could borrow maximally to reduce their taxes to zero if possible. Miller (1977)

suggested that the presence of taxes on income may reduce the tax advantage associated with debt financing. This is because sugar firms could save corporate taxes by raising the debt to equity ratio, but investors would pay additional personal tax and, therefore, require higher returns to compensate for this fact and the higher associated risks. Modigliani and Millers proposition was therefore modified in 1977 to incorporate taxes but with the same argument that capital structure indeed matters. Graham and Harvey (2001) also posit that a typical firm could double tax benefits by issuing debt until the marginal tax benefit begins to decline. This implies that it is not therefore possible for a sugar firm to have a 100% debt financing.

According to Breuer and Gürtler (2008), since different countries have different tax laws, the entire proposition on tax shield relevance could lose its validity if for instance a country changes its tax laws to deny advantage on interest on debt. A case in point is Kenya where firms are subject to thin capitalization status. A firm is said to be thinly capitalized if it is predominantly foreign controlled or where the debt outweighs equity by over three times (Blouin, Huizinga, Laeven & Nicodème, 2014). Multinational groups in particular are often able to structure their financing arrangements to establish a tax-efficient mixture of debt and equity designed to evade tax through loopholes in international transfer pricing rules (Blouin, Huizinga, Laeven & Nicodème, 2014). To deter this illegality, any interest on excess debt does not enjoy tax shield implying that debt has obviously a maximum limit of tax advantage in a financial structure. The assertion of 100% debt financing is therefore not true.

The relevance of this theory to the current study is therefore anchored on propositions if capital structure decision to be taken by the sugar firms matter, then taxes and default risk could be good places to look for reasons why it matters (Miller, 1988). Understanding these propositions also helps the sugar firms to distinguish between logical and illogical reasons for particular financing

decisions, and that the fundamental message is that any combination of finance sources is as good as another. No matter how many sources of finance are used, the resulting capital structure is just another way of dividing the net cash flow between the people who have contributed the capital that sustains the company's operations (Myers, 2001). Modigliani and Millers assertion is however only true in theory since in practice there exists bankruptcy and agency costs which will even increase as debt increases in a firm (Brigham & Gapenski, 1996). This therefore introduces trade off theory.

The tradeoff theory gives an assumption that the management of a company will always choose how much debt and equity to use in financing the operations of the entity and that this is obtained by balancing off the cost and benefits associated with each source of finance. According to the theory, firms should select an optimum capital structure that balances the advantages and disadvantages of both debt and equity. The Trade-off theory according to Jensen and Meckling, (2001), gives an indication that financially unstable firms will always depend on banks for debt while profitable and financially stable firms rely on internally generated funds for investment. The researchers establish that within the trade-off theory, there is a debt pecking order which prefers bank loan to market debt and this is due to the lower implied bankruptcy costs. According to Myers, (2001), the trade-off theory states that a company should borrow up to the point where the marginal value of tax shields on any additional debt can be offset by the increase in present value of possible costs of financial distress. The value of the firm will therefore decrease because of financial distress. The theory suggests that managers prefer debt to equity and that they will always balance the profits and the costs benefits associated with each source to reach an optimum leverage. The effective price of using debt relative to equity will reduce since the interest expense is tax deductible. The theory guided the study in establishing whether sugar

firms in Western Kenya have a well-known way of choosing optimal capital structures that balances the benefits and disadvantages of various capital structure decisions which are used to finance the business activities. The theory further guided the study in establishing if the financial strength and performances of sugar firms is influenced by their preferred source of financing either debts or equity. Additionally, the theory guided in establishing if managers of the sugar firms consider interest tax shied and net present value in their borrowing decisions.

The pecking order theory which is also referred to as the information asymmetry theory was proposed by Myers in 1984. According to Myers and Majluf, (1984), firms normally fund new investments, firstly with accumulated profits, then debt, and finally with the issue of new equity. The pecking order theory suggests that firms have a particular way of choosing the kind of capital they use to finance their business (Myers and Majluf, 1984). The theory of the pecking order is about what the firm's management will prefer in terms of which source(s) of finance to use in financing the business operations and the order in which these sources will be used. Firstly, firms will chose internal finance that is using profits from previous years. Secondly if there is insufficient internally generated funds, firms will chose to lend money from credit institutions such as banks and thirdly as a last resort, firms will issue additional shares. In a nut shell the pecking order theory states that a firm's management favors internal financing to external financing.

According to Vivian, (2008) firms leverage reflects both the past profitability as well as the investment opportunities of the firms, implying that if a firm have no available opportunities, it may prefer equity than debt contrary to the pecking order theory The pecking order theory guided the study in establishing if the sugar milling firms in western Kenya obey the dictates of the theory of using accumulated profits followed by external debt and finally by issuing new

equity in their financing decisions when financing the business operations. The theory in turn explained the factors informing decisions on financing like risks, control and bankruptcy.

The agency cost theory was proposed by Ross in 1972. It was expounded by Meckling in 1976. It is based on the idea that a conflict of interests exists between the management and shareholders of a firm. This is according to Jensen & Meckling, 1976. The researchers argued that since the ownership and control of a firm is separate, agency costs of equity in corporate finance arise since managers incline to maximize their own convenience instead of the value of the firm. They argued that, to explain the relevance of capital structure, there exist three types of agency cost. Firstly, the asset substitution effects which emphasized that as debt/equity ratio increased, management developed an increased incentive to undertake risky projects because if the project is successful, shareholders get all the upside whereas if it is unsuccessful, debt holders get all the downside.

Secondly, there are underinvestment problems where if debt was risky the gain from the project would accrue to debt holders rather than the shareholders hence management had incentives to reject positive projects even though they have the potential to increase the firms' value (Jensen & Meckling, 1976). Thirdly, the agency costs arising from the free cash flow which argued that unless the free cash flow is given back to investors, management will always have an incentive to destroy the firm's value through empire building and perks with cash that should have been paid back to shareholders. According to this theory, conflict of interest exerts pressure on managers to seek funds even when profitable opportunities do not exist. The funds can then be used for other projects other than those that enhance the value of the firm.

The theory however, gives a solution by concluding that increasing the leverage level of a firm would impose financial discipline on management in such circumstances (Calabrese, 2011). The agency theory guided this study in a number of ways foremost, the posits of ways theory were used to determine if the managers of the sugar milling companies acts on the best interest of the shareholders in coming up with the capital structure decisions or are swayed by partisan, selfish and debt holders interest in analyzing the trends of capital formation on financial performance. The theory guided the study to establish whether the public and shareholders' interests are taken into considerations when taking loans financing from internal sources in order to come up with optimal debt/equity ratio and subsequent acquisition and amortization of assets.

Capital structure has attracted a strong debate and scholarly attention in the corporate finance literature for a long period of time. However, in the context of sugar industries, the topic has received inadequate research attention. Different studies on capital structure and financial performance done have mostly highlighted on the relationship between debt in capital structure and financial performance and in most cases, the results showed a positive relationship (Roden and Lewellen, (1995); Ghosh et al., (2000); Deesomask et al., (2004); Berger and Bonaccorsi di Patti, (2006), Huang and Song, (2006); Chakraborty, (2010) showed positive relationship.

Huang & Song (2006) also studied determinants of capital structure among the companies in China, the study found that capital structure is the combination of Debt, Equity or internal funds that a firm chooses to run its operations. The decision to use Debt, equity or a combination of both is determined by several factors such as business risk, Tax exposers, Market conditions, the firm growth rate and the cost of capital as have been the case of sugar Firms in Kenya. A study by Huang & Song (2006) found that the optimal capital structure of the firm will therefore be obtained at a combination of debt and equity that maximizes the total value of the firm or

minimizes the weighted average cost of capital. However, these findings by Huang & Song (2006) were based on the general firms hence would not be generalized for the sugar firm industries, hence it's not clear whether these capital structures influence profitability, sales volume, earning per share and return on equity and assets of sugar firms in Kenya. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

Similarly, Salehi and Biglar (2009) studied the issue of whether the capital-structure decision impacts firms' performance of Iranian firms. Their study used three definition of capital structure in scope of book value to market value and five measures were assumed for financial performance. They applied the data of 117 corporate in Tehran Stock Exchange for the period from 2002 to 2007. Results of their study demonstrated that capital structure influences financial performance. The significance of the influence of capital structure on performance respectively is belonged to measures of adjusted value, market value and book value. However, this study did not bring out the different forms of capital structure decisions of these firms and how they affect the financial performance of the firms especially in the sugar industry. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

Gul et al., (2012) also investigated how firm characteristics affect the capital structure in banking and insurance sector in United States. They used a sample of 272 American firms listed on New York Stock Exchange for the years (2005-2007). They applied correlations and European Journal of Accounting, Auditing and Finance Research regression analysis to estimate the functions

relating to profitability that is measured by return on equity with measures of capital structure. Empirical results show a positive relationship between debt to total assets and profitability and between total debt to total assets and profitability in the service industry. Similarly, the findings of their study show a positive relationship between debt to total assets and profitability in the short-run, long-term debt to total assets and profitability and between total debt to total assets and profitability in the manufacturing industry. However, this study was more of banking and insurance industry than sugar industry; hence their findings cannot be generalized for the sugar firms.

A study that's related to Nigerian listed companies was done in 2013 by Oyedijo, (2012) who examined the relationship between capital structure and firms performance of 25 companies using the data covering the periods of 2008-2012. Gross profit, net profit, returns on equity and return on assets, were used as the measures of firm performance whereas debt equity ratio and debt assets ratio were used as the measures of capital structure. The statistical tests were used, where, the results show that gross profit, net profit, return on equity, return on assets, are not significantly correlated with debt equity ratio. In addition, gross profit margin and return on equity are significantly correlated with debt assets ratio as the measures of capital structure, and capital structure has significant impact on gross profit and return on equity. However, this study by Oyedijo, did not bring out the different forms of capital structure decisions of these Nigerian listed firms. The study was also on the general Nigerian listed companies and not specifically on sugar firms, hence limiting its findings from generalization. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

Ghazouani (2013) also studied the capital structure of firms and the explanation of their behavior in the context of trade-off theory. It analyzes the determinants of capital structure of Tunisian firms through the existence or not of a dynamic model of adjustment to target leverage ratio. This validation leads to test two complementary successive models, the first is a static, while the second is a dynamic model that incorporates the variable of transaction costs to see how we can talk about a speed adjustment allowing firms to get closer to the target ratio. The results of the first model show that the profitability and asset structure are the main explanatory variables of the level of leverage of Tunisian firms. While for the dynamic model, the most remarkable result is manifested at the level of the adjustment costs that are relatively high which engendered a slow adjustment towards the optimal ratio. However, this study only analyzed factors influencing capital-structure decisions of the Tunisian firms and not the effects of capital-structure decisions on financial performance of these firms. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

Muhammad and Abdul (2015) evaluate the financial and operating performance of newly privatized Egyptian state-owned enterprises and determine whether such performance differs across firms according to their new ownership structure. The Egyptian privatization program provides unique post-privatization data on different ownership structures. The study covers 69 firms, which were privatized between 1994 and 1998. For these newly privatized firms, these study documents significant increases in profitability, operating efficiency, capital expenditures, and dividends. Conversely, significant decreases in employment, leverage, and risk are found, although output shows an insignificant decrease following privatization. However, this study by

Muhammad and Abdul (2015) did not bring out forms of capital structure decisions for these newly privatized Egyptian state-owned enterprises, as it only looked at the ownership structure. The study looked at the general listed companies and not specify on the sugar firms, hence limiting its findings from generalization. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

Obonyo (2017) also studied the impact of capital structure on financial performance of companies listed at the Nairobi securities exchange in Kenya on 30 listed companies using non-profitability sampling design concludes that there is a weak positive relationship between capital structure and financial performance of the sampled companies listed at the Nairobi Securities Exchange market in Kenya. It also found out that there is a weak positive relationship between capital structure and earnings per share. Debt ratio has a weak positive relationship with return on assets and equity and also too much liabilities in the company's capital structure has an impact in performance of firms as measured by earnings per share, return on assets and return on equity. However, this study by Obonyo, did not bring out the different forms of capital structure decisions of these Nairobi listed firms. The study looked at the general listed companies and not specify on the sugar firms, hence limiting its findings from generalization. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

The sugar sector in the western part of Kenya include Muhoroni (1966), previously East African Sugar Company Ltd in 1961; Chemelil (1968); Mumias (1973); Nzoia (1978); South Nyanza (1979). Miwani Sugar which started in 1922 as private investment and was taken over in 1970. Private investment include: West Kenya Sugar, Soin Sugar Company, Kibos Sugar and Allied Industries Ltd, Butali Sugar Company and Busia Company. Of the private investments only Butali and West Kenya are presently in operation, at present, both Miwani and Muhoroni are under receivership. According to Kenya Sugar Board (2005) which also state that state holding in the industry are: Miwani Sugar (49%), Muhoroni (82.78%), Chemelil (97.64%), Nzoia (98.87%) and South Nyanza (99.79%). This implies that the government has invested in this industry. The government oversees the sub-sector principally through the Ministry of Agriculture (MoA) and the Kenya Sugar Board (KSB), the latter being made of representatives from the state, sugar companies, farmers' organization and general industry.

Despite these investments, self-sufficiency in sugar has remained elusive over the years as consumption continues to outstrip supply. The performance of the sugar industry has continued to be quite dismal. According to SUCAM 2019 report, Mumias Sugar Company's current production stands at 520,000 metric tonnes and consumption which has increased steadily over the last years at 740,000 leaving the country with a deficit of 220,000 metric tonnes. The sugar processing firms in Western Kenya is chosen due to myriad of problems they are facing that hurt their profitability. According to Kibet, (2013) the core problem affecting Kenya's sugar industry is the persistent deterioration in profitability due to insufficient working capital and liquidity that finance their operations. Consequently, most of these factories have accumulated large debts amounting to Kshs. 58 billion as at 31st Dec 2018 (Kenya Sugar Board, 2019) and as a result,

approximately 50% of sugar companies in Kenya each year experience a declining financial hence going under (Mwanaongoro, & Imbambi, 2014).

A number of scholars have done studies on Sugar Firms to bring out factors affecting their performance. However, most of these studies have not dwelled on capital structure decisions of these firms and how the different capital structure influence financial performance of the firms. For instance, Wamalwa, (2014) studied effects of lean manufacturing technology strategy implementation on factory time efficiency of Mumias Sugar Company limited in Kakamega County, Kenya using descriptive case research design on 910 employees, the study found that lean manufacturing technology has significant impact on Factory Time Efficiency depending on the manner of implementation of the practice.

Wamalwa, (2014) results of the study further shows that the Company in Kenya has not implemented very important tools and techniques in their operations like total productive maintenance However, this study Wamalwa, (2014), did not bring out the different forms of capital structure decisions of this company. The study also looked at manufacturing technology strategy implementation and not capital structure decision of the sugar firm. This therefore limits its findings from generalization. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

Similarly, Mbalwa (2014) studied effect of corporate governance on performance of sugar manufacturing firms in western Kenya using cross sectional sample survey research design on eleven (11) sugar manufacturing firms. The study concluded that although elements of board

characteristics, top management characteristics, stakeholder communication and disclosure are practiced in sugar firms in Kenya, board characteristics had a greater influence on organizational performance compared to top management characteristics and stakeholder communication and disclosure characteristics. The study also found that element of corporate governance significantly influenced organizational performance in sugar firms. However, this study Mbalwa (2014), did not bring out the different forms of capital structure decisions used by sugar firms in western Kenya. The study also looked at corporate governance as a determinant on firm's performance, and not capital structure decision. This therefore limits its findings from generalization. The present study seeks to fill these gaps by investigating the effects of loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing on financial performance of sugar industries in Kenya.

The capital structure approaches are specific combination of debt and equity adopted by business organizations to finance its overall operations and growth (Oke, & Babatunde, 2011). The debt approaches may come in the form of bond issues or loans, while equity may come in the form of common stock, preferred stock, or retained earnings (Ronoh, & Ntoiti, 2015). Therefore, the approaches underscoring these models of financing are Net Income Approach, Net Operating Income Approach and WACC Approach (Traditional View).

In the net income approach, the capital structure decision is relevant to the valuation of the firm. Therefore, a change in the capital structure causes an overall change in the cost of capital and also in the total value of the firm (Ejupi, and Ferati, 2015). Higher debt content in the capital structure means a high financial leverage and this result in decline in the overall or weighted

average cost of capital. This result in increase in the value of the firm and also increase in the value of the equity shares. In an opposite situation, the reverse conditions prevail. According to Wooldridge, (2012) the average cost of capital will reduce with greater use of debt and the equity shareholders will not insist for higher return with increased levels of gearing caused by the use of increasing level of debt component. It is also assumed that the lenders will also not insist for higher return with increasing levels of debt. Hence, the average cost of capital falls until the level of debt is reached since there is no upturn in the cost of either equity or debt.

Based on 'Net Operating Income Approach (NOI)', value of the firm is independent of its capital structure. It assumes that the weighted average cost of capital is unchanged irrespective of the level of gearing (Chakraborty, 2010). The underlying assumption behind this approach is that the increase in the employment of debt capital increases the expected rate of return by the stockholders and the benefit of using relatively cheaper debt funds is offset by the loss arising out of the increase in cost of equity.

A change in proportion of various sources of finance cannot alter the weighted average cost of capital and as such, the value of firm remains unaltered for all degrees of leverage. Under this approach, optimal capital structure does not exist as average cost of capital remains constant for varied types of financing mix (Tirmizi, and Ahmad, 2013). NOI approach is opposite to the NI approach. According to this approach, the market value of the firm depends upon the net operating profit or EBIT and the overall cost of capital, weighted average cost of capital (WACC). The financing mix or the capital structure is irrelevant and does not affect the value of the firm.

In WACC Approach, the cost of capital is interdependent on the degree of leverage. The lowest component in the cost of capital relates to the fixed interest bearing investments (Shubita, and Alswalhah, 2012). Traditionally, optimal capital structure is assumed at a point where weighted average cost of capital (WACC) is minimum (Oke, and Babatunde, 2011). For a project evaluation, this WACC is considered as the minimum rate of return required from project to pay-off the expected return of the investors and as such WACC is generally referred to as the 'required rate of return'. WACC is defined as the weighted average of the cost of various sources of finance. Weight being the market value of each source of finance outstanding, cost of various sources of finance refers to the return expected by the respective investors (Ronoh, and Ntoiti, 2015).

The debt component should be raised up to the level where the WACC of the firm is at the lowest which is called 'optimum cost of capital'. Till the optimum level reaches a firm can rise its debt component to minimize WACC and for increasing returns to the equity holders. After the optimum level, any further increase in debt increases the risk to the equity holders (Ejupi, and Ferati, 2015). With the increase in leverage, lenders being to worry about the repayment of interest and principal and security available to them (Wooldridge, 2012). The interest rate will be higher on additional loans. Therefore, average cost of debt begins to rise. Simultaneously, when the equity holders will not much bother when the debt levels of the company are lower. But with increasing leverage, the equity holders are much concerned about the level of interest payments affecting the volatility of cash flow for equity (Githire, and Muturi, 2015). Then the equity holders demand for more rates of return for taking an additional risk. Thus, a combination of both the sources of finance, with the increase in leverage, the overall cost of capital will also start rising after the optimum level of gearing.

WACC is undoubtedly an important tool in determining optimal capital structure. To minimize the value of the firm as well as the market value of the stock, the firm should strive to minimize WACC (Khalaf, 2013). Thus considerable weight is placed on WACC for achieving the ultimate objective of increasing the stockholders worth by choosing an appropriate capital mix (Khalaf, 2013). Other conditions, likely cash flow, ability of the firm to meet fixed charges, degree of leverage, fluctuations of EBIT and its likely impact on EPS for alternative methods of financing etc. should also be taken into consideration with due weightage for the purpose (Khalaf, 2013). The value of the firm is maximum where the level of gearing for each firm at which the cost per unit of capital is at its lowest point. Therefore, a firm should identify and maintain capital structure at this optimum level.

1.2 Statement of the Problem

The sugar industry plays a significant role in socio-economic development of the Kenyan economy by directly supporting 200,000 small-scale farmers who supply over 85 percent of the cane milled by the sugar companies. In fact, an estimated six million Kenyans derive their livelihood directly or indirectly from the sugar industry (KSB, 2010). However, most if not all of the sugar firms in western Kenya are facing myriad of problems that hurt their profitability, sales volume and financial leverage (Masinde, & Makori, 2014). According to Kibet, (2013) the core problem affecting Kenya's sugar industry is the persistent deterioration in profitability due to insufficient working capital and liquidity that finance their operations. Consequently, most of these factories have accumulated large debts amounting to Kshs. 58 billion as at 31st Dec 2018 (Kenya Sugar Board, 2019) and as a result, approximately 50% of sugar companies in Kenya each year experience a declining financial hence going under (Mwanaongoro, & Imbambi, 2014). Similarly, a report by Harding (2015) on Sugar Campaign for change (SUCAM) Kenya

concluded that the sugar industry in Kenya will face collapse if the current scenario characterized by frequent company shut downs, huge debt; unwise investment practices and liquidity shortages are not resolved before the COMESA protectionism clause will be lifted soon. This implies that the sugar companies both private and public are in urgent need of financial leverage to survive competition from the entry of other sugar producers and an impending end to sugar import limits from the Common Market for Eastern and Southern Africa (COMESA) trade bloc after the end of a one year extension given early this year. Although the problems facing the sugar companies have been largely blamed on corporate management, it is not clear whether capital structure decisions also plays a role in financial performance of these firms. Capital structure decisions are critical for the firm's financial decision makers; since it affects earnings before interest and tax and leads to change in market value of the firm and share value. However, academician's studies on corporate finance have not found the optimal capital structure which increases firm's performance. Besides, in as much as there are a number of studies on Sugar Firms, the effect of capital structure decisions on the financial performance of sugar firms in western Kenya remains unclear. This implies that there is a lacuna of evidence on the relationship between capital structure decisions and financial performance of sugar industries in Kenya. It is against this gap that the present study seeks to investigate the effects of capital structure decisions on financial performance of sugar firms in western Kenya.

1.3 Objectives of the Study

1.3.1 General objective

The general objective of this study was to determine the effect of Capital Structure decisions on financial performance of sugar firms in western Kenya.

1.3.2 Specific objectives

i.   Examine the effect of loan financing on financial performance of sugar firms in Western Kenya.

ii. Determine the effect of debenture financing on financial performance of sugar firms in Western Kenya.

iii. Access the effect of preference share capital financing on financial performance of sugar firms in Western Kenya.

iv. Access the effect of ordinary share capital financing on financial performance of sugar firms in Western Kenya.

v.   Evaluate the effect of institutional capital (Retained Earnings) financing on financial performance of sugar firms in Western Kenya.

1.4 Research Hypothesis

The study sought to test the following null hypotheses;

H0$_1$: There is no statistically significant effect of loan financing on financial performance of sugar firms in Western Kenya.

H0$_2$: There is no statistically significant effect of debenture financing on financial performance of sugar firms in Western Kenya.

H0$_3$: There is no statistically significant effect of preference share capital financing on financial performance of sugar firms in Western Kenya.

H0$_4$: There is no statistically significant effect of ordinary share capital financing on financial performance of sugar firms in Western Kenya.

H0$_5$: There is no statistically significant effect of institutional capital on financial performance of sugar firms in Western Kenya.

1.5 Scope of Study

The study was conducted in 11 Sugar firms based in Nyanza and Western Kenya. Nyanza and western are regions in Kenya. The sugar processing firms found in Nyanza are Muhoroni (1966), Chemelil (1968); South Nyanza (1979), Dhiwa, Miwani Sugar which started in 1922 as private investment, and Kibos Sugar and Allied Industries Ltd. In Western Kenya province, we have Butali Sugar Company, Busia Company, Mumias (1973) and Nzoia (1978). The study revolved around these sugar processing companies investigating how loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing and their influence on financial performance. Both primary and secondary data was collected. The secondary data was collected for the period between the years 2012 to the year 2021 forming a duration of 9 years.

1.6 Justification of the Study

The study aims to contribute to the existing body of knowledge on the topic of debt financing. The study aims to apply a more holistic view on the topic of optimal capital financing decisions and to make a unique contribution by comparing the various funding mechanisms and funding mix adopted by firms in Kenya in an attempt to identify best practices.

The study will also provide information to regulatory organizations that are involved in promoting investments such as Capital Markets Authorities in Kenya to assist in analyzing and harnessing financial resources relevant to business and form policies that foster investments in developing countries. The study will be of assistance to management of sugar firms in their decision making process and their attempts in maximizing their firms 'value and performance and thereby contributing to maximization of shareholders wealth.

1.7 Delimitations of the Study.

The study was delimited to sugar firms in western Kenya. The study was delimited to capital structures influencing financial performance of sugar firms specifically; it sought to establish how loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital financing influence on financial performance of sugar firms. There may be other capital structures influencing the financial performance of the sugar firms but the researcher concentrated on the ones named above. The researcher used descriptive survey research design with only quantitative approaches of collecting primary data. The target population was 11 sugar firms in western Kenya comprising also the sample size. Both primary and secondary data were gathered from these sugar firms.

1.8 Limitations of the Study

Some of the respondents had poor or negative attitude about the study, feeling uneasy with offering the information. Moreover, some of the respondents especially the head of departments from these sugar firms were apprehensive and were not readily offering the information, especially those that touched on financial statement of the sugar firms. However, to address this, the researcher assured them of confidentiality of information and explained to them the intention of the study. It was also not easy to access some of the sugar firms due to ragged terrain of the area, particularly when it rained; roads leading to these sugar firms were impassable. Therefore, the researcher had to revisit these firms during the dry season for easy accessibility and effective data collection.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This Chapter discusses literature related to the effect of Capital structure decisions on financial performance. It focuses on two substantive literature aspects. First, theoretical reviews of the conceptual theories so far advanced in the field of Capital Structure, concepts and the empirical review for evidences about financial performance in various parts of the world and conceptual framework.

2.2 Theoretical Review

Capital structure theories encompass an organized way of financing company projects by mixing equities and liabilities. The study anchored its arguments on Trade-Off Theory and Pecking order theory

2.1.1 The Trade-Off Theory

The proponents of this theory goes back to Kraus and Litzenberger (1973) who considered a balance between the dead-weight costs of bankruptcy and the tax saving benefits of debt. This theory looks at the tradeoff between tax benefit of debt and the costs of bankruptcy. It argues that while investment decision and firm assets are held constant, an optimal capital structure is attained when the tax benefit of debt equals to leverage associated costs which include financial distress, bankruptcy and agency (Myers, 2001). Firms will use debt as much as possible but watch out for any disadvantage that may arise as a result of a bankruptcy. This is the point at which the tax saving from any additional unit of debt exactly equal to the cost which arises from

an increase in the financial distress probability (Sheikh & Wang, 2011). The theory assumes the existence of different target leverage for different firms due to firm's specific factors and also believes that firms are already at their presumed targets (Myers, 2001). According to Luigi and Sorin (2009), trade-off theory grew out of the debate over the MM irrelevance theorem when corporate income tax was added; this created a benefit for debt in that it served to shield earnings from taxes implying a 100% debt financing. In terms of profitability, trade-off theory asserts that more profitable firms have more debt-serving capacity thus a higher debt ratio and vice versa (Luigi & Sorin, 2009). High profitability firms with tangible assets that are relatively safe will use more debt than firms with low profitability as well as those with risky intangible assets.

In practice however, firms do not operate with a 100% debt financing due to distress, bankruptcy and agency costs hence the need to match the costs and benefits. In addition, the target capital structure is not directly observable and that the tax code is much more complex than that assumed hence different conclusions regarding the target can be reached depending on which features of the tax code are included (Graham & Harvey, 2001). Moreover, while the theory predicts that there is a positive effect of the tax rate and leverage due to allowable financial expenses against taxable income, it does not specify the effect of tax rate and leverage (Karadeniz, Kandir, Balcilar & al, 2009). Hennessy and Whited (2005) in their study on debt dynamics show several empirical findings inconsistent with the static trade-off theory to disapprove the existence of target leverage ratio. They argue that firms can be savers or heavily levered, that leverage is path dependent, decreasing in lagged liquidity and varies negatively with an external finance weighted average.

The theory informs the study by establishing whether sugar manufacturing firms in Western Kenya have a well-known way of choosing optimal capital structures that balances the benefits

and disadvantages of both loan and equity which are used to finance the business activities. The theory further informs the study in establishing if the financial wherewithal and performances of sugar firms is dictated by their preferred source of financing either, debts, equity or debt-equity. Moreover, the trade-off theory guides the study by establishing the management of sugar processing firms in western Kenya considers interest tax and net present value in their borrowing decisions.

2.1.2 Pecking order theory

The Pecking Order Theory, also known as the Pecking Order Model, was formulated by Stewart Myers and Nicolas Majluf in 1984. The theory states that managers follow a hierarchy when considering sources of financing, with an assumption that there is no target capital structure. The firms choose capitals according to the following preference order: internal finance, debt, equity. Myers and Majluf (1984) argued the existence of information asymmetry between managers (insiders) and investors (outsiders). They argued that managers have more inside information than investors and act in favor of old shareholders.

In the context of the present study, this theory suggests that sugar firms have a particular preference order for capital used to finance their businesses (Myers and Majluf, 1984). Owing to the information asymmetries between the sugar firm and potential investors, the firm will prefer retained earnings to debt, short-term debt over long-term debt and debt over equity. Myers and Majluf (1984) argued that if the sugar producing firms issue no new security but only use it has retained earning to support the investment opportunities, the information asymmetric can be resolved. That implies that issuing equity becomes more expensive as asymmetric information insiders and outsiders increase. Sugar firms which information asymmetry is large should issue debt to avoid selling underpriced securities.

In conclusion, the pecking order theory of corporate capital structure underpins the discourse that sugar-manufacturing firms may experience financial deficits with internal resources and if this happens, the firm may obtain external debt as the last resort. Some financing patterns in the data are consistent with pecking order: firms with moderate deficits favor debt issues; firms with very high deficits rely much more on equity than debt. Others are not: many equity issuing firms do not seem to have entirely used up the debt capacity; some firms with a surplus do issue equity. The theory therefore suggests a sharp discontinuity of financing methods between surplus firms and deficit firms and another at the debt capacity.

2.2 Empirical Literature Review

2.2.1 Loan Capital Financing and Financial Performance

This is a method of financing in which company receives the loan, don't give up the ownership or profits and bound to pay back the principal and interest at specified dates (Higgins, 2009). This kind of financing usually comes with strict conditions and secured by collateral as a guarantee that loan will be repaid. Hence, to have full authority and ownership of their businesses, business organizations choose debt financing over equity financing (Jagongo, & Mutswenje, 2014). Debt is the long term and short term borrowing that a firm has; mostly the long term borrowing is used to finance the capital structure of a firm and is at an interest which is pegged on to the agreement between the lenders and the firm, on the obligation of the firm to repay at a particular time (Ross, 2001). When it comes to debt, according to Myers and Majluf (1984) theory of pecking order, debt is considered as the last resort after a firm has realized that its internal financing that its equity and retained earnings are not enough. According to Mahakud and Jitendra, (2012) under pecking order there is no optimal capital structure since the observed debt ratio is the cumulative outcome of the pecking order financing behavior over time. The

tradeoff theory of capital structure predicts that firms will choose their mix of debt and equity to balance the costs and benefits of debt.

Tax benefits and control of free cash flow problems are argued to push firms to use more debt. The theory describes a firm's optimal capital structure as the mix of financing that equates the marginal costs and benefits of debt (Zender, 2010). Debt offers firms a tax shield, therefore this makes firms to pursue higher levels of debt in order to gain the maximum tax benefit and in the end increase their profitability. On the other hand, high levels of debt increases the possibility of a firm going into bankruptcy (Myers, 2001). When it comes to increased levels of debt by a firm, managers should be very careful so as to mitigate the risk factor which may lead to bankruptcy. According to Leland and Pyle (1977) they propose that managers will take debt-equity ratio as a signal, by the fact that high leverage implies higher bankruptcy risk.

Kebewar (2012) using a data from a sample of 2240 of French non listed companies of service sector during 1999-2006 did a study on the effect of debt on corporate profitability. Descriptive study design was used; secondary data from audited financial statements was obtained. According to the study findings, debt has no influence on profitability either in a linear way, or in a non-linear way. This finding is consistent with that of Baum et al. (2007) on American industrial companies. In addition, in order to improve the precision of the estimation by reducing heterogeneousness between different sizes of companies, the study analyzed the behavior of the French firms according to their size. The study concluded that there was no impact debt had on profitability, regardless of the size of the company. Saad et al. (2015) also studied the association between the source of funds via equity and leverage, and the performance of SMEs in Malaysia. The study sampled 177 Malaysian SMEs involving manufacturing and agriculture sectors. Using

the ordinary least squares method, the study revealed that equity financing has considerably positive connection with the performance of businesses, while debt financing was insignificant. The study concluded that SMEs in Malaysia employ equity financing as a source of business capital, due to its potential in affecting the performance of business. However studies Kebewar (2012) only focusses on effect of debt on corporate profitability in France and not sugar firms and Saad et al. (2015) only focusses on the association between the source of funds via equity and leverage, and the performance of SMEs in Malaysia and not sugar firms. This therefore limits their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Pouraghajan and Malekian (2012) conducted a study whose objective was to establish the impact of capital structure on financial performance of companies listed in the Tehran Stock Exchange in Iran. They studied and tested a sample of 400 firms in the form of 12 industrial groups during the years 2006 to 2010. Variables of return on assets ratio (ROA) and return on equity ratio (ROE) were used to measure financial performance of companies. Regression analysis was used to test the relationship between the variables. The results suggest that there is a significant negative relationship between debt ratio and financial performance of companies. The result also shows that by reducing debt ratio, management can increase.

In Pakistan, Liaqat et al., (2017) examined the impacts of the composition of capital on the financial performance of firms in the energy and fuel sector of within the country by use of secondary data from the year of 2006 up to 2014. The study adopted the multiple regression model which established that there was a considerable negative effect of structure of capital on the return on equity and return on assets of firms in the sector of fuel & energy in Pakistan,

whereas EPS was merely determined by the capital structure indicators, the size only has considerable positive behavior on EPS. However study by Pouraghajan and Malekian (2012) only focusses on the impact of capital structure on financial performance of companies listed in the Tehran Stock Exchange in Iran and not sugar firms and study by Liaqat et al., (2017) focusses on impacts of the composition of capital on the financial performance of firms in the energy and fuel sector in Pakistan and not sugar firms. These therefore limit their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya

Dube (2013) did a study on the impact of debt financing on productivity of small and medium scale enterprises in Zimbabwe, and concluded that productivity in a firm was positively related to the level of debt financing and changes in investment. The study also concluded that expenditure on investment was an important determinant of productivity in SMEs operations. The level of debt financing must be moderate to avoid large interest payments which can prevent SMEs from investing using internal sources of finance.

Jaramillo and Schiantarelli (2016) conducted a study on access to long term debt and effects on firm performance in Ecuador. They found evidence that suggests that a shorter maturity is not conducive to greater productivity. Long-term debt may actually lead to productivity improvements. Al-Tally (2014) revealed that there is a relationship between capital structure and financial performance in Saudi Arabian firms while conducting a study on the effect of financial leverage on firm financial performance in Saudi Arabia's public listed companies. On an average, the mean financial performance of 57 firms tended to increase with respect to a decrease in leverage level. Lower leverage levels were found to be linked with higher gross profit

margins, NPM, ROA and ROE. However Dube (2013) study focusses on the impact of debt financing on productivity of small and medium scale enterprises in Zimbabwe and not sugar firms, Jaramillo and Schiantarelli (2016) study focusses on access to long term debt and effects on firm performance in Ecuador and not sugar firms and Al-Tally (2014) focusses on a relationship between capital structure and financial performance in Saudi Arabian firms and not sugar firms. These therefore limit their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Adesina, Nwidobie and Adesina (2015) studied the effect of capital composition on the financial performance of the quoted banks in Nigeria. The authors sampled 10 Nigerian commercial banks and collected data for time period of eight years from year 2005 up to 2012. Using the ordinary least square regression examination of the secondary data collected, the study found that the structure of capital had a considerable positive connection with the financial performance of the quoted banks in Nigeria. This study suggested that the management of quoted banks in that country should from time to time make use of equity and debt funds when financing their operations so as to improve their earnings. Moreover, Lambe (2014) examined the functions of debt fund, the effects of capital mix and parameters that affected a company's capital selection and the general impact of the company's value in the Nigerian market. This study used both primary data which was obtained through the use questionnaires and secondary data collected from the periodic publications and the fact book of the Nigerian Stock Exchange. Findings of the study established that the value in the market for a company is positive and considerably affected by its selection of financial debt.

Dube (2013) completed a research study on the effect of debt on the profitability of SMEs in Zimbabwe, and noted that productivity in a firm had a positive connection to the level of leverage use as well as variations in investments. The study further established that investment expenditure was a vital deciding factor of efficiency in SMEs operations. The level of leverage must be reasonable to evade high costs of leverage which can deter SMEs from employing retained earnings. However study by Adesina, Nwidobie and Adesina (2015) focuses on the effect of capital composition on the financial performance of the quoted banks in Nigeria and not sugar firms, study by Lambe (2014) focusses on the functions of debt fund, the effects of capital mix and parameters that affected a company's capital selection and the general impact of the company's value in the Nigerian market and not sugar firms and study by Dube (2013) focusses on the effect of debt on the profitability of SMEs in Zimbabwe and not sugar firms. These therefore limit their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Ebaid (2009) carried out a study to investigate the impact of choice of capital structure on the performance of firms in Egypt. Performance was measured using ROE, ROA, and gross profit margin. Capital structure was measured by short-term debt to asset ratio, long-term debt to asset ratio, and total debt to total assets. Multiple regression analysis 20 was applied to estimate the relationship between the leverage level and performance. The study indicated that capital structure has little to no impact on a firm's performance. Langat, et al., (2014) conducted a study on the effect of debt financing on the profitability of Kenya Tea Development Authority processing factories and indicated that firm performance, which was measured by (ROE and ROA), was significantly and positively associated with long-term debt and total debt at 1% and

5% respectively, while on the other hand, short-term debt showed a negative and significant relationship at 5% in the two models. The negative relation between short-term debt and the profitability of tea processing factories meant that supplying the finance through short-term debts does not lead to profitability. However study by Ebaid (2009) focusses on the impact of choice of capital structure on the performance of firms in Egypt and not sugar firms and study by Langat, et al., (2014) focusses on the effect of debt financing on the profitability of Kenya Tea Development Authority processing factories and not sugar firms. This therefore limits the generalization of their findings. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Omesa, et al., (2013) examined the relationship between a firm's capital structure and financial performance among a sample of 30 companies listed at the NSE whose data for 5 years period 2007 - 2011. The findings indicate that there was a significant correlation between total assets of a firm and long term debt. Long term debt had a positive correlation with ROE which is insignificant and weak. Maina & Ishmail (2014) did a study on capital structure and financial performance of firms listed at the NSE. Using a regression model and statistical software, the study concluded that debt and equity are major determinants of financial performance of firms listed at the NSE. There was evidence of a negative and significant relationship between capital structure financial performances. This implied that the more debt the firms used as 21 a source of finance the more they experienced low performance. The study also concluded that firms listed at NSE used more short-term debts than long term. However study by Omesa, et al., (2013) on the relationship between a firm's capital structure and financial performance among a sample of 30 companies listed at the NSE and not sugar firms and study by Maina & Ishmail (2014)

focusses on capital structure and financial performance of firms listed at the NSE and not sugar firms. These therefore limit the generalization of their findings. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Chepkemoi (2013) carried out a study to analyze the effect of capital structure of SMEs on their financial performance in Kenyan market. The sample of the study was 295 SMEs in Nakuru town. Descriptive statistics and multiple regression models were used. The finding revealed that capital structure had a negative effect on firm profitability but positive effect on sales growth. Magara (2012) did a study on capital structure and its determinants at Nairobi Securities Exchange. The study sought to find determinants of capital structure. It was established that from the period 2007 to 2011, there was a positive significant relationship between the size, tangibility and growth rate and degree of leverage of the firm.

Muchugia (2013) examined the effect of debt financing on firm profitability of commercial banks in Kenya. The study showed a significant positive relationship between short term debt financing and profitability since short-term debt tends to be less expensive and increasing it with a relatively low interest rate will lead to an increase in profit levels and hence performance. However study by Chepkemoi (2013) focusses on the effect of capital structure of SMEs on their financial performance in Kenyan market in Nakuru and not sugar firms and study by Muchugia (2013) focusses on effect of debt financing on firm profitability of commercial banks in Kenya and not sugar firms. These therefore limit their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Koskei (2017) also examined the association between long-term debt ratio, debt to asset ratio, debt to equity ratio and the financial performance of the private sugar manufacturing companies in Kenya. The study carried out a survey of all six private sugar companies in Kenya and relied on secondary data. The study revealed that debt to equity ratio has considerable effects on the financial performance, debt asset ratio has no considerable impact on financial performance and long-term debt equity ratio has considerable effects on financial performance and the moderating factor of a firm's size have no impact on the financial performance of firms.

Makanga (2015) also studied the impacts of debt financing on financial performance of the firms listed at the NSE. The study used a quantitative research design with analysis being done using linear regression models using SPSS. The study revealed that short-term debt was negatively connected to return on assets but not significantly. The study also found that long-term debt was also negatively correlated to return on assets but less significantly than short term debt and found a weak negative connection between return on assets and total debt. However study by Koskei (2017) on the association between long-term debt ratio, debt to asset ratio, debt to equity ratio and the financial performance of the private sugar manufacturing companies in Kenya and not sugar firms and study by Makanga (2015) focusses on impacts of debt financing on financial performance of the firms listed at the NSE and not sugar firms. These therefore limit their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Onchong'a, Muturi and Atambo (2016) examined the effects of leverage financing in financial performance of selected firms in the country. The study targeted a population of 60 firms with debt in their capital structure in Nairobi Security Exchange, and utilized secondary data from

audited financial reports of these firms between periods of 2009-2012. Using regression analysis coefficient on the debt effects on return on asset the study revealed that a unit increase of short term debt reduces return on asset. However, the study found a unit increase in short term debt however will reduce the profit margin ratio.

Kajirwa (2015) also studied if the use of debt funds in a firms' capital composition had an effect on performance of firms. This study carried out an assessment of the commercial banks listed on NSE in the country and a targeted population that comprised of 11 commercial banks was put into consideration. The study employed correlation and regression models. The study revealed that leverage negatively affected the firms' performance although not statistically considerable. The study concluded that the use of leverage in a firms' capital composition has negative impacts on the performance of commercial banks which is not statistically considerable. However study by Onchong'a, Muturi and Atambo (2016) focusses on the effects of leverage financing in financial performance of selected firms in the Nairobi Kenya and not sugar firms and study by Kajirwa (2015) focusses on the use of debt funds in a firms' capital composition had an effect on performance of firms and not sugar firms. These therefore limit their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya.

Gabrijelcic, Herman and Lenarcic (2016) studied the impacts of financial debts and the foreign funding on a firms' performance prior to and in times of the current crisis. The study used a large panel of firms in Slovenia. The study found a considerable negative effect of debt on the firms' performance and also that firms with some foreign leverage performed healthier averagely than those firms that rely entirely on domestic financing. Concurrently, these firms suffered a huge

decline in their performance if the total debt was raised. However study by Gabrijelcic, Herman and Lenarcic (2016) focusses on the impacts of financial debts and the foreign funding on a firms' performance prior to and in times of the current crisis and not sugar firms. This therefore limits their findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how loan financing influence their financial performance of sugar industries in Kenya

2.2.2 Debenture Financing and Financial Performance

The bond is the most common type of debt instrument used by private corporations and by governments. An investor loans a sum of money in return for the promise of repayment at the specified maturity date (Becker and Ivashina, 2013). Usually, the investor also receives periodic interest payments over the duration of the bond's term. In the investing world, bonds are generally considered to be a relatively safe investment. Highly rated corporate or government bonds come with little perceived default risk (Demirgüç, 2006). However, each bond, including those issued by government agencies or municipalities, will carry an individual credit rating.

Machel (2013) studied the effects of bond issues on the stock price performance of firms listed at NSE. The objective of his study was to establish the effect of bond issues on the performance of the stock price of firms listed at the Nairobi Securities Exchange. A descriptive study was carried out using the event study methodology. The target population for this study was all the companies listed at the Nairobi Securities Exchange that have issued debt, in the form of bonds or notes. The study was a census of the six listed companies that met this criterion. The market model was used to estimate the market returns which were used to calculate the abnormal returns of each company's stock on every trading day. The findings obtained were the result of the

parametric t-test carried out at a 5% significance level, which revealed outcomes that pull in either direction with regard to the objective of this study, that is where bond issues have a positive effect on the share price of the issuing company and where the bond issues have a negative effect or no effect at all. However, the reviewed study only looked at the effects of bond issues on the stock price performance of the general firms listed at NSE and not on specifically sugar firms in Western Kenya. This therefore limits the generalization of its findings for the present study. The present study therefore looked at the effects of debenture financing on the performance of sugar firms in western Kenya to fill this gap.

Malm and Roslund (2013) investigated the bond-to-total debt ratio and its impact on firms' performance. The study was conducted on the Norwegian market, within which a well-developed and mature bond market was established. So as to check the importance of the correlation between the ratio and performance, a quantitative study was conducted through a multiple correlation analysis. The results were consistent, as none of the tests performed were able to offer vital correlations for the relationship. They therefore indicated that, within the Norwegian context, the bond-to-total debt ratio failed to seem to impact firms' performance. The tests showed an insignificant relationship between the bond-to-total debt ratio and firm performance. This result indicated that practitioners among the sector ought not to worry regarding whether or not bonds can impact their performance. However, the reviewed study by Malm and Roslund (2013) looked at the bond-to-total debt ratio and its impact on firms' performance, with more emphasis on the general firms in Kenya, and not on specifically sugar firms in Western Kenya. This limits the generalization of its findings for the present study. The present study therefore looked at the effects of debenture financing on the performance of sugar firms in western Kenya to fill this gap.

Becker and Ivashina (2013) in their study reaching for yield in the bonds and debentures market noted the tendency by investors to buy riskier assets in order to achieve higher yield. This they believed to be a very important issue contributory to the credit cycle. They conducted a close study of this development within the bond market. The study indicated that insurance corporations, the biggest institutional holders of company bonds, reach for yield in choosing their investments. Reaching-for-yield existed each within the primary and also the secondary market, and was strong to a series of bond and issuer controls, as well as bond liquidity and period, and issuer fixed effects. This behavior is connected to the trade cycle, being most pronounced during economic expansions. It is also more pronounced for companies with poor corporate governance and that restrictive capital requirement is more binding. A comparison of the ex-post performance of bonds acquired by insurance companies showed no outperformance, but higher systematic risk and volatility. In general, bonds and debentures are considered safe if unspectacular investments with a guaranteed rate of return. Generally, professional financial advisors encourage their clients to keep a percentage of their assets in bonds and to increase that percentage as they approach retirement age. However, the study by Becker and Ivashina (2013) on assessing the yield in the bonds and debentures market focused on only the behavior of the investors in the market, with little emphasis on how such capital financing influence financial performance of the firms particularly the sugar firms in western Kenya. The present study therefore filled this gap by looking at the effects of debenture financing on financial performance of sugar firms.

2.2.3 Preference Share Capital and Financial Performance

According to Jensen (1986) firms with great investment opportunities have lower debt levels meaning that they employ more equity to debt. Equity point of view from the pecking order

theory of capital structure by Myers and Majluf (1984) is that firms follow a pecking order of incremental financing choice that prioritizes internal funds at the top. Internal funds is own equity that includes retained earnings, according to this theory the most important component of capital structure financing is equity, debt comes in when equity is not enough. The firms perform well financially with a return above that of the cost of debt then equity holders benefit whereas if the firm financial performance is below the cost of debt then the debt holders bear loss. A firm's growth influences the capital structure in terms of the needs of the firm which in turn dictate whether debt or equity, firms with expected growth are not supposed to collaterize their assets hence more equity than debt and this is true in relation to a study by Rajan and Zingales (1995) which noted that firms with expected growth should be equity financed than debt financed

Preference shares come with no voting rights but they do provide an advantage over ordinary shareholders when it comes to receiving dividends (Shubita & Alsawalhal, 2012). Preference shareholders are first in line for dividend payments, both when the business is operating, and also in the event of the company entering liquidation in the future. Dividend payments for preference shareholders are often at an agreed level and are made at defined points throughout the year. Due to this preference shares are often seen as a less risky investment, although payment amounts may be lower in light of this (Ishaya and Abduljeleel, 2014). Should the company experience a period of growth with profits to match, preference shareholders will not see the benefit in this when it comes to receiving their dividend payment. However, this works both ways, and many individuals investing in this way appreciate the element of certainty that comes with it. Despite this, companies may choose not to make a dividend payment in certain instances. Even if you hold preferred stock, you will still not be able to receive a dividend payment if the company

decides not to issue them. What happens in this situation depends on the type of preference share which is held.

Irwin & Scott (2010) in a study on the sources of financing for business enterprises notes that finances can be classified based on different sources ranging from share capital, savings, bank loans, credit finance among others. Deakins *et al*., (2010) while carrying out a study on sources of finances noted that it can generally be classified as internal (from within the organization) and external (usually from outside the business enterprise. However, reviewing the studies by Irwin & Scott (2010) and Deakins *et al*., (2010) shows that they both focused on the sources of financing of business organizations and not specifically the influence of preference shares capital on financial performance of sugar firms. The present study therefore assessed the how preference shares capital would influence financial performance of sugar firms in Western Kenya.

In order to examine the effect of financial structure on organizational profitability among listed firms in Nigeria, Ishaya and Abduljeleel (2014) found that commercial debt is usually negatively correlated with firm profits besides the fact that preference share capital is directly related with profits of the firm. Secondary data was used which showed the findings were consistent with Shubita & Alsawalhal (2012) survey and also provide evidence against the agency cost theory.

Mohd and Shuhymee (2015) examined and verified the existence of relationship between the source of capital via equity and debt financing, and the performance of small and medium enterprise (hereafter SME) in Malaysia. The study is run based on of postal survey using cluster sampling method. It comprises of 177 samples of Malaysian SMEs involving in manufacturing and agriculture sectors. Subsequently, two research hypotheses are developed and analyzed. It is found that equity financing has significant positive relationship on the business performance,

while debt financing is insignificant. The study suggests that SMEs in Malaysia do employ equity financing as a source of business capital, for its potential (capability) in affecting the performance of business. However, these findings by Mohd, and Shuhymee, (2015) were based on the general small and medium enterprises hence would not be generalized for the sugar firm industries, hence it's not clear whether these capital structures decisions influence profitability, earnings per share, marketing shares of sugar firms in Kenya. The present study seeks to fill these gaps by investigating the effects of preference share capital financing on financial performance of sugar industries in Kenya.

Njagi, Kimani, and Kariuki, (2017) analyzed the effect of equity financing on financial performance of SMEs in Kenya. The study adopted a descriptive survey research design. The target population of study was 300 SMEs from which a sample size of 60 SMEs was drawn. The primary data was collected using self-administered questionnaire while secondary data was obtained from audited financial statements and analyzed by use of SPSS. Data analyzed capture descriptive statistic which included mean, standard deviation and variance. Inferential statistic included Pearson's correlation and multiple regressions. The study revealed that SMEs had greater preference for contribution from friends and ploughing back profit as a source of equity finance. Angel investors as a form of equity financing has not gained acceptance as a source of finance. From the study it was evident that equity finance had a positive relationship to financial performance of the SMEs. Equity offered a lifelong financing option with no or minimal cash outflow inform of interest. The study also noted that the performance of the SMEs was largely affected by the source of finance and the liquidity position of the business. However, this study by Njagi, Kimani, & Kariuki, (2017) only focused on equity financing and financial performance of SMEs in Kenya. This therefore limits its findings from generalization. The present study seeks

to fill these gaps by focusing on sugar firms in Western Kenya, and how preference share capital financing influence their financial performance of sugar industries in Kenya.

Githire, and Muturi, (2015) examined the effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange. The population of interest was the firms listed at the Nairobi Securities Exchange and a probability of all firms listed at the Nairobi Securities Exchange from year 2008-2013 was the sample. The study adopted an explanatory non experimental research. Secondary data was obtained from the published annual reports and financial statements of the listed companies at the NSE covering the years 2008 to 2013. The collected data was entered into the Statistical Program for Social Sciences (SPSS) and multiple regression analysis method was used to analyze and test the hypotheses. The findings showed that equity and long term debt have a positive and significant effect on financial performance, while short term debt has a negative and significant effect on financial performance. Thus, this study concludes that equity and short debt financing enhances financial performance, while short terms reduce financial performance. However the study by Githire, and Muturi, (2015) suffered from methodological gap as it only focused on the effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange. This therefore limits its findings from generalization. The present study seeks to fill these gaps by focusing on sugar firms in Western Kenya, and how preference share capital financing influence their financial performance of sugar industries in Kenya.

2.2.4 Ordinary Share Capital and Financial Performance

Ordinary shares otherwise known as 'common stock' gives holders the right to vote at meetings as well as take dividends from the company's profits. Voting rights mean you have a say on issues such as salaries and the future direction of the business (Oladeji, *et al.,* 2015). Although

you do have the right to dividends when they are paid, companies are not obliged to distribute them should a decision be made to the contrary. This may be because profits are lower than expected, or because it has been decided that these profits are to be reinvested straight back into the business to fuel further growth instead.

Share capital is commonly measured by the Book value which compares market of the shares as compared to firm value all as indicated in the financial reports (Phylaktis et al., 2010). The above is done in ratio form by calculating price per share over share capital value. The value of capital refers to the difference between assets book value and total value to all financial obligations commonly known as liabilities and then it is divided over the outstanding share capital shares as indicated by the statement of the financial position (Sullivan & Steven, 2003). Thus from the above argument, the share capital net book value is equated to the equivalent value of remaining assets; this goes a long way in giving the net worth of the enterprise in case there is need for liquidation (Oladeji, et al., 2015). Thus the net book value is a very critical component in the measurement of investor share in the firm. Mostly a consideration is made on the number of shares to portray the net value in terms of investment per share. This value is then divided over the share price.

Saeedi and Mahmoodi (2011) further noted that book ratio is commonly associated with the value of investment. When such a ration is low then it is considered that there is undervaluation of the stock. Equally, it could also imply that there is a fundamental issue that needs to be addressed in the organization. Usually since ratios vary depending on industry such a ration could also call for questioning if investors are paying unwarranted attention for an organization that is potentially bankrupt as up to this point, net book value can greatly influence decision of the investors in terms of buying shares of the firm under consideration. Additionally, the value of

the book as compared to the shares can be a very critical baseline for valuation of stock under consideration. However, study by Saeedi and Mahmoodi (2011) was more general as it only explained the meaning of book values with respect to share capitals, hence it had a contextual gaps as it did not focus on how ordinary share capital influence financial performance of sugar firms in Western Kenya. The present study therefore filled this gap left in the literature.

Although it must be at technical levels not be based on the need for liquidation since it may proof to be not only misleading but also it may not be the best reflection of the situation at hand (Abdul, 2012). In most cases shares have traded below such value only to be end up being a not a true value due to other market factors. Thus in case, the firm's book balance as reflected in statement of financial position is not in tandem with the above position then a low price ratio may be considered as a perfect indicator of an undervalued stock. Notably, the book value may not be the best consideration incase future is being evaluated as firm prospects usually change depending on market conditions which not only shape an organization's equity but also trends in terms of interest of investors. However, reviewing the literature by Abdul, (2012) shows that the study was more on the book values and conditions associated with the book values with respect to share capitals, hence it had a contextual gaps as it did not focus on how ordinary share capital influence financial performance of sugar firms in Western Kenya. The present study therefore filled this gap left in the literature.

Gathara, Kilika and Maingi (2019) sought to investigate the effect of financial structure on performance of selected companies listed at (NSE), Kenya. The specific study objective was to determine the effect of equity on the performance of Companies listed on the Nairobi Securities Exchange (NSE). Causal or explanatory research design was employed in the study due to the nature of the problem and available. Quantitative data was used. Multivariate tests using panel

data model examined the effects of the independent variable on company's financial performance. Data was collected for 30 selected companies for the period 2007-2015. Various diagnostic tests including, Auto-correlation test, Normality test, Heteroscedasticity test, Unit root test and Test for pooling were carried out. Regression coefficients were used to test for significance using t-statistic at 5% level of significance and conclusions drawn. The study found out that Equity had significant positive effect on financial performance of selected companies listed at NSE, Kenya. The recommendations of the study were that managers of the selected companies listed at NSE, Kenya could utilize the various sources of finance since financial structure had a positive effect on the performance of the listed firms

Onaolapo & Kajola (2010) did a research on the effects of capital structure on the profitability of firms quoted on Nigeria Stock Exchange. The research used a sample of thirty non-financial firms for the period 2001-2007. The findings indicated that a negative effect exist between capital structure and firm level of profitability. The study used (ROE and ROA) of these companies

Adekunle (2009) did a research study on the impact of financial structure on the firm's profitability in Nigeria for the period 2001-2007. He sampled 30 non-financial companies quoted in Nigerian stock exchange and collected secondary data from company's financial statements. The study used debt ratios as the independent variables and ROA and ROE as the dependent variable. The study employed ordinary least square estimation approach and established that debt ratio has a significant negative relationship with the performance of the firms.

Masiega et al (2013) did a study investigating the effects of capital structure on the financial performance of listed companies at NSE. 30 listed companies at NSE were sampled and data

collected for period of five years starting from 2007 to 2011. The study concluded that there is a significant positive correlation between long-term debt and total company assets. The long-term debt has a positive effect on the financial performance although the nature of the effects was weak and insignificant

2.2.5 Institutional Capital (Retained Earnings) and Financial Performance

Tirmizi & Ahmad (2013) analyzed the impacts of retained earnings on firm value and shareholders wealth among 85 randomly selected listed Pakistani manufacturing firms. A cross-sectional survey research design was adopted and a quantitative questionnaire used to collect primary data. Through descriptive and simple linear regression techniques, the study established that Pakistani firms retained 77% of earnings between 2000 to 2009. This retention rate was found to be significantly and positively affecting the value as well as wealth of the shareholders of the listed manufacturing firms operating in Pakistan.

Bassey Eyo Bassey, Godwin Onyam Edom (2016) examined the impact of retained profit on corporate performance of Niger Mills Company, Calabar-Nigeria. Adopting the ex-post facto research design, data on retained earnings and profitability was extracted from annual financial records of the company for a 10-year period between 2001 and 2010. The Karl Pearson product moment correlation coefficient and t-test were used to examine the relationship between retained earnings and the company's corporate performance (turnover). The study established that positive and statistically significant relationship existed between retained profits and turnover. A statistically significant relationship between retained profit and future earnings capacity of the company was also established. While the reviewed study established the correlation between retained profits on corporate performance, it had not provided the empirical evidence on how the

retained profits would also influenced the level of profitability of the business organizations, especially sugar firms. The present study looked at the influence of Institutional Capital (Retained Earnings) on financial Performance of sugar firms in western Kenya to fill this gap.

Javed & Shah (2015) analyzed the effect of retained earnings on stock returns of seven (7) food and personal care goods industry firms listed in Karachi Stock Exchange. Panel data for the period 2009 – 2014 (5 years) was extracted from annual financial reports of the 7 firms and analyzed through linear regression and Spearman's correlation coefficient analysis. The study found a weak and insignificant relationship between retained earnings and cash dividend per share and capital gain/loss yield. The study also found a moderate positive and significant relationship between retained earnings and closing price of stock. However, the reviewed study focused on effect of retained earnings on stock returns of seven (7) food and personal care goods industry, but did not provide the empirical evidence on how the retained profits would also influenced the level of profitability of the business organizations, especially sugar firms. The present study looked at the influence of Institutional Capital (Retained Earnings) on financial Performance of sugar firms in western Kenya to fill this gap.

2.2.6.4 Regulations

Kenya's sugar industry has many natural advantages, almost all of which have been undermined by policy and public mismanagement that has seen its productivity slump (Murgor, 2008). Good policies change economies; solve old and persistent problems and create new dawns in frameworks constructed by political leaders, technocrats and experts, all with the aim of changing our collective future (Coughlin, 2011). A clear jumpstart would have come from regulations that encouraged entrepreneurs to produce any of the 13 new high yield seeds

developed by the Kenya Sugar Research Foundation (KESREF) and already released for commercial production. Likewise, delivering on the Crops Act's commitment to extension services to get farmers to switch to better seeds would have lifted yields by up to 100% (SUCAM, 2013).

On importation cost, the nation saves Sh40-55 billion a year in import costs by using locally produced sugar which matters more as our trade deficit continues to grow and place downward pressure on the value of the shilling (Obado, 2005). Yet, in its bid to remedy the decline in the industry, the government has drawn up regulations and legislations that appear unjustified and inexplicable. For instance, Common Market for Eastern and Southern Africa (Comesa) has warned that there will be no further extensions in protecting domestic sugar production from imports, yet Kenyan sugar costs $870 (Sh87,000) a tonne to produce compared to $350 in Malawi and $400 in Egypt (SUCAM, 2013). There is, therefore, no possibility of Kenyan sugar competing against imports without the cost of production falling dramatically. That makes it a top priority for the new regulations to reduce production costs.

Currently, the proposed controls comprise of a peculiarly old-fashioned model of expensive (for taxpayers) state intervention that will further load costs and actively prevent the key corrections that can reduce our production costs (Obange, & Onyango, & Siringi, 2011). The starting point for Kenya's excessive costs is low yield seeds. Farmers still use old-fashioned, low-yield seeds, meaning that Kenya produces far less sugar per hectare than any competitor. To rescue the farmers from low yield seeds, the Kenyan government has come up with a legislation that directs entrepreneurs to produce any of the 14 new high-yield seeds developed by the Sugar Research Institute (SRI) and already released for commercial production (SUCAM, 2013). Likewise,

delivering on the Crops Act's commitment to extension services has directed farmers to switch better seeds for double yields.

2.2.6.5 Legislation

The Kenyan government also introduced zoning directives, where a farmer is assigned just one mill to sell to. However, Harding, (2005) documents that these regulations discouraged raw sugar production in other countries. For instance, it drove farmers out of production and ruined a once-thriving industry in Australia, Pakistan, India, and South Africa. The new rules also require investors to have high-powered management teams up to two years before getting licenses or going into operation and build sugar mills ahead of licensing (Coughlin, 2011). However, currently the Parliamentary Committee on Delegated Legislation is reviewing this legislation of zoning to carry out a cost-benefit analysis or comparative assessment of other policies.

2.3 Financial Performance of Sugar Companies

2.3.1 Level of Profitability

Profitability is defined as either accounting or economic profits. Accounting profits is the excesses of the incomes over the expenses. This involves all the taxable incomes less all the deductible expenses. For a business unit to run, it must be making profits (Drucker, 2018). However, a single non-profit financial year may not really harm the business of the firm, but when the firm incurs losses in consecutive years this may jeopardize the viability of that business (Don 2009). The accounting profits are measured to ascertain the success of the business; to see the business' chances of survival; and to ascertain its ability to reward the owners for their investment into the business, and this according to Don is the main goal of the management.

The measurement of accounting profit is done by several instruments some of them include the income statement which accounts for the ending financial year. Another such instrument is the proforma income statement that measures projected profitability of the business for the coming accounting year. Economic profit is computed by deducting the opportunity cost from the net income Graham (1996). The opportunity cost includes the money, the labor and the management ability directed towards credit allocation (Agum, 2011). Economic profits are computed to provide the business with a long-term perspective to oversee its continued operation. The firm's profitability is influenced by the structure of the revenue generating assets like credit in banks which generate revenue in terms of the interest incomes. Also profitability is dependent on the firm's ability to eliminate risks in the asset operation to ensure correspondence between the assets and the liabilities (Bobakova. 2003). Profitability of the sugar firms ensures its going concern value. To assess earnings, the parameter of Return on average assets (ROAA) was used to measure it. This is the ratio of profit before tax (PBT) to the average of the total assets at the beginning and at the end of the year. The ratio is a measure of how well the sugar firms' assets were utilized in realizing profits. A higher ratio is desirable. If profit continues to grow much faster than asset growth, then the sugar firms are utilizing there assets much better to generate profits.

2.3.2 Market share

Market share refers to the portion or percentage of a market earned by a company or an organization. In other words, a company's market share is its total sales Sales Revenue Sales revenue is the income received by a company from its sales of goods or the provision of services. In accounting, the terms "sales" and in relation to the overall industry sales of the industry in which it operates. (2015 journal on overview and impact of market shares)

2.5 Summary of Literature Review

This study reviewed both theoretical literature and empirical literature based on the capital structures influencing the financial performance of the sugar firms. In theoretical review, the study explains the proponents, tenets and how these theories (Trade-Off Theory and Pecking order theory) inform the study. In empirical literature review, the study reviewed past empirical studies based on study objectives and exposed gaps that were left in the study. In most of the reviewed studies, the researches have been on other firms conducted in other countries. Hence most of these studies have contextual gaps and therefore, have not found optimal capital structure that would be adopted by sugar firms for good financial performance. Besides, in as much as there are a number of studies on Sugar Firms, the effect of capital structure decisions on the financial performance of sugar firms in western Kenya remains unclear. This implies that there is a lacuna of evidence on the relationship between capital structure decisions and financial performance of sugar industries in Kenya. It is against this knowledge gap that the present study seeks to investigate the effects of capital structure decisions on financial performance of sugar firms in western Kenya.

Table 2.1: Summary of Literature Review and Research Gaps

Objectives	Author	Study title	Methodology	Findings	Knowledge gap
Examine the effect of loan capital financing on financial performance of sugar firms	Kebewar (2012)	Effect of debt on corporate profitability	Descriptive study design was used; secondary data from audited financial statements was obtained	debt has no influence on profitability either in a linear way, or in a non-linear way	The study setting was on general companies of service sector and not on sugar manufacturing companies hence contextual gap
	Mohd and Shuhymee (2015)	Relationship between the source of capital via equity and debt financing, and the performance of small and medium enterprise (hereafter SME) in Malaysia	The study used postal survey using cluster sampling method. Population consisted of 177 samples of Malaysian SMEs involving in manufacturing and agriculture sectors	Equity financing has significant positive relationship on the business performance, while debt financing is insignificant	These findings by Mohd, and Shuhymee, (2015) were based on the general small and medium enterprises hence would not be generalized for the sugar firm industries, hence it's not clear whether these capital structures decisions influence profitability, sales volume, financial leverage of sugar firms in Kenya
	Githire, and Muturi, (2015)	Effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange	The population of interest was the firms listed at the Nairobi Securities Exchange and a probability of all firms listed at the Nairobi Securities Exchange from year 2008-2013 was the sample. The study adopted an explanatory non-experimental research. Secondary data was obtained from the published annual reports and financial statements of	The findings showed that equity and long term debt have a positive and significant effect on financial performance, while short term debt has a negative and significant effect on financial performance	The study by Githire, and Muturi, (2015) suffered from methodological gap as it only focused on the effect of capital structure on the performance of firms listed at the Nairobi Securities Exchange. This therefore limits its findings from generalization

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			the listed companies at the NSE covering the years 2008 to 2013. Multiple regression analysis method was used to analyze and test the hypotheses		
	Pouraghajan and Malekian (2012)	Impact of capital structure on financial performance of companies listed in the Tehran Stock Exchange in Iran	They studied and tested a sample of 400 firms in the form of 12 industrial groups during the years 2006 to 2010 Regression analysis was used to test the relationship between the variables	The results found a significant negative relationship between debt ratio and financial performance of companies	Focused on the impact of capital structure on financial performance of companies listed in the Tehran Stock Exchange in Iran and not sugar firms
Effect of Debenture Financing on Financial Performance of sugar firm	Kebewar (2012)	Effect of debt on corporate profitability	Data from a sample of 2240 of French non listed companies of service sector Descriptive study design was used Secondary data from audited financial statements was obtained	Debt has no influence on profitability either in a linear way, or in a non-linear way	Focused on only listed service companies Only used secondary data for analysis There is no quantitative data component
	Dube (2013)	Effect of capital composition on the financial performance of the quoted banks in Nigeria	Sampled 10 Nigerian commercial banks and collected data for time period of eight years from year 2005 up to 2012. Used ordinary least square regression examination of the secondary data collected	The study found that the structure of capital had a considerable positive connection with the financial performance of the quoted banks in Nigeria	Focused on the general capital structure decisions Findings based on banks as opposed to sugar firms
	Jaramillo and Schiantarelli (2016)	Access to long term debt and effects on firm performance in Ecuador	Secondary data of 57 manufacturing firms were collected	The study found a positive significant relationship between long term loans and	Used the general manufacturing firms and not sugar firms. It was also based on Ecuador and not Kenya,

				profitability performance of the firms	hence limiting the generalization of the study findings as there was a contextual gaps
	Malm and Roslund (2013)	Bond-to-total debt ratio and its impact on firms' performance	a quantitative study was conducted through a multiple correlation analysis	The bond-to-total debt ratio failed to seem to impact firms' performance. The tests showed an insignificant relationship between the bond-to-total debt ratio and firm performance. This result indicated that practitioners among the sector ought not to worry regarding whether or not bonds can impact their performance	However, the reviewed study by Malm and Roslund (2013) looked at the bond-to-total debt ratio and its impact on firms' performance, with more emphasis on the general firms in Kenya, and not on specifically sugar firms in Western Kenya. This limits the generalization of its findings for the present study. The present study therefore looked at the effects of debenture financing on the performance of sugar firms in western Kenya to fill this gap.
	Becker and Ivashina (2013)	Reaching for yield in the bonds and debentures market	Used secondary data from bond market Analyzed data through time series	The study indicated that insurance corporations, the biggest institutional holders of company bonds, reach for yield in choosing their investments. Reaching-for-yield existed each within the primary and also the secondary market, and was strong to a series of bond and issuer controls, as well as bond liquidity and	Becker and Ivashina (2013) on assessing the yield in the bonds and debentures market focused on only the behavior of the investors in the market, with little emphasis on how such capital financing influence financial performance of the firms particularly the sugar firms in western Kenya. The present study therefore filled this gap by looking at the effects of debenture financing on

				period, and issuer fixed effects	financial performance of sugar firms
	Machel (2013)	Effects of bond issues on the stock price performance of firms listed at NSE	A descriptive study was carried out using the event study methodology. The target population for this study was all the companies listed at the Nairobi Securities Exchange that have issued debt, in the form of bonds or notes. The study was a census of the six listed companies that met this criterion. The market model was used to estimate the market returns which were used to calculate the abnormal returns of each company's stock on every trading day.	The findings obtained were the result of the parametric t-test carried out at a 5% significance level, which revealed outcomes that pull in either direction with regard to the objective of this study, that is where bond issues have a positive effect on the share price of the issuing company and where the bond issues have a negative effect or no effect at all	However, the reviewed study only looked at the effects of bond issues on the stock price performance of the general firms listed at NSE and not on specifically sugar firms in Western Kenya. This therefore limits the generalization of its findings for the present study. The present study therefore looked at the effects of debenture financing on the performance of sugar firms in western Kenya to fill this gap
	Koskei (2017)	Association between long-term debt ratio, debt to asset ratio, debt to equity ratio and the financial performance of the private sugar manufacturing companies in Kenya	The study carried out a survey of all six private sugar companies in Kenya and relied on secondary data	The study revealed that debt to equity ratio has considerable effects on the financial performance, debt asset ratio has no considerable impact on financial performance and long-term debt equity ratio has considerable effects on financial performance and the moderating factor of a firm's size have no impact on the	Findings were only based on secondary data. Only private sugar companies were involved in the study

				financial performance of firms	
Effect of preference share Financing on financial Performance of sugar firms in.	Titman, and Wesseles (2018),	Relationship between capital structure and share prices in NSE	Used panel data pertaining to the energy sector over the period 2006 to 2011 and employing multiple regression analysis	The results indicated that debt; equity and gearing ratio were significant determinants of share prices for the sector under consideration Gearing ratio and debt were found to positively affect share prices while equity negatively affected share prices	Only secondary data was used Focused on debt and equity source of capital in isolation and not specifically preference share capital. Looked at the general listed companies and not specify on the sugar firms, hence limiting its findings from generalization
	Njagi, Kimani, & Kariuki, (2017)	Effect of equity financing on financial performance of SMEs in Kenya	The study adopted a descriptive survey research design. The target population of study was 300 SMEs from which a sample size of 60 SMEs was drawn. The primary data was collected using self-administered questionnaire while secondary data was obtained from audited financial statements and analyzed by use of SPSS. Data analyzed capture descriptive statistic which included mean, standard deviation and variance. Inferential statistic included Pearson's correlation and multiple regressions	The study revealed that SMEs had greater preference for contribution from friends and ploughing back profit as a source of equity finance

Equity finance had a positive relationship to financial performance of the SMEs

The study also noted that the performance of the SMEs was largely affected by the source of finance and the liquidity position of the business | However, this study by Njagi, Kimani, & Kariuki, (2017) only focused on equity financing and financial performance of SMEs in Kenya. This therefore limits its findings from generalization. |

	Eriki and Osifo (2017)	Effect of debt-equity mix on financial performance of downstream oil and gas firms in Nigeria	The annual financial statements of twelve (12) oil and gas firms listed on the Nigerian Stock Exchange were used for the study which covers a period of five (5) years from 2011 - 2015. Panel regression analysis using fixed effect model and hausman test were applied on performance indicators	The results show that there is negative and insignificant effect between debt to capital employed (DC) and long term debt to common equity (LDCE) on firm performance using RoA and RoE while debt to asset (DA) and debt To common equity (DCE) are positively and significantly impact on RoA and RoE	Used on secondary data Only focused on downstream oil and gas firms in Nigeria and not on the sugar firms
	Musila (2015)	Relationship between equity financing and financial performance for firms in the energy and petroleum sector listed at the Nairobi Securities Exchange	Used descriptive study design Collected secondary data Regression model to analyze the relationship between variable F-test was used to determine the fitness of the regression model in analyzing the relationship	The results of the study showed an insignificant but positive relationship between equity financing and financial performance The study also showed a significant positive relationship between financial performance and growth opportunities and equity ratio	Used on secondary data Findings were only based on energy and petroleum sector listed at the Nairobi Securities Exchange
Effect of Ordinary share capital financing on financial Performance of sugar firms in Western Kenya.	Gathara, Kilika and Maingi (2019)	Effect of financial structure on performance of selected companies listed at (NSE), Kenya	Quantitative data was used. Multivariate tests using panel data model examined the effects of the independent variable on company's financial performance. Data was collected for 30 selected companies for the period 2007-2015. Various	The study found out that Equity had significant positive effect on financial performance of selected companies listed at NSE, Kenya	The study focused on the general equity financing and not the ordinary share financing form of capital. This therefore limits the generalization of its findings for the present study

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			diagnostic tests including, Auto-correlation test, Normality test, Heteroscedasticity test, Unit root test and Test for pooling were carried out. Regression coefficients were used to test for significance using t-statistic at 5% level of significance and conclusions drawn		
	Onaolapo & Kajola (2010)	Effects of capital structure on the profitability of firms quoted on Nigeria Stock Exchange	The research used a sample of thirty non-financial firms for the period 2001-2007 The study used (ROE and ROA) of these companies	The findings indicated that a negative effect exist between capital structure and firm level of profitability.	The study focused on the general capital structure financing and not the ordinary share financing form of capital. This therefore limits the generalization of its findings for the present study
	Adekunle (2009)	Impact of financial structure on the firm's profitability in Nigeria for the period 2001-2007	He sampled 30 non-financial companies quoted in Nigerian stock exchange and collected secondary data from company's financial statements. The study used debt ratios as the independent variables and ROA and ROE as the dependent variable	The study employed ordinary least square estimation approach and established that debt ratio has a significant negative relationship with the performance of the firms.	The study focused on the general financial structure financing and not the ordinary share financing form of capital. This therefore limits the generalization of its findings for the present study
	Masiega et al (2013)	Effects of capital structure on the financial performance of listed companies at NSE	30 listed companies at NSE were sampled and data collected for period of five years starting from 2007 to 2011	The study concluded that there is a significant positive correlation between long-term debt and total company assets. The long-term debt has a	The study focused on the general capital structure financing and not the ordinary share financing form of capital. This therefore limits the generalization of its

				positive effect on the financial performance although the nature of the effects was weak and insignificant	findings for the present study
Effect of Institutional Capital (Retained Earnings) on Financial Performance	Tirmizi & Ahmad (2013)	Impacts of retained earnings on firm value and shareholders wealth among 85 randomly selected listed Pakistani manufacturing firms	A cross-sectional survey research design was adopted and a quantitative questionnaire used to collect primary data. Through descriptive and simple linear regression techniques, the study established that Pakistani firms retained 77% of earnings between 2000 to 2009	This retention rate was found to be significantly and positively affecting the value as well as wealth of the shareholders of the listed manufacturing firms operating in Pakistan.	Focused on the general manufacturing firms in Pakistan and not specifically sugar industry The findings cannot therefore be generalized in terms of the present study due to contextual gaps
	Bassey Eyo Bassey, Godwin Onyam Edom (2016)	Impact of retained profit on corporate performance of Niger Mills Company, Calabar-Nigeria	Adopting the ex-post facto research design, data on retained earnings and profitability was extracted from annual financial records of the company for a 10-year period between 2001 and 2010. The Karl Pearson product moment correlation coefficient and t-test were used to examine the relationship between retained earnings and the company's corporate performance (turnover	The study established that positive and statistically significant relationship existed between retained profits and turnover. A statistically significant relationship between retained profit and future earnings capacity of the company was also established	While the reviewed study established the correlation between retained profits on corporate performance, it had not provided the empirical evidence on how the retained profits would also influenced the level of profitability of the business organizations, especially sugar firms. The present study looked at the influence of Institutional Capital (Retained Earnings) on financial Performance of sugar firms in western Kenya to fill this gap.

Javed & Shah (2015)	Effect of retained earnings on stock returns of seven (7) food and personal care goods industry firms listed in Karachi Stock Exchange	Panel data for the period 2009 – 2014 (5 years) was extracted from annual financial reports of the 7 firms and analyzed through linear regression and Spearman's correlation coefficient analysis	The study found a weak and insignificant relationship between retained earnings and cash dividend per share and capital gain/loss yield. The study also found a moderate positive and significant relationship between retained earnings and closing price of stock	However, the reviewed study focused on effect of retained earnings on stock returns of seven (7) food and personal care goods industry, but did not provide the empirical evidence on how the retained profits would also influenced the level of profitability of the business organizations, especially sugar firms. The present study looked at the influence of Institutional Capital (Retained Earnings) on financial Performance of sugar firms in western Kenya to fill this gap

2.6 Conceptual Framework

Kothari, (2009) portray an idea is a unique or general thought gathered or got from particular examples. Kerlinger, (1973) notes that not at all like a hypothesis, an idea does not require talk to be comprehended. Cohen, Manion, & Morrison (2007) assert that a conceptual framework is an arrangement of wide thoughts and standards borrowed from applicable fields of enquiry and utilized to assemble a resulting introduction. The conceptual framework for this study exhibits the relationship of capital structure decisions and financial performance of sugar processing companies in western Kenya which has been presented in Figure 1 beneath which it conceptualizes that capital structure decisions (loan financing, debenture financing, preference share capital financing, ordinary share capital financing and institutional capital (retained earnings) influence on financial performance of sugar processing companies established through Level of profit and market shares (dependent variables). However, the relationship between these variables is influenced by intervening variables which are legislation and regulations. The conceptual framework for this study is illustrated in Figure 2.1.

Independent Variables

Loan Financing
- Cane Maintenance Loans
- Cane Development Loans
- Factory Rehabilitation Loans

Debenture Financing
- Secured/Unsecured debentures
- Redeemable/Irredeemable debentures
- Convertible debentures

Dependent Variables

Performance of sugar firms
- Level of profit
- Market shares

Preference share capital
- Redeemable/ Irredeemable
- Participative/Non Participative
- Cumulative/non cumulative
- Convertible/non-Convertible

Ordinary share capital
- Issued Share Capital
- Paid up Share Capital
- Authorized Share Capital

Mediating Variables

- **Sugar Sector Regulations and Legislations**

Institutional Capital (Retained Earnings)
- Earnings Before interest, Tax, amortization and depreciation (EBITAD)

Fig. 2.1: Conceptual Framework showing Relationship between Capital Structure decision and Financial Performance.

Debt or loan financing for a business firm is the process of borrowing money from a source outside the firm in order to continue operating the business. The business owner is responsible for paying back that principal amount, according to the terms of the loan, plus some percentage charge of interest (Zender, 2010). A repayment schedule for the principal and interest is generally established at the time the financing occurs. In most cases, repayment period is within six months to a year at most, 18 months. Any longer loan term than that is considered a medium term or long term loan. Long term loans can last from just over a year to 25 years.

When you think of debt financing, you may immediately think of borrowing money from a bank to obtain a bank loan. However, there are many other types of debt financing depending on the needs of the business and its ability to repay the debt Kebewar (2012). Each has advantages and disadvantages depending on the riskiness of the business and its stage in the life cycle (Pouraghajan and Malekian, 2012). For instance, there is asset financing which is basically the utilization of a company's balance sheet assets, including short-term investments, inventory and accounts receivable, to borrow money or get a loan (Liaqat et al., 2017)

The company borrowing the funds must provide the lender with a security interest in the assets. There is also lease financing, which is one of the important sources of medium and long-term financing where the owner of an asset gives another person, the right to use that asset against periodical payments. The owner of the asset is known as lessor and the user is called lessee. Wooldridge, (2012) also elaborate that a finance lease is a type of lease in which a finance company is typically the legal owner of the asset for the duration of the lease, while the lessee not only has operating control over the asset, but also some share of the economic risks and returns from the change in the valuation of the underlying asset (Ronoh, and Ntoiti, 2015). Another form of loan financing is inventory financing, where a credit is obtained by businesses

to pay for products that aren't intended for immediate sale. Financing is collateralized by the inventory it is used to purchase (Pouraghajan and Malekian 2012). Inventory financing is often used by privately-owned businesses that don't have access to other options.

In business finance, a debenture is a medium to long-term debt instrument used by large business organization to borrow money, at a fixed rate of interest. The legal term "debenture" originally referred to a document that either creates a debt or acknowledge it, but in some countries the term is now used interchangeably with bond, loan stock or note (Malm and Roslund, 2013). A debenture is thus like a certificate of loan or a loan bond evidencing the company's liability to pay a specified amount with interest. Although the money raised by the debentures becomes a part of the company's capital structure, it does not become share capital. Senior debentures get paid before subordinate debentures, and there are varying rates of risk and payoff for these categories.

Debentures are freely transferable by the debenture holder. Debenture holders have no rights to vote in the company's general meetings of shareholders, but they may have separate meetings or votes e.g. on changes to the rights attached to the debentures (Machel, 2013). The interest paid to them is a charge against profit in the company's financial statements. According to Demirgüç, (2006) debenture can be categorized in terms of secured or unsecured debentures, redeemable or irredeemable debentures and convertible debentures. Convertible debentures are a type of debentures that can be converted into equity shares of the company. Non-convertible debentures are the type of debentures that cannot be converted into equity shares of a business organization.

On the other hand, redeemable debentures carry a specific date of redemption on the certificate. The business organization is legally bound to repay the principal amount to the debenture holders

on that date. On the other hand, irredeemable debentures, also known as perpetual debentures, do not carry any date of redemption (Becker and Ivashina, 2013)

The capital that a business organization raises through the issuance of preference shares is termed as preference share capital. These shares come with a fixed rate of dividend and a preferential right to avail profits and claim assets during liquidation. Just like debenture capital, there are also redeemable and irredeemable preference share (Phylaktis et al., 2010). Redeemable Preferences shares are those type of preference shares issued to shareholders which have a callable option embedded, meaning they can be redeemed later by the company. It is one of the methods that companies embrace in order to return cash to the existing shareholders of the company (Javed & Shah, 2015). On the other hand, convertible preference shares are those shares which can be converted into equity shares within a specified period of time, whereas non-convertible preference shares cannot be converted into equity shares (Saeedi and Mahmoodi, 2011).

Ordinary share capital is the sum of money raised by a corporate from private and public sources through the issue of its common shares. It is the capital that is received by the owners of the company in exchange for shares. The ordinary share capital has equity ownership in the company in proportion to their holdings. In this form of share capital, there is Issued share capital, which is simply the monetary value of the shares of stock a company actually offers for sale to investors (Phylaktis et al., 2010). The number of issued shares generally corresponds to the amount of subscribed share capital, though neither amount can exceed the authorized amount. Therefore, authorised capital of a company is the maximum amount of share capital that the company is authorised by its constitutional documents to issue to shareholders (Sullivan & Steven, 2003). Part of the authorised capital can remain unissued. The authorised capital can be

changed with shareholders' approval. There is also Paid-up capital, which is the amount of money a company has received from shareholders in exchange for shares of stock (Oladeji, *et al.,* 2015). Paid-up capital is created when a company sells its shares on the primary market directly to investors, usually through an initial public offering (IPO).

Institutional capital is the total of the credit union's regulatory reserve accounts, undivided or retained earnings, special reserves (designated for a specific purpose), and net income that has yet to be closed to the retained earnings account (Tirmizi & Ahmad (2013). This form of capital relates with earnings per share (EPS) of a company which is a company's net profit divided by the number of common shares it has outstanding (Javed & Shah, 2015). EPS indicates how much money a company makes for each share of its stock and is a widely used metric for estimating corporate value. The business organization can also decide to utilize earnings before interest, taxes, depreciation, and amortization (EBITDA), which is also a measure of a company's overall financial performance and is used as an alternative to net income in some circumstances (Khalaf, 2013). This metric also excludes expenses associated with debt by adding back interest expense and taxes to earnings.

The financial risk arises on account of the use of debt or fixed interest bearing securities in its capital. A company with no debt financing has no financial risk (Dauda, 2012). The extent of financial risk depends on the leverage of the firm's capital structure. A firm using debt in its capital has to pay fixed interest charges and the lack of ability to pay fixed interest increases the risk of liquidation. The financial risk also implies the variability of earnings available to equity shareholders (Demirgüç, 2006).

Financial risk is the unexpected variability or volatility of returns (Holton, 2004). It includes credit, liquidity and market risks which contribute to the volatility of financial performance (Tafri *et al.,* 2009 and Dimitropoulos et al., 2010). The hypothesis is that financial risk leads into failure of financial performance if it is not well managed. The financial crisis acquires unparalleled proportions and inflicted long-term damage on economies, countries and people. Every business decision and entrepreneurial act is connected with risk. Credit risk is the main financial risk that hinders the performance of business organizations, especially in Africa. This is the risk of the varying net worth of the assets due to the failure of the contractual debt of the counter party to meet the obligation (Pyle, 1999).

The main indicators used in the appreciation of the firms' profitability are return on equity, ROE (Net income / Average Equity), return on asset, ROA (Net income /Total assets) and the indicator of financial leverage or (Equity / Total Assets) (Dardac and Barbu, 2005). A commonly used measure of organization's financial performance is the level of organization profits (Ceylan, Emre and Asl, 2008). The income statements of business organization report profits before and after taxes. Another good measure on financial performance of a business is the ratio of pre-tax profits to equity (ROE) rather than total assets since firms with higher equity ratio should also have a higher return on assets (Ceylan, Emre and Asl, 2008). The continued viability of a business organization depends on its ability to earn an adequate return on its assets and capital. The evaluation of earnings performance relies heavily upon comparison on the key profitability measures, such as return on assets and return on equity, to industry bench mark and peer group norms (Duca and McLaughlin, 1990). However, most of these reviewed literature have focused on the general business organizations and not on how financial risks influence capital structure

decisions of a sugar processing firms that would then influence their financial performance. The present study seeks to fill these gaps left.

Tafri et al., (2009) examined the relationship between financial risk and profitability of the conventional and Islamic banks in Malaysia for the period between 1996 and 2005. The components of financial risk comprised of credit risk, interest rate risk and liquidity risks. The study employed panel data regression analysis of Generalized Least Squares of fixed effects and random effects models and found that credit risk has a significant impact on profitability of the conventional as well as the Islamic banks. The relationship between interest rate risk and ROE were found to be weakly significant for the conventional banks and insignificant for the Islamic banks. The effect of interest rate risk on ROA is significant for the conventional banks. Also liquidity risk having an insignificant impact on profitability. However, this study by Tafri *et al*., (2009) focused only on commercial banks and not on how financial risks influence capital structure decisions of a sugar processing firms that would then influence their financial performance. This therefore limits the generalization of its findings to the present study. The present study seeks to fill these gaps left.

Amin et al., (2014) examined the simultaneous influence of the financial risk and financial performance of firms listed in security stock exchange in Tanzania. In their study the financial performance under consideration was return on assets and return on equity, while financial risk was the average of financial risks. The study employed the instrumental variable regression of fixed effect to solve simultaneous equations by two-stage least squares. By using unbalanced panel data of 21 firms from 2003 to 2012, their results showed that by applying both ROA and ROE in the performance equation, financial risk is significant. The findings were that there was inverse relation of financial risk and financial performance cannot be avoided and the business

firms should make a trade-off between risk and financial performance. However, the reviewed literature have focused on the general business organizations listed in security exchange and not on how financial risks influence capital structure decisions of a sugar processing firms that would then influence their financial performance. The present study seeks to fill these gaps left.

Managers must learn how to use debt capital well in financing their operations. Debt, even at zero interest rates can send any firm into a situation it may not pay its bills and debt (Githire and Muturi, 2015). This happens when the value of assets goes down while the amount of debt is constant because the amount borrowed is contractual. Akbarian (2013) investigated the correlation that exists between debt financing risk and ROA of firms quoted at Tehran stock exchange. The research used a sample of 95 firms listed in Tehran Stock Exchange for the period between 2005 to 2011. The study adopted a panel data and multiple regressions to test the research hypothesis. The findings of this study established the inverse correlation that exists between the study variables. The study also found a direct correlation between market risk and ROE. The focus of the study was however on risk associated with debt financing and not on effects of non-employment of debt risk and financial performance.

Credit risk can be defined as risk of loss due to a party in an agreement not meeting its contractual financial obligation in a timely manner. Following the financial crisis in 2007, banks, insurers, and capital markets firms realized that the conventional methods of managing their credit risk may not be sufficient. These institutions are now looking at more adaptive approaches to manage credit risk (World Bank Report, 2010). It is widely accepted that most people are risk averse and that risk and return are related. Common belief is that the higher the risk the higher the return.

Sharp (1964) in his study found that one of the major tenets of portfolio analysis is that risk and return are positively correlated, but some studies however point out that managers may not necessarily believe that risk and return are positively related. In his study, Bowman (1980) found that there may be a negative correlation between accounting measures of risk and return. The main cause of liquidity problems in a firm is the problem of credit risk and high default rate by the customers. Jan (2006) study on liquidity and Credit Risk of a firm found that there is a positive correlation between the illiquidity and default components of yield spreads as well as support for downward sloping term structures of liquidity spreads. Banks now ensure that they have large amount of capital against any form of credit risks so that they can be in a position to adequately tackle any risks which will be incurred (Bank for International Settlement, 1999). Financial institutions have always used information on borrower characteristics such as character (reputation), capital (leverage), capacity (volatility of earnings), and collateral to reach a largely subjective judgment as to whether or not to grant credit (Altman, 1998).

Most lenders employ credit scorecards to rank potential and existing customers according to risk, and then apply necessary strategies. With products such as unsecured personal loans or mortgages, lenders charge a higher price for higher risk customers and lower price for lower risk customers and with revolving products such as credit cards and overdrafts, risk is controlled through the setting of credit limits. Some products may also require collateral or covenant before a firm grants a credit (Edelman, 2002). Malik (2010) seek to exploit the obvious parallels between behavioral scores and the ratings ascribed to corporate bonds to build consumer-lending equivalents. The study incorporates both consumer-specific ratings and macroeconomic factors in the framework of Cox Proportional Hazard models. The results show that default intensities of consumers are significantly influenced by macro factors.

Malik (2010) argues that models for credit risk can be used as the basis for simulation approaches to estimate the credit risk of portfolios of consumer loans. Borowski and Elmer (1988) compare the bankruptcy predictions of an expert system to several credit scoring models and find that the expert system correctly anticipated over 60 percent of the failures before bankruptcy, whereas the credit scoring models had prediction rates of 48 percent to 30 percent. Hansen and Messier (1988) also shows that their expert system outperformed credit scoring models and the human experts in forecasting business failures

Liquidity was a key factor during the 2008-09 financial crisis in which the business organizations funding sources dried up quickly and they found themselves short on cash to cover their obligations as they came due (Longworth 2010). There is a general sense that banks had not fully appreciated the importance of liquidity risk management and the implications of such risk for the business organizations themselves. As result, policymakers have suggested that firms should hold more liquid assets than in the past, to help self-insure against potential liquidity or funding difficulties (Githire and Muturi, 2015).

Liquid assets such as cash and government securities generally have a relatively low return; therefore, holding them imposes an opportunity cost on a business organization. In the absence of regulation, it is reasonable to expect that banks will hold liquid assets to the extent they help to maximize the firm's profitability. Henceforth, policymakers have opted to require larger holdings of liquid assets. This study seems to establish whether business organizations' holdings of liquid assets have a significant impact on their profitability. Profitability is improved for firms that hold some liquid assets, however, there is a point at which holding further liquid assets diminishes a firms' profitability, all else equal (Bernanke 2008). Such findings are conceptually in line with relevant literatures and are consistent with the idea that the opportunity cost of

holding low-return assets eventually outweighs the benefit of any increase in the organizations' liquidity. Likewise, there is a similar estimated benefit to holding more liquid assets when economic conditions deteriorate.

The ultimate objective of any business organization is to maximize the profit, but, preserving liquidity of the said organization is likewise an important objective too. The dilemma that is faced by the management of sugar firms is that increasing profits at the cost of liquidity can bring serious problems to the firms. Therefore, there must be a trade-off between these two objectives of the firms (Sufian and Chong, 2009). One objective should not be at cost of the other because both have their importance. If we do not care about profit, we cannot survive for a longer period. On the other hand, if we do not care about liquidity, we may face the problem of insolvency or bankruptcy. For these reasons, liquidity management in business organization should be given proper consideration and will ultimately affect the profitability of the organization.

Market risk that comprises three types of risk: currency risk it is the risk that the value of a financial instrument will fluctuate because of changes in currency exchange rates; the lowering of exchange rate can lead to a loss of value of assets denominated in foreign currency thus influencing business performance (Okochi, 2008).Fair value interest rate risk - the risk that the value of a financial instrument will fluctuate due to changes in market interest rates. Price risk - the risk that the value of a financial instrument will fluctuate as a result of changing market prices, even if these changes are caused by factors specific to individual instruments or their issuer, or factors affecting all instruments traded in the market. The market risk incorporates not only the potential loss but as well the gain.

Panos *et al.,* (2009) highlight in their study that commodity risks have become more evident than before. For instance rapidly developing economies like China and India have driven up the global demand and prices. As the risk exposures have increased companies are aiming to manage their exposures better and hence avoiding increased costs or earning volatility (Panos et al., 2009). However, the development of commodity exchanges and emergence of wide availability of forwards and other derivatives allows companies to meet these targets Panos et al., (2009). Through the developed markets companies are able to hedge the price and demand uncertainties by using financial contracts as forwards, futures, swaps, and options. Many commodities like agricultural products (corn, wheat, and soybeans), energy products (crude oil, petroleum products) and metals (aluminum, gold, copper) have their own hedging instruments.

Okochi (2008) points out that commodity risk management is not always very straight forward and has often several challenges. Even defining the commodity price risk exposure which can be considered as a starting point of commodity hedging can be problematic (Okochi, 2008). After the exposures are defined and measured, companies need to start analysis whether it is possible or reasonable to hedge the exposure. However, the efficiency of hedging strategy depends highly on the existence of a strong and stable correlation between commodity's spot and futures prices. The efficiency of hedging strategy depends highly on the existence of a strong and stable correlation between commodity's spot and futures prices. If the correlation doesn't hold persistently or the level of correlation changes over time hedging loses its effectiveness. However, commodities futures contracts generally correlate very well with underlying commodity's spot prices (Gaur and Seshadri, 2005). For instance crude oil futures correlate excellently with crude oil spot prices.

According to Yakup and Asli (2010) increased risk exposures and increased hedging activity are consequences of internalization in of business environments. Also Yakup and Asli (2010) point out companies that have foreign sales, foreign income, and foreign assets are exposed to exchange rate risk (due to more of foreign currencies) and interest rate risk (due to higher leverage and lower quick ratios). Oil companies are also more likely to be exposed to commodity price risk as their market prices become more volatile (Yakup and Asli, 2010).

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Research Philosophy

This study was anchored on pragmatic knowledge which focuses on the research problem (Tashakkori and Teddie, 1998) which in this study was financial performance of selected sugar firms in Western Kenya. The pragmatic perspective in employing "what works" used diverse approaches, give primacy to the importance of the research problem and question, and values both objective and subjective knowledge (Greene, 2007; Patton, 1990, Rossman and Wilson 1985). Pragmatists believe that since world is not an absolute entity, understanding it requires the use of different ways of gathering and analyzing data. This calls for use of different methods and techniques for generating information. This gives researcher freedom to use both descriptive and inferential data analysis techniques and provides opportunities to integrate a variety of theoretical perspectives (Patton, 1990). Datta (1994) argue that pragmatism is best paradigm for justifying the use causal or explanatory research design.

3.1 Research Design

The study employed a descriptive study approach, with quantitative analysis methods. Creswell and Clark, (2014 cited in Mvumbi 2015), contents that descriptive method approach encourages the use of multiple worldviews by observing inductive and deductive thinking which helps to answer questions and provide more comprehensive evidence in numbers and words for studying research problems. Gay et-al (2009, cited in Mvumbi 2015), points out that quantitative research is the collection of data and analysis of numerical data in order to describe, explain, predict or control phenomena of interest. By using quantitative approach, the researcher employed

descriptive survey research design in this study to obtain data in order to describe existing phenomena by asking individuals about their perceptions, attitudes, behavior and values. This design was used to explain or explore existing status of variables. (Maganda and Mugenda, 1999) opine that descriptive survey design is the best method for researchers to collect original data for the purpose of describing a population that is too large to observe directly.

3.2 Study Area

The study was conducted in Western Kenya, comprising of Nyanza and Western provinces. Nyanza province has latitude of 0°10'S and longitude of 34°15'E while western province has latitude of 15.9455° S and longitude of 23.3824° E.

3.3 Target Population

Target population was the 11 (eleven) sugar manufacturing companies in western Kenya and their respective employees in different departments (see Table 3.1). Given the small number of 11 firms in the Sugar industry in Western Kenya, which of course do not warrant sampling to be undertaken (Salkind, 2010), a probability study was conducted to capture all the eleven (11) sugar manufacturing firms operational in Western Kenya (Mugenda, Momanyi, & Naibei, 2012). Therefore, in this research, all the 11 Sugar manufacturing companies and their various employees in Western Kenya were defined as the target population from where the sample sizes for the respondents were drawn. The sugar processing firms in Western Kenya is chosen due to myriad of problems they are facing that hurt their profitability, sales volume and financial gearing.

Table 3.1 Target Population

Category of respondents	Population
Accountants	15
Administrative Assistants	21
Finance Assistants	16
Human Resource Assistants	17
Field Officers	33
Procurement officers	17
Maintenance officers	11
Quality Control Officers	19
Total	**149**

3.4 Sampling Frame and Sample Size

The sampling frame of this study referred to the 11 sugar manufacturing companies' database of the Kenya Sugar Board which regulates and licenses Sugar companies in Kenya upon which purposive sampling were exercised to ascertain the respondents. Given the small number of 11 companies in the sugar industry in western Kenya, which of course do not warrant sampling to be carried out (Salkind, 2010), a probability study was conducted to capture all the 11 sugar manufacturing firms operational in western Kenya (Mugenda, Momanyi & Naibei, 2012).

The study concentrated on 11 registered companies and operating in western Kenya as at June 2017 which has a population of 149 employees working in different departments of each sugar company (KSB, 2017). To take account of representation of all functional areas of the departments, proportional random sampling was done to obtain a sample size of respondents.

It must be noted that this approach was consistent with the practice of surveying key informants knowledgeable about organizational matters by virtue of their positions. Proportional random sampling is considered by many researchers as an impersonal method preferably to be used where questions demand a considered rather than immediate answer (John & Weitz, 2010).

In selection of the employees (respondents), the researcher applied simple random sampling. This method would be efficient since every subject member of the target population have equal chances of participation. From the population of 2014, the study used Fischer formula to calculate the sample size for the students as shown.

$$n = \frac{N}{1+N\,(e)^2}$$

Where: n is the sample size, N is the population size and 'e' is the level of precision which was 0.05. Therefore from a population of 149 employees (respondents)

$$n = \frac{149}{1 + 149(0.0025)}$$

n=109 Respondents

3.5 Data Collections Tools

Both primary and secondary sources of data were used. For primary data, the study used questionnaires, document analysis and interview guides to collect quantitative and qualitative data respectively, the secondary data was obtained from the Sugar companies audited a nnual reports, finance departments of the sugar companies and the Sugar survey manuals/financial reports using the secondary data collection sheet. Specifically sales volume, and profit after tax was obtained through the secondary data collection sheet in the annexure.

3.5.1 Questionnaires

Primary data was collected using structured questionnaires. The researcher recruited three (3) research assistants (RAs) who supported in administering the questionnaires. The RAs were then taken through a two-day training that was conducted by the researcher. The training covered ways of approaching the respondents, interpretation of the questionnaires to the respondents and filling of the questionnaires. After the training, the RAs, under the supervision of the researcher, distributed copies of the questionnaire to selected main respondents. In each case, the RA issued out the questionnaire, then waited for it to be filled by the respondent, at the end of each day of data collection, the research assistant inspected all questionnaires, to check for their completeness. All participants were given consent after the researcher's explanation of the purpose of the study, its risks and benefits and that participation was voluntary. The participants were also informed of the right to withdraw consent at any time without any penalty.

Burns and Grove (2003) confirm that questionnaires are considered rich for both quantitative and qualitative research. The questionnaire was mainly composed of closed-type questions. The questionnaire was divided into different categories to address each specific research question in addition to the general question. Questionnaires are deemed suitable for the study as not only do they allow for the collection of standardized information but are also relatively inexpensive to administer and easy to analyze (Creswell, 2009). Respondents expressed their view towards each of the items in various subtitles by ticking. The administered questionnaires were accompanied by a covering letter/letter of consent to explain the purpose of survey. Closed type questions were used because it is easy to understand and responses are easily quantifiable and subjective to computation of mathematical analysis (Allen *et.al,* 2011).

3.5.2 Document Analysis

Secondary data was obtained from the Kenya Sugar Board Annual reports, Finance departments of the sugar companies and the Sugar survey manuals/financial reports using the secondary data collection sheet. The secondary data was also analyzed by time series to ascertain the profitability trend in the Sugar manufacturing Industry. The total net profits was then cumulated over the fifteen years under study which formed a trend to create basis of justification on the deteriorating financial performance among sugar manufacturing companies.

3.5.3 Interview Schedule

This interview guide was constructed in form of questions and the items were put in sequence to allow orderliness in providing and recording information as suggested by Kothari (2004). The unstructured interview is preferred because Nkpa, (1997) states that it is flexible and allows the researcher to gather more information on the study. The interview schedule was administered to heads of departments of sugar manufacturing companies in western Kenya to confirm the consistency of what other respondents (employees) had said in the questionnaires and to justify the content of the document analysis.

3.6 Piloting of Research Instruments

The study carried out a pilot study before the questionnaire is employed in the final and actual data collection process. The importance of the pilot study is to detect ambiguity, evaluate the type of answers given to determine whether they help the researcher to achieve the laid down objectives (Robson, 2007). Mugenda & Mugenda (2010) also says that the purpose is to refine the questionnaire so that respondents in the major study had no problem in answering the

questions. Expert opinion from the supervisors was requested to comment on the representativeness and suitability of the questions and give suggestions of corrections to be made to the structure of the questionnaires. The study administered a pre-test sample (10% of the total sample) to the respondents in the pilot study, who were not from the study area. Therefore, 6 respondents were administered with questionnaires for the sake of pilot testing. These respondents did not take part in the actual study. According to Mugenda & Mugenda (2010) a pre-test sample should be between 1% and 10% depending on the sample size. Questionnaires were self-administered to the respondents and interpretation of the response alternatives and queries was carried out to form items that bear the same meaning but are not identical. Order of response alternatives was similarly changed for questions with normal scale to assess the validity and reliability. Meanwhile, respondents' choices were evaluated for appropriateness. The researcher also verified if the questions are comprehended the same way by the respondents. In addition, average time taken to complete the questionnaires was noted and the overall pilot test results were discussed with the supervisors and adjustments made according to the results of the instruments review and pilot test prior to the production of the final instruments.

3.6.1 Validity of the Instrument

Measurement of validity ensures that the results obtained from the analysis of data accurately represent the phenomenon under study (Mugenda and Mugenda, 2003). Measurement of validity was done by examining the content and construct of the instrument. Content validity was achieved by the supervisors providing guidance in assessing the accuracy with which the questions in the instruments captures the variables under investigation. All items in the instruments were reviewed and the accuracy by which they addressed the research objectives and questions assessed. Construct validity refers to the degree to which inferences can legitimately be

made from the operationalization in a study to the theoretical constructs on which these operationalization are based. It focused on how questions are constructed in terms of clarity, vagueness and instructions to the respondents for guidance. This was also validated by the supervisors.

3.6.2 Reliability of the Instruments

In this study, reliability of data was judged by estimating how well the items that reflect the same construct yielded similar results. According to (Connelly, 2008), extant literature suggests that a pilot study sample should be 10%-20% of the sample projected for the larger parent study. The study administered a pre-test sample (10% of the total sample) to the respondents in the pilot study. Therefore, 6 respondents were administered with questionnaires for the sake of pilot testing. After one week, the same questionnaires were again administered to the same group of respondents and the responses scored manually. The study looked at how consistent the results are for different items for the same construct within the measure. The reliability was computed using SPSS to return Cronbach Alpha coefficient for the number of items in the scale. Connelly (2008) explains that a reliability coefficient of 0.60 or higher is considered as "acceptable" in most Social Science applications. Therefore, to ascertain reliability of the questionnaire, Cronbach Alpha was used as a measure of reliability.

3.6.3 Reliability Analysis Output

The most standard test of inter-item consistency reliability is Cronbach's alpha coefficient. According to Sekaran and Bougie (2010), Cronbach's alpha reliability coefficient designates the degree to which an instrument is error free, consistent and stable across time and also across the various items in the scale. Hence, the Cronbach alpha coefficient test was used to measure the internal consistency of the instruments and results reported in Table 3.1.

Table 3.2 Reliability Analysis

Capital Structures decisions	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
Loan Financing	0.850	0.844	8
Debenture Financing	0.883	0.891	6
Preference Share Capital Financing	0.891	0.894	6
Ordinary Share Capital	0.896	0.907	4
Institutional capital (Retained earnings)	0.888	0.870	3
Average	**0.880**	**0.884**	

From table 3.2 on reliability, loan financing had a reliability coefficient of $\alpha = 0.844$, debenture financing $\alpha = 0.891$, preference share capital financing $\alpha = 0.894$, ordinary share capital $\alpha = 0.907$ and institutional capital $\alpha = 0.870$. The instrument had an overall Cronbach alpha coefficient $\alpha = 0.884$ thus reliability test alpha coefficient was > 0.7. These findings were in line with the rule of thumb proposed by Hair et al. (2010) where coefficient of 0.60 is regarded to have an average reliability while coefficient of 0.70 and above indicates that the instrument has a high reliability standard. Therefore, all items were included in the research instrument.

3.7 Data Collection Procedure

The researcher obtained approval of research proposal by Jaramogi Oginga Odinga University of Science and Technology, then apply for research permit from the National Council of Science and Technology (NACOSTI). The researcher used questionnaire, interview schedule and document analysis.

3.8 Data Analysis Techniques

After data collection, quantitative data from questionnaires were analyzed using descriptive statistics, correlations and regressions analysis with the aid of SPSS. v. 22. The regression coefficients were tested for significance using t-statistic at 5% level of significance and conclusions drawn. Multiple regression is preferred in situations where the number of independent variables is more than one (Faraway, 2002), like in this study, loan financing, debenture financing, preference shares capital financing, ordinary shares capital financing and institutional capital (Retain earnings) are (independent variables).

In addition, regression methods are integral components of any data analysis concerned with describing the effect of a response variable and one or more explanatory variables (Hosmer & Stanley, 2000). A 5% level of significance has been used in many studies like Maina and Kondongo (2013), Chisti et al. (2013) and Abor (2007) in the past hence a good benchmark. The 5% level of significance was compared with the p-value and significance of the predictor variable(s) concluded if the latter is less than 5% (Castillo, 2009). P-value is the exact lowest probability of rejecting the null hypothesis when it is true (Gujarati, 2003). This survey therefore well fits the technique and test.

The coefficient of determination (R^2) was used to rank explanatory variables contribution to the response variable in an attempt to validate or invalidate the pecking order theory. R^2 is the proportion of variation of the response variable that is explained by the variation of the predictor variable(s) and as such the higher it is the better (Kumar, 2005). Qualitative data from the interview guides was analyzed through thematic content analysis to augment on the quantitative data findings.

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3.8.1 Test of Statistical Hypotheses

Hypotheses are formulated to test how variables are related to each other. Correlation analysis tested the null hypotheses $H0_1$, $H0_2$, $H0_3$, $H0_4$ and $H0_5$ using Pearson Product Moment Correlation coefficient denoted by r. Pearson Product Moment Correlation tested statistical significance between a standardized slope whose value do not depend on the units of measurement and measure the degree of association between continuous data and interval scaled variables as applied in this study. The value of r ranges between -1 and +1 with +1 being a perfect correlation. To measure the proportion of variance in the dependent variable that is explained by the independent variable, Pearson Product moment correlation was used to predict the significance and strength of relationship between capital structure decisions (loan financing, debenture financing, preference share capital financing, ordinary share capital, and institutional capital) and financial performance of sugar processing firms in western Kenya. Regression analysis is as explained in Table 3.3.

Table 3.3: *Test of Hypotheses Using Regression and Correlation Test*

Research Objective	Hypothesis	Analysis	Model
To examine effect of loan financing on financial performance of sugar firms in Western Kenya	**1H₀:** There is no statistically significant relationship between loan financing and financial performance of sugar firms in Western Kenya.	Inferential (Pearson Product Moment Correlation and Regression)	$Y = \beta_0 + \beta_1 X_1 + \varepsilon_1$ Y is financial performance X_1= loan financing β_0, β_1 co-efficient of variables ε_1 error term
To determine effect of debenture financing on financial performance of sugar firms in Western Kenya	**2H₀:** There is no statistically significant relationship between debenture financing and financial performance of sugar firms in Western Kenya.	Inferential (Pearson Product Moment Correlation and Regression)	$Y = \beta_0 + \beta_2 X_2 + \varepsilon_2$ Y is financial performance X_2= debenture financing β_0, β_2 co-efficient of variables ε_2 error term
To establish effect of preference share capital financing on financial performance of sugar firms in Western Kenya	**3H₀:** There is no statistically significant relationship between preference share capital financing and financial performance of sugar firms in Western Kenya.	Inferential (Pearson Product Moment Correlation and Regression)	$Y = \beta_0 + \beta_3 X_3 + \varepsilon_3$ Y is financial performance X_2= preference share capital financing β_0, β_3 co-efficient of variables ε_3 error term
To evaluate effect of ordinary share capital financing on financial performance of sugar firms in Western Kenya	**4H₀:** There is no statistically significant relationship between ordinary share capital and financial performance of sugar firms in Western Kenya.	Inferential (Pearson Product Moment Correlation and Regression)	$Y = \beta_0 + \beta_4 X_4 + \varepsilon_4$ Y is financial performance X_4= ordinary share capital β_0, β_4 co-efficient of variables ε_4 error term
To determine effect of Institutional Capital (Retained Earnings) financing on financial performance of sugar firms in Western Kenya	**5H₀:** There is no statistically significant relationship between Institutional Capital and financial performance of sugar firms in Western Kenya.	Inferential (Pearson Product Moment Correlation and Regression)	$Y = \beta_0 + \beta_4 X_4 + \varepsilon_4$ Y is financial performance X_5= Institutional Capital β_0, β_4 co-efficient of variables ε_4 error term

3.8.2 Multiple Linear Regression Model

Multiple regression analysis is applied when two or more independent variables are studied in relation to a single dependent variable. This involves predicting a criterion from a predictor

variable and testing hypothesized relationships between predictors and a criterion. Multiple

regression analysis is a parametric statistical test. The independent variables (predictor variables)

and dependent variable (criterion variable) in this study tested Hypothesis are five. In this study,

the relationship between loan financing, debenture financing, preference share capital financing,

ordinary share capital financing and institutional (Retain earnings) as capital structure models,

and financial performance of the sugar processing firms in Western Kenya was developed into a

multiple linear regression model as follows: -

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_{5} + \varepsilon$$

Where;

      Y - is financial performance
      X_1=Loan financing
      X_2= Debenture financing
      X_3= Preference share Capital financing
      X_4= Ordinary Share Capital Financing
      X_5= Institutional Capital (Retained Earnings) Financing
      $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are regression coefficients
      ε_3 error term

3.9 Diagnostic Tests

3.9.1 Multicollinearity

Variance inflation factors (VIFs) and correlation coefficients were used to test any multi-

collinearity. This is a situation where there is a high degree of association between independent

variables (Kothari, 2004). It is a problem that distorts the regression coefficients, making them

unstable, difficult to interpret and hence invalid significance tests (Cooper & Schindler, 2006).

VIF is the extent of inflation of standard errors of slopes due to presence of multicollinearity.

The coefficients were compared with 0.8 or VIF of 5 and presence of multi-collinearity

concluded for those variables with at least 0.8 coefficients or VIF of at least 5 as recommended

by Gujarati (2003).

3.9.2 Heteroscedasticity

According to Revelle Zinberg (2012), Heteroskedasticity refers to the circumstance in which the variability of a variable is unequal across the range of values of a second variable that predicts it. As it relates to statistics, heteroskedasticity, also spelled heteroskedasticity, refers to the error variance, or dependence of scatter, within a minimum of one independent variable within a particular sample. These variations can be used to calculate the margin of error between data sets, such as expected results and actual results, as it provides a measure for the deviation of data points from the mean value. For a dataset to be considered relevant, the majority of the data points must be within a particular number of standard deviations from the mean as described by Chebyshev's theorem, also known as Chebyshev's inequality. This provides guidelines regarding the probability of a random variable differing from the mean.

3.9.3 Normality Test

The test was done to ascertain whether the variables and by extension the regression residuals will be mesokurtic and non-skewed. Kurtosis refers to lopsidedness of the data while skewness is the biasness of data towards one side of the center than the other (Gujarati, 2003). Normal distribution should not be too steep (leptokurtic) or too flat (platykurtic) neither should it be positively or negatively skewed (Gujarati, 2003). While non-normality of data does not affect the consistency of the estimators, it affects their efficiency and may possibly distort the statistical tests to make them invalid (Green, 2008). Kerlinger (2011) documents that normality is the shape of the data distribution and is tested by examining the skewness and kurtosis. Extreme values in skewness and kurtosis indicate the possibility of abnormality in the data distribution. Researchers

(see Kerlinger, 2011) suggested skewness values above 3 and kurtosis values above 10 might indicate possible problem in the data with regard to normality.

3.10 Variables Description

Table 3.4: *Variables Description Table*

Variable		Indicators
Variable	**Indicators**	▪ Level of profit ▪ Turnover ▪ EPS ▪ Market Share ▪ ROA
Dependent Variable Independent variable (Capital structure)	**Financial Performance of sugar processing firms**	● Level of profit ● Market Share
	Loan Financing	▪ Asset financing ▪ Trade credit ▪ Lease financing ▪ Bank overdrafts ▪ Inventory financing ▪ Repayment Period of long term loans
	Debenture Financing	▪ Secured/ Unsecured debentures ▪ Redeemable/ Irredeemable debentures ▪ Convertible debentures ▪
	Preference share capital financing	▪ Redeemable/ irredeemable ▪ Convertible/ Non-convertible ▪ Cumulative/ non-cumulative ▪ Participating/ Non participating
	Ordinary share capital	▪ Issued Share Capital ▪ Paid up Share Capital ▪ Authorized Share Capital
	Institutional Capital (Retained Earnings)	▪ Earnings before interest, tax, amortization and depreciation (EBITAT) ▪ Dividend payout ▪ Earnings per share (EPS) ▪ Net income

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Response Rate

Questionnaires were distributed to 109 respondents in sugar processing firms in Western Kenya, out of which 101 questionnaires were complete and returned representing 92.66% response rate. Only 8 questionnaires were not returned which formed 7.34% of the response rate. The information is presented as in table 4.1 below

Table 4.1: Response Rate

Responses	Freq.	Percentage %
Unreturned Questionnaires	8	7.34
Returned complete Questionnaires	101	92.66
Total	109	100%

This response rate was deemed satisfactory as it was in line with Field (2013) suggestion, who recommends 75% as a rule of the thumb for minimum responses. Further, regarding the works of Jaworski and Kohli, 1993; Patra et al., 2010, this response rate is considered satisfactory and is comparable to research on similar topics in marketing. Further, Babbie (2010) summarized that return rates of above 50% are acceptable to analyze and publish, 60% is good and 70% is very good. This means that the response rate for this study was very good.

4.2 General Information of the Respondents

4.2. 1 Gender of Respondents

The study established the distribution by gender of the respondents involved in the study. This was aimed at determining whether both genders are well represented in the study unit of analysis which is the sugar sector in western Kenya. The information obtained from the field is presented as in table 4.2 below

Table 4.2 Gender of the Respondents

Gender	Frequency	Percentage (%)
Male	37	36.6%
Female	64	63.4%
Total	**97**	**100.0%**

The information in table 4.2 reveal that the number of male employees were the majority of the respondents in this sector at 63.4% response rate while the female gender was 36.6%. The gender disparity in most organizations is still a challenge to attain equity in representation.

4.2.2 Duration of Service of Respondents in the Sector

The study sought to find out the period of service in their current sugar company. The information obtained from the field is presented as in table 4.3 below.

Table 4.3 Duration worked by Respondents in the company

Period in Years	Freq.	Percentage (%)
Less than 3 years	18	18.6%
3 - 5 years	29	29.9%
More than 5 years	54	53.46%
Total	**101**	**100.0%**

The information in table 4.3 above reveal that majority of the respondents had worked in their present sugar firms for a period of more than 5 years at 53.46% response rate, while 29.9% response rate indicated those who have worked for 3 to 5 years, only 18.6% response rate had worked for less than 3 years in their current company. This shows that most of the respondents had stayed in their present place of work long enough and were therefore were informative on

how capital structure decisions influence financial performance of the sugar company. Their longer duration also made them understand the trend performance of their sugar firms.

4.3 Loan Financing and Financial Performance of Sugar Companies

The first objective of the study was to establish the effect of loan financing on the financial performance of the sugar companies in western Kenya. The respondents were interviewed about the components of various loan financing. The information established from the respondents of the study about the various loans used by sugar companies are presented as in table 4.5 below. The factor loading for indicators of the effectiveness of the loan financing indicators and financial performance of the sugar companies was established.

Table 4.5: Factor loading for the loan financing indicators and financial performance of the sugar companies.

Loan type indicator	Qualitative information (Responses from the interviews)	Factor loading effect on performance of Sugar Companies
Cane Maintenance Loan	Respondents revealed that the loan is meant for farmers and the company for maintenance of their first and second ratoons. The intent of the loan is for the purchase of fertilizers, ploughing, weeding and procurement of agro-chemicals for quality cane production. The loan repayment period is up to 18 months with 5% interest charge on the reducing balance.	**0.897 weight loading** This loading factor weight reveal that the indicator of loan financing contributes greatly to financial performance of sugar companies in western Kenya, through quality and quantity of cane for crushing resulting in high tonnage of sugar and sugar products for high sales and profits.
Cane Value Addition Loan	The respondents revealed that cane value addition loan is given to cane farmers engaged in cane processing to enhance the quality of sugar products before selling. The loan repayment period is upto 24 months with interest charge of 10% on reducing balance. This loan is given to farmers affiliated to a sugar company. This helps to minimize operational costs in the early stages	**0.689 weight loading** The effect of this loan on financial performance of sugar companies is fairly high as it increases tonnage at lower cost leading to high profitability

	of processing thus increasing tonnage produced at minimum operating costs.	
Cane development loan	The respondents in the study revealed that this loan is given to farmers or sugar companies wanting to establish and maintain ratoons. The loan is structured and disbursed in phases: 40% of the loan is for establishing cane plants and it is given within the first 24 months; the second phase of the loan is 30% of the loan meant for the maintenance of the first ratoon and the last phase of 30% of the loan is meant for maintenance of the second ratoon. The respondents indicated that this loan is important as its interest charge is 4% if given to farmers and at 5% if it is the sugar company that uses the loan to enhance cane development.	**0.864 weight loading** The rating of this loan by respondents reveal that when the loan is well utilized by both the farmers and sugar company its effect is on high and continuous production of quality cane. This will boost the sugar company's financial performance through high sales volume of sugar and sugar products.
Sugar Factory Rehabilitation Loan	Respondents revealed that the loan is meant for rehabilitation of machinery to increase efficiency and effectiveness. This loan repayment period is 24 months and at 5% interest rate at a reducing balance.	**0.673 weight loading** The respondents revealed that the effect of this loan product leads to increased production of sugar from raw cane due to crushing efficiency, high tonnage of inventory of sugar products which result in high profitability
Machinery and equipment loan	The respondents expressed that this loan is mean to facilitate the sugar factories to acquire new machinery and equipment for production purposes. The loan interest charge is 5% on a reducing balance.	**0.871 weight loading** This loan effect on the financial performance of sugar companies is high. It helps to improve on production which in-turn increases inventory for sales revenue.

The study further sought to examine effect of loan financing parameters relating to asset-based lenders, trade credit, commercial finance companies, interest on Loan and repayment Period and their effect on the financial performance of sugar firms. The respondents were asked to rate the Loan Financing constructs on a 5- point likert scale, where 1.0 mean weight = Strongly Disagree (SD); 2.0 mean weight = Disagree (D); 3.0 mean weight = Neutral (N); 4.0 mean weight = Agree (A); 5.0 mean weight = Strongly Agree (SA). The responses obtained from the field is presented as in table 4.6 below

Table 4.6 Loan Financing constructs and Performance of Sugar Industry

Loan Financing constructs	SD	D	N	A	SA	Mean	STD
The sugar company relies on Asset-based lenders	7.2%	20.6%	7.2%	40.2%	24.7%	3.546	1.056
The sugar company relies on Trade credit	5.2%	9.3%	12.4%	43.3%	29.9%	3.835	0.913
The sugar company access Bank overdrafts loans from Commercial finance companies	0.0%	0.0%	3.1%	32.0%	64.9%	4.619	0.672
The Interest charged on Loan is affordable to our sugar company	23.7%	36.1%	18.6%	15.5%	6.2%	2.443	1.071
The Repayment Period for loans accessed by sugar companies is manageable	20.6%	21.6%	6.2%	32.0%	19.6%	3.082	1.258
Sugar firms engages in lease financing for long term benefits	12.4%	10.3%	12.4%	38.1%	26.8%	3.567	0.974
The sugar firms engages in inventory financing to boost cash flow	8.2%	11.3%	11.3%	41.2%	27.9%	3.690	0.982

From table 4.6 the results indicate that sugar companies relies on Asset-based lenders as 40.2% agreed response rate with a mean weight of 3.546 magnitude strength with a standard deviation of 1.056. This result concurs with the results in table 4.5 on indicators of sugar factory rehabilitation loans with 0.673 mean weight loading and machinery and equipment loan with 0.871 mean weight loading in relation to financial performance of the sugar companies in

western Kenya. This shows that most of sugar firms mostly opt for asset based financing loans as it is associated with faster approvals and funding delivery than conventional bank loans.

The study established that sugar Companies rely on Trade credit as 43.3% of the respondents agreed response rate with a mean weight of 3.835 magnitude strength and 0.913 standard deviation. This concurs with results in table 4.5 on loan financing indicators relating to cane maintenance loans whose mean weight is 0.897 weight loading in relation to financial performance of sugar companies in western Kenya.

Further the sugar Company's access loans from Commercial finance companies as indicated by 64.9%response rate with mean weight of 4.619 and a standard deviation of 0.672. Most of the sugar firms prefer getting credit facilities from the commercial finance for they find it easy to access. Further the study established that the Interest rate charged on Loans is not affordable to the sugar companies as expressed by majority of the respondents 36.1% with a mean weight of 2.443 and standard deviation of 1.07. This finding failed to concur with the findings in table 4.5 about the interest rates charged loan financing indicators of products in the sugar sector. This shows that although most of the sugar firms in western Kenya preferred commercial loans, they were not able to afford the interest charged on loan facilities by the financial institutions. On the statement on whether "the Repayment Period for loans accessed by Sugar Company is manageable 32.0% response rate agreed with mean weight of 3.082 magnitude strength and standard deviation of 1.258. For lease financing for long term benefits the study results revealed that 38.1% of the responses agreed the sugar firms in western Kenya engage in lease financing to boost their financial performance. On the statement whether their sugar firms also practice inventory financing, 41.2% responses agreed that most of the sugar firms in western Kenya would engage in inventory financing to boost their cash flow.

4.3.1 Correlation Analysis for Loan financing Constructs and Financial performance of Sugar companies

The study established the degree of association between the constructs of loan financing and financial performance of the sugar companies. The variables are FP- financial performance, CML –is cane maintenance loan, CDL is cane development loan, FRL- is factory rehabilitation loan and CVAL is cane value addition loan, and MEL is machinery and equipment loan. The results of the analysis are presented as in table 4.7 below.

Table 4.7 Correlation coefficients

Variables in the Model		FP	CML	CDL	FRL	CVAL	MEL
FP	Pearson Correlation	1					
	Sig. (2-tailed)						
CML	Pearson Correlation	.831**	1				
	Sig. (2-tailed)	.000					
CDL	Pearson Correlation	.768**	.871**	1			
	Sig. (2-tailed)	.000	.000				
FRL	Pearson Correlation	.907**	.913**	.873**	1		
	Sig. (2-tailed)	.000	.000	.000			
CVAL	Pearson Correlation	.768**	.814**	.873**	.803**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		
MEL	Pearson Correlation	.797**	.863**	.899**	.816**	.920**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	101	101	101	101	101	101

**. Correlation is significant at the 0.01 level (2-tailed).

The correlation coefficients indicate strong and positive association between the variables, this indicate that factory rehabilitation loans has the highest correlation coefficient at .907** with

financial performance of the sugar companies while cane value addition loan and cane development loan

had the lowest correlation with financial performance of sugar companies in western Kenya.

Table 4.8 Coefficients of loan Financing Constructs and Financial Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.603	.075		8.055	.000		
	CML	.255	.049	.374	5.238	.000	.115	8.664
	CDL	.224	.390	.319	.606	.000	.141	7.075
	FRL	.429	.023	.940	18.609	.000	.230	4.340
	MEL	.219	.035	.423	6.290	.000	.130	7.695

b. Dependent Variable: Financial Performance

The study established the contribution of each of the loan constructs towards the financial

performance of the sugar companies in western Kenya. The results in table 4.7 formed the

foundation of interpretation and discussion. The correlation coefficients in table 4.7are high and

indicate the likelihood of multicollinearity effect among the variables. The result in table 4.8

indicate that the variance inflation factor(VIF) values are greater than 1.0 but less than 10.0

hence the severity of multicollinearity does not exist among the variables under investigation;

therefore these variables can be included in the model of analysis in this study.

The regression model below was adopted in the study to establish the relationship between the
variables;

$$Y = \beta_0 + \beta_1X_{1i} + \beta_2X_{2i} + \beta_3X_{3i} + \beta_4X_{4i} + \beta_5X_{5i} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots..(Equation\ 4.1)$$

From the regression model above, the constructs of loan financial were included in the first

variable and the model for objective one was regenerated as below;

$$Y = \beta_0 + \beta_1X_{1i} + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots.(Equation\ 4.2)$$

The constructs of loan financing were then operationalized and included in the model above;

$$Y = \beta_0 + \beta_1CML + \beta_2CDL + \beta_3FRL + \beta_4MEL + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots. (Equation\ 4.3)$$

Where:

       CML- is cane maintenance loan

       CDL- is Cane Development Loan

       FRL- is factory rehabilitation loan

       MEL-is machinery and equipment loan

The coefficients when substituted in the model, the equation above becomes;

$Y = 0.603 + 0.255CML + 0.224CDL + 0.429FRL + 0.219MEL$ ………………..(Equation 4.3a)

The results in the model indicate that one unit increase in cane maintenance loan causes 0.225 unit change in financial performance of the sugar firms in western Kenya. For cane development loans a unit increase in their use causes 0.224 unit increase in financial performance of the sugar firms. Further it is observed that a unit increase in the use of factory rehabilitation loans causes 0.429 increase in financial performance and for machinery and equipment loans a unit increase in its use causes 0.219 unit increase in financial performance in the sugar firms in western Kenya.

4.3.2 Descriptive Statistics

The study established the analysis of loan financing variables and financial performance of the sugar companies in this study. The results are presented as in table 4.8 below

Table 4.8: Loan Financing variables and Financial Performance of Sugar Companies

Variable	Mean	SE Mean	St.Dev	Min.	Max	Skew	Kurt.
FP	4119068	844447	2388456	1078864	7848316	0.33	-1.02
CML	49282594	7944440	22470268	16932462	84671817	0.23	-0.66
CDL	49282594	7048012	19934787	13832756	75292211	-0.00	-0.44
FRL	538935	109308	309171	69164	972023	-0.35	-0.77
MEL	1594093	316414	894955	1002394	3734712	2.47	6.46

The descriptive statistics results in table 4.8 reveal that financial performance of sugar companies over the period of study had a minimum value of Kshs1078864 and a maximum value of Kshs7848316 all in billions with a mean of Kshs4119068 where the annual financial

performance values of the sugar companies is deviating from this mean by a standard margin of 2388456. This implies that the data values were scattered far away from the mean in the sugar companies in western Kenya. The financial performance was positively skewed with a skewness index of 0.33. This skewness is not very high implying the degree of deviation of the frequency distribution from the normal distribution is small in terms of financial performance.

With regard to cane maintenance loans the results shows that the minimum value of Kshs16932462 and the maximum was of Kshs84671817 all in billions with a mean of the cane maintenance loan of Kshs49282594 with the values in the sugar companies deviating from this mean by a standard margin of 22470268 . The data for cane maintenance loans were positively skewed with a Skewness index of 0.23 which is not high also implying that the degree of deviation of the frequency distribution of this cane maintenance loans from the normal distribution is small in terms of cane maintenance loans to sugar companies in western Kenya.

In respect of cane development loans, the results shows that the minimum loan amount was Kshs13832756 and the maximum was of Kshs75292211. The mean of the cane development loans was Kshs49282594 all in billions with the sugar company's values deviating from this mean by a standard margin of 19934787. The data for cane development loans to sugar companies were negatively skewed with a Skewness index of -0.00 which implies that the frequency distribution of cane development loans to sugar companies was of a normal distribution.

With regard to factory rehabilitation loans to sugar companies in western Kenya, the results shows that the minimum amount was Kshs69164 and the maximum was of Kshs972023 all in billions. The mean of the factory rehabilitation loans was Kshs538935 with the sugar company's values of factory rehabilitation loans deviating from this mean by a standard margin of 309171. The data for factory rehabilitation loans were negatively skewed with a Skewness index of -0.35 which was however small hence the conclusion that the departure of the frequency distribution of factory rehabilitation loans from a normal distribution is small.

Finally, in respect of machinery and equipment loans, the results shows that the minimum amount was Kshs1002394 and the maximum was of Kshs3734712 all in billions. The mean of this loan was Kshs1594093 with the sugar company's values deviating from this mean by a standard

margin of 894955. The data for machinery and equipment loans were positively skewed with a Skewness index of 2.47 which was very high hence the conclusion that the departure of the frequency distribution of machinery and equipment loans in a normal distribution is quite high. Also, the very high degree of Kurtosis of 6.46 indicate that the data for the machinery and equipment loans is not a normal distribution but the value of kurtosis is less than the standard value of 10.0 indicating that despite a high value of kurtosis of 6.46 is less than the standard. Therefore normality test of the data show that this data used in the study is normally distributed and data has no problem and its analysis results can be relied on for decision making.

4.4 Debenture Financing and Financial Performance of Sugar Companies

The second study objective examined the effect of debenture financing and financial performance of sugar companies. The constructs and attributes regarding debenture financing were evaluated by respondents on a 5-point Likert scale and results are presented as in table 4.9 below

Table 4.9 Debenture Financing in Sugar Companies

Debenture Financing	SD	D	N	A	SA	Mean	STD
Security for debentures financing is required from a sugar company	7	12	8	39	31	**3.773**	**1.015**
	7.2%	12.4%	8.2%	40.2%	32.0%		
Redeemable debentures are used as a financing mechanism in sugar companies	4	9	5	43	36	**4.010**	**0.895**
	4.1%	9.3%	5.2%	44.3%	37.1%		
Debenture financing are convertible to equity shares and ownership	2	9	19	38	29	**3.856**	**0.803**
	2.1%	9.3%	19.6%	39.2%	29.9%		
Debentures are rated in financing the sugar companies	0	2	5	42	48	**4.402**	**0.609**
	0.0%	2.1%	5.2%	43.3%	49.5%		
The interest rate of debentures are affordable to sugar companies	13	24	12	28	20	**3.186**	**1.149**
	13.4%	24.7%	12.4%	28.9%	20.6%		

The results in table 4.9 regarding statement on security for debentures financing is required from a sugar company results showed that among the participants, 39(40.2%) agreed, while 31(32.0%) strongly agreed. However, 12(12.4%) of the respondents showed disagreement with the statement, 8(8.2%) remained neutral while 7(7.2%) indicated strong disagreement. This gives a total of 70(72.2%) of respondents who believe that their sugar firms were expected to provide security for debentures financing for their sugar companies (Mean = 3.773, SD = 1.015). Only 19(19.6%) indicated otherwise. On the statement concerning redeemable debentures are used as a financing mechanism in sugar companies, 43(44.3%) of the respondents agreed with the statement, 37.1% strongly agreed, while 5(5.2%) remained neutral. However, 9(9.3%) disagreed with the statement, while 4(4.1%) strongly disputed the statement. This shows that majority of the respondents expressed positively to the statement, (Mean = 4.010, SD = 0.895), implying that most of the sugar firms in Western Kenya utilised redeemable debentures as a financing mechanism for their firms. On the statement regarding debenture financing as convertible to equity shares and ownership, 38(39.2%) of the total respondents agreed with the statement, 29(29.9%) strongly agreed to the statement, while 19(19.6%) remained neutral. However, 9(9.3%) disapproved the statement with 2(2.1%) strongly disagreeing with the statement. Overall, majority of the respondents at 67(69.1%) (Mean = 3.856 and SD = 0.803), confirmed that debenture financing of most of the sugar firms in western Kenya were convertible to equity shares thus encouraging prospective investors to engage in debenture financing to sugar firms. Regarding the debentures rating in financing the sugar companies the majority of the respondents 48(49.5%) expressed strongly the concept, 42(43.3%) of the total respondents agreed with the statement, while only 2(2.1%) of the total respondents disagreed and only 5(5.2%) of the total respondents remained neutral on the statement. This shows that majority of the respondents at

90(92.8%) response rate (Mean = 4.402, SD = 0.609) expressed positively about the concept of debenture rating and its use in the sugar firms in Western Kenya. Regarding the concept of debenture interest charge, majority of the respondents 28(28.9%) agreed that the interest rate of debentures are affordable to sugar companies; while 20(20.6%) of the total respondents strongly agreed, 12(12.4%) of the total respondents were neutral.

The study further established the type of debentures used in the sugar sector and their effect size on the performance of sugar companies in western Kenya. Factor loading analysis was used. The information obtained from the field is presented as in the table 4.10 below

The factor loading for indicators of the effectiveness of the debenture financing indicators and financial performance of the sugar companies was established.

Table 4.10: Factor loading for the Debenture financing indicators and financial performance of the sugar companies.

Debenture type financing indicator	Qualitative information (Responses from the interviews)	Factor loading effect on performance of Sugar Companies
Debentures with floating charge and title deed (Unsecured Debentures)	The respondents expressed that financing using debentures of floating charge and title deed positively influenced performance of sugar firms.	**0.869 weight loading** This loading factor weight reveal that the indicator of debenture financing contributes greatly to financial performance of sugar companies in western Kenya, through fairly affordable floating interest charge that minimizes the cost of financing sugar companies.
Debentures with Fixed Charge (Secured Debentures)	The respondents revealed that fixed charge debentures are fair in terms of the cost of financing and therefore their minimization results in improved financial position of sugar companies.	**0.741 weight loading** The effect of this debenture on financial performance of sugar companies is fairly high
Convertible Debentures	The respondents revealed that this kind of financing in sugar firms minimizes the cost of finance and thus improving on the liquidity of the sugar company.	**0.683 weight loading** The factor loading of this kind of debenture indicate that it has a positive effect on the financial performance of sugar companies through the cost of financing capital.

4.5 Preference Share Capital Financing and Financial Performance of Sugar Firms

The third study objective sought to examine effect of preference share financing on financial performance of sugar firms in Western Kenya. Respondents were asked of their opinions in relation to preference shares capital in financing the sugar firms. The respondents rated the statements about Preference Share financing using a 5- point Likert scale. The results obtained from the respondents are presented as in table 4.11a

Table 4.11a: Preference Shares Capital Financing in Sugar Firms

Preference Shares Financing	SD	D	N	A	SA	Mean	STD
Preference share capital financing in sugar firms are redeemable	2	8	6	42	39	**4.113**	**0.810**
	2.1%	8.2%	6.2%	43.3%	40.2%		
Preference share capital are convertible into ordinary shares	0	5	22	37	33	**4.010**	**0.663**
	0.0%	5.2%	22.7%	38.1%	34.0%		
Interest on our preference shares capital are Cumulative	0	4	10	40	43	**4.258**	**0.656**
	0.0%	4.1%	10.3%	41.2%	44.3%		
Participating Preference shareholders receive additional dividends	9	13	18	31	26	**3.536**	**1.045**
	9.3%	13.4%	18.6%	32.0%	26.8%		
Rate of Dividend on preference shares are affordable to the company	23	29	17	20	8	**2.598**	**1.144**
	23.7%	29.9%	17.5%	20.6%	8.2%		

According to table 4.11a regarding statement "*preference share capital are Redeemable*" the study found that among the respondents, 39(40.2%) strongly agreed, while 43(43.3%) agreed, 6(6.2%) remained neutral on the statement, while 8(8.2%) and 2(2.1%) disagreed and strongly disagreed respectively. Overall, 82(83.5%) with a mean response of (Mean 4.113, STD = 0.810) of the respondents confirmed the statement, while only 10(10.3%) indicated otherwise. This shows that preference shares capital of most of the sugar firms in western Kenya were highly redeemable and hence would make it easy for them to raise enough working capital.

On the statement that "*preference share capital are Convertible into ordinary shares*", 37(38.1%) agreed with the statement, 33(34.0%) strongly agreed, 22(22.7%) while only 5(5.2%) registered their disagreement with the statement. Generally, 70(72.1%) supported the statement (Mean 4.010, STD = 0.663) implying that most of the sugar firms in Western Kenya had preference share capitals were highly convertible into ordinary shares.

The study similarly sought to find out *whether interest on the preference shares capital of the sugar firms in Western Kenya was cumulative*. From the study findings, it was found that 43(44.3%) of the respondents strongly supported the statement, 40(41.2%) agreed with the statement, while only 10(10.3%) were undecided with the statement. Only 4(4.1%) disagreed with the statement, implying that the interest rate on preference shares of most of the sugar firms in Western Kenya (Mean 4.258, STD = 0.656) were cumulative.

On the statement on "*Participating Preference shareholders receive additional dividends*", the study found that 31(32.0%) agreed with statement, 26(26.8%) strongly agreed, while 18(18.6%) remained neutral. Cumulatively, only 22(22.7%) of the respondents were in disagreement with the statement. This implies that the participating preference shareholders of most of the sugar firms in western Kenya receive manageable additional dividends (Mean 3.536, STD = 1.045). When it comes to whether *the rate of dividends of sugar firms' preference shares are affordable to the company*, 29(29.9%) were in disagreement with statement, 23(23.7%) strongly disagreed, while 17(17.5%) remained neutral. Only 28(28.2%) supported the statement (Mean 2.598, STD = 1.144). This implies that most of the rate of dividend on preference shares for sugar firms in western Kenya were not affordable to these firms and hence incase the companies enters bankruptcy the stockholders would be paid from the companies' assets.

4.5.1 Factor Analysis of Preference share financing and financial performance

The factor loading for indicators of the effectiveness of the preference share capital financing indicators and financial performance of the sugar companies was established. The information is summarized as in table 4.11b

Table 4.11b: Preference Share Capital financing indicators and financial performance.

Preference share Capital financing indicator	Qualitative information (Responses from the interviews)	Factor loading effect on performance of Sugar Companies
Redeemable preference Shares	The respondents expressed that financing using redeemable preference capital financing has an effect performance of sugar firms.	**0.568 weight loading** This loading factor weight reveal that the indicator of redeemable preference capital financing contributes averagely to financial performance of sugar companies in western Kenya, by minimizing the cost of financing sugar companies.
Convertible Preference Share capital	The respondents revealed that convertible preference capital financing are better in terms of the interest charge begged on this type of capital financing and therefore their minimization results in improved financial position or liquidity of sugar companies as it increases the ownership with unlimited liability	**0.726 weight loading** The effect size contribution of this convertible preference capital financing on financial performance of sugar companies is high.
Cumulative Preference Share Capital	The respondents revealed that this kind of financing in sugar firms maximizes the cost of finance and thus decreasing the liquidity of the sugar company. The fixed interest charge accumulates each	**0.437 weight loading** The factor loading of this kind of preference share capital financing indicate that it has a negative effect on the financial performance of sugar companies through the cost of

	time it is not paid.	financing capital increases if unpaid during non-profit years leading to interest charge burden on the sugar firms. This has crippled these companies over time.
Participating Preference share Capital	The respondents revealed that this kind of financing in sugar firms maximizes the benefits as it increases core capital to the firm and its deposits that are disposable for use to enhance financial leverage in the sugar companies and thus increasing the liquidity of the sugar company.	**0.881 weight loading** This factor loading weight reveal that this type of preference capital improves on the financial performance of sugar firms as it investors tend to be included in decision making in the sugar firms. This positively adds value to the firm and its financial performance.

4.6 Ordinary Share Capital Financing and Financial Performance of Sugar Firms

The fourth study objective sought to examine effect of ordinary share financing on financial performance of sugar firms in Western Kenya. Ordinary Share financing was evaluated basing on a 5- item five level scale. Thus, the emerging data was summarized and aggregated in terms of response frequency and corresponding percentage with reference to each item. Further, for each item, the mean value and deviations about the mean (SD) were determined See Table 4.12,

Table 4.42 Ordinary Share Capital in Sugar Firms and Financial Performance

Ordinary Share Capital	SD	D	N	A	SA	Mean	STD
The Issued Share capital is sufficient for our capital needs	21	39	8	16	13	**2.598**	**1.139**
	21.6%	40.2%	8.2%	16.5%	13.4%		
The Paid up Share Capital is sufficient for our company capital needs	28	38	13	11	7	**2.289**	**1.060**
	28.9%	39.2%	13.4%	11.3%	7.2%		
Ordinary Share capital allows flexibility in terms of meeting payment obligations	1	6	15	41	34	**4.041**	**0.723**
	1.0%	6.2%	15.5%	42.3%	35.1%		
The authorized share capital is Sufficient	42	38	10	7	0	**1.814**	**0.889**
	43.3%	39.2%	10.3%	7.2%	0.0%		
Dividends Pay-out on Share Capital is manageable for the company.	1	9	14	38	35	**4.000**	**0.780**
	1.0%	9.3%	14.4%	39.2%	36.1%		

According to the study findings, 39(40.2%) were in disagreement with the statement, 21(21.6%) strongly disagreed, while 8(8.2%) remained neutral on the statement. Only 29(29.9%) were in support of the statement. Generally, over two thirds of the respondents at 60(61.8%) (Mean 2.598, STD = 1.139) disagreed with the sugar companies' issued were adequate for their capital needs. Insufficient issued shares compel the company to take other measures reasonably necessary to increase the company's shares to cater for the needs of the firm. On the statement of "*Our Paid up Share Capital is sufficient for our company capital needs*", 38(39.2%) of the respondents were in disagreement with the statement, 28(28.9%) vehemently disagreed with the statement, while 13(13.4%) were undecided. Cumulatively, only 18(18.5%) supported the statement that their companies' Paid up Share Capital were adequate to meet the firms' needs. In general, 66(68.1%) (Mean 2.289; STD = 1.060) confirmed that the paid up shares were inadequate to cater for the sugar firms' needs. Inadequate paid up shares makes the firms to think of other means of financing their working capital.

On the statement of "*Share capital allows us flexibility in terms of repayment*", 41(42.3%) agreed with the statement, 34(35.1%) strongly agreed, while 15(15.5%) remained neutral on the statement. Cumulatively, only 7(7.2%) indicated otherwise on the statement. Overall, (Mean 4.041; STD = 0.723) confirmed their share capital permitted their companies to be flexible in terms of repayment. Flexible payment of share capital among the firms makes the sugar firms to effectively plan and budget for the financial operations. On whether their companies had e*xhausted their authorized share capitals*, majority of the respondents at 42(43.3%) were strongly in disagreement with the statement, 38(39.2%) agreed with statement, while 10(10.3%) remained neutral on the statement. Only 7(7.2%) disputed the statement. With an overall response of 80(82.5%) disagreeing with the statement, (Mean 1.814, STD = 0.889), it can be deduced that majority of the sugar firms in western Kenya had not exhausted their authorised share capitals hence can still trade the shares to raise capital. On the statement of "*Dividend on Share Capital for our shareholders is manageable for the company to run*", 38(39.2%) agreed with the statement, 35(36.1%) strongly agreed with the statement, while 14(14.4%) were undecided on the statement. Only 10(10.3%) disagreed with the statement. Overall, 73(75.3%) (Mean 4.000, STD = 0.780) confirmed that most of the sugar firms in western Kenya were able to manage and run the dividend of share capital due to their flexibility and convertibility.

The correlation analysis for the ordinary share capital was conducted to find out how ordinary share capital correlated with financial performance of sugar firms in Western Kenya. Table 4.13a shows that the Pearson correlation coefficient ($r = 0.651$) is a clear indication that ordinary share capital has a positive correlation with financial performance (p-values > 0.05). This shows that there exists a positive relationship between ordinary shares capital financing and financial performance.

Table 4.13a: Correlation results

Model Variables		Financial Performance	Ordinary share capital
Financial performance	Pearson Correlation	1	.651**
	Sig. (2-tailed)		0.000
Ordinary share capital	Pearson Correlation	.651**	1
	Sig. (2-tailed)	0.000	

**. The value is significant at the 0.01 level (2-tailed).

Table 4.13b *Model Summary*

Model	r	r Square	Adjusted r Square	Std. Error of the Estimate
1	0.651[a]	0.424	0.418	0.347

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	16.803	1	16.803	37.011	0.000[b]
	Residual	23.238	96	0.454		
	Total	40.041	97			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.613	0.516		5.06	0.000
	Ordinary share capital	0.465	0.168	0.467	2.76	0.000

a. Dependent Variable: Financial performance
b. Predictors: (Constant), ordinary share capital

The regression analysis results as presented in table 4.13b reveal that ordinary share capital with a coefficient of determination of $r^2 = 0.424$ and r= 0.651 (F = 37.011, p =.000<0.05) The coefficient of determination indicates that 42.4% of the variation on financial performance in sugar companies is influenced by ordinary share capital in financing the company operations. The correlation coefficient indicate a positive relationship between ordinary share capital and financial performance (r = 0.651). The results in table 4.13b further reveal that a unit increase in ordinary share capital financing causes 0.465 units change in financial performance of sugar firms and the result indicate that this variable has a positive and statistically significant effect on

financial performance (F = 37.011, p =.000<0.05) and it can be relied in the prediction of financial performance in sugar firms. The results concurred with study by Gathara, Kilika and Maingi (2019) on the effect of equity on the performance of Companies listed on the Nairobi Securities Exchange (NSE). The study found out that Equity had significant positive effect on financial performance of selected companies listed at NSE, Kenya. The recommendations of the study were that managers of the selected companies listed at NSE, Kenya could utilize the various sources of finance since financial structure had a positive effect on the performance of the listed firms

4.7 Retained Earnings Financing and Financial Performance of Sugar Firms

The fifth study objective sought to examine effect of Retained Earnings Financing on financial performance of sugar firms in Western Kenya. Retained Earnings Financing was evaluated basing on a 5- item five level scale. Thus, the emerging data was summarized and aggregated in terms of response frequency and corresponding percentage with reference to each item. Further, for each item, the mean value and deviations about the mean (SD) were determined as in table 4.14

Table 4.5 Retained Earnings and Financial performance of Sugar Firms

Retained Earnings	SD	D	N	A	SA	Mean	STD
There is adequate retained earnings for our company	39	47	11	0	0	**1.711**	**0.657**
	40.2%	48.5%	11.3%	0.0%	0.0%		
Amount of Earnings per share used as capital in our company is sufficient	41	46	10	0	0	**1.680**	**0.651**
	42.3%	47.4%	10.3%	0.0%	0.0%		
The company has Growth in dividend pay-outs over the years	25	37	14	13	8	**2.402**	**1.083**
	25.8%	38.1%	14.4%	13.4%	8.2%		
Our company regularly Earnings Before interest, Tax, amortization and depreciation (EBITAD)	29	33	4	19	12	**2.505**	**1.220**
	29.9%	34.0%	4.1%	19.6%	12.4%		
Net income of retained earnings is higher compared to other sources of capital	3	5	14	42	33	**4.000**	**0.793**
	3.1%	5.2%	14.4%	43.3%	34.0%		

From the statement that "*There is adequate retained earnings for our company*" majority of the respondents at 47(48.5%) disagreed with the statement, 39(40.2%) disagreed with the statement, while 11(11.3%) remained neutral. None of the respondents agreed with the statement. Generally, 86(88.7%); (Mean 1.711, STD = 0.657) of the respondents indicated that retained

earnings for sugar firms in western Kenya were insufficient for the firms to raise adequate working capital.

On whether *the amount of earning per share used as capital in sugar firms were sufficient*, 46(47.4%) of the respondents disagreed with statement, 41(42.3%) strongly disagreed while 10(10.3%) were undecided with the statement. None of the respondents agreed with the statement. This implies that majority of the respondents at 87(89.7%) (Mean 1.680, STD = 0.651) confirmed that retained earnings for sugar firms in western Kenya were inadequate to raise sufficient working capital. On the statement that "*Our company has witnessed Growth in dividends pay-outs over the years*" 37(38.1%) of the respondents disagreed with the statement, 25(25.8%) strongly disagreed, while 14(14.4%) were neutral on the statement. On the contrary, only a total of 21(21.6%) were in agreement with the statement. This implies that majority of the respondents at 62(63.9%); (Mean 2.402, STD = 1.083) disagreed that their sugar firms have experienced growth in dividends pay out over the period of time.

On whether *the net income of companies retained earnings was higher compared to other sources of capital*, 33(34.0%) were in disagreement with the statement, 29(29.9%) strongly disagreed, while 4(4.1%) were undecided. On the other hand, a total of only 31(33.0%) supported the statement. This implies that majority of the respondents at 62(63.9%); (Mean 2.505, STD = 1.220) disagreed that their sugar firms regularly retains profits as capital. However, it was found that net income of retained earnings was higher in most of the sugar firms as compared to other sources of capital. This was based on the response of majority of the respondents at 42(43.3%) who agreed with the statement, 33(34.0%) strongly agreed, while 14(14.4%) remained neutral. Only 8(8.3%) of the respondents disagreed with the statement.

4.7.1 Regression Results for Retained Earnings and Financial Performance of Sugar firms

The relationship and the effect size of the retained earnings and financial performance was done using correlation analysis. The results show that the Pearson correlation coefficient was (r=0.568) indicating that Institutional Capital (Retained Earnings) has a positive correlation with financial performance (p = .000< 0.05).

Table 4.15 Correlation results for Retained Earnings and financial performance

Variables		Financial Performance	Institutional Capital (Retained Earnings)
Financial performance	Pearson Correlation	1	.568**
	Sig. (2-tailed)		0.000
Institutional Capital (Retained Earnings)	Pearson Correlation	.568**	1
	Sig. (2-tailed)	0.000	

**. The value is significant at the 0.01 level (2-tailed)

Table 4.16 Model Summary

Model	R	r Square	Adjusted r Square	Std. Error of the Estimate
1	0.776^a	0.602	0.600	0.518

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	7.442	1	7.442	23.929	0.000^b
1	Residual	32.461	96	0.311		
	Total	39.803	97			

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	9.51	0.992		9.58	0.000
1	Institutional Capital (Retained Earnings)	0.433	0.043	0.431	10.06	0.000

a. Dependent Variable: Financial Performance
b. Predictors: (Constant) Institutional Capital (Retained Earnings)

Table 4.16 presents the regression model the regression model of Institutional Capital with a coefficient of determination of $r^2 = 0.602$ and r = 0.776 at 0.05 significance level. The coefficient

of determination indicates that 60.2% of the variation on financial performance is influenced by Institutional Capital. The correlation analysis also shows that there exists a positive relationship between Institutional Capital and financial performance. The results further indicate that a unit change in retained earnings causes 0.433 unit changes in financial performance of sugar companies in western Kenya and this change is statistically significant.

4.8 Capital Structure Decisions and Financial Performance of Sugar Firms

Regression analysis was done with the capital structure decisions and financial performance of sugar firms in western Kenya. There were five predictors as explanatory variables: loan financing, debenture financing, preference share capital, ordinary share capital and institutional capital (retained earnings). The results are presented as in table 4.17 below

Table 4.17 Regression Analysis of Combined Capital Structure Decisions on financial performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.794[a]	0.631	0.630	0.568

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	27.14	3	15.02	46.502	0.000[b]
1	Residual	13.29	94	0.323		
	Total	40.43	97			

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	12.51	0.454		27.55	0.000
	Loan financing	0.633	0.043	0.631	14.72	0.000
1	Debenture financing	0.481	0.051	0.473	9.43	0.038
	Preference share capital	0.578	0.045	0.619	12.84	0.028
	Ordinary share capital	0.442	0.061	0.440	7.25	0.011
	Institutional Capital	0.467	0.055	0.452	8.49	0.019

a. Dependent *Variable: Financial Performance*

b. Predictors: (Constant) *Loan financing, Debenture financing, preference share capital, ordinary share capital, institutional capital*

The results show a strong and positive association between the capital structure decisions and performance of sugar companies($R = 0.794^a$). Further, capital structure decisions (Loan financing, Debenture financing, preference share capital, ordinary share capital, institutional capital) account for 63.1% ($R^2 = 0.631$, p =0.000 <0.05) of variation in financial performance of sugar companies. The variables used in the model can be relied on in the prediction of performance of sugar companies up to 63.0% (Adjusted $R^2 = 0.630$, P = p<0.05). The ANOVA results showed that regression model variables were statistically significant (F = 46.502; p<0.05) and can be relied on for the prediction of performance in sugar companies.

In this study, the relationship between loan financing, debenture financing, preference share capital financing, ordinary share capital financing and institutional (Retain earnings) and financial performance of the sugar processing firms was determined and a multiple linear regression model below was used:

$Y = \beta_0 + \beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4+ \beta_5X_5+\varepsilon$ …………………………..(Equation 4.4)

Where;

      Y - is financial performance
      X_1=Loan financing
      X_2= Debenture financing
      X_3= Preference share Capital financing
      X_4= Ordinary Share Capital Financing
      X_5= Institutional Capital (Retained Earnings) Financing
      $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are regression coefficients
      $\mathcal{E}_3$ error term

The coefficients in table 4.17 were substituted into the equation and it changed to:

$Y = 12.51 + 0.633X_1+0.481X_2+0.578X_3+0.442X_4+ 0.467X_5$ …………………..(Equation 4.4.1)

The results in the equation indicate that a unit change in loan financing causes 0.633 units change in financial performance of sugar firms in western Kenya. For debenture financing one

unit change causes 0.481 units change in financial performance. Also one unit change in preference share capital financing it causes 0.578 units change in financial performance of sugar firms. The ordinary share capital unit change was found to cause 0.442 unit change in financial performance; and one unit change in institutional capital also known as retained earnings was found to cause a change of 0.467 units change in financial performance and these variables influence was statistically significant. The study results concurs with different studies on capital structure and financial performance like study on the relationship between debt in capital structure and financial performance and in most cases, the results showed a positive relationship (Roden and Lewellen, (1995); Ghosh et al., (2000); Deesomask et al., (2004); Berger and Bonaccorsi di Patti, (2006), Huang and Song, (2006); Chakraborty, (2010) showed positive relationship.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides brief summary with reference to discussed findings, conclusions made leading to recommendations. Areas to be considered in future related research are also highlighted in this chapter.

5.2 Summary of the Findings

The summary of main findings is presented based on the following sub-thematic areas:

5.2.1 Loan Financing and Financial Performance of Sugar Companies

The study established the effect of loan financing on the financial performance of the sugar companies in western Kenya. The respondents reacted to various components of loan financing. The results revealed that Cane Maintenance Loan is meant for farmers and the company for maintenance of their first and second ratoons. The intent of the loan is for the purchase of fertilizers, ploughing, weeding and procurement of agro-chemicals for quality cane production. The loan repayment period is up to 18 months with 5% interest charge on the reducing balance. In terms of factor loading analysis the loan had 0.897 weight loading. This loading factor weight reveal that the indicator of loan financing contributes greatly to financial performance of sugar companies in western Kenya, through quality and quantity of cane for crushing resulting in high tonnage of sugar and sugar products for high sales and profits. This loading factor reveal that the indicator of loan financing contributes greatly to financial performance of sugar companies in western Kenya, through quality and quantity of cane for crushing resulting in high tonnage of sugar and sugar products for high sales and profits. Moreover, the Cane Value Addition Loan results revealed that cane value addition loan is given to cane farmers engaged in cane processing to enhance the quality of sugar products before selling. The loan repayment period is upto 24 months with interest charge of 10% on reducing balance. This loan is given to farmers affiliated to a sugar company. This helps to minimize operational costs in the early stages of processing thus increasing tonnage produced at minimum operating costs. Factor analysis loading was at 0.689 weight. Therefore the effect of this loan on financial performance of sugar companies is fairly high as it increases tonnage at lower cost leading to high profitability.

The results on Cane development loan revealed that this loan is given to farmers or sugar companies wanting to establish and maintain ratoons. The loan is structured and disbursed in phases: 40% of the loan is for establishing cane plants and it is given within the first 24 months; the second phase of the loan is 30% of the loan meant for the maintenance of the first ratoon and the last phase of 30% of the loan is meant for maintenance of the second ratoon. The respondents indicated that this loan is important as its interest of the first ratoon and the last phase of 30% of the loan is meant for maintenance of the second ratoon. The respondents indicated that this loan is important as its interest charge is 4% if given to farmers and at 5% if it is the sugar company that uses the loan to enhance cane development. The factor loading analysis had 0.864 weight; the rating of this loan by respondents reveal that when the loan is well utilized by both the farmers and sugar company its effect is on high and continuous production of quality cane. This will boost the sugar company's financial performance through high sales volume of sugar and sugar products. Further, the analysis of Sugar Factory Rehabilitation Loan the results revealed that the loan is meant for rehabilitation of machinery to increase efficiency and effectiveness. This loan repayment period is 24 months and at 5% interest rate at a reducing balance. The loan construct was rated at 0.673 weight loading. This reveals that the effect of this loan product leads to increased production of sugar from raw cane due to crushing efficiency, high tonnage of inventory of sugar products which resulting in high profitability. Further, the Machinery and equipment loan component was also established, the respondents expressed that this loan is mean to facilitate the sugar factories to acquire new machinery and equipment for production purposes. The loan interest charge is 5% on a reducing balance. The factor loading analysis established that this construct had 0.871 weight loading; meaning that this loan component had a high effect on the financial performance of sugar companies for it helps to improve on production which in-turn increases inventory for sales revenue.

The study further examined the effect of loan financing parameters relating to asset-based lenders, trade credit, commercial finance companies, interest on Loan and repayment Period and their effect on the financial performance of sugar firms. The respondents rated the Loan Financing constructs on a 5- point likert scale the results indicate that sugar companies relies on Asset-based lenders as 40.2% agreed response rate with a mean weight of 3.546 magnitude strength with a standard deviation of 1.056. This result concurred with the results on indicators of sugar factory rehabilitation loans which had 0.673 mean weight loading and machinery and

equipment loan with 0.871 mean weight loading in relation to financial performance of the sugar companies in western Kenya. This showed that most of sugar firms mostly opt for asset based financing loans as it is associated with faster approvals and funding delivery than conventional bank loans. The results relating to sugar Companies reliance on Trade credit, 43.3% of the total respondents agreed on this construct and rated it with a mean weight of 3.835 magnitude strength and 0.913 standard deviation. This also concurred with results on loan financing indicators relating to cane maintenance loans whose mean weight is 0.897 weight loading in relation to financial performance of sugar companies in western Kenya.

The results of Correlation Analysis for Loan financing Constructs and Financial performance of Sugar companies. The correlation coefficients indicate strong and positive association between the variables, this indicate that factory rehabilitation loans has the highest correlation coefficient at .907[**] with financial performance of the sugar companies while cane value addition loan and cane development loan had the lowest correlation with financial performance of sugar companies in western Kenya. The study regression results when the coefficients when substituted in the model showed that:

$Y = 0.603+0.255CML+0.224CDL+0.429FRL+0.219MEL$. The results in the model indicate that one unit increase in cane maintenance loan causes 0.225 unit change in financial performance of the sugar firms in western Kenya. For cane development loans a unit increase in their use causes 0.224 unit increase in financial performance of the sugar firms. Further it is observed that a unit increase in the use of factory rehabilitation loans causes 0.429 increase in financial performance and for machinery and equipment loans a unit increase in its use causes 0.219 unit increase in financial performance in the sugar firms in western Kenya.

Further, the descriptive statistics results revealed that financial performance of sugar companies over the period of study had a minimum value of Kshs1078864 and a maximum value of Kshs7848316 all in billions with a mean of Kshs4119068 where the annual financial performance values of the sugar companies is deviating from this mean by a standard margin of 2388456. This implies that the data values were scattered far away from the mean in the sugar companies in western Kenya. The financial performance was positively skewed with a skewness index of 0.33. This skewness is not very high implying the degree of deviation of the frequency distribution from the normal distribution is small in terms of financial performance. With regard

to cane maintenance loans the results shows that the minimum value of Kshs16932462 and the maximum was of Kshs84671817 all in billions with a mean of the cane maintenance loan of Kshs49282594 with the values in the sugar companies deviating from this mean by a standard margin of 22470268 . The data for cane maintenance loans were positively skewed with a Skewness index of 0.23 which is not high also implying that the degree of deviation of the frequency distribution of this cane maintenance loans from the normal distribution is small in terms of cane maintenance loans to sugar companies in western Kenya. In respect of cane development loans, the results shows that the minimum loan amount was Kshs13832756 and the maximum was of Kshs75292211. The mean of the cane development loans was Kshs49282594 all in billions with the sugar company's values deviating from this mean by a standard margin of 19934787. The data for cane development loans to sugar companies were negatively skewed with a Skewness index of -0.00 which implies that the frequency distribution of cane development loans to sugar companies was of a normal distribution. With regard to factory rehabilitation loans to sugar companies in western Kenya, the results shows that the minimum amount was Kshs69164 and the maximum was of Kshs972023 all in billions. The mean of the factory rehabilitation loans was Kshs538935 with the sugar company's values of factory rehabilitation loans deviating from this mean by a standard margin of 309171. The data for factory rehabilitation loans were negatively skewed with a Skewness index of -0.35 which was however small hence the conclusion that the departure of the frequency distribution of factory rehabilitation loans from a normal distribution is small. Finally, in respect of machinery and equipment loans, the results shows that the minimum amount was Kshs1002394 and the maximum was of Kshs3734712 all in billions. The mean of this loan was Kshs1594093 with the sugar company's values deviating from this mean by a standard margin of 894955. The data for machinery and equipment loans were positively skewed with a Skewness index of 2.47 which was very high hence the conclusion that the departure of the frequency distribution of machinery and equipment loans in a normal distribution is quite high. Also, the very high degree of Kurtosis of 6.46 indicate that the data for the machinery and equipment loans is not a normal distribution.

5.2.2 Debenture Capital Financing and Financial Performance of Sugar Companies

The study established the effect of debenture financing and financial performance of sugar companies. The constructs and attributes regarding debenture financing were evaluated by

respondents on a 5-point Likert scale and results revealed that security for debentures financing is required from a sugar company 39(40.2%) of the total respondents agreed (Mean = 3.773, SD = 1.015). Regarding the redeemable debentures as a financing mechanism in sugar companies, 43(44.3%) of the total respondents agreed (Mean = 4.010, SD = 0.895), implying that most of the sugar firms in Western Kenya utilised redeemable debentures as a financing mechanism for their firms. Further, on debenture financing convertibility to equity shares and ownership, 38(39.2%) of the total respondents agreed (Mean = 3.856 and SD = 0.803), this confirmed that debenture financing of most of the sugar firms in western Kenya were convertible to equity shares thus encouraging prospective investors to engage in debenture financing to sugar firms. Regarding the debentures rating in financing the sugar companies the majority of the respondents 48(49.5%) of the total respondents expressed strongly and positively to the concept (Mean = 4.402, SD = 0.609). Moreover on the concept of debenture interest charge, majority of the respondents 28(28.9%) agreed that the interest rate of debentures were affordable to sugar companies.

Factor loading analysis on the indicators of the effectiveness of the debenture financing indicators and financial performance of the sugar companies. The results revealed that financing using debentures of floating charge and title deed positively influenced performance of sugar firms with 0.869 weight loading. This loading factor weight reveal that the indicator of debenture financing contributes greatly to financial performance of sugar companies in western Kenya, through fairly affordable floating interest charge that minimizes the cost of financing sugar companies. Moreover for Debentures with Fixed Charge, the respondents revealed that fixed charge debentures are fair in terms of the cost of financing and therefore their minimization results in improved financial position of sugar companies with 0.741 weight loading. The effect of this debenture on financial performance of sugar companies is fairly high.

5.2.3 Preference Share Financing and Financial Performance

The findings on the effect of preference share financing on financial performance of sugar firms in Western Kenya the factor loading for indicators of the effectiveness of the preference share capital financing indicators and financial performance of the sugar companies. Redeemable preference Shares, the respondents expressed that financing using redeemable preference capital

financing has an effect performance of sugar firms and with 0.568 weight loading. This loading factor weight revealed that the indicator of redeemable preference capital financing contributes averagely to financial performance of sugar companies in western Kenya, by minimizing the cost of financing sugar companies. Convertible Preference Share capital, the respondents revealed that convertible preference capital financing are better in terms of the interest charge begged on this type of capital financing and therefore their minimization results in improved financial position or liquidity of sugar companies as it increases the ownership with unlimited liability with 0.726 weight loading. Therefore the effect size contribution of this convertible preference capital financing on financial performance of sugar companies is high.

Cumulative Preference Share Capital, the respondents revealed that this kind of financing in sugar firms maximizes the cost of finance and thus decreasing the liquidity of the sugar company. The fixed interest charge accumulates each time it is not paid and with 0.437 weight loading. The factor loading of this kind of preference share capital financing indicate that it has a negative effect on the financial performance of sugar companies through the cost of financing capital increases if unpaid during non-profit years leading to interest charge burden on the sugar firms. This has crippled these companies over time. Participating Preference share Capital, the respondents revealed that this kind of financing in sugar firms maximizes the benefits as it increases core capital to the firm and its deposits that are disposable for use to enhance financial leverage in the sugar companies and thus increasing the liquidity of the sugar company and with 0.881 weight loading. This factor loading weight reveal that this type of preference capital improves on the financial performance of sugar firms as it investors tend to be included in decision making in the sugar firms. This positively adds value to the firm and its financial performance.

5.2.4 Ordinary Share Capital Financing and Financial Performance of Sugar Firms

The results on the effect of ordinary share financing and financial performance of sugar firms in Western Kenya, indicate that ordinary share capital is correlated with financial performance of sugar firms in Western Kenya; the Pearson correlation coefficient (r =0.651) is a clear indication that ordinary share capital has a positive correlation with financial performance (p-values > 0.05). The regression analysis results reveal that ordinary share capital with a coefficient of determination of $r^2 = 0.424$ and r= 0.651 (F = 37.011, p =.000<0.05). This indicates that 42.4% of the variation on financial performance in sugar companies is influenced by ordinary share capital in financing the company operations. Further, it reveals that a unit increase in ordinary share capital financing causes 0.465 units change in financial performance of sugar firms and with a positive and statistically significant effect on financial performance (F = 37.011, p =.000<0.05) and it can be relied in the prediction of financial performance in sugar firms.

5.2.5 Retained Earnings Financing and Financial Performance of Sugar Firms

The findings on the effect of Retained Earnings Financing on financial performance of sugar firms in Western Kenya that the Pearson correlation coefficient was (r=0.568) indicating that Institutional Capital (Retained Earnings) has a positive correlation with financial performance (p = .000< 0.05). The regression results of Institutional Capital with a coefficient of determination of $r^2 = 0.602$ and r = 0.776 at 0.05 significance level, indicates that 60.2% of the variation on financial performance is influenced by Institutional Capital. The correlation analysis also show that there exist a positive relationship between Institutional Capital and financial performance. The results further indicate that a unit change in retained earnings causes 0.433 unit changes in

financial performance of sugar companies in western Kenya and this change is statistically significant.

5.2.6 Capital Structure Decisions and financial performance of sugar firms

Regression analysis results on the capital structure decisions and financial performance of sugar firms the results show a strong and positive association between the capital structure decisions and performance of sugar companies($R = 0.794^a$). Further, capital structure decisions (Loan financing, Debenture financing, preference share capital, ordinary share capital, institutional capital) account for 63.1% ($R^2 = 0.631$, p $=0.000$ <0.05) of variation in financial performance of sugar companies. The variables used in the model can be relied on in the prediction of performance of sugar companies up to 63.0% (Adjusted $R^2 = 0.630$, P = p<0.05). The ANOVA results showed that regression model variables were statistically significant (F = 46.502; p<0.05) and can be relied on for the prediction of performance in sugar companies. The coefficients were substituted into regression model and the equation changed to: ***Y = 12.51 + 0.633X_1+0.481X_2+0.578X_3+0.442X_4+ 0.467X_5 ;*** the results in the equation indicate that a unit change in loan financing causes 0.633 units change in financial performance of sugar firms in western Kenya. For debenture financing one unit change causes 0.481 units change in financial performance. Also one unit change in preference share capital financing it causes 0.578 units change in financial performance of sugar firms. The ordinary share capital unit change was found to cause 0.442 unit change in financial performance; and one unit change in institutional capital also known as retained earnings was found to cause a change of 0.467 units change in financial performance and these variables influence was statistically significant.

5.3 Conclusion

Based on the findings the study concludes that capital structure decisions positively influence performance of sugar firms in Kenya. Therefore the sugar firms should optimize their capital structure decisions to improve on their financial performance.

5.4 Recommendation

The sugar firms in Kenya should optimize their capital structure decisions to better their financial position for growth and solvency.

REFERENCES

Adekunle, A. O. & Sunday, O. K. (2010). Capital Structure and Firm Performance: Evidence from Nigeria, European Journal of Economics, Finance and Administrative Sciences, 25, 71-80.

Adesina, J. B., Nwidobie, B. M., & Adesina, O. O. (2015). Capital structure and financial performance in Nigeria. *International Journal of Business and Social Research*, 5(2), 21-31

Alihodzic, A., & Eric, D. (2013, June 19). Calculation of Average Weighted Cost of Capital for Individual Shares of Sarajevo and Banja Luka Stock Exchange.

Armadeep. T., (2013). Impact of Cost of Capital in Decision Making. *Indian Journal of Applied* Research, 100-102.

AYDOG˘ AN ALTI (2006).how Persistent Is the Impact of Market Timing on Capital Structure

Ben-Shahar, H. (1968). The Capital Structure and the Cost of Capital: A Suggested Exposition. *The Journal of Finance*, 639-653.

Berger, A. a. (2006). Capital structure and firm performance:a new approach to testing agency theory and an application to the banking industry. Journal of Banking and Finance , 30, 1065 -1102

Bragg, S. (2013). What are headline earnings. http://www.accountingtools.com/whatare-headline-earnings.html Date of access: 25 Feb. 2019

C.Myers, S., (2001). Capital Structure, Asset utilization, Profitability and Growth. The Journal of EconomisPerspectives , 81-102.

Chakraborty, I. (2010). Capital structure in an emerging stock market: The case of India. Research in International Business and Finance, 24, 295-314.

Chakraborty, I. (2010). Capital Structure in an Emerging Stock Market: The Case of India. Research in International Business and Finance, 24(3), 295–314. https://doi.org/10.1016/j.ribaf

Chen, J. (2004). Determinants of capital structure of Chinese listed companies. Journal of Business Research , 57, 121- 144.

Cohen, L., Manion, L. & Morrison, K. (2007). *Research Methods in Education* (5th ed.). New York, RoultedgeFlaner.

Connors, E., (2001).The impact of the environmental risk on the cost of equity capital evidence from the toxic release inventory, USA

Dauda M., (2012). Impact of Business Risk on Corporate Capital Structure of Publicly-Listed Nigerian Companies of a panel of ninety-four Nigerian listed firms from 2000 to 2006

Deesomsak, R. a. (2004). The determinants of capital structure: evidence from the Asia Pacific region. Journal of Multinational Financial Management, 14 (4-5), 387- 405

Dejan, E., &Almir, A. (2013, June 20). Calculation of average weighted cost of capital for individual shares of Sarajevo and Banja Luka stock exchange. Zadec, Croatia.

Demirgüç, K., A. (2006). Finance and economic development: Policy Choices for developing countries.

Dunn, J. (2010). Financial reporting and analysis. United Kingdom: Wiley. Economics,Vol. 13, pp: 187-221.

Ejupi, E., & Ferati, R. (2015). Capital Stucture and Profitbility : The Macedonian CASE Rametulla Ferati , PhD Candidate. European Scientific Journal, 8(7), 51–58. https://doi.org/10.1016/j.jbankfin.2008.07.019

Elena, Alexandra Nenu, Georgeta Vintila and ̧ Stefan Cristian Gherghina (2018).The Impact of Capital Structure on Risk and Firm Performance: Empirical Evidence for the Bucharest Stock Exchange Listed Companies

Eriki P.O. and Osifo O., (2017). Effect of Debt - Equity Mix on Financial Performance of Downstream Oil and Gas Firms in Nigeria. Journal of Economics & Finance, Vol. 1 Issue No 1

Eriksson, A., (2017). Government Financing of SMEs. A case study of the Swedish business development check for internationalization, Master Thesis, Umeå Univesity

Fama, E. F. (2002). Testing Trade-Off and Pecking Order Predictions about Dividends and Debt. The Review of Financial Studies , 15, 1-33.

Gabriela Mihalca (2011).the effects of the market conditions on the firm's capital

Gabrijelcic, M., Herman, U., & Lenarcic, A. (2016). Firm performance and (foreign) debt financing before and during the crisis: evidence from firm-level data. Banka Slovenije

Ganbold, B. (2008). Improving access to finance for SME: international good experiences and lessons for Mongolia. Institute of Developing Economies.

Ganbold, B. (2008). Improving access to finance for SME: international good experiences and lessons for Mongolia. Institute of Developing Economies

Gapenski, L. C. (1987). An empirical study of the relationships between leverage and capital costs for electric utilities. Public Utility research Centre. Florida, United States of America.

Gathara, Z.M, Kilika, J M., Maingi J N. (2019) Effect of Equity on Financial Performance of Selected Companies Listed in the Nairobi Securities Exchange, Kenya, International Journal of Business & Law Research 7(1):1-24

Gathogo, G., &Ragui, D. M. (2014). The Company's capital structure Kenya: What Determines It? *Research Journal of Finance and Accounting*, 5(5).

Gaver, J. J., &Gaver, K. M. (1993). Additional Evidence on The Association Between The Investment Opportunity Set and Corporate Financing, Dividend, and Pompensation Policy. Elsevier Science, 16(1993), 125-160.

Ghosh, C. (2000). The pricing of seasoned equity offerings: evidence from REITs. Real Estate Economics , 28, 363-384

Githire, C. and Muturi, W. (2015). Effects of Capital Structure On Financial Performance Of Firms In Kenya: Evidence From Firms Listed At The Nairobi Securities Exchange, *International Journal of Economics*, Commerce and Management United Kingdom Vol. III, Issue 4

Githire, C., & Muturi, W. (2015). Capital structure and financial performance in Kenya: Evidence from firms listed at the Nairobi Securities Exchange. International Journal of Economics, Commerce and Management, 3(4), 1–10. https://doi.org/10.1017/CBO9781107415324.004

Goyal and Frank. (2003). Testing the pecking order theory of capital structure. *Journal of Financial Economics*

Gul, S., Khan, M. B., Razzaq, N., & Saif, N. (2012). How Firm Characteristics Affect the Capital Structure in Banking and Insurance Sector in United States. *European Journal of Business and Management,* 4(12).

Harding, D. (2005). The Sugar Campaign for change (SUCCAM) Kenya; An inside Story of success and Continuing struggle; Action Aid International.

Higgins, R.C. (2009). Analysis for financial management. 9th ed. New York: McGrawHill.

Huang, S. a. (2006). The determinants of capital structure: evidence from China. China Economic Review , 17, 14-36.

Huang, S. and. Song., T., (2006). The determinants of capital structure: evidence from China. China Economic Review , 17, 14-36.

Hussainey, K., Mgbame, C.O. & Chijoke-Mgbame, A.M. (2011).Dividend policy and share price volatility: UK evidence. The Journal of Risk Finance, 12(1):57-68.

Investopedia.(2014) Retrieved from http://www.investopedia.com

Ivanovic, S., Baresa, S., & Sinisa, B. (2011). Factoring: Alternative model of financing. UTMS Journal of Economics, 2(2), 189- 206.

Jaggi, B., & Gul, F. A. (1999). Joint Analysis of Effect of the investment opportunity set, and Free Cash Flow Measures in Corporate Debt Policy. Review of Quantitative Finance and Accounting, 12(1999),371-381.

Jagongo, A. & Mutswenje, V.S. (2014). A survey of the factors influencing investment decisions: the case of individual investors at the NSE. *International Journal of Humanities and Social Science*, 4(4):92-101

Jaramillo, F., & Schiantarelli, F. (2016). Access to long term debt and effects on firms' performance: lessons from Equador. *Term finance: theory and evidence*, (p. 37). Washington D.C.

Jasra, J. M., Hunjra, A. I., Rehman, A. U., Azam, R. I., & Khan, M. A. (2012). Determinants of business success of Small and Medium Enterprises

Jensen, M. (1986). Agency cost and free cash flow, corporate finance and takeovers. American Economic Review , 76, 323-339.

Kajirwa, H. I. (2015). Effects of debt on firm performance: A survey of commercial banks listed on Nairobi securities exchange. *Global Journal of Advanced Research*, *2*(6), 1025-1029.

Keasey, K., & McGuinness, P. (2010). Small new firms and the return to alternative sources of finance. Small Business Economics, 2(3), 213-222.

Kennon, J. (2010). Earnings yield as a value investing strategy. http://www.joshuakennon.com/earnings-yield-as-a-value-investing-strategy/ Date of access: 16 Jan. 2019

Kenya Sugar Board, (2019).Year Book of Sugar Statistics.

Kerlinger, F. N. (1973). *Foundations of Behavioral Research.* 2nd edition. Holt, Rinehart and Winston.

Khadka, H. B. (2006). Leverage and the Cost of Capital: Some Tests Using Nepalese Data. *The Journal of Nepaleses Business Studies*, 85-91.

Kimki, A. (1997). Intergenerational succession in small family business: borrowing constraints and optimal timing of succession. Small Business Economics , 9, 309 - 318.

Koppeschaar, Z.R., Sturdy, J., Du Toit, E., Deysel, D.J., Rossouw, J., Van Wyk, H.A., Gaie-Booysen, F.F., Papageorgiou, K., Smith, C. & Van der Merwe, C.M. (2013). Descriptive accounting: IFRS focus. 18thed. Pretoria: Van Schaik

Koskei, N. K. (2017). Capital structure relation to the performance of an organization: private sugar manufacturing companies. *International Journal of Innovative Research and Development*, 6(9), 98-103

Kothari, C.R. (2009). *Research Methodology*. New Delhi: New Age International.

Kraja, Y. B., Osmani, E., &Molla, F. (2014). The Role of the Government Policy for Support the SMEs. *International Journal of Interdisciplinary Research* SIPARUNTON, 1(4)

Lambe, I. (2014). Corporate capital structure and firm's market value in Nigeria. *Research Journal of Finance and Accounting,* 5, 12-16.

Leland, H. and Pyle, H., 1977. "Informational asymmetries, financial structure, and financial intermediation," *Journal of Finance*, Vol.32, No2, pp.371-87.

Mahakud, S. M. (2012). Are Trade-off and Pecking Order Theories of Capital Structure Mutually Exclusive? Evidence from Indian Manufacturing Companies. *Journal of Management Research Vol.12*, No.1 , 41-55.

Miller, M.H , (1977). "Debt and taxes", Journal of Finance, Vol. 32 No. 2, pp. 261-75.

Mirea, M., Asalos, N., &Ainur, A. K. (2007).Factors determining the firm's cost of capital.

Mlonzi, V.F., Kruger, J. & Ntoesane, M.G. (2011). Share price reaction to earnings announcement on the JSE-AltX: A test for mark efficiency. Southern African Business review, 15(3):142-166.

Modigliani, F and Miller, M.H. (1958). The cost of capital, corporation finance and the theory of investment, American Economic Review, June, pp: 261-297.

Mohd I M Alnajjar(2015).business Risk Impact on Capital Structure: A Case of Jordan Industrial Sector, industrial sector ofAmman Stock Exchange for the period of 2009-2011

Mohd, R., and Shuhymee A., (2015). Effects Of Equity And Debt Financing On SME Preformance In Malaysia, Journal of Risk Finance, 6 (5), 438 – 445.

Morris, M. R. (2001). Creating Shareholder Value Through Capital Structure Optimization. Value Incorporated.

Mugenda O., M. Mugenda A., G., (2003). Research Methods; Quantitative and Qualitative Approaches.Nairobi: Acts press.

Muhammad Shadab Abdul Sattar (2015). Cost of Capital – The Effect to the Firm Value and Profitability; Empirical Evidences in Case of Personal Goods (Textile) Sector of KSE 100 Index

Munene K.,H., (2006). Impact on profitability on Capital Structure of Companies Listed at the Nairobi Stock Exchange. Unpublished MBA Thesis, University of Nairobi

Musiega, M. G et al (2013). Capital Structure and Performance: Evidence from Listed Non-Financial Firms on Nairobi Securities Exchange (NSE), Kenya. International Journal for Management Science and Technology, 1(2).

Musila P., (2015). The Relationship between Equity Financing and Financial Performance of the Energy and Petroleum Companies Listed At the Nairobi Securities Exchange Peter Musila, Unpublished Masters Thesis, University Of Nairobi

Muzir, E. (2011). Triangle Relationship among Firm size, Capital Structure Choice and Financial Performance: some evidence from Turkey. Journal of Management Research , 11 (2), 87-89.

Nachmias C., F., Nachmias D. (1996). Research Methods in the Social Sciences. St. Martins

Nenova, T., ThioroNiang, C., & Ahmad, A. (2009). Bringing Finance to Pakistan's Poor: Access to Finance for Small Enterprises and the Underserved

Nguyen T., Huong, V and Bartolacci F. (2017). Government support and firm financial performance: New evidence from a transitional economy, Munich Personal RePEc Archive MPRA Paper No. 81752.

Njagi, I. K., Kimani, E. M. & Kariuki, S. (2017). Equity financing and financial performance of Small and Medium Enterprises in Embu Town, Kenya. International Academic Journal of Economics and Finance, 2(3), 74-91

Oke, S., & Babatunde, A. (2011). Capital Structure and Industrial Performance in Nigeria (1999-2007). Internacional Business and Management, 2(1), 100–106.

Onaolapo, A. A. and Kajola, S. O. (2010). Capital Structure and Firm Performance: Evidence from Nigeria, European Journal of Economics, Finance and Administrative Science, 25, 70-82

Onchong'a, E. N., Muturi, W. & Atambo, W. (2016). Effects of debt financing on businesses firms financial performance. *International Journal of Social Sciences and Information Technology,* 2(5), 723-737

Pandey, I. (2011). Capital Structure and the Cost of Capital. Delhi: Sharma Publishers.

Prabansari, Y., &Kusuma, H. (2005). Factors Affecting Capital Structure Manufacturing Companies Go Public in Jakarta Stock Exchange. Synergies:Special Edition on Finance. Press 1996 Social Science.

Purwohandoko. (2017). Empirical Study of the Relationship Between Profitability Expected for Google Pages Beta on Shares Traded onJakarta Stock Exchange Capital Asset Pricing Model Approach. Malang:

Rajan, R.G and Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. Journal of Finance, Vol. 50, No. 5, pp: 1421-1460.

Roden, D. (1995). Corporate capital structure decisions: evidence from leveraged buyouts. Financial Management , 24, 76-87.

Roe and Troege (2016).The impact of the tax benefits of debt in the capital structure of firm and the stability of the financial system, Belgium.

Ronoh, C., & Ntoiti, J. (2015). Effect of Capital Structure on Financial Performance of Listed Commercial Banks in Kenya . a Case Study of Kenya Commercial Bank Limited . Cheruyot Ronoh Effect of Capital Structure on Financial Performance of Listed Commercial Banks in Kenya a. The Strategic Journal of Business &change Management, 2(72), 750–781

Ross, S. a. (2001).Corporate Finance 6th Edition.New York: Graw-Hill Companies Inc

Shieh et al.(2001), state that debt interest, profit, and the growth of the company'

Shubita, M. F., & Alswalhah, J. M. (2012). The Relationship between Capital Structure and Profitability. International Journal of Business and Social Science, 3(16), 104–112. https://doi.org/10.1108/03074350810915851

Singh, M. & Davidson III, W.N. (2004). "Agency Costs, Ownership Structure and Corporate

Steenkamp, M. (2013). Headline earnings per share (HEPS) – Part 2 How calculate HEPS. http://www.rsmbettyanddickson.co.za/Articles/Article-Heps-How-tocalculate-Part2. aspx Date of access: 26 Jan. 2019.

Stephen A.Ross, R. W. (2001). Corporate Finance.New York: Mc Graw Hill.

Sucam (2003). A summary of the Recommendations of the Sugar Industry Task Force Appointed By The Minister of Agriculture on 27 March (2003) and Checklist to Assess the Performance of the Government in Implementing the Recommendations of the Sugar industry Task force;http;www.kenyalink.org/sucam

Suresha and Shefali (2013).Five independent variable, such as liquidity, size of company, product variability, profitability, and tangibility Tarus et al. (2001).Kenyan Firms Listed, NSE

Takalo, T., & Tanayama, T. (2010). Adverse selection and financing of innovation: is there a need for R&D subsidies? *The Journal of Technology Transfer, 35*(1), 16-41

Thao B., W. P Wijewardana (2012) Financial leverage, firm growth and financial strength in the listed companies. Sri Lanka

Tirmizi, M. A., & Ahmad, M. (2013). Impact Of Retained Earnings On The Maximization Of Firm Value And Shareholders Wealth. African Journal of Business Management Full, 7(18), 1833–1844. https://doi.org/10.5897/AJBM12.111

Titman, S. and Wesseles R. (2018), the relationship between capital structure and share prices in NSE, journal of Finance 1-19

Umar M, Tanveer Z, Aslam S &Sajid M. (2012). Impact of Capital Structure on Firms' Financial performance: Evidence from Pakistan. Research Journal of Finance and Accounting , 1.

Uremadu, S. O., & Efobi, U. R. (2012). The Impact of Capital Structure and Liquidity on Corporate Returns In Nigeria: Evidence From Manufacturing Firms. International Journal of Academic Research in Accounting, Finance and Management Sciences, 2(3), 1–16.

Vaidya, D.(2014). Dummies guide to earnings per share. http://www.wallstreetmojo.com/earnings-per-share-basic-eps-diluted-eps. html Date of access: 19 Feb. 2019.

William Beach, Rea S. Hederman, Jr., and Guinevere Nell (2008).Economic Effects of Increasing the Tax Rates on Capital Gains and Dividends

Wooldridge, J. M. (2012). Introductory Econometrics. A Modern Approach. Fifth Edition. Michigan State University

Wu, A. (2016). The signal effect of Government R&D Subsidies in China: Do ownership matter? Technological Forecasting and Social Change

Wu, J., Song, J., & Zeng, C. (2008). An empirical evidence of small business financing in China. Management Research News, 31(12), 959-975.

Zender, M. L. (2010).Debt Capacity and Tests of Capital Structure.Journal of Financial and Quantitative Analysis , 45 (5), 1161 - 1187.

Zhang (2010).profitability, growth company, tangibility as, the size of the company, and the company's capital structure against age..Beijing, China

Zhang, H., Li, L., Zhou, D., & Zhou, P. (2014). Political connections, government subsidies and firm financial performance: Evidence from renewable energy manufacturing in China. Renewable Energy, 63, 330-336

APPENDICES

Appendix I: Financial performance: Cumulative Report : Secondary Data

Year															
Debt															
Equity															
Operating Cost															
Operating Income															
Gross Income															
Current Assets															
Current Liabilities															
Asset Base															
Profit															
Sales															

Appendix 1I: Questionnaire

My name is **BOAZ OMONDI ODEYO**, a Doctor of philosophy Degree student in Finance at Jaramogi Oginga Odinga University of Science and Technology. I am carrying out a research project titled: Effect of Capital Structure decisions on financial performance of sugar firms in western Kenya. I will be working with research assistance. We intend to issue a self-administered questionnaire. Filling of questionnaires is estimated to take 10 to 15 minutes. This survey is directed towards improving the performance of sugar industries in Kenya and shall not be used for any other purpose other than this research. It is therefore my humble request that you respond to the questions accordingly.

PART A: Background information

a) What is your Gender?   Male   [ ]   Female   [ ]

b) How old are you?

    18-25 years   [ ]   26-33 Years   [ ]

    34-41 years   [ ]   Over 42 years   [ ]

c) What is your level of education?

    None   [ ]   Primary   [ ]

    Secondary   [ ]   Tertiary   [ ]

d) What Position do you hold in the organization? _____

e) In what departments have you worked in the company?

    ▪ Finance   [ ]

    ▪ Production   [ ]

    ▪ General Administration   [ ]

    ▪ Internal Audit   [ ]

    ▪ All the above   [ ]

f) Have you worked elsewhere other than in the Sugar Industry?

        Yes   [ ]   No   [ ]

g) For how long have you been working at the company?

    Less than 3 years [ ]   3-5 years   [ ]   More than 5 years   [ ]

h) For how long has this firm been in operations_____

SECTION B: LOAN FINANCING

The following statements relate to aspects of Loan financing in your organization. Indicate your level of agreement with the statements on a scale of 1 to 5 as 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA).

Loan Financing	SD	D	N	A	SA
Our Company relies greatly on Asset financing					
Our Company relies heavily on Bank overdraft					
Our Company relies greatly on lease financing					
Our Company relies greatly on inventory financing					
The Interest charged on Loan is affordable for to our company					
The Repayment Period for loans accessed by our company is manageable					

SECTION C: DEBENTURE FINANCING

The following statements relate to aspects of Debenture Financing in your organization. Indicate your level of agreement with the statements on a scale of 1 to 5 as 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA).

Debenture Financing	SD	D	N	A	SA
Our debentures are highly Secured					
Our Debentures share are highly Redeemable					
Our debentures financing are highly Convertible					
We use a series of debentures rated sequentially from the first					
The interest rate on our debentures are affordable					

SECTION D: PREFERENCE SHARES

The following statements relate to aspects of Preference Shares financing in your organization. Indicate your level of agreement with the statements on a scale of 1 to 5 as 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA).

Preference Shares Financing	SD	D	N	A	SA
Our preference share capital are highly Redeemable					
Our preference share capital are highly Convertible into ordinary shares					
Interest on our preference shares capital are Cumulative					
Our Participating Preference shareholders receive manageable additional dividends					
Rate of Dividend on our preference shares are affordable					

SECTION E: ORDINARY SHARE CAPITAL

The following statements relate to aspects of Ordinary Shares financing in your organization. Indicate your level of agreement with the statements on a scale of 1 to 5 as 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA).

Ordinary Share Capital	SD	D	N	A	SA
Our Company's Issued Share is sufficient for our capital needs					
Our Paid up Share Capital is sufficient for our company capital needs					
Share capital allows us flexibility in terms of repayment					
Our company has exhausted its authorized share capital					
Dividend on Share Capital for our shareholders is manageable to allow the company to run					

SECTION F: RETAINED EARNINGS

The following statements relate to aspects of Retained Earnings financing in your organization. Indicate your level of agreement with the statements on a scale of 1 to 5 as 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Neutral (N); 4 = Agree (A); 5 = Strongly Agree (SA).

Retained Earnings	SD	D	N	A	SA
There is adequate retained earnings for our company					
Amount of Retained Earning used as capital in our company is sufficient					
Our company has witnessed Growth in Retained Earnings over the years					
Our company regularly Retains Profits as capital					
Profitability of retained earnings is higher compared to other sources of capital					

SECTION G: FINANCIAL PERFORMANCE

Year						
Measure						
Profit (Loss)						
Turnover						
EPS						
Market Share						
ROA						

OPTION TWO: DOCUMENT ANALYSIS GUIDE

Year					
Measure					
Commercial Loans					
Debentures					
Preference Shares					
Ordinary Shares					
Retained Earnings					
Profit (Loss)					
Turnover					
EPS					
Market Share					
ROA					

Researcher…………………………………Signature…………………………Date…………

Appendix III: Interview Schedule

Section A: Preference Share Capital Financing

Please in your own opinion how do you rate the effectiveness of the preference share capital financing indicators and financial performance of the sugar companies? Using weights of 0.00 to 1.00 indicate the index weight for each indicator).

Preference share Capital financing indicator	Qualitative information (Responses from the interviews)	Factor loading effect on performance of Sugar Companies(range weight index 0.00 to 1.00)
Redeemable preference Shares		
Convertible Preference Share capital		
Cumulative Preference Share Capital		
Participating Preference share Capital		

Section: B: Debenture Financing

Please in your own opinion how do you rate the effectiveness of the debenture financing indicators and financial performance of the sugar companies? Using weights of 0.00 to 1.00 indicate the index weight for each indicator).

Debenture type financing indicator	Qualitative information (Responses from the interviews)	Factor loading effect on performance of Sugar Companies (range weight index 0.00 to 1.00)
Debentures with floating charge and title deed (Unsecured Debentures)		
Debentures with Fixed Charge (Secured Debentures)		
Convertible Debentures		

Appendix IV: List of Sugar Manufacturing Companies in Western Kenya, their total employees and year of incorporations

	Company Name	Total Employees	Total Population	Year of Incorporation
1	Butali Sugar Company Ltd	961	961	2011
2	Chemelil Sugar Company Ltd	1599	1599	1968
3	Kibos Sugar Company Ltd	669	669	2007
4	Muhoroni Sugar Company Ltd	781	781	1966
5	Mumias Sugar Company Ltd	1948	1948	1973
6	Nzoia Sugar Company Ltd	1249	1249	1978
7	Soin Sugar Company Ltd	739	739	2006
8	Sony Sugar Company Ltd	621	621	1976
9	Sukari Sugar Company Ltd	481	481	2012
10	Transmara, Sugar Company Ltd	899	899	2011
11	West Kenya Sugar Company Ltd	998	998	1981
	Total	10,945	10,945	

Source :(Kenya Sugar Board, 2020)