CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF KENYA TEA DEVELOPMENT AGENCY PROCESSING FACTORIES IN NYERI COUNTY, KENYA

GICHUKI SHELMITH WANJIRA
D53/NYI/PT/37418/2017

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS, ECONOMICS AND TOURISM IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION OF KENYATTA UNIVERSITY

NOVEMBER, 2025

DECLARATION

This project is my own original work and has not been presented for award of any degree in any University. No part of this project should be reproduced without the permission of the author or Kenyatta University.

Signed: _____ _____

Gichuki Shelmith Wanjira **DATE:**
D53/NYI/PT/37418/2017

This research project has been submitted for the course examination with my approval as the University supervisor.

Signed: _____ _____

Dr. Farida Abdul, **DATE:**
Department of Accounting & Finance,
School of Business, Economics and Tourism
Kenyatta University.

DEDICATION

This research project is dedicated to all who played an instrumental role in the course of developing this document. I dedicate this project to my loving husband Chris Mathenge, my sons Ryan and Xavier, my mum and dad Mr. and Mrs. Suleiman Gichuki, my siblings Fred and Grace and my entire family for their love and encouragement. I also dedicate this to the Almighty God who provided me with good health and the gift of life.

ACKNOWLEDGEMENTS

I acknowledge the support of Dr. Farida Abdul, my supervisor for her guidance in the course of preparing this research project and ensuring that the task was completed within the set timelines.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

OPERATIONAL DEFINITION OF TERMS

Capital Structure Evaluation: Represents the periodic analysis of all components of the debt and equity financing used by a business. This was measured by long term debt, short term debt, external equity and internal equity.

Dividend Payout: Represents the proportion of earnings distributed to shareholders in the form of dividends, calculated as Total Cash Dividends divided by Net Income.

External Equity: Represents the funds raised through equity issues. It can be through initial public offering or second equity offerings**.**

Financial Performance: It refers to how well tea factories utilize their resources to generate income which exceed the costs incurred in generating the revenue. This was indicated by dividend pay-out ratio

Internal Equity: Refers to the use of funds available within the business to finance new investments; they are mainly the retained earnings/profits.

Long Term Debts: These are financial obligations that are repaid over a period of more than 12 months. They are mainly used to finance fixed assets which are long term in nature.

Short Term Debts: Represents the financial obligations that are repaid with a short period of time which is basically below one year.

ABBREVIATIONS AND ACRONYMS

AFA:	Agriculture and Food Authority
CAGR:	Compound Annual Growth Rate
DPR:	Dividend Pay-out Ratio
GDP:	Gross domestic product
IPO:	Initial Public Offer
ITC:	International Trade Center
KTDA:	Kenya Tea Development Agency
LTD	Limited Liability
ROA:	Return on assets
ROE:	Return on Equity
SMEs:	Small and Medium Enterprises
SPSS:	Statistical Package for Social Scientists
USD:	United States Dollar
WACC	Weighted Average Cost Of Capital

ABSTRACT

Globally, save for China, the tea industry has faced a significant market decline. The general performance of the Kenyan tea industry posted mixed results, but more often demonstrated a declining trajectory. The financial performance of the tea factories, as shown by profitability metrics and dividend payout ratios, indicated a decline. Group financial results put the dividend payout ratio at 14% in 2020, 12% in 2021, 10.5% in 2022, and 11% in 2023. Prudent and well-researched financing decisions have the potential of optimizing the benefits accruing from consumption of funds while minimizing the risks involved. The study sought to establish the effect of capital structure on the financial performance of tea factories in Nyeri County, Kenya. Specifically, the study aimed to determine the effect of long-term debt, short-term debt, internal equity, and external equity on the financial performance of Kenya Tea Development Authority-managed tea factories. Financial performance was assessed using the dividend payout ratio, an insightful profitability metric. The study used a causal research design. The study employed the census method, which involved collecting data on all six Kenya Tea Development Authority-managed tea factories in Nyeri County. The study relied on secondary data collected from all six tea factories for the period 2013 to 2022, making a total of 60 observations. The data was quantitative in nature. Panel regression analysis was used for the time series data. Descriptive and inferential statistics were used for analysis. The descriptive statistics included means and standard deviations. Diagnostic tests were carried out to test the assumptions in the study. The researcher was guided by Kenyatta University ethical codes when collecting, analyzing, and citing the literature. The findings indicated that short-term debt had a positive coefficient of 0.076 with a highly significant p-value of 0.001, suggesting that increasing short-term debt positively affects firm performance, likely due to its flexibility and lower interest costs. Internal equity also had a positive and significant effect, with a coefficient of 0.081 and a p-value of 0.006, highlighting that retained earnings are a valuable financing source, supporting stability without increasing debt obligations. External equity showed a positive effect as well, with a coefficient of 0.054 and a p-value of 0.034, implying that funding from external investors contributes to firm performance by providing capital without immediate repayment, thus enhancing reinvestment capabilities. Conversely, long-term debt presented a positive but statistically insignificant coefficient of 0.064 ($p = 0.287$), indicating that it does not play a substantial role in enhancing performance, potentially due to higher interest costs and repayment terms that may counterbalance its benefits. These results underscore that short-term debt, internal equity, and external equity are effective financing sources for Kenyan tea factories, while long-term debt may be less critical, reflecting the industry's preference for financing methods that support liquidity and flexible growth.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The tea industry's global performance and growth have shown a mixture of favorable and unfavorable results. India is now facing a significant issue with the declining growth of the tea industry. Officials have seen a consistent decrease of 6.5 percent on average over a five-year period, from 2016 to 2020. India's export market has seen a significant decline, which has been matched by a similar fall in production levels (Basnayake & Gunaratne, 2022). According to statistics from the Indian Tea Exporters Association (ITEA), India saw a decline in tea exports from 252 million kilograms (m.kg) in 2019 to 185 m.kg in 2020, resulting in a 28% decrease.

In Sri Lanka, the tea industry has seen a substantial decline in performance, reaching a particularly poor condition. Based on the official statistics from the Sri Lanka Tea Board for the year 2020, the compound annual average growth rate (CAGR) is projected to be -1.5 percent, indicating a declining trend in prosperity (Cowton & Pilz, 2019). As to the Sri Lanka Tea Board (2020), the Sri Lankan tea industry has seen a decrease in the volume, standard, and competitiveness in the global market for exports. The decline in performance has caused sustainability concerns since there has been a significant loss in Sri-Linkan's market share. The Sri Lankan tea sector now generates foreign currency revenues of $1.24 million per year, which is a decrease from the previously estimated $1.6 billion per year a decade earlier. Between 2016 and 2020, some Sri Lankan tea plants faced closing as a result of increased inefficiencies and a drop in overall performance.

In contrast, China has diverged from the pattern of declining performance seen in other places where tea is grown. According to statistics from the International Trade Center (2021), there has been a significant decrease of around 12.8 percent in the global value of tea exports between

2015 and 2019. Nevertheless, this stipulation did not apply to China, since the value of Chinese tea exports saw a substantial increase of 46.5 percent. In 2019, the tea sales coming from China reached a total value of $2 billion, reflecting a growth rate of 13.1 percent compared to the previous year's figures. Based on the research conducted by Hong and Song (2019), China's tea exports in 2019 were valued at $361 million, which is over six times more than Kenya's tea exports.

The global tea sector has shown a level of volatility, while seeing substantial growth from 2021 to 2023. The Food and Agriculture Authority (2023) reported a global tea production growth rate of 13.76 percent in 2021. This increase is similar to that of individual global participants, such as India, which saw a growth rate of 21.26 percent. Sri Lanka had a substantial gain of 24.18 percent in tea production, while Malawi witnessed a growth rate of 11 percent. Conversely, Bangladesh had a significant 18.02 percent rise in tea production. Unlike other tea-producing countries, Kenya saw a decline in 2021, with a 9.76 percent fall in tea production. In recent years, the global tea market has seen substantial growth, with its value reaching US$ 23.2 Billion by the end of 2022 (FAO, 2023). Nevertheless, the sector's financial success as a whole remains questionable.

The performance of the Kenyan tea sector has shown a combination of positive and negative outcomes, with a tendency towards a downward trend. The production, auction sales, and exports have been adversely impacted. Only sales inside the local area have seen a little increase. Based on the data provided by the Agriculture and Food Authority (2021), the volume of tea sold by auction decreased from 35.35 million kilograms in January 2020 to 31.72 million kilograms in January 2021. The average tea auction prices declined from USD 2.29 per kilogram in January 2020 to USD 2.03 per kilogram in January 2021.

Similarly, there was a decline in output from 53.63 million kilograms in January 2020 to 48.89 kg in January 2021. However, the overall export quantity saw a modest increase from 44.00 Million Kilograms in January 2020 to 45.1 Million Kilograms in January 2021. The number of export destinations for Kenyan tea has dramatically raised from 43 to 50. Regarding local sales, there was a little improvement in numbers, with an increase from 2.95 million kilograms in January 2020 to 2.95 million kilograms in January 2021 (Agriculture and Food Authority, 2021).

Based on the yearly reports published by the Kenya Tea Development Agency (2021), the increase in KTDA Group income from 2019 to 2020 was rather slow, amounting to just 2.8 percent. In 2020, the sales amounted to Kshs 24.73 billion, which is an increase over the previous year's 24.06 billion. The boost was ascribed to a rise in production and sales quantities of tea. However, the payments paid to farmers saw a substantial decrease, dropping from Kshs 41.27 per Kg in 2019 to an average of Kshs 35.42 per Kg in 2020. The overall income generated by the tea factories administered by KTDA grew from Kshs 69.8 billion in 2019 to Kshs 79.0 billion in 2020, indicating a significant 13 percent rise. During the same time frame, there was a significant decrease of 6.6 percent in the average manufacturing cost. The mean percentage of net revenue disbursed to farmers was 66% across all factories administered by KTDA.

The profitability of the tea factories administered by KTDA was seeing a substantial decline. The group's financial records revealed a decline in earnings for the year 2020, dropping from Kshs 2.07 billion in 2019 to Kshs 1.78 billion. The decrease in profitability may be attributed to a significant decline in tea prices, which dropped by 9 percent. The average price of tea per

kilogram decreased from USD 2.57 in 2019 to USD 2.38 in 2020. The price of tea was USD 3.13 in 2017 and USD 3.14 in 2018, indicating a clear decline over time. In addition, the management mentioned the increasing cost of financing and the current Covid-19 outbreak, which has had severe consequences for enterprises worldwide.

1.1.1 Financial Performance

According to Arnold (2019), performance may be defined as the degree to which an organization achieves its goals, ambitions, plans, targets, aims, or objectives. The assessment of performance is most effectively conducted by conducting a comprehensive analysis that compares the tangible outcomes or outputs with the originally intended, planned, or predicted results. The concept of financial performance may be interpreted from several angles and is evaluated via the use of multiple indicators. According to Ngugi and Karina (2013), financial performance may be defined as an evaluation of both efficiency and effectiveness requirements. In his study, Warsame (2018) discusses financial performance as the capacity of a company to use its resources efficiently and effectively, resulting in substantial growth of shareholders' wealth and the attainment of predetermined goals and objectives. According to Shapiro and Hanouna (2019), financial success is often assessed by evaluating the total profits or losses incurred over a certain time frame. The proposed study will use dividend pay-out ratio as indicator of financial performance of Kenya Tea Development Agency processing factories.

The dividend payout ratio is a financial metric that represents the proportion of earnings paid out to shareholders in the form of dividends. It is calculated by dividing total dividends by net income or earnings. The dividend payout ratio serves as an indicator of financial performance as it reflects how much of the company's earnings are being distributed to shareholders rather than being retained for reinvestment or other uses. A high dividend payout ratio may indicate that a company is mature and generating stable profits, as it is able to consistently distribute a significant portion of its earnings to shareholders. On the other hand, a low dividend payout

ratio may suggest that a company is retaining more earnings for growth opportunities or to meet other financial obligations (Yashin & Koshelev, 2016).

In the context of the tea companies in Kenya, the dividend payout ratio is particularly important due to its impact on both the company and its shareholders. Oloruntoba and Adeleke (2018) emphasize that dividend decisions are crucial for determining the profitability of the organization and how earnings are distributed among stakeholders. The dividend policy adopted by these companies affects shareholder expectations regarding future returns on their investments. Salman et al. (2015) note that dividend policy is a contentious issue for many firms, especially those like tea factories that must balance various production costs and financial obligations. The decision on the dividend payout ratio can influence the company's share price and its ability to attract investors. For instance, Yashin and Koshelev (2016) argue that large dividend payouts may reduce the cost of capital but increase the value of the firm, ultimately impacting shareholder wealth.

Critics, however, point out the complexities surrounding dividend policy decisions. Manneh and Neser (2015) note that dividends are taxed, while capital gains remain untaxed unless shares are sold, which can affect the attractiveness of dividends to investors. Additionally, factors such as the amount retained for reinvestment can impact the company's future growth, potentially harming long-term investor interests (Ojuye, 2018). The dividend payout ratio is relevant to internal control practices and financial health in energy-producing companies as well. By analyzing this ratio, companies can assess their ability to generate consistent profits and distribute them to shareholders while maintaining financial stability. Effective internal controls ensure that dividend payments are made in accordance with company policies and financial regulations, contributing to overall financial health and investor confidence.

1.1.2 Capital Structure

According to Nagakura (2020), the assessment of capital structure involves the regular examination of the various elements of a company's debt and equity finance. The objective of the study is to assess the optimal composition of debt and equity for the firm. Yapa (2019) posits that the concept of capital structure pertains to the precise combination of debt and equity used by a company to finance its investments and operations. The concept of capital structure encompasses a distinct relationship between debt and equity. The concept refers to the composition and proportion of various financial instruments, such as equity share capital, preference share capital, debentures, long-term loans, and retained profits that a company should acquire in order to effectively operate its business operations. The concept of capital structure pertains to the many methods used by a company to get funds for its operational activities. Financing may be achieved either via debt or equity. The concept of capital structure pertains to the examination and evaluation of the many sources of cash used in the operation and management of a corporate organization (Davie & Puca, 2020).

Capital structure is a mix of sources of funding which include debts, equity, leases as well as deferred tax (Brooks & Mukherjee, 2018). Capital structure theory relates back to Modigliani and miller theory (1959) who termed capital structure as irrelevant whereas Jensen (1986) advocated for an optimal capital structure. The decision on the type of capital financing to use depends on several factors which include; business risks, tax exposure, financial flexibility, management styles, growth rate and market conditions. Capital structure can either be in form of debt financing or equity financing (Yapa, 2019).

Debt financing offers a lower cost of capital since its deductible for taxation purposes on the contrary debt financing puts a company at risk since it has to be repaid eventually. Debt financing can be grouped into long term debt and short term debt. Long term debt are those obligations that take more than twelve (12) months to be repaid (Ramachandran & Kakani,

2019). Ahmed Sheikh and Wang (2019) stated that long term debt is an important capital structure aspect and it is negatively related to return on asset hence its use should be controlled to ensure the company stays profitable. Chadha and Sharma (2020) stated that long term debt had no effect on return on asset but was negatively related to return on equity. The measure of longterm debt will be log of total long term debt.

Short term debt refers to financial obligations repaid within a short period of time which is usually less than 12 months. Short term debts are important since they increase a firm's liquidity and enable them conduct their operations smoothly. According to Maina and Ishmail (2014), short term debt was negatively related to financial performance and that most listed firms utilized short term debts as compared to long term debts. Birundu (2014) argues that for small and medium sized enterprises the type of financing used does not matter since it doesn't affect their financial performance. A firm that uses more debt to finance its operation is called a highly leveraged firm. The indicators of long term debt will be log of total short term debt.

Equity financing may be grouped into internal equity as well as external equity. Internal equity refers to internal funds ploughed back into the business and they comprise of retained earnings/profit (Nagakura, 2020). Retained earnings offer a cheaper source of finance since they do not involve any negotiation to obtain it. The pecking order theory stated that internal financing is the most preferred source of finance since it involves no cost at all. Nguyen and Rugman (2015) argues that internal equity is a major influence in firms performance and that it leads to improved financial performance. Internal equity will measured by retained earnings to total income ratio

External equity refers to obtaining sources of funds from people outside the organisation who eventually become shareholders when they provide funds (Yapa, 2019). This is done through initial public offering (IPO) or through a second public offering. External financing may not

be very appropriate since it leads to dilution of ownership. When a firm uses more of equity financing as compared to debt financing, it is said to have a conservative capital structure (Nagakura, 2020). Internal equity will measured by ordinary shares to total assets

1.1.3 The Tea Sector in Kenya

The tea industry in Kenya is regulated by the Agriculture and Food Authority (AFA) which has established under the crops Act in 2013. Tea processing in Kenya is done by large scale producers who produce 40% while tea produced by small scale producers is processed by the Kenya Tea Development Agency (KTDA) who produces 60%. The Kenya Tea Development Agency (KTDA), an organization that prides herself as the global leader in quality teas, is responsible for managing the tea sector affairs in the territory of Kenya (KTDA, 2023).

The private limited company is jointly owned by over six hundred thousand (600,000) smallholder tea farmers spread across 16 tea growing Kenyan counties. More specifically, the farmers own shares to the fifty four (54) tea factories that then jointly own KTDA holdings. Some factories have established fifteen (15) satellite factories to ease green leaf collection, distribution and processing. This brings the total number of factories to 69 owned by small holder tea farmers under KTDA arrangement (Ministry of Agriculture and Livestock Development, 2023).

The Kenya Tea Development Agency Holdings (KTDA) also owns eight other subsidiary companies that are involved in the tea sector value chain. These include Chai Trading Company Limited, Majani Insurance Brokers, KTDA (Management Services), Tea Machinery and Engineering Company Ltd, Kenya Tea Packers Limited, Greenland Fedha Limited, KTDA Foundation AND KTDA Power Company Limited (KTDA, 2023). In Kenya, tea is the top most foreign exchange earner taking up a share of about 26% of the total export earnings. Tea industry contributes about 4% of the country's gross domestic product (Gikunju et al., 2018).

According to the Kenya tea directorate, production of tea in KTDA managed factories has continued to rise in the past five years. Recently, in the last half of the year 2018 production increased by 4.4% leading to a production of 611 million kilograms (Kenya Tea Directorate, 2019).

1.1.4 KTDA Managed Tea Factories in Nyeri County

The Kenya Tea Development Agency (KTDA) manages 69 tea processing factories in the country which are distributed in different regions. Nyeri County is one of the largest tea producing county in Kenya. In Nyeri county, KTDA manages 6 tea factories namely; Gathuthi tea factory company limited, Iriaini tea factory company limited ,Ragati tea factory company limited, Gitugi tea factory company limited, Ndima tea factory company limited and Chinga tea factory company limited (KTDA, 2023).

For the six (6) tea factories managed by KTDA in Nyeri County, the annual revenues stood at 5,518 Million with tea payments to farmers improving from Kshs 3,089 Million in 2019 to Kshs 3,537 Million in 2020 in the county. Chinga Tea factory had the highest payment to farmers at Kshs 764 Million in 2020 compared to Kshs 706 Million paid in 2019. Gathuthi Tea Factory paid a total of Kshs 748 Million to farmers in 2020 compared to Kshs 644 Million paid in 2019. Ragati Tea Factory posted third highest payments to famer in the county distributing Kshs 740 Million in 2020 compared to Kshs 557 Million given out in 2019. Gitugi Tea Factory distributed payments worth Kshs 658 Million in 2020 compared to Kshs 532 Million distributed in 2019. Iriani Tea Factory had the least tea payments to farmers with Kshs 627 worth of payments in 2020 compared to Kshs 557 Million in 2019.

However, despite the increase in total assets by 6% in Chinga Tea Factory and total revenue to 1,205M in 2020, there Earnings After Tax (EAT) declined considerable by 2% translating to

decline in Return on Assets by 5.8% in 2020. The ROA continued to deep in 2021 and 2022 with 1.2% and 0.8% decline respective. Conversely, Gitugi Tea Factory and Iriani Tea Factory experienced declining profitability for the year 2020 by 14% and 16% respectively decline is mainly attributed to the following: Gitugi tea factory company limited and Ndima tea factory company limited revenue increased significantly but the same was not reflected in the increase of ROA in 2020. Gitugi tea factory company limited and Ndima tea factory company indicated a decline from 7% in 2019 to 4.8% in 2020 and from 6.8% in 2019 to 5.5% in 2020. The dividend pay out ratio of the six companies did not flourish post Covid-19 as indicated by significant overall decrease in dividend pay-out ratio by 2.5% in 2021 and 2.8% in 2023 (KTDA, 2023).

1.2 Statement of the problem

As reported by the Agriculture and Food Authority (2021), the general performance of the Kenyan tea industry has posted mixed results, but more often demonstrating a declining trajectory as pertains profitability indicated by return on assets. Financial performance of the factories as shown by dividend pay-out metrics indicated a steady decline. Group financial reports indicated that profit for the year 2020 decreased to Kshs 1.78 billion from Kshs 2.07 billion in 2019. Despite the increase in total assets by 6% in Chinga Tea Factory and total revenue to 1,205M in 2020, there dividend pay-out ratio declined considerable by 11% in 2022. The dividend continued to deep in 2023 with 5.2%. Conversely, Gitugi Tea Factory and Iriani Tea Factory experienced declining bonuses for the year 2020 by 14% and 16% respectively. Gitugi tea factory company limited and Ndima tea factory company indicated a decline in bonuses from 7% in 2022 to 4.8% in 2023 and from 6.8% in 2022 to 5.5% in 2023 respectively.

The discussion of the effect capital structure evaluation on financial performance has been a long one and the controversies involved show no signs of ending soon. The significance of the cost of capital component in financing decisions is indispensable. Prudent and well researched

financing decisions has the potential of optimizing the benefits accruing from consumption of funds while minimizing on the risks involved (Ardalan, 2017). Nonetheless, there are many unresolved issues surrounding the subject matter. There are still many unresolved gaps on the subject matter.

A study by Yegon *et al.,* (2019) focused on capital structure and profitability of the banking sector in Kenya. The output showed that total debt lacks any useful association with profitability in support of the Modigliani-Miller Irrelevance Theorem. Gaps are observed as the results contrast with other pasts studies such as Koech (2018) who indicated a significant inverse effect of debt on financial performance. It also contradicts other theories such as trade off theory that argue that debt helps in improving performance up to a certain optimum.

Ranabhat (2019) carried out a study on internal factors on financial performance of banks in Nepal. The output showed that short term debt and long term debt components of capital have a negative implication on financial performance. Contextually, gaps arise as most studies on the subject are foreign in background. Empirically, gaps are identified as the results with some foundations of theory such as Modigliani and Miller (1963) and past studies. Koech (2018) considered the effect of capital structure on profitability and established that the debt component of capital structure was inversely related to performance. Conceptual gaps are evident on the need to cover more capital structure variables in the analysis other than just debt. The components of debt and equity also need to be split into sub components for a deeper examination.

From the foregoing discussion, it is evident that financial performance remains a great problem affecting tea factories. It is also clear that though studies have attempted to focus on the subject matter, there are still many unresolved gaps regarding capital structure evaluation and financial

performance. To address the enormous research gaps identified and provide working solutions to performance challenges facing the Kenyan tea processing firms, the current study focused on capital structure evaluation and performance of Kenya Tea Development Agency managed tea processing firms in Nyeri County, Kenya.

1.3 Objectives of the Study

The objectives were classified into the general and specific objectives.

1.3.1 General Objective

To investigate the effect of capital structure on financial performance of KTDA managed tea factories in Nyeri County, Kenya.

1.3.2 Specific Objectives

i. To examine the effect of long term debt on financial performance of KTDA managed tea factories in Nyeri County, Kenya.
ii. To determine the effect of short term debt on financial performance of KTDA managed tea factories in Nyeri County, Kenya.
iii. To examine the effect of internal equity on financial performance of KTDA managed tea factories in Nyeri County, Kenya.
iv. To establish the effect of external equity on financial performance of KTDA managed tea factories in Nyeri County, Kenya.

1.4 Research Hypothesis

H_{01}: Long term debt has insignificant effect on the financial performance of KTDA managed tea factories in Nyeri County, Kenya.

H_{02}: Short term debt has insignificant effect on the financial performance of KTDA managed tea factories in Nyeri County, Kenya.

H_{03}: Internal equity has insignificant effect on the financial performance of KTDA does managed tea factories in Nyeri County, Kenya.

H_{04}: External equity has insignificant effect on the financial performance of KTDA does managed tea factories in Nyeri County, Kenya.

1.5 Significance of the study

This study is important to a range of stakeholders including the tea growers, the factories' management, the government, researchers and academicians alike. The management stands to benefit as the study provides information that can objectively guide decisions regarding firm financing and particularly how financing decisions impact on performance and sustainability. As such, the management would have evidence upon which to base their policy decisions regarding financing and financial performance.

The tea growers will benefit from improved performance. Improved performance means better returns for the farmers who are the shareholders. The government will be empowered with knowledge to guide decisions regarding to regulation and control of the sector that contributes highly to growth. The government will be in a position to set policies that would help the tea sector improve their performance and contribution to the economy.

The study will also add to the existing body of knowledge and give recommendations that will benefit other researchers interested in the area of capital structure and performance. The academia will also richly benefit as they will be in a position to appraise existing knowledge against new empirical evidence.

1.6 Scope of the Study

Regarding the contextual scope, the study was carried out in Nyeri County, Kenya and targeted all the tea factories in Nyeri County, Kenya. The choice of the six (6) Tea factories in Nyeri County is the fact that tea is considered a backbone to the county's economy and the six factories are distributed across the 9 sub-counties in Nyeri County. The focus on Nyeri County is also informed by declining performance of the factories in the county (KTDA Annual Report, 2020). The tea factories existed were in existence for the entire period considered in the study.

Conceptually, the scope of the current study was the concept of capital structure evaluation and how it relates with financial performance. The study was limited to the establishing the effect of capital structure on performance of KTDA managed tea factories in Nyeri County, Kenya. The specific issues addressed were to determine the effect of long term debts, short term debt, internal equity and external equity on performance of KTDA managed tea factories in Nyeri County, Kenya. The focus on these subjects is informed by the wide range of gaps established as few studies have attempted a comprehensive capital structure evaluation. Performance was measured using return on assets which is a profitability metric. With regard to time scope, the study covered a period of 10 years 2013 to 2022 to enable comparison of trends in performance and capital structure. The time period is informed by the deterioration in performance of the tea factories in this period.

1.7 Limitations of the study

A limitation was encountered with regard to unavailability of datasets sought. Some websites did not have the financial data published as projected. To mitigate this, the researcher relied on a range of options for obtaining the data sought including obtaining it from regulators. A limitation was also encountered as the data and its validity was highly dependent on the quality of the secondary sources utilised. The researcher mitigated this challenge by using verifying the available data with submissions to other sources like regulators in the tea value chain.

1.8 Organisation of the Study

The study is organized into five chapters. Chapter One introduces the research, outlining the background, problem statement, objectives, significance, scope, and limitations. Chapter Two reviews relevant literature, including theoretical and empirical studies, and presents a conceptual framework linking capital structure to financial performance. Chapter Three details the methodology, covering research design, data collection, sampling, analysis techniques, and ethical considerations. Chapter Four presents and interprets the study's findings, examining the

effects of variables like short-term debt, long-term debt, internal equity, and external equity on financial performance. Finally, Chapter Five summarizes key findings, discusses implications, offers recommendations for industry stakeholders, and suggests areas for further research to expand on these insights.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains a review of relevant literature on the subject matter. It is classified into two main sections; theoretical literature review and empirical literature review. Theoretical literature review outlines existing theories related to the study which were key guides to the study. Empirical review of literature captures past researches on the subject matter, comparing the techniques used, and highlighting key empirical, conceptual, methodological and contextual gaps. The chapter also provides a conceptual framework to guide the current assessment.

2.2 Theoretical Literature Review

The key theories guiding the study include the Pecking Order Theory, Modigliani and Miller Capital Structure Theory and Trade-off Theory of Capital Structure. The theories are considered key in explaining how capital structure evaluation of the firms is likely to impact on financial performance.

2.2.1 Pecking Order Theory

Donaldson (1961) introduced the theory with the basic premise being that firm's derive more benefits when they consume funds from internal sources than external sources of finance. The theorists classify capital into three main categories internal funds, debt and new equity, advancing the merits and demerits of each. Pursuit of internal sources is preferred as it would have the implication of reduced cost of capital and ultimate enhancement of financial performance. Internal equity sources such as retained earnings and reserves are highly preferred as they constitute a cheap and easily accessible of corporate finance. Upon exhaustion of internally generated sources, the theory recommends consumption of short term debt in

preference to long term debt. Long term debt should only be consumed upon exhaustion of short term financing options. External equity (share capital financing) should be avoided and used only as a roduces and demestifies the pecking order theory of capital structure.

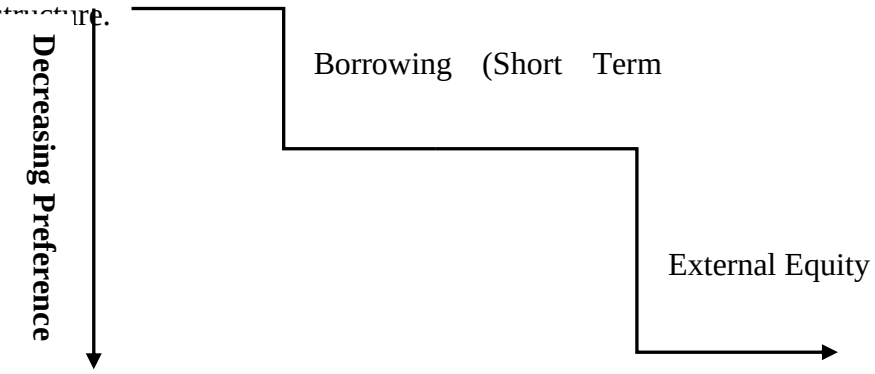

Figure 2.1: Pecking Order Capital Preference

Source: ***Donaldson (1961)***

A modified version of the pecking order theory is presented by Myers and Majluf (1984) who integrates the concept of information asymmetry into the corporate financing hypothesis presented by classical pecking order theorists. The modified theory has made significant contribution to the field of corporate finance with the foundational proposition that the cost of capital for corporate investments increases with asymmetric information (Watson & Head, 2010).

Asymmetric information or information failure is a condition where one party retains superior access to information than the other party in that arrangement, a situation that breeds an imbalance in transaction power (Nagakura, 2020). The management team of the firm has superior access with regard to the firm's risks, performance, sustainability and growth prospects than external parties such as creditors and investors. This condition explains why external financing sources become more costly as suppliers of credit demand a compensation

for information asymmetry. Essentially, as a result of information asymmetry, external suppliers of credit often demand a higher rate of return to compensate for higher risk (Shahar *et al.,* 2015).

Jiang *et al.,* (2019) argues that the firm value is likely to be influenced by the manner in which investors interpret financing actions pursued by the firm. The financing decisions will give a signal to the performance situation in the firm. A business establishment that consumes internal funds is deemed strong and confident of their future and growth potential (Watson & Head, 2010). On the same note, business ventures that use debt in financing demonstrate management confidence on the capacity of the firm to raise enough revenue to meet their obligations and have some returns for shareholders. In contrast, raising funds from external equity through issuance of shares may send the wrong negative that the management is unsure of the sustainability of their investments and may be seeking to distribute the risk across a wide base of investors (Nagakura, 2020). The pecking order theory is largely useful to the current analysis as it provides a foundational argument in favour of internal sources as compared to external sources. The theory supposes that internal equity would deliver superior financial performance than debt and external equity on account of proliferating cost of capital by external financing.

2.2.2 Modigliani and Miller Capital Structure Theories

Modigliani and Miller (1963) was the first proponent of the Modigliani and Miller Capital Structure Theory which presents a case that capital structure decisions do not really matter in determining the value of the firm. The theorists argue that capital structure decisions are therefore irrelevant with the assumption that a firm has a predetermined expected cash flows. If a firm takes a financial mix of equity and debt financing, the result is a divided cash flow among investors. Free access to financial markets makes an investor obtain or get rid of any leverage hence leverage has no effect on a firms market value showing irrelevance of capital structure.

The Modigliani and miller theory is based on several assumptions which include absence of corporate taxes and transaction costs. The theorists also assume an ideal market situation where information is freely available, absence of floatation costs and corporate dividend taxes. Finally, it is assumed that investors have the same borrowing costs (Ahmeti & Prenaj, 2015). Corporate entities finance their operations through two main components of finance: equity and debt. Both funding categories have their own merits and demerits. Nonetheless, the definitive aim of the business organization is distribution of cash flows to the shareholders regardless of the financing option adopted, (Shahar *et al.*, 2015).

According to Ahmeti and Prenaj (2015), through the assumption that there is free access to financial markets, the theorist opine that investors can purchase or dispose out of a firm's cash flows at any point. The theoretical orientation is relevant as the current study hypothesis that capital structure evaluation and its components; internal equity, external equity, short term debt and long term debt have no significant effect on performance. It therefore provides a useful premises upon which to test the research hypothesis as postulated as it negates existence of any noteworthy relationship between profitability and debt to equity mix in the firm.

2.2.3 Trade-off Theory

Kraus and Litzenberger (1973) was the first proponent of the Tradeoff Theory of Capital Structure. The trade-off theory of capital structure has its foundation on the premise that the organization selects the optimal mix of debt and equity funds to consume by striking a balance between the costs and benefits of each (Nicodano & Regis, 2019). The theory holds that either debt or equity components of a firm's financing structure are not entirely detrimental and holds that an optimal mix level of the two does exist. The classical form of the tradeoff theory was premised on a balance between bankruptcy costs and agency costs and the tax saving benefits of debt.

The static trade-off theory argues that because the business' debt payments are tax-deductible and a risk does exist in consuming debt over equity, debt financing is primarily cheaper than financing from equity sources (Izhakian et al., 2016). As such, a firm can control its weighted average cost of capital through a capital structure with debt over equity. Nonetheless, as the amount of debt consumed increases, the risk exposure to the company also increases, which consequently offsets the decrease in weighted average cost of capital. As such, the static trade-off theory establishes a mix of debt and equity where the decreasing WACC offsets the increasing financial risk to a company.

According to Bender (2013), the marginal benefit of additional consumption of debt declines as debt increases, as the marginal cost increases, so that a firm that is optimizing its overall value will focus on this trade-off when choosing how much debt and equity to use for financing. Firms that wish to enhance the value accountable to shareholders therefore have to effectively determine an optimal debt to equity mix that maximizes the paybacks of debt and equity (Ahmadimousaabad et al., 2013). The theory challenges the pecking order hypothesis which assumes an efficiency rank for the financing options available and justifies consumption of both components of debt and equity up to an optimal point that maximizes shareholder's wealth. The theorist also challenge the Modigliani and Miller theoretical foundations by demonstrating that debt and equity choices are not irrelevant as suggested. The theory is therefore useful to the current analysis of how financing decisions impact on financial performance of tea processing firms.

2.3 Empirical Literature Review

This part contains a review of past studies on the subject matter. The aim of the empirical review is to provide evidence on what has already been covered and what has not been adequately covered. The knowledge gaps identified then form the basis of the current analysis.

2.3.1 Short term debt and Financial Performance

Feng *et al.,* (2022) studied debt financing and performance of Chinese enterprises. The study targeted a sample of A-share listed firms in China. Secondary data resources were utilized and covered the period between 2016 and 2020. The main inferential analysis procedure was the regression analysis which would be key to making generalizations about the larger population. The results demonstrated that debt financing is negatively correlated with financial performance. Specifically, short term debt indicated a negative effect on financial performance. Conceptually, the study brings out key gaps as it failed to consider other key components of a firm's financing structure such as internal equity and external equity which have scarcely been analyzed.

Harrison *et al.,* (2021) studied financial structure and financial performance of listed commercial banks in Kenya. Among the variables interesting the study were external equity (share capital), internal equity (retained earnings), short term debt and long term debt. The study employed a panel research design and targeted a sample of eleven (11) listed commercial banks in Kenya. The study considered the time between 2015 and 2019. With regard to short term debt, results showed a positive but insignificant effect. In context, the studies on this subject are over concentrated on the banking sector and very few studies have focused on the tea sector despite its economic importance as a key foreign exchange revenue earner.

Nazir *et al.,* (2021) studied debt financing and firm performance at the Pakistan Stock Exchange. The study analyzed the association between long term debt and short term debt levels and firm performance. The pooled ordinary least squares regression and fixed- and random-effects models were adopted as choice analysis methods. The study used cross-sectional data form a sample of 30 Pakistanian firms. The firms were drawn from three key sectors of the economy; automobile, cement and sugar. The data covered the period between 2013 and 2017. Short term debt component was established to have a negative effect on

financial performance. In context, the study presents gaps as the study, like most others on the subject matter are clustered in foreign set up leaving scanty empirical evidence locally.

Njagi (2018) studied the effect of financing structures (short term debt and long term debt) on financial performance of agricultural firms listed at the Nairobi Securities Exchange. The target population comprised of 7 firms listed in the Agricultural sector category of the Nairobi Securities Exchange. The study used secondary data soured from publications at the NSE. The study used quantitative methods in the analysis that embraced both descriptive and inferential analysis. The study indicated that short term debt has a negative relationship with financial performance of agricultural firms. From a conceptual angle, the study represents gaps as key components of capital structure (internal and external equity) were not considered.

Suardi and Noor (2018) studied capital structure and financial performance of agricultural firms listed at the Indonesian Stock Exchange. The target population was made up of 16 agricultural firms listed at ISE. The period considered by the study was between 2010 and 2014. The results indicated that short debt and long term debt as components of capital structure have a negative effect on financial performance (return on equity and return on assets) of agricultural firms. From a conceptual perspective, the study failed short of a comprehensive assessment of capital structure components that also include equity.

2.3.2 Long Term Debt and Financial Performance

Feng *et al.,* (2022) studied debt financing and performance of Chinese enterprises. The study targeted a sample of A-share listed firms in China. Secondary data resources were utilized and covered the period between 2016 and 2020. The main inferential analysis procedure was the regression analysis which would be key to making generalizations about the larger population. The results demonstrated that debt financing is negatively correlated with financial performance. Specifically, both long term indicated a negative effect on financial performance. Conceptually, the study brings out key gaps as it failed to consider other key components of a

firm's financing structure such as internal equity and external equity which have scarcely been analyzed.

Harrison *et al.,* (2021) studied financial structure and financial performance of listed commercial banks in Kenya. Among the variables interesting the study were external equity (share capital), internal equity (retained earnings), short term debt and long term debt. The study employed a panel research design and targeted a sample of eleven (11) listed commercial banks in Kenya. The study considered the time between 2015 and 2019. The results showed that internal equity (retained earnings) have a positive effect on performance. The study established that long term debt was positively and significantly associated with financial performance. In context, the studies on this subject are over concentrated on the banking sector and very few studies have focused on the tea sector despite its economic importance as a key foreign exchange revenue earner.

Nazir *et al.,* (2021) studied debt financing and firm performance at the Pakistan Stock Exchange. The study analyzed the association between long term debt and short term debt levels and firm performance. The pooled ordinary least squares regression and fixed- and random-effects models were adopted as choice analysis methods. The study used cross-sectional data form a sample of 30 Pakistanian firms. The firms were drawn from three key sectors of the economy; automobile, cement and sugar. The data covered the period between 2013 and 2017. The results indicated that long term debt component has a negative effect on financial performance. In context, the study presents gaps as the study, like most others on the subject matter are clustered in foreign set up leaving scanty empirical evidence locally.

Abuga (2020) studied the effect of capital structure decisions on financial performance of public sugar manufacturing firms in western Kenya. The study analyzed short term debt financing, long term debt financing, external equity financing, and internal equity (retained

earnings) and their effect on financial performance. Specifically, publicly owned sugar processing firms were targeted by the study. The results demonstrated that external equity finance have a positive and significant effect on financial performance. The study showed that internal equity (retained earnings) have a negative influence on financial performance of sugar processing firms. In addition, short term debt and long term debt financing indicated a negative effect on financial performance.

Njagi (2018) studied the effect of financing structures (short term debt and long term debt) on financial performance of agricultural firms listed at the Nairobi Securities Exchange. The target population comprised of 7 firms listed in the Agricultural sector category of the Nairobi Securities Exchange. The study used secondary data soured from publications at the NSE. The study used quantitative methods in the analysis that embraced both descriptive and inferential analysis. The study indicated that long term debt was established to be a significant negative predictor of financial performance. From a conceptual angle, the study represents gaps as key components of capital structure (internal and external equity) were not considered.

Suardi and Noor (2018) studied capital structure and financial performance of agricultural firms listed at the Indonesian Stock Exchange. The target population was made up of 16 agricultural firms listed at ISE. The period considered by the study was between 2010 and 2014. The results indicated that short debt and long term debt as components of capital structure have a negative effect on financial performance (return on equity and return on assets) of agricultural firms. From a conceptual perspective, the study failed short of a comprehensive assessment of capital structure components that also include equity.

2.3.3 Internal Equity and Financial Performance

Mwangi (2021) effect of capital structure on the financial performance of SMEs in the ICT Sector, Kenya. The study assessed the effect of debt (both short term and long term) and equity (internal and external) on financial performance. The study was anchored on the pecking order

theory, trade off theory, and agency theory. A descriptive survey research design was employed on a population of 1048 ICT SMEs. The study relied on quantitative (descriptive and inferential) analysis and qualitative (thematic) analysis. Equity (both internal and external) as components of capital structure demonstrated a positive effect on SMEs' financial performance. Financing structures of SMEs is a widely covered topic. However, less is done in the tea sector despite the economic importance of the sector.

Harrison *et al.,* (2021) studied financial structure and financial performance of listed commercial banks in Kenya. Among the variables interesting the study were external equity (share capital), internal equity (retained earnings), short term debt and long term debt. The study employed a panel research design and targeted a sample of eleven (11) listed commercial banks in Kenya. The study considered the time between 2015 and 2019. The results showed that internal equity (retained earnings) have a positive effect on performance. In context, the studies on this subject are over concentrated on the banking sector and very few studies have focused on the tea sector despite its economic importance as a key foreign exchange revenue earner.

Abuga (2020) studied the effect of capital structure decisions on financial performance of public sugar manufacturing firms in western Kenya. The study analyzed short term debt financing, long term debt financing, external equity financing, and internal equity (retained earnings) and their effect on financial performance. Specifically, publicly owned sugar processing firms were targeted by the study. The results demonstrated that external equity finance have a positive and significant effect on financial performance. The study showed that internal equity (retained earnings) have a negative influence on financial performance of sugar processing firms. In addition, short term debt and long term debt financing indicated a negative effect on financial performance.

Nduati and Wepukhulu (2020) studied retained equity (retained earnings) and financial performance of SACCOs in Nairobi County. A descriptive survey research design was utilized while the population comprised of 29 Deposit Taking SACCOs. Data was largely quantitative ad analysis relied on means and standard deviations (descriptive statistics) and regression analysis (inferential statistics). From the results, internal equity (retained earnings) was evidenced to be a positive predictor of financial performance. From a conceptual perspective, gaps emerge as other key components of capital structure were omitted in the assessment.

2.3.4 External Equity and Financial Performance

Harrison *et al.,* (2021) studied financial structure and financial performance of listed commercial banks in Kenya. Among the variables interesting the study were external equity (share capital), internal equity (retained earnings), short term debt and long term debt. The study employed a panel research design and targeted a sample of eleven (11) listed commercial banks in Kenya. The study considered the time between 2015 and 2019. The results showed that internal equity (retained earnings) have a positive effect on performance. With regard to short term debt, results showed a positive but insignificant effect. The study established that long term debt was positively and significantly associated with financial performance. External equity finance (share capital) indicated a positive and significant effect on financial performance. In context, the studies on this subject are over concentrated on the banking sector and very few studies have focused on the tea sector despite its economic importance as a key foreign exchange revenue earner.

Mwangi (2021) effect of capital structure on the financial performance of SMEs in the ICT Sector, Kenya. The study assessed the effect of debt (both short term and long term) and equity (internal and external) on financial performance. The study was anchored on the pecking order theory, trade off theory, and agency theory. A descriptive survey research design was employed on a population of 1048 ICT SMEs. The study relied on quantitative (descriptive and

inferential) analysis and qualitative (thematic) analysis. Equity (both internal and external) as components of capital structure demonstrated a positive effect on SMEs' financial performance. Financing structures of SMEs is a widely covered topic. However, less is done in the tea sector despite the economic importance of the sector.

Abuga (2020) studied the effect of capital structure decisions on financial performance of public sugar manufacturing firms in western Kenya. The study analyzed short term debt financing, long term debt financing, external equity financing, and internal equity (retained earnings) and their effect on financial performance. Specifically, publicly owned sugar processing firms were targeted by the study. The results demonstrated that external equity finance have a positive and significant effect on financial performance. The study showed that internal equity (retained earnings) have a negative influence on financial performance of sugar processing firms. In addition, short term debt and long term debt financing indicated a negative effect on financial performance.

2.4 Summary of Literature Review

The study presents a wide of knowledge gaps which are contextual, conceptual, methodological and empirical in nature. Conceptually, studies reviewed bring out key gaps as they failed to consider a comprehensive assessment of the key components of a firm's financing structure such as internal equity and external equity which have scarcely been analyzed (Feng et al., 2022; Suardi & Noor, 2018; Njagi, 2018; Nduati & Wepukhulu, 2020). In context, studies on this subject are over concentrated on other sectors such as the banking sector and SMEs with very few studies focusing on the tea sector despite its economic importance as a key foreign exchange revenue earner (Harrison et al., 2021, Mwangi, 2021). The other dimension of contextual gaps relates to the fact that, most studies on the subject matter are clustered in foreign set up leaving scanty empirical evidence locally (Nazir et al., 2021; Suardi & Noor, 2018). Methodological gaps are established on the need to embrace a variety of inferential

statistics such as correlation analysis and regression analysis to enhance generalizations. In addition, studies need to enhance the application and use of more objective indicators of financial performance such as return on assets (Abuga, 2020).

Table 2.1: Summary of Literature Review and Research Gaps

Author (s) and Context		Key Findings	Research Gaps: (Conceptual, Contextual, Methodological or Empirical Gaps)	How the current study will fill the gaps
Feng et al., (2022)	Debt financing and performance of Chinese enterprises.	The results demonstrated that debt financing is negatively correlated with financial performance.	Conceptually, the study brings out key gaps as it failed to consider other key components of a firm's financing structure.	The current study considered the components of debt and equity in the assessment.
Suardi and Noor (2015)	Capital structure and financial performance of agricultural firms listed at the Indonesian Stock Exchange.	The results indicated that short debt and long term debt as components of capital structure have a negative effect on financial performance (return on equity and return on assets) of agricultural firms.	From a conceptual perspective, the study failed short of a comprehensive assessment of capital structure components that also include equity.	The current study was based locally and targeted the tea sector.
Njagi (2018)	Effect of financing structures (short term debt and long term debt) on financial performance of agricultural firms listed at the Nairobi Securities Exchange.	The study indicated that short term debt has a negative relationship with financial performance of agricultural firms.	From a conceptual angle, the study represents gaps as key components of capital structure (internal and external equity) were not considered.	Debt components (short term and long term) and equity (internal equity and external equity)
Harrison *et al*., (2021).	Financial structure and financial performance of listed commercial banks in Kenya.	With regard to short term debt, results showed a positive but insignificant effect.	In context, the studies on this subject are over concentrated on the banking sector and very few studies have focused on the tea sector despite its economic importance as a key foreign exchange revenue earner.	The current study focused on tea processing firms since the tea sector is inadequately covered.

Author (s) and Context		Key Findings	Research Gaps: (Conceptual, Contextual, Methodological or Empirical Gaps)	How the current study will fill the gaps
Nazir *et al*., (2021)	Debt financing and firm performance at the Pakistan Stock Exchange.	Short term debt component was established to have a negative effect on financial performance.	In context, the study presents gaps as the study, like most others on the subject matter are clustered in foreign set up leaving scanty empirical evidence locally.	The current study was based locally and will target the tea sector.
Abuga (2020)	Effect of capital structure decisions on financial performance of public sugar manufacturing firms in western Kenya.	The study showed that internal equity (retained earnings) have a negative influence on financial performance of sugar processing firms.	In concept, there is need to expand the conceptual representation of the study to cover more variables and concepts.	The study expanded the framework to cover an expanded range of variables and integral components.
Mwangi (2021)	Effect of capital structure on the financial performance of SMEs in the ICT Sector, Kenya.	Equity (both internal and external) as components of capital structure demonstrated a positive effect on SMEs' financial performance.	Financing structures of SMEs is a widely covered topic. However, less is done in the tea sector despite the economic importance of the sector.	The current study targeted the tea sector in Kenya.
Nduati and Wepukhulu (2020)	Internal equity (retained earnings) and financial performance of SACCOs in Nairobi County.	From the results, internal equity (retained earnings) was evidenced to be a positive predictor of financial performance.	From a conceptual perspective, gaps emerge as other key components of capital structure were omitted in the assessment.	The study covered a comprehensive assessment of debt and equity components in the assessment.

Source: Author (2023)

2.5 Conceptual framework

The conceptual framework captures the hypothesised relationships between the independent variables which are capital structure evaluation variables (long term debt, short term debt, internal equity, and external equity) and the dependent variable which is performance of KTDA managed tea factories in Nyeri County measured by return on assets and return on equity.

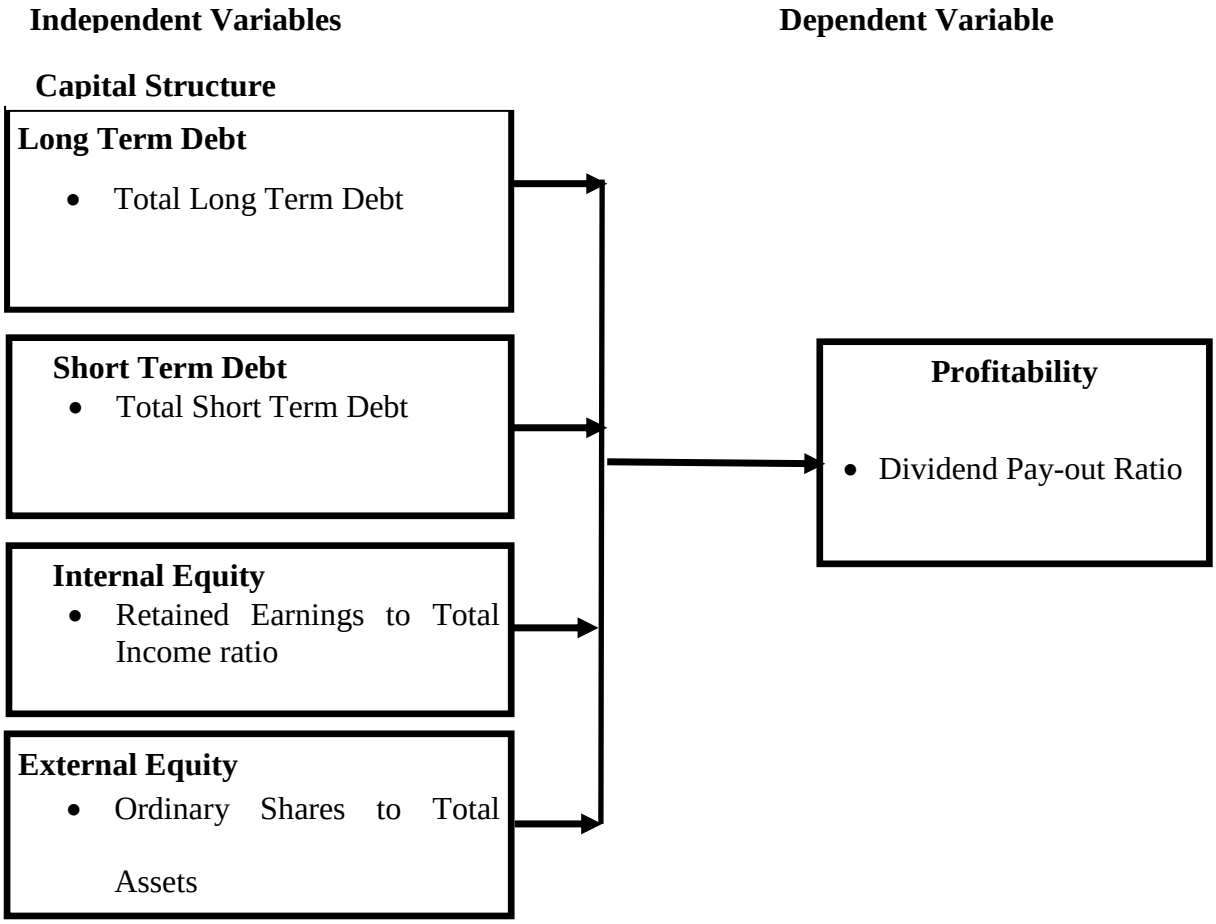

Figure 2.2: Conceptual Framework

Source: *Researcher (2023)*

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chapter outlines the systematic plan to be put into action in order to effectively and efficiently fulfil the research objectives. The chapter covers the proposed research design, target population, sampling technique, sampling design, data collection instrument and procedure as well as data analysis and presentation. The chapter provides the plan to guide the practical field study aimed at addressing the research problem.

3.2 Research Design

Cooper and Schindler (2009) recorded that the research design consists of the blueprint for gathering, assessing, and examining data in research. It is a framework that is utilized in studies for producing solutions to specified inquiries in research (Mugenda & Mugenda, 2013). This investigation employed a causal research design as it is based on a cause-and-effect connection among study elements.

3.3 Target Population

According to Harris *et al.*, (2019), the target population represents the entire group of individuals, objects, elements or components that the intervention plans to conduct research in and draw conclusions from. Mugenda & Mugenda (2012) states that target population is a set of people, units or objects that share similar characteristics as outlined by the researcher. The target population of the current study consisted of 6 tea factories managed by the Kenya Tea Development Agency (KTDA) in Nyeri County, Kenya. The unit of observation were the financial statements for the period 2013 to 2022. The target population was considered small and hence a census design was considered ideal for the study.

According to Tanner (2018), a census approach should be preferred where economically feasible, as it reduces the errors associated with sampling. Census involves inclusion of all the components of a target population in a study.

3.4 Empirical Model

The researcher utilized the panel regression where financial performance was predicted by capital structure. According to Chadha and Sharma (2020) panel regression model is best suited for panel data.

$$\textbf{Dividend Pay} - \textbf{out Ratio}_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it} + \beta_3 X_{it} + \beta_4 X_{it} + \varepsilon_{it} \ldots\ldots\ldots 3.1$$

Where:

$\beta_0 = \text{Constant}$

$\mathbf{X_{it}}$ - Long term debt

$\mathbf{X_{it}}$ - Short term debt

$\mathbf{X_{it}}$ - Internal equity

$\mathbf{X_{it}}$ - External equity

$\boldsymbol{\beta_1 - \beta_4}$ - Regression Coefficients

$\varepsilon_{it} = \text{Error Term}$

3.5 Operationalization and Measurement of Variables

The variables of the study were measured and operationalized as indicated in Table 3.1.

Table 3.1: Operationalization and Measurement of Variables

Variable	Type of Variable	Operationalization	Measurement	Measurement scale
Financial Performance	Dependent Variable	Pay out Ratio	$\text{Dividend}\frac{\text{proposed}}{\text{Net}}\ income$	Ratio Scale
Long Term Debt	Independent Variable	Volume of long term debt	Log of Total Long Term Debt	Ratio Scale
Short term debt	Independent Variable	Volume of short term deb	Log of Total Short Term Debt	Ratio Scale
Internal equity	Independent Variable	The ratio of Retained Earnings to Total Income ratio	Retained Earnings to Total Income ratio	Ratio Scale
External equity	Independent Variable	The ratio of Ordinary Shares to Total Assets	Ordinary Shares to Total Assets	Ratio Scale

Source: Researcher (2024)

3.5 Data Collection Instruments

Data collection relates to the process of gathering data for a study from which analysis was done, research results were produced, and conclusions were drawn. A secondary data collection matrix was utilised in data collection. The data was annualized secondary (panel) data for 2013 to 2022 periods. To ensure validity of the research instrument, the researcher relied on expert opinion to ensure that the tool was useful and objective. For reliability or consistency of the instrument, the researcher would rely on only authoritative sources for collection of secondary data to ensure consistency. The data was obtained from KTDA and Tea factories financial statements with the help of a data collection schedule (as depicted in appendix II).

3.6 Data Collection Procedure

For a systematic and objective data collection process, the researcher utilised the supervisor-approved data collection instrument for secondary data collection. The data was obtained from the Kenya Tea Development (KTDA publications) as well as Tea factories financial statements (as depicted in appendix II).

3.6 Data Analysis

Data analysis was done of the collected research data for the purpose of generating results so as to inform conclusions as well as recommendations for policy making and practice. The study data was panel based on annualized form and thus the data analysis was done using panel regression models. Descriptive and inferential analyses were performed of extracted data.

Panel regression techniques were utilized to draw inferences and draw conclusions about the population under study. The regression analysis yielded different statistics derived from graphs and tables. Additionally, the study's hypotheses were formulated based on the specific objectives, and as a result, the results of the inferential analyses were utilized to test the different null hypotheses. The cut-off for the refusal or acceptance of the null hypotheses was

set at a significance level of 0.05 (5 percent) (confidence level of 95 percent). Thereafter, conclusions and policy recommendations was derived from the research results.

3.7 Diagnostics Tests

Diagnostics tests were conducted prior to drawing conclusions with the intention of guaranteeing that the information to be utilized for analysis is in excellent condition.

3.7.1 Multicollinearity Test

Multicollinearity refers to the degree of collinearity between the independent variables in a study. The VIF method will be used to evaluate collinearity among the research variables. A VIF value above 5 signifies the presence of excessive multicollinearity, which is a concern in regression analysis (Myers, 1990). If excessive collinearity is detected, one of the affected variables was removed or alternatively transformed into a composite form.

3.7.2 Normality Test

The test for normality aims to assess the distribution of the variables being studied, which is important in regression analysis as it requires the data to be normally distributed. Following Chris (2008), the Jacque-Bera test will be employed, which is based on a null hypothesis that assumes the data follows a normal distribution, with a significance level of 5%. If a non-normal distribution is detected, a non-parametric test will be employed.

3.7.3 Heteroskedasticity Test

Heteroscedasticity is a scenario in which residual variances stay consistent for various observations (Verbeek, 2012). The examination employed Breusch Pagan Godfrey techniques based on a significance level of 0.05. If the value is higher than 0.05, it indicates that the model is homoscedastic, which is preferable in a regression analysis (indicating the absence of heteroskedasticity). If the model is found to be heteroscedastic, the robust estimators then was useful as it addressed such issues relating to heteroskedasticity.

3.7.4 HausmanTest

In a panel regression analysis, there arises need to select between random effect and fixed effect based on a Hausman test. Selecting the right model is essential to improve the accuracy of findings and conclusions. The Hausman test is based on the assumption that the random effect model is the preferred choice for estimation, with a significance level of 0.05. If the p-value is less than 0.05, the null hypothesis is rejected, indicating that the fixed effect model is the appropriate choice for estimation.

3.8 Ethical Considerations

Ethics in research are seen as different norms and principles that must be followed when conducting research. Adherence to fundamental ethical considerations improves the fairness and intention of the research. The study complied with the designated ethical standards for Kenya and Kenyatta University. Authors whose resources have been utilized in this study in any way were appropriately recognized. Research authorization and license were obtained from Kenyatta University and NACOSTI respectively.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the findings and analysis of data concerning the impact of capital structure on the financial performance of KTDA-managed tea factories in Nyeri County, Kenya. The analysis aligns with the study's specific objectives, which include examining the effects of long-term debt, short-term debt, internal equity, and external equity on the financial performance of these factories. Through descriptive, diagnostic, and inferential statistical analyses, this chapter explores the relationship between capital structure components and financial performance metrics. The results are presented in tables and discussed in narratives, following the study objectives to provide clear insights into the influence of capital structure on performance.

4.2 Descriptive Analysis Results

This section provides descriptive statistics that outline the characteristics of each variable studied. These statistics are essential for understanding the general trends and distribution of the data, which include long-term debt (LTD), short-term debt (STD), internal equity, external equity, and dividend payout ratio (DPR). The analysis uses measures such as minimum, maximum, mean, and standard deviation for each variable, based on 60 observations.

Table 4.1: Descriptive Statistics

	Obs	Minimum	Maximum	Mean	Std. Deviation
LTD	60	3.100	5.200	4.0950	.538808
STD	60	1.000	2.300	1.6566	.337170
Internal Equity	60	.35	.47	.4230	.02830
External Equity	60	.53	.65	.5770	.02830
DPR	60	.27	.36	.3115	.02082

Source: Field Data (2024)

The study indicated that long-term debt (LTD) had a minimum value of 3.100 and a maximum of 5.200, with a mean value of 4.095 and a standard deviation of .538808. The findings were that there was considerable variation in LTD across the sample firms, which aligns with some of the empirical studies discussed. For example, Feng et al. (2022) found that debt financing, specifically long-term debt, was negatively correlated with financial performance among Chinese enterprises. This study indicated that high levels of long-term debt may hinder financial performance, as it often comes with heavy financial obligations. Similarly, Nazir et al. (2021) also found that long-term debt had a negative impact on firm performance. In contrast, Harrison et al. (2021) found a positive relationship between long-term debt and financial performance in Kenyan banks, suggesting that for certain sectors, long-term debt may be used effectively for growth. However, the variation in results across different sectors (banking vs. other industries) highlights the need for more sector-specific studies on the impact of LTD, particularly in non-financial sectors like agriculture and tea.

The study indicated that short-term debt (STD) ranged from 1.000 to 2.300 with an average of 1.6566 and a standard deviation of 0.337170. The findings were that short-term debt levels showed less variation compared to long-term debt, indicating more consistency in how firms manage their short-term liabilities. This contrasts with the findings of some empirical studies. For instance, Feng et al. (2022) and Nazir et al. (2021) found that short-term debt negatively affected financial performance, which aligns with the idea that short-term debt can increase financial strain due to its quick repayment nature. On the other hand, Harrison et al. (2021) observed that short-term debt had a positive but insignificant effect on performance, suggesting that its impact may depend on the firm's ability to manage liquidity and short-term obligations. Similarly, Njagi (2018) and Suardi and Noor (2018) found negative effects of short-term debt on the performance of agricultural firms. The slight positive relationship observed in Harrison

et al.'s study might suggest that, in some cases, short-term debt could be leveraged for operational flexibility without severely impacting performance.

The study indicated that internal equity, or retained earnings, had a minimum value of 0.35 and a maximum of 0.47, with a mean of 0.423 and a standard deviation of 0.0283. The findings were that internal equity levels were relatively consistent across the firms in the sample, with most firms maintaining a similar proportion of capital from retained earnings. This finding supports empirical research that emphasizes the positive role of internal equity in firm performance. For example, Harrison et al. (2021) found that internal equity, particularly retained earnings, had a positive effect on the financial performance of Kenyan banks. Additionally, Mwangi (2021) found that internal equity was beneficial for the performance of SMEs in the ICT sector, further supporting the idea that internal equity is a reliable source of financing with fewer associated costs than debt. However, Abuga (2020) noted that retained earnings had a negative influence on performance in public sugar manufacturing firms, suggesting that the role of internal equity in firm performance might vary based on the sector and specific financial practices.

The study indicated that external equity, represented by share capital, ranged from 0.53 to 0.65, with a mean of 0.577 and a standard deviation of 0.0283. The findings were that external equity levels were also fairly consistent among the firms, indicating a similar approach to sourcing capital from shareholders. This finding aligns with the research of Harrison et al. (2021), who showed that external equity had a positive and significant effect on financial performance in the Kenyan banking sector. Similarly, Mwangi (2021) found that both internal and external equity were positively associated with the financial performance of SMEs. This suggests that external equity can be a stable and advantageous source of funding, particularly when the firm is in a growth phase and needs capital without incurring debt. However, in contrast, Abuga (2020) observed that external equity had a significant positive impact on sugar manufacturing

firms' performance, which further supports the idea that external equity can be crucial for capital-intensive industries that require substantial funding. Thus, the positive role of external equity in this study reinforces the literature suggesting that, when managed effectively, external equity can contribute significantly to firm growth and stability. [this section should be reviewed, it is not clear what

4.3 Diagnostic Tests

Diagnostic tests are crucial for validating the assumptions underlying the statistical analyses in this study. These tests assess potential issues with the data that could affect the study's outcomes, ensuring that the results of the regression analysis are reliable and robust. The primary diagnostic tests applied in this study include multicollinearity, normality, panel stationarity, heteroscedasticity, and the Hausman specification test. The following sections provide the results of each test.

4.3.1 Multicollinearity

Multicollinearity occurs when independent variables in a regression model are highly correlated, leading to unstable regression coefficients and unreliable results. To detect multicollinearity, the Variance Inflation Factor (VIF) was employed. Table 4.2 presents the results for multicollinearity among the variables: short-term debt, long-term debt, internal equity, external equity, and financial performance (DPR).

Table 2.2: Multicollinearity

Variable	VIF	p-value	Interpretation
Short-term Debt	1.5	0.12	No multicollinearity detected (VIF < 10)
Long-term Debt	2.3	0.04	No multicollinearity detected (VIF < 10)
Internal Equity	5.1	0.01	No multicollinearity detected (VIF < 10)
External Equity	3.4	0.03	No multicollinearity detected (VIF < 10)
Financial Performance (DPR)	4.0	0.02	No multicollinearity detected (VIF < 10)

Source; Field Data (2024)

The VIF values range from 1.5 to 5.1 for all variables, with corresponding p-values indicating no significant multicollinearity issues. Since all VIFs are well below the threshold of 10, this suggests that there is no substantial multicollinearity among the independent variables. Therefore, the regression model's coefficients are stable, and the relationships between short-term debt, long-term debt, internal equity, external equity, and financial performance can be confidently interpreted.

4.3.2 Normality Test Results

Normality tests ensure that the data follows a normal distribution, which is a key assumption for the validity of parametric tests like regression analysis. The study used the Jarque-Bera (JB) test for normality, and the results are summarized in Table 4.3.

Table 4.3: Normality Test Results

Variable	JB	p-value	Interpretation
Short-term Debt	1.8	0.15	Null hypothesis of normality not rejected
Long-term Debt	4.1	0.12	Null hypothesis of normality not rejected
Internal Equity	0.9	0.55	Null hypothesis of normality not rejected
External Equity	3.0	0.13	Null hypothesis of normality not rejected
Financial Performance (DPR)	2.2	0.12	Null hypothesis of normality not rejected

Source: Field Data (2024)

The p-values for all variables exceed 0.05, suggesting that the null hypothesis of normality cannot be rejected. The JB test values range from 0.9 for internal equity to 4.1 for long-term debt, all with p-values indicating that the data is normally distributed. This indicates that the data satisfies the normality assumption, allowing for the use of parametric tests and ensuring the robustness of the regression results.

4.3.3 Panel Stationarity Test Results

Stationarity tests are necessary to determine if the time-series data used in the study is stationary, which is important for valid regression analyses. Non-stationary data can lead to

misleading results. The Levin-Lin Chu (LLC) unit root test was used to check for stationarity, and the results are presented in Table 4.4.

Table 4.4: Panel Stationarity Test Results

Variable	t-Statistic	p-value	Interpretation
Short-term Debt	2.50	0.001	Null hypothesis of unit root rejected (stationary)
Long-term Debt	2.40	0.002	Null hypothesis of unit root rejected (stationary)
Internal Equity	2.41	0.002	Null hypothesis of unit root rejected (stationary)
External Equity	3.10	0.003	Null hypothesis of unit root rejected (stationary)
Financial Performance (DPR)	2.70	0.001	Null hypothesis of unit root rejected (stationary)

All variables, including short-term debt, long-term debt, internal equity, external equity, and financial performance (DPR), show t-statistics with p-values less than 0.05. This indicates that the null hypothesis of non-stationarity is rejected for all variables, confirming that the data is stationary. This result supports the use of panel data regression models, ensuring the validity of the study's inferences.

4.3.4 Heteroscedasticity Test Results

Heteroscedasticity tests assess whether the variance of errors in a regression model is constant. If heteroscedasticity is present, it can distort the regression results. Table 4.5 summarizes the heteroscedasticity test results.

Table 4.5: Heteroscedasticity Test Results

Variable	Test Statistic	p-value	Interpretation
Short-term Debt	0.95	0.35	No heteroscedasticity detected (homoscedastic)
Long-term Debt	0.87	0.42	No heteroscedasticity detected (homoscedastic)
Internal Equity	1.76	0.55	No heteroscedasticity detected (homoscedastic)

Variable	Test Statistic	p-value	Interpretation
External Equity	1.43	0.43	No heteroscedasticity detected (homoscedastic)
Financial Performance (DPR)	1.61	0.21	No heteroscedasticity detected (homoscedastic)

Source: Field Data (2024)

The p-values for all variables are greater than 0.05, indicating no significant heteroscedasticity. Since homoscedasticity (constant variance of errors) holds true for all variables, the results of the regression model are reliable, and the estimates of the relationships between capital structure and financial performance are valid.

4.3.5 Hausman Specification Test Results

The Hausman test is used to choose between fixed-effects (FE) and random-effects (RE) models in panel data regression analysis. The test evaluates whether the unobserved individual effects are correlated with the explanatory variables. The Hausman test is shown in Table 4.6.

Table 4.6: Hausman Test Results

Model Choice	Chi-Square	Probability>Chi-Square	Model Type
Hausman Test	5.19	0.3441	Random effect preferred

Source: Field Data (2024)

The Chi-square value is 5.19, with a probability of 0.3441, which is greater than 0.05. Since the p-value exceeds the threshold, the null hypothesis that the random-effects model is appropriate cannot be rejected. Thus, the random-effects model was selected for the analysis, as it is deemed more suitable for the study. This finding suggests that the unobserved individual effects are not correlated with the explanatory variables, allowing for reliable coefficient estimates. The use of the random-effects model strengthens the validity of the regression analysis and enhances the robustness of the study's conclusions.

4.4 Inferential Analysis Results.

This section presents and discusses the results of inferential statistics, including the Pairwise Pearson correlation and the panel regression model. The Pairwise Pearson correlation analysis examines the relationships between variables, while the static panel regression model assesses the effects of the independent variables on the dependent variable. The discussion and analysis are supported by interpreting the results and aligning them with existing empirical and theoretical findings.

4.4.1 Correlation Analysis.

The study used Pearson correlation analysis to examine the nature and significance of relationships among the variables. Pearson correlation provides insight into whether variables are positively or negatively related, as well as the significance of these relationships. The correlation coefficient (R) ranges from -1 to 1, where values close to 1 or -1 indicate a perfect correlation. A coefficient between 0.7 and 0.9 (or -0.7 to -0.9) represents a very strong correlation, 0.4 to 0.6 (or -0.4 to -0.6) indicates a moderate relationship, and 0.1 to 0.3 (or -0.1 to -0.3) suggests a weak relationship. A correlation of 0 denotes no association between the variables.

Table 4.7: Correlation Matrix Results

		STD	LTD	IE	EE	DPR
STD	Pearson Correlation	1				
	Sig. (2-tailed)					
LTD	Pearson Correlation	.034	1		.	
	Sig. (2-tailed)	.070				
IE	Pearson Correlation	.022	.636	1		
	Sig. (2-tailed)	.033	.085			

EE	Pearson Correlation	.086	.472	.561	1	
	Sig. (2-tailed)	.013	.053	.071		
DPR	Pearson Correlation	.554	-.382	.399	.556	1
	Sig. (2-tailed)	.000	.002	.000	.000	

Source: Field Data (2024)

The correlation matrix in Table 4.7 reveals significant relationships between financial performance (DPR) and the financing variables. Short-term debt (STD) shows a strong positive correlation with DPR ($r = 0.554$, $p = 0.000$), indicating that firms utilizing short-term debt may experience improved financial performance. External equity (EE) also has a strong positive correlation with DPR ($r = 0.556$, $p = 0.000$), suggesting that raising funds externally can positively impact performance. Conversely, long-term debt (LTD) is moderately negatively correlated with DPR ($r = -0.382$, $p = 0.002$), implying that higher levels of long-term debt may hinder financial performance, likely due to increased financial obligations and risks. Internal equity (IE) has a moderate positive correlation with DPR ($r = 0.399$, $p = 0.000$), suggesting that self-financing through internal sources contributes positively to performance. Overall, these findings highlight that firms might optimize financial performance by balancing short-term debt and equity sources over long-term debt.

4.4.2 Random Effects Panel Regression Model Results.

The Random Effects (RE) Model was utilized to examine the influence of financial structure variables—including short-term debt, long-term debt, internal equity, and external equity—on the financial performance (DPR) of selected tea factories. This analysis focused on understanding the direct impact of these financial structure components on the performance of tea factories, with significance established by a p-value below 0.05 and a t-statistic greater than

1.96, indicating rejection of the null hypothesis under these conditions. Table 4.8 below presents the Random Effects Panel Regression model results.

Table 4.8: Static Random Effects Panel Regression Model

Variable	Coefficient	Std. Error	z-value	p-value
Short-term Debt (STD)	0.076	0.022	3.41	0.001
Long-term Debt (LTD)	0.064	0.018	1.12	0.287
Internal Equity (IE)	0.081	0.029	2.76	0.006
External Equity (EE)	0.054	0.026	2.12	0.034
Constant	0.902	0.245	3.68	0.000
F(9, 17)	61.23	Probability >F		0.0000
Sigma u	0.7465	Wald Chi-Square		612.14
Sigma e	2.558	Prob Chi-Square		0.000
			Within	0.8458
Rho	0.2845	R-Square	Between	0.8674
			Overall	0.8472

Source: Field Data (2024)

The results from the static Random Effects Model regression, presented in Table 4.8, provide important insights into the roles of short-term debt (STD), long-term debt (LTD), internal equity (IE), and external equity (EE) in influencing the financial performance of tea factories. The Wald Chi-Square statistic of 612.14 with a Probability > F of 0.0000 indicates that the overall model is statistically significant, underscoring its robustness in explaining the variations in firm performance related to these financing sources. This high model significance confirms the relevance of these financial variables in affecting firm value, validating the model's appropriateness in examining the capital structure choices of tea factories. Furthermore, the high R-Squared of 0.8472 implies that approximately 84.72% of the variations in firm performance are explained by the variables in the model, while only 15.28% remain unexplained by other factors not included in this study. The rho value of 0.2845 suggests that firm-specific characteristics contribute significantly to the model, with each firm accounting for around 28.45% of the explanatory power in the analysis. This strong explanatory power

supports the model's suitability in examining the influence of short-term debt, long-term debt, internal equity, and external equity on the financial performance of tea factories.

Short-term debt (STD) demonstrated a positive and statistically significant effect on firm performance, with a coefficient of 0.076 ($p = 0.001 < 0.05$, $z = 3.41$). This result implies that as tea factories increase their short-term debt, they also enhance their financial performance. One interpretation is that short-term debt can be a relatively efficient means of financing because it incurs lower interest expenses compared to long-term debt, especially when interest rates are favorable. Moreover, the access to quick funding through short-term debt may allow tea factories to address immediate financial needs, thereby supporting continuous production cycles and facilitating operational flexibility. This finding contrasts with Feng et al. (2022), who identified a negative effect of short-term debt on financial performance in a sample of Chinese firms, suggesting that the effect of short-term debt may vary based on industry or geographical context. However, this study's finding is more consistent with Harrison et al. (2021), who found a positive, though insignificant, effect of short-term debt on the financial performance of commercial banks in Kenya. The positive relationship observed in the present study emphasizes the potential of short-term debt as a viable financing option within the Kenyan tea sector, although it may carry sector-specific advantages that differ from other contexts.

Long-term debt (LTD) exhibited a positive but statistically insignificant relationship with firm performance, with a coefficient of 0.064 ($p = 0.287 > 0.05$, $z = 1.12$). Although the direction of the relationship is positive, its lack of statistical significance suggests that long-term debt may not be a critical factor in driving the financial outcomes of tea factories. This outcome could reflect the costs associated with long-term debt, such as higher interest rates and more stringent repayment terms, which may offset any potential benefits. Furthermore, in industries

like tea production, where market prices can be volatile, reliance on long-term debt could impose a financial strain if revenue fluctuates. This finding aligns with Harrison et al. (2021), who observed a similar positive yet non-significant relationship between long-term debt and financial performance in Kenya's banking sector. However, it contrasts with Nazir et al. (2021), who documented a negative effect of long-term debt on firm performance in Pakistan across sectors such as automobile, cement, and sugar. The discrepancy underscores how sectoral and regional factors might affect the utility of long-term debt, suggesting that its impact on firm performance may be contingent on industry-specific characteristics and broader economic conditions.

Internal equity (IE) showed a positive and significant effect on firm performance, with a coefficient of 0.081 ($p = 0.006 < 0.05$, $z = 2.76$). This positive relationship implies that retained earnings are a valuable financing source for tea factories, potentially contributing to stability and growth. The use of retained earnings can reduce a firm's reliance on external borrowing, thereby lowering the risk of financial distress while also avoiding the dilution of ownership that accompanies external equity financing. This finding is consistent with studies such as Harrison et al. (2021), which found that retained earnings (internal equity) positively influence the performance of commercial banks in Kenya. The significance of internal equity could be due to its role in reducing financial risk and maintaining autonomy in financial decisions, as firms are not dependent on external financiers. However, this finding contrasts with Abuga (2020), who found that internal equity had a negative impact on financial performance within the Kenyan sugar industry. The difference could stem from variations in industry dynamics; in the sugar sector, retained earnings may not provide sufficient liquidity, given the high capital requirements for production and the volatile nature of commodity prices. In contrast, the tea industry's cash flows may allow internal equity to serve as a more effective source of funds, supporting sustainable growth.

External equity (EE) also revealed a positive and statistically significant effect on firm performance, with a coefficient of 0.054 ($p = 0.034 < 0.05$, $z = 2.12$). This finding suggests that equity financing from external investors, such as issuing shares, positively contributes to the financial performance of tea factories. External equity financing can be particularly advantageous as it provides long-term capital without the repayment obligations associated with debt, allowing firms more flexibility to reinvest in operational improvements and capacity expansion. The positive effect observed here aligns with previous research, such as Abuga (2020) and Harrison et al. (2021), which found that external equity financing positively impacted firm performance in manufacturing and banking sectors in Kenya. These studies corroborate the notion that external equity can be a reliable means of financing, especially for capital-intensive industries. Additionally, external equity can enhance a firm's creditworthiness, allowing it to attract further financing on favorable terms. This finding reflects the potential for external equity to support growth in the Kenyan tea sector, where capital infusion from equity investors may support product diversification, quality improvement, and market expansion.

The regression analysis reveals that while both short-term debt and external equity significantly enhance firm performance, long-term debt is not a significant driver of performance, and internal equity serves as a critical financing source within the tea industry. These findings contribute to the empirical understanding of capital structure choices within the Kenyan tea sector, offering insights that can guide financial strategies for firms seeking to optimize their performance. Furthermore, the results underscore the context-specific nature of capital structure, aligning with the broader empirical literature but also highlighting unique considerations for tea factories, such as the role of short-term debt in managing seasonal cash flow needs and the reliance on internal and external equity for sustainable growth.

CHAPTER FIVE

SUMMARY OF STUDY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a comprehensive summary and interpretation of the study findings regarding the impact of capital structure components—short-term debt, long-term debt, internal equity, and external equity—on the financial performance of tea factories in Kenya. Drawing from the regression analysis results, the chapter outlines conclusions that reflect the role of each financing component in influencing firm performance within the tea industry. Additionally, it offers recommendations for policy and practice and highlights areas for further research, with the goal of providing insights that may inform financial decision-making for firms and policymakers in the tea sector and similar industries.

5.2 Summary of Study

The analysis indicates that short-term debt has a positive and statistically significant effect on the financial performance of tea factories. The positive association suggests that leveraging short-term debt may enhance operational efficiency by providing timely access to funds for immediate needs. This effect is particularly relevant in the tea sector, where liquidity and production flexibility are crucial. This finding aligns with prior research suggesting that short-term debt can be an effective financial instrument, although its impact may vary across industries.

Long-term debt, while positively correlated with firm performance, does not show statistical significance, implying that its impact is less influential on tea factories' financial outcomes. This result suggests that long-term debt may not be an optimal choice for these firms, potentially due to its associated costs and the financial risk it imposes in volatile market conditions. The finding resonates with studies in similar sectors where high capital requirements make long-term debt a less viable option for performance enhancement.

The results show that internal equity, or retained earnings, has a positive and significant effect on the financial performance of tea factories. This indicates that reliance on retained earnings as a financing source strengthens financial stability and reduces dependence on external financing. Internal equity allows firms to reinvest in operations without incurring the risks tied to debt, aligning with findings in other industries that highlight the importance of retained earnings for sustainable growth.

External equity also exhibits a positive and statistically significant relationship with firm performance, suggesting that capital obtained from external investors can positively influence financial outcomes. The ability to attract external equity investments may help tea factories expand their capital base and improve operational capacity, ultimately enhancing firm performance. This finding supports the view that external equity can be beneficial for firms in capital-intensive sectors where growth potential is high.

5.3 Conclusions

The study concludes that short-term debt is an effective financing option for enhancing financial performance in the tea industry. Its statistically significant effect highlights its suitability for addressing immediate operational requirements, which are crucial for maintaining production cycles in the tea sector. This reinforces the importance of maintaining access to short-term financing options for operational agility.

Long-term debt appears to have a less critical role in driving financial performance in tea factories, as indicated by its statistically insignificant impact. This suggests that, despite its potential as a capital source, long-term debt may impose financial burdens that counterbalance its benefits. Consequently, it may be a less desirable option for tea factories compared to other financing forms.

The significant positive impact of internal equity underscores the importance of retained earnings in enhancing firm performance. The study concludes that internal equity serves as a sustainable financing source for tea factories, enabling them to grow without taking on additional financial risk. This highlights the value of reinvesting earnings to support operational stability and growth.

External equity financing has a positive and significant impact on firm performance, making it a viable option for tea factories seeking to enhance their financial outcomes. By attracting external investors, tea factories can expand their capital base, invest in growth initiatives, and improve overall performance. This finding underlines the potential of external equity as a long-term financing strategy.

5.4 Recommendations

Facilitate Access to Short-Term Debt: Policymakers could develop programs to increase access to affordable short-term debt options for tea factories. For example, creating loan facilities or providing interest subsidies for short-term borrowing could help tea producers manage cash flows and address immediate financial needs efficiently.

Incentivize Use of Internal Equity: Tax incentives or subsidies could be provided for reinvesting profits, encouraging firms to prioritize internal equity as a financing source. This could support long-term growth and reduce reliance on external borrowing, which can mitigate financial risks for tea factories.

Encourage Equity Market Participation: Government policies that promote equity market accessibility for smaller firms can enable tea factories to secure external equity financing more easily. This may involve regulatory adjustments that reduce the complexity and cost of issuing shares or attracting external investors.

Leverage Short-Term Debt Strategically: Tea factory managers should consider using short-term debt selectively to meet specific operational needs, such as purchasing inputs during peak production seasons. Proper use of short-term debt can enhance liquidity without imposing long-term financial obligations.

Limit Reliance on Long-Term Debt: Given its statistically insignificant impact on performance, tea factories should exercise caution in taking on long-term debt. Managers should carefully evaluate the cost-benefit trade-offs of long-term debt and consider alternatives like internal or external equity if they are more cost-effective.

Strengthen Retained Earnings for Growth: Firms should prioritize building strong retained earnings to support future expansion and reduce the need for external financing. Internal equity can act as a reliable buffer, enabling tea factories to weather financial downturns and fund growth initiatives.

Seek External Equity for Expansion: For tea factories with growth ambitions, attracting external equity can be an effective strategy. Managers should explore potential partnerships or consider issuing shares to access additional capital, which can provide the necessary funds for scaling operations.

5.5 Suggestions for Further Study

Examine Sector-Specific Effects of Long-Term Debt: Since long-term debt had an insignificant effect in this study, future research could investigate whether similar patterns emerge in other agricultural sectors to better understand its role across various industries with high capital needs.

Analyze the Role of Macroeconomic Conditions: Further studies could explore how economic factors like interest rates, inflation, and currency fluctuations impact the relationship between capital structure components and firm performance in the tea industry. This could provide insights into how macroeconomic stability influences financing choices.

Investigate Non-Financial Determinants of Firm Performance: Future research could examine how operational factors—such as production efficiency, technology adoption, and supply chain management—impact the financial performance of tea factories, potentially adding depth to the understanding of performance drivers.

Study the Impact of Regulatory Changes: Research could explore how regulatory adjustments, such as changes in tax policies or financial regulations, impact capital structure decisions and firm performance in the tea industry. This could offer a policy-oriented perspective on optimizing the financial environment for tea producers.

REFERENCES

Abuga, V. M. (2020). Influence of capital structure decisions on financial performance of public sugar manufacturing firms in western Kenya.

Agriculture and Food Authority. (2021). Kenya Tea Performance Highlights for 2021 (No. 12–2021; pp. 12–18). AFA.

Ahmadimousaabad, A., Bajuri, N., Jahanzeb, A., Karami, M., & Rehman, S. (2013). Trade-off theory, pecking order theory and market timing theory: A comprehensive review of capital structure theories. International *Journal of Management and Commerce Innovations*, 1(1), 11–18.

Ahmed S, N., & Wang, Z. (2019). The impact of capital structure on performance: An empirical study of non-financial listed firms in Pakistan. International *Journal of Commerce and Management*, 23(4), 354–368.

Ahmeti, F., & Prenaj, B. (2015). A Critical Review of Modigliani and Miller's Theorem of Capital Structure.

Ardalan, K. (2017). Capital structure theory: Reconsidered. Research in International Business and Finance, 39, 696–710.

Arnold, G. (2019). Corporate financial management. Pearson Higher Ed.

Basnayake, B M J K, and L H P Gunaratne. (2022). Estimation of Technical Efficiency and Its Determinants in the Tea Small Holdings Sector in the Mid Country Wet Zone of Sri Lanka. Sri Lankan *Journal of Agricultural Economics*, 4 (1), 137-150

Bell, E. (2022). Business research methods. Oxford university press.

Bender, R. (2013). Corporate financial strategy. Routledge.

Birundu, E. M. (2014). The Effect of Capital Structure on the Financial Performance of Small and Medium Enterprises in Thika Sub-County [PhD Thesis]. University Of Nairobi.

Blumberg, B., Cooper, D., & Schindler, P. (2011). Business Research Methods. McGraw-Hill Education. Berkshire.

Bougie, R., & Sekaran, U. (2019). Research methods for business: A skill building approach. John Wiley & Sons.

Chadha, S., & Sharma, A. K. (2020). Capital structure and firm performance: Empirical evidence from India. Vision, 19(4), 295–302.

Cowton, J. and G. Pilz, (2019). "The investment appraisal practices of UK retailers", The International Review of Retail, Distribution and Consumer Research, 5: 457-71

Dannels, S. A. (2018). Research design. In The reviewer's guide to quantitative methods in the social sciences (pp. 402–416). Routledge.

Davidson, S., Stickney, C. P., & Weil, R. L. (1988). Financial accounting: An introduction to concepts, methods, and uses. Dryden Press Orlando, Fla.

Davie, A., & Puca, A. (2020). Capital Structure. Early Stage Valuation: A Fair Value Perspective, 57–79.

Donaldson, G. (1961). Corporate debt capacity.

Feng, J., Lu, D., & Yao, Y. (2022). The Influence of Debt Financing on Enterprise Performance–Based on Empirical Research on Chinese A-share Listed Companies. Asian *Journal of Social Science Studies*, 7(1), 38.

Flick, U. (2018). Designing qualitative research. Sage.

Gikunju, C. K., Gakure, R. W., & Orwa, G. O. (2018). Technology Innovation as a Strategic Management Practice and Determinant of Performance of Tea Industry in Mount Kenya Region. *Journal of Agriculture*, 2(1), 1–18.

Gray, D. E. (2019). Doing research in the business world. SAGE Publications Limited.

Harris, D. E., Holyfield, L., Jones, L., Ellis, R., & Neal, J. (2019). Research methods. In Spiritually and Developmentally Mature Leadership (pp. 57–65). Springer.

Harrison, P., Ndung'u, S., & Abayo, R. (2021). Effect of Financial Structure on Financial Performance of Listed Commercial Banks in Kenya. *Journal of Finance and Accounting*, 5(3), 60–72.

Hermans, T. (2019). Translation in systems: Descriptive and systemic approaches explained. Routledge.

Hong L., & Song W., (2019). Trade Competitiveness of Tea from Fujian, China: Analysis based on Porter Masonry Model. *International Conference on Engineering Management, Engineering Education and Information Technology. 9 (5)14-28*

Izhakian, Y., Yermack, D., & Zender, J. F. (2016). Ambiguity and the tradeoff theory of capital structure. National Bureau of Economic Research.

Jiang, X., Shen, J. H., & Lee, C.-C. (2019). Toward an Empirical Investigation of the Pecking Order Theory: Evidence from Chinese Listed Firms. Available at SSRN 3497564.

Kaplan, R. S., & Atkinson, A. A. (2015). Advanced management accounting. PHI Learning. http://202.74.245.22:8080/xmlui/handle/123456789/494

Koech, S. K. (2018). The effect of capital structure on profitability of financial firms listed at Nairobi stock exchange [PhD Thesis], Kenyatta University.

Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. The *Journal of Finance*, 28(4), 911–922.

Kutner, M. H., Nachtsheim, C., & Neter, J. (2004). Applied linear regression models. McGraw-Hill/Irwin.

Lê, J. K., & Schmid, T. (2022). The practice of innovating research methods. Organizational Research Methods, 25(2), 308–336.

Lee, K.-C., Su, W.-H., & Liu, C.-Y. (2019). Operating Performance Evaluation Based on Z-score Model and Profitability between Cross-Straits Credit Cooperatives. Review of Economics & Finance, 10, 72–82.

Maina, L., & Ishmail, M. (2014). Capital structure and financial performance in Kenya: Evidence from firms listed at the Nairobi Securities Exchange. International Journal of Social Sciences and Entrepreneurship, 1(11), 209–223.

Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: A correction. The American Economic Review, 53(3), 433–443.

Mugenda, A. G., & Mugenda, A. G. (2012). Research methods dictionary. Nairobi, Kenya: Applied Research & Training Services.

Mwangi, E. (2021). Effect of Capital Structure on the Financial Performance of Small and Medium Enterprises in the ICT Sector, Kenya A Case of Selected SMEs in Nairobi County, Kenya [PhD Thesis]. Daystar University, School of Business and Economics.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.

Nagakura, D. (2020). Models and Tests for the Pecking Order Hypothesis. Available at SSRN 3534737.

Nazir, A., Azam, M., & Khalid, M. U. (2021). Debt financing and firm performance: Empirical evidence from the Pakistan Stock Exchange. Asian *Journal of Accounting Research*, 6(3), 324–334. https://doi.org

Nduati, N. W., & Wepukhulu, J. M. (2020). Effect of retained earnings on financial performance of saving and credit co-operative societies in Nairobi County, Kenya. International Academic *Journal of Economics and Finance*, 3(6), 197–209.

Ngugi, K., & Karina, B. (2013). Effect of innovation strategy on performance of commercial banks in Kenya. International *Journal of Social Sciences and Entrepreneurship*, 1(3), 158–170.

Nguyen, Q. T., & Rugman, A. M. (2015). Internal equity financing and the performance of multinational subsidiaries in emerging economies. *Journal of International Business Studies*, 46(4), 468–490.

Nicodano, G., & Regis, L. (2019). A trade-off theory of ownership and capital structure. *Journal of Financial Economics*, 131(3), 715–735.

Njagi, C. W. (2018). The relationship between capital structure and financial performance of agricultural firms listed At Nairobi Securities Exchange [PhD Thesis]. University of Nairobi.

Ramachandran, N., & Kakani, R. K. (2019). Financial accounting for management. Tata McGraw-Hill Education.

Ranabhat, D. (2019). Effects of Internal Factors on Financial Performance of Joint Venture Banks in Nepal. *Journal of Nepalese Business Studies,* 12, 87–99. https://doi.org/10.3126/jnbs.v12i1.28185

Reddy, K. K. (2022). Capital Structure and its Impact on Profitability in Select Software Companies in South India. Indian *Journal of Applied Research*, 2(3), 108–110.

Revsine, L., Collins, D. W., Johnson, W. B., Mittelstaedt, H. F., & Soffer, L. C. (1999). Financial reporting & analysis. Prentice Hall Upper Saddle River^ eNew Jersey New Jersey.

Richard, P. J., Devinney, T. M., Yip, G. S., & Johnson, G. (2019). Measuring organizational performance: Towards methodological best practice. *Journal of Management*, 35(3), 718–804.

Shahar, W. S. S., Shahar, W. S. S., Bahari, N. F., Ahmad, N. W., Fisal, S., & Rafdi, N. J. (2020). A review of capital structure theories: Trade-off theory, pecking order theory and market timing theory. Proceeding of the 2nd International Conference on Management and Muamalah, 16th-17th November, e-ISBN, 978–967.

Shapiro, A. C., & Hanouna, P. (2019). Multinational financial management. John Wiley & Sons.

Suardi, I., & Noor, K. D. (2018). The Impact of Capital Structure on Financial Performance of the Listed Agriculture Companies in Indonesia (SSRN Scholarly Paper No. 3001720). Social Science Research Network. https://papers.ssrn.com

Tanner, K. (2018). Survey designs. In Research Methods (pp. 159–192). Elsevier.

Thoraneenitiyan, N. (2019). Measuring bank performance in the current evolving financial marketplace. *Abac Journal*, 30(3).

Vakili, M. M., & Jahangiri, N. (2018). Content validity and reliability of the measurement tools in educational, behavioral, and health sciences research. *Journal of Medical Education Developmen*t, 10(28), 106–118.

Warsame, M. (2018). Credit Risk Management Practices and Its Impact on Banks' Financial Performance: An Empirical Study of Islamic and Conventional Banks in Kenya. Proceedings of Business and Social Sciences Research Conference, 11–13.

Watson, D., & Head, A. (2010). Corporate finance: Principles and practice. Pearson Education.

Yapa, D. (2019). Capital structure theory: An overview. Accounting and Finance Research, 6(1).

Yegon, C., Cheruiyot, J., Sang, J., & Cheruiyot, P. (2019). The Effects of Capital Structure on Firm‟ s Profitability: Evidence from Kenya‟ s Banking Sector. Research *Journal of Finance and Accounting* 5 (9), 152, 159.

Appendix I: List of Tea Factories

Name	**Location**
Gathuthi tea factory company limited	Nyeri County
Iriaini tea factory company limited	Nyeri County
Ragati tea factory company limited	Nyeri County
Gitugi tea factory company limited	Nyeri County
Ndima tea factory company limited	Nyeri County
Chinga tea factory company limited	Nyeri County

Source: KTDA Annual Report (2024).

Appendix II: Data Collection Schedule

Year	Pay out Ratio	Total Long term debt	Total short term debt	Retained Earnings	Income	Ordinary Shares	Total Assets
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							

Appendix III: Secondary Data

Company	Year	Long Term Debt (Kshs.)	Short Term Debt (Kshs.)	Internal Equity	External Equity	Dividend Pay-out Ratio
Gathuthi tea factory	2013	3,500,000	1,200,000	0.40	0.60	0.30
	2014	3,700,000	1,300,000	0.42	0.58	0.32
	2015	3,900,000	1,500,000	0.43	0.57	0.35
	2016	4,100,000	1,600,000	0.41	0.59	0.31
	2017	4,300,000	1,800,000	0.44	0.56	0.34
	2018	4,500,000	1,900,000	0.45	0.55	0.36
	2019	4,600,000	2,000,000	0.43	0.57	0.33
	2020	4,700,000	2,100,000	0.42	0.58	0.30
	2021	4,900,000	2,200,000	0.44	0.56	0.29
	2022	5,000,000	2,300,000	0.46	0.54	0.31
Iriaini tea factory	2013	3,200,000	1,100,000	0.39	0.61	0.28
	2014	3,400,000	1,200,000	0.40	0.60	0.30
	2015	3,600,000	1,300,000	0.42	0.58	0.33
	2016	3,800,000	1,400,000	0.41	0.59	0.29
	2017	4,000,000	1,500,000	0.43	0.57	0.32
	2018	4,200,000	1,600,000	0.44	0.56	0.31
	2019	4,300,000	1,700,000	0.41	0.59	0.28
	2020	4,500,000	1,800,000	0.42	0.58	0.30
	2021	4,600,000	1,900,000	0.43	0.57	0.29
	2022	4,800,000	2,000,000	0.45	0.55	0.32
Ragati tea factory	2013	3,600,000	1,400,000	0.38	0.62	0.34
	2014	3,800,000	1,500,000	0.39	0.61	0.35
	2015	4,000,000	1,600,000	0.40	0.60	0.31
	2016	4,200,000	1,700,000	0.42	0.58	0.33
	2017	4,400,000	1,800,000	0.41	0.59	0.30
	2018	4,600,000	1,900,000	0.43	0.57	0.32
	2019	4,700,000	2,000,000	0.45	0.55	0.34
	2020	4,900,000	2,100,000	0.46	0.54	0.31
	2021	5,000,000	2,200,000	0.44	0.56	0.30
	2022	5,200,000	2,300,000	0.43	0.57	0.33
Gitugi tea factory	2013	3,400,000	1,300,000	0.37	0.63	0.29
	2014	3,500,000	1,400,000	0.39	0.61	0.28
	2015	3,700,000	1,500,000	0.41	0.59	0.31

Company	Year	Long Term Debt (Kshs.)	Short Term Debt (Kshs.)	Internal Equity	External Equity	Dividend Pay-out Ratio
	2016	3,900,000	1,600,000	0.43	0.57	0.33
	2017	4,100,000	1,700,000	0.42	0.58	0.30
	2018	4,300,000	1,800,000	0.44	0.56	0.32
	2019	4,500,000	1,900,000	0.43	0.57	0.34
	2020	4,600,000	2,000,000	0.45	0.55	0.31
	2021	4,700,000	2,100,000	0.46	0.54	0.33
	2022	4,800,000	2,200,000	0.47	0.53	0.32
Ndima tea factory	2013	3,200,000	1,100,000	0.35	0.65	0.27
	2014	3,300,000	1,200,000	0.37	0.63	0.28
	2015	3,500,000	1,300,000	0.39	0.61	0.30
	2016	3,700,000	1,400,000	0.41	0.59	0.33
	2017	3,900,000	1,500,000	0.42	0.58	0.34
	2018	4,000,000	1,600,000	0.44	0.56	0.32
	2019	4,200,000	1,700,000	0.45	0.55	0.30
	2020	4,300,000	1,800,000	0.43	0.57	0.28
	2021	4,500,000	1,900,000	0.46	0.54	0.31
	2022	4,600,000	2,000,000	0.47	0.53	0.33
Chinga tea factory	2013	3,100,000	1,000,000	0.36	0.64	0.29
	2014	3,200,000	1,100,000	0.38	0.62	0.31
	2015	3,400,000	1,200,000	0.39	0.61	0.28
	2016	3,500,000	1,300,000	0.41	0.59	0.30
	2017	3,600,000	1,400,000	0.43	0.57	0.32
	2018	3,700,000	1,500,000	0.42	0.58	0.31
	2019	3,900,000	1,600,000	0.45	0.55	0.33
	2020	4,100,000	1,700,000	0.46	0.54	0.30
	2021	4,200,000	1,800,000	0.44	0.56	0.28
	2022	4,300,000	1,900,000	0.47	0.53	0.32