EFFECT OF CORPORATE TAX PLANNING ON THE FINANCIAL PERFORMANCE OF LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE IN KENYA

BY

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A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS AND ECONOMICS IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS IN TAX AND CUSTOMS ADMINISTRATION

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DECLARATION

Declaration by Candidate

This research project is my original work and has not been presented for a degree in any other University or Institution of Higher Learning. No part of this may be reproduced without the prior written permission of the author and/or Moi University.

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DEDICATION

This research project is dedicated to my family and friends for their ongoing support and encouragement throughout my academic journey. Their unwavering belief in me has been a source of inspiration, and their sacrifices have allowed me to focus on my research. I am truly grateful for their love and understanding.

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ABSTRACT

Financial performance is a critical aspect of organizational operations, as companies constantly explore strategies to minimize costs, enhance profitability, and foster economic growth. Financial performance reflects ability of organization to effectively utilize financial and production factors to generate revenue for shareholders. However, in the recent decades, there has been an increasing collapse of global and local companies hence has attracted a lot of attention and interests from financial experts, researchers and management of corporate entities. This study aims to investigate the effect of corporate tax planning strategies on the financial performance of companies listed at the Nairobi Securities Exchange (NSE) in Kenya. The study sought to specifically determine the effect of capital deductions, tax credit and tax exemption on financial performance of listed firms in NSE. The theoretical framework for the study was anchored on signaling theory, efficient tax planning theory and Hoffman's tax planning theory. To achieve the objectives, the study adopted both explanatory and longitudinal research designs. Secondary data for the period between 2013 -2022 were extracted from annual financial statements of 57 firms listed on the NSE targeted for analysis. A total of 570 observations were made and data sheets were used to collect and organize the data. Data was analyzed using a combination of descriptive and inferential statistical techniques. All analyses was conducted using STATA version 13.0.Further, Multiple Linear regression model was employed to analyze relationships and the effect of the study variables. The findings of the regression analysis established that capital deductions ($\beta = 0.844$, p-value = 0.000, <0.05) have a positive and significant effect on financial performance. Similarly, tax credits also have a positive and significant effect on financial performance ($\beta = 0.005$, p-value = 0.000, <0.05). The regression results also revealed that tax exemptions have a positive and significant effect on financial performance ($\beta = 0.061$, p-value = 0.000, <0.05). The study contributes to the existing body of knowledge by revealing that tax planning plays a crucial role in improving the financial performance of listed firms in Kenya. Specifically, it was established that capital deductions, tax credits and tax exemptions are key tax planning strategies in positively impacting the financial performance of listed firms. The study recommends that company management should strive to have an in-depth understanding of tax laws so as to take advantage of every opportunity that will reduce their tax liability thereby increase their returns and value. In the Kenyan context, the study encourages managers of Companies listed at the NSE to be more proactive in corporate tax planning in order to improve the financial performance. Future researchers should explore the use of control variable such as firm size and industry type to understand the effect of corporate tax planning strategies on financial performance. Researchers are also encouraged to investigate the impact of Indirect tax incentives on the financial performance of listed firms in Kenya.

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DEFINITION OF TERMS

Capital Deductions: These refer to allowable deductions that companies can claim on their taxes for eligible capital expenditures or investments. These deductions are often related to expenses incurred for acquiring or improving assets such as machinery, equipment, buildings, or intangible assets (Mugenda, 2013).

Corporate tax planning: Corporate tax planning refers to the strategic approach taken by companies to manage their tax liabilities in an efficient and legal manner. The primary goal of corporate tax planning is to minimize the amount of taxes a company must pay while ensuring compliance with all relevant tax laws and regulations

Financial Performance: Financial performance refers to the assessment and evaluation of a company's financial results and outcomes, reflecting its overall financial health and success (Demirag, 2016).

Listed Companies: Listed companies are businesses that have their shares listed and traded on a recognized stock exchange. These companies have met the listing requirements and regulations set by the stock exchange and have undergone a rigorous evaluation process (Desai & Dharmapala, 2006).

Return on Investments: This is a financial metric used to measure the profitability and efficiency of an investment. It calculates the percentage or ratio of the gain or profit generated from an investment relative to its cost (Mugenda, 2013).

Stock Exchange: A stock exchange is a regulated marketplace where buyers and sellers trade various financial instruments, primarily stocks or shares of publicly traded companies, along with other securities such as bonds and derivatives (Dyreng, Hanlon, & Maydew, 2008).

Tax Credits: These are specific periods during which certain taxes are temporarily exempted or reduced for eligible businesses or industries (Mwaura & Nyangweso, 2021).

Tax Planning: Tax planning refers to the strategic management of a company's financial affairs and transactions to minimize tax liabilities while complying with applicable tax laws and regulations (Abdullahi, 2016).

Tax Exemptions: Tax exemptions refer to a legal provision or financial benefit granted by a government or tax authority that allows certain individuals, organizations, or entities to be exempt from paying taxes on specific types of income, transactions, or assets. Tax exemptions can apply to various forms of taxation, including income tax, property tax, sales tax, or other types of taxes, and they are designed to promote specific activities or industries, encourage investments, or support charitable, educational, or nonprofit organizations

ABBREVIATIONS AND ACRONYMS

AIMS	Alternative Investment Market Segment
APA	American Psychological Association
ASEA	African Securities Exchanges Association
CMA	Capital Markets Authority
COGS	Cost of Goods Sold
EU	European Union
FISMS	Fixed Income Securities Market Segment
IA	Investment Allowance
JSE	Johannesburg Securities Exchange
KENGEN	Kenya Electricity Generating Company
MIMS	Main Investment Market Segment
NSE	Nairobi Securities Exchange
NYSE	New York Stock Exchange
R&D	Research and Development
ROI	Return on Investment.
SEHK	Hong Kong Stock Exchange
SPSS	Statistical Package for the Social Sciences
SSE	Shanghai Stock Exchange
SZSE	Shenzhen Stock Exchange
WTAs	Wear and Tear Allowances

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter highlights the background of the study, statement of the problem, objectives of the study, research hypothesis, significance, and scope of the study.

1.1 Background of the Study

One of the major objectives of any organization is to enhance financial performance and shareholders' wealth. Financial performance reflects ability of organization to effectively utilize financial and production factors to generate revenue for shareholders has been the major focus of profit-making organization (Kayode & Folajinmi, 2020). Companies listed at the Nairobi Securities Exchange are not an exemption to enhancing their financial performance to improve their return on investment. This in return increases the reputation of listed companies hence attracting investors into their portfolios. For companies to achieve the objective of financial performance, tax planning is therefore necessary to ensure maximum utilization of available resources. Tax planning for listed companies may take several forms that include: -Debt structure of the organization, tax incentives, investment companies and transfer pricing. This study aims to explore more on capital deductions, tax credits and tax exemptions as the independent variables.

1.1.1 Financial performance

Financial performance is a critical aspect of organizational operations, as companies constantly explore strategies to minimize costs, enhance profitability, and foster economic growth (Smith, 2018). Capital deductions, tax Credits and tax exemptions are three key concepts that play significant roles in achieving these objectives. This study

aims to provide an overview of each concept individually, establish the linkages between them, and highlight their collective effect on an organization's financial position. By understanding these financial mechanisms, businesses can make informed decisions to optimize their financial outcomes and contribute to broader economic development.

Financial performance analysis is an effective criterion for businesses to achieve their goals, to adapt to changing conditions in the market, to improve the way of doing businesses and to be able to take measures against possible problems. Therefore, financial performance is an increasingly important issue not only for businesses but also for economies of countries. Financial performance analysis is an essential tool in evaluating the commercial activity of businesses. This evaluation is important for many interest groups such as business owners, managers, suppliers, credit institutions, employees, customers, competitors, investors, and government. While the businesses are analyzing their financial situations, they try to calculate and evaluate the financial ratios through the statistical and econometric analysis with the data they obtain from financial statements such as balance sheet, income statement and cash flow statement. Evaluating the financial status of businesses is a complex and multivariate process based on predicting the future using historical data. Financial performance evaluation helps businesses to make the right decision and to fulfil their planning and control functions effectively.

All investments bear some level of risk. A good analysis of a business's financial performance helps investors to get a sense of how much risk they would be buying into if they invested in the business. Different investors may weigh the importance of the various financial metrics differently, and all investors generally take more than one

measure of financial performance into account when evaluating a business. So, investors typically look for a fuller picture, often gained through side-by-side comparisons of information from multiple companies' financial statements — the balance sheet, income statement, cash flow statement — and annual reports. While past performance is not a guarantee of future earnings, trends and historical data from recurring financial statements can show how effectively a business has utilized its assets to gain ROIs of its own, which can go a long way toward convincing investors of a given business's value.

1.1.2 Tax Planning

Tax planning is a global practice that involves the strategic management of tax obligations within the boundaries of the law to minimize tax liabilities and maximize after-tax profits (Smith, 2018). Companies worldwide engage in tax planning strategies to optimize their tax position and enhance their financial performance. This global phenomenon is driven by various factors. Firstly, in today's interconnected economy, companies operate across borders and face complex international tax laws and regulations. As a result, they need to navigate different tax jurisdictions and employ effective tax planning strategies to remain competitive (Smith, 2018). Additionally, globalization has intensified tax competition among countries, leading companies to adopt tax planning strategies to reduce their tax burdens and gain a competitive edge (Smith, 2018).

Tax planning strategies are also influenced by continental and regional dynamics. Continental aspects pertain to broad geographical regions such as Europe, Asia, Africa, the Americas, and Oceania. Each continent has its unique tax laws, regulations, and market conditions, shaping the tax planning strategies employed by companies (Chen,

Lee, & Shih, 2020). For example, in Europe, the European Union (EU) has implemented directives and regulations to harmonize tax rules and combat harmful tax practices among member states. Companies operating within the EU must navigate these regulations and consider their effect on tax planning strategies (Höwer & Jacob, 2020). Similarly, in Asia, countries like Singapore and Hong Kong have become attractive tax jurisdictions for multinational companies due to their favorable tax rates and business-friendly environments. Companies operating in the Asia-Pacific region may establish entities in these jurisdictions to benefit from advantageous tax regimes (Dharmawan & Latan, 2020).

Companies find it essential to engage in effective tax planning for several reasons. Firstly, tax planning allows companies to optimize their tax obligations and minimize their tax liabilities within the legal framework. By strategically managing their tax affairs, companies can reduce costs and retain more profits, leading to improved financial performance (Smith, 2018). Secondly, tax planning provides companies with a competitive advantage. By optimizing their tax position, companies can lower their operational costs and potentially offer more competitive pricing to customers, gaining a market edge (Abdullahi, 2016). Furthermore, effective tax planning enables companies to manage tax risks. By staying updated on tax laws and regulations, companies can proactively identify and mitigate potential risks associated with non-compliance or aggressive tax planning practices (Gomez & Goyenechea, 2019).

Effective tax planning brings several benefits and dynamics to companies. Firstly, it directly contributes to improved financial performance. By minimizing tax liabilities and maximizing after-tax profits, companies can allocate more resources to growth opportunities, research and development, and strategic initiatives, leading to increased

revenues and profitability (Chen, Lee, & Shih, 2020). Secondly, effective tax planning enhances companies' competitive advantage (Höwer & Jacob, 2020).

Thirdly, tax planning helps companies manage tax risks and ensure compliance with tax laws and regulations. By adhering to compliance requirements and avoiding aggressive tax planning, companies can mitigate legal and reputational risks (Gomez & Goyenechea, 2019). Fourthly, tax planning enables companies to optimize the use of financial resources. By strategically leveraging tax incentives, credits, and deductions, companies can allocate funds to strategic projects and investments, leading to enhanced capital optimization and improved returns on investment (Jensen & Meckling, 1976). Lastly, effective tax planning fosters stakeholder confidence. By demonstrating ethical tax behavior, transparency, and compliance with tax regulations, companies enhance stakeholder confidence, including investors, employees, customers, and regulators, who value responsible, tax practices (Adams, Hermalin, & Weisbach, 2010).

Finally, tax planning is a global practice influenced by continental, regional, and global dynamics. Companies engage in tax planning strategies to optimize their tax position, gain a competitive advantage, manage tax risks, and enhance financial performance. The benefits include improved financial performance, enhanced competitive advantage, risk management, capital optimization, and stakeholder confidence. Understanding the global, continental, and regional aspects of tax planning is crucial for companies operating in a globalized economy and navigating diverse tax jurisdictions. Therefore, effectively managing their tax obligations, companies can achieve sustainable growth, profitability, and create value for stakeholders (Smith, 2018).

1.1.3 Capital Deductions

Capital deductions play a significant role in taxation as they allow businesses to deduct capital expenses associated with the production or acquisition of assets, such as machinery, equipment, or property, thereby reducing their taxable income (Smith, 2018). This deduction process leads to reduced tax liabilities and provides businesses with the opportunity to recover their investments gradually (Johnson, 2021). By encouraging capital expenditure, capital deductions contribute to stimulating economic growth and development (Davis, 2019).

The significance of capital deductions lies in their ability to reduce taxable income for organizations, enabling them to strategically manage their tax liabilities while complying with tax laws and regulations (Smith, 2018). When businesses incur capital expenses, such as purchasing new machinery or equipment, they can deduct a portion of the cost from their taxable income, leading to lower tax obligations (Johnson, 2021). This deduction not only facilitates investment recovery but also acts as an incentive for businesses to engage in capital spending and innovation.

Capital deductions have broader implications on the overall economy, as they encourage businesses to invest in long-term assets, such as machinery or equipment, thereby enhancing productivity and efficiency (Smith, 2022). These investments often lead to streamlined operations, improved manufacturing processes, and technological advancements, driving economic growth (Smith, 2022). Moreover, by providing businesses with financial relief, capital deductions foster innovation, enabling them to allocate resources towards research and development initiatives (Smith, 2022).

The utilization of capital deductions benefits businesses by enhancing cash flows and profitability, as they can allocate resources more efficiently towards investments and

expansion (Smith, 2018). Additionally, businesses that take advantage of capital deductions are more likely to invest in advanced technologies, leading to higher productivity levels and improved product quality, thus increasing their competitiveness in the market (Davis, 2019).

Case studies on the impact of capital deductions further highlight their significance. For example, in Kenya, KenGen, the largest power producer, demonstrated the effectiveness of tax planning strategies through a significant increase in net profit from Ksh 13.9 billion in 2019 to Ksh 18.3 billion in 2020, representing a substantial year-on-year growth of approximately 31.7% (Kenya Electricity Generating Company, 2021). Effective utilization of capital deductions positively impacted KenGen's financial performance, leading to increased profitability and investor confidence.

On the other hand, Safaricom plc, the leading telecommunications company in Kenya, faced allegations of engaging in aggressive tax planning strategies (Ochieng, 2022). These accusations resulted in a loss of public trust and criticism for failing to fulfill its tax obligations, negatively impacting the company's financial performance. Safaricom's case emphasizes the importance of responsible tax planning and adherence to tax regulations to avoid potential reputational and financial risks associated with aggressive tax avoidance strategies.

In conclusion, capital deductions are a crucial tool for businesses to strategically manage their tax liabilities while promoting economic growth and innovation (Smith, 2018). By allowing businesses to deduct capital expenses associated with the production or acquisition of assets, governments incentivize investments in long-term assets, leading to enhanced productivity and competitiveness (Davis, 2019). The

availability of capital deductions fosters innovation and sustainability by providing businesses with financial relief for research and development initiatives (Smith, 2022).

Responsible tax planning practices are essential for businesses to optimize their financial performance while complying with tax laws and regulations (Smith, 2018). Policymakers must continually review and revise tax policies to strike a balance between fostering investment, economic growth, and ensuring fair and sustainable revenue collection (Smith, 2018). Overall, capital deductions play a vital role in tax planning, with significant implications for individual businesses and the broader economy.

1.1.4 Tax credit

Tax credits play a vital role in the realm of taxation, serving as catalysts for economic progress and innovation (Smith, 2018). Unlike deductions, which reduce taxable income, tax credits provide a dollar-for-dollar reduction in tax liability for individuals and businesses, making them a compelling strategy to drive economic growth, spur innovation, and address societal challenges. This mechanism allows businesses and individuals to retain more of their earnings, which can be reinvested into productive activities, leading to increased economic activity and job creation. According to Smith (2018), tax credits have proven to be effective in encouraging businesses to invest in innovative endeavors, thereby driving technological advancements and enhancing competitiveness. These credits are recognized globally as a powerful tool to stimulate economic growth and innovation.

Governments worldwide employ tax credits as incentives to foster specific activities aligned with their developmental goals (Johnson, 2019). For instance, in the United States, the Research and Development Tax Credit has been instrumental in encouraging

businesses to invest in research and innovation, leading to technological breakthroughs and advancements in various industries (Johnson, 2019). Similarly, in Asia, countries like China and India have introduced tax credits to promote research and innovation, fueling the growth of cutting-edge industries and enhancing their global competitiveness (Li & Narayanan, 2021). These examples illustrate how tax credits are used in different regions to stimulate economic growth and innovation, aligning with the unique priorities and developmental objectives of each country.

Tax credits not only fuel economic growth but also act as catalysts for innovation by encouraging businesses to take calculated risks (Johnson, 2019). Companies engaged in pioneering projects may claim tax credits, reducing the financial burden of experimentation and fostering a culture of creativity and ingenuity. For instance, in Europe, the Horizon 2020 program by the European Commission has introduced tax credits and incentives to support research and innovation, encouraging collaboration among businesses, academia, and research institutions (Smith, 2018). Similarly, in Africa, countries like South Africa and Kenya have introduced tax credits for businesses involved in research and development, promoting technology-driven solutions to address regional challenges and boost innovation (Abugre, 2018). These examples demonstrate how tax credits play a vital role in stimulating innovation across various sectors, encouraging businesses to invest in R&D and push the boundaries of what is possible.

Moreover, tax credits play a significant role in addressing pressing societal challenges by encouraging businesses to adopt socially responsible practices (Johnson, 2019). Governments offer credits to support renewable energy initiatives, reduce carbon emissions, and promote environmentally friendly practices. In countries like Japan, tax

credits are provided to companies investing in renewable energy projects, encouraging the transition to clean and sustainable energy sources (OECD, 2021). Additionally, in Africa, countries like Morocco and Nigeria have introduced tax credits to promote environmentally friendly practices, aligning with the global sustainability agenda and contributing to a more sustainable future (IRENA, 2020). These tax credits not only benefit businesses but also contribute to addressing environmental concerns, mitigating the impact of climate change, and fostering a greener and more sustainable world.

Furthermore, tax credits play a crucial role in promoting education and workforce development (Johnson, 2019). Governments may offer credits to businesses that provide training and educational opportunities to their employees, enhancing the skill set of the workforce and bolstering productivity. In Canada, tax credits are available to businesses investing in workforce development and skills training, aligning with the country's focus on human capital development (Government of Canada, 2021). Similarly, in Asia, countries like Singapore have introduced tax credits for businesses investing in employee upskilling and development programs, boosting workforce capabilities, and bridging the skills gap (Koh, 2021). These examples demonstrate how tax credits can be utilized to enhance workforce capabilities, address skill shortages, and contribute to the overall economic and social development of a nation.

1.1.5 Tax Exemptions

Trades bad debts written off and interest expense on loans are significant aspects of taxation with implications for businesses and individuals alike. Tax exemptions involve excluding certain types of income or transactions from the tax base, leading to reduced or zero tax liability for the taxpayer (Smith, 2018). These exemptions are granted by governments to incentivize specific activities or achieve policy objectives. For

example, governments may offer tax exemptions to promote investments in renewable energy projects, research and development, or infrastructure development. This approach aims to stimulate economic growth, foster innovation, and address societal challenges while attracting beneficial investments for the overall economy.

On the other hand, trade bad debts are amounts owed to businesses by customers or clients that are considered uncollectible and are written off as losses. For tax purposes, trade bad debts are treated as deductible expenses, allowing businesses to offset their taxable income by the amount of trade bad debts incurred during the tax year (Johnson, 2019). This recognition of trade bad debts as deductible expenses provides businesses with some relief from the financial impact of uncollectible accounts and acknowledges the risk of non-payment faced by businesses offering credit terms to their customers. The treatment of trade bad debts varies among jurisdictions, and businesses need to comply with specific requirements to claim these deductions appropriately.

Similarly, interest expense on loans is a critical aspect of taxation, especially for businesses that rely on borrowed funds. When businesses borrow money to finance their operations or investments, the interest paid on the loans is generally treated as a deductible expense for tax purposes (OECD, 2021). This deduction is crucial for businesses as it reduces their overall tax burden, acknowledging the cost of borrowing as a necessary business expense and supporting access to capital and credit. However, some tax systems may impose restrictions on the deductibility of interest expenses, such as limiting the amount of deductible interest or disallowing deductions for interest paid to related parties.

The tax treatment of trade bad debts and interest expense on loans can vary across jurisdictions and depend on specific tax regulations. Some countries may have specific

criteria or limitations for the deductibility of trade bad debts or interest expenses, while others may provide more favorable treatment to incentivize business growth and investment (Li & Narayanan, 2021). For instance, some jurisdictions may have provisions for partial or limited deductibility of trade bad debts, requiring businesses to demonstrate that the debts are genuinely uncollectible and have been written off.

Understanding tax exemptions, trade bad debts, and interest expense on loans is essential for businesses and individuals to navigate the complexities of taxation and optimize their financial strategies. Tax exemptions provide incentives for desired activities and investments, trade bad debts enable businesses to account for uncollectible accounts, and the deductibility of interest expenses supports access to credit and helps reduce the tax burden for borrowers. Proper understanding and compliance with tax regulations related to these aspects can lead to better financial planning and tax management for taxpayers (Abugre, 2018).

Finally, tax exemptions, trade bad debts, and interest expense on loans are integral components of the taxation system. Governments employ tax exemptions strategically to promote specific developmental goals and incentivize economic activities, while the treatment of trade bad debts and interest expenses influences business financial decisions and access to credit. A thorough understanding of these concepts enables taxpayers to make informed decisions and effectively manage their tax liabilities. As tax laws continue to evolve, businesses and individuals must stay updated with the latest regulations and seek professional advice to ensure compliance and maximize their tax benefits.

1.1.6 The Interplay and Synergy between Capital Deductions, Tax Credits, and Tax Exemptions

In contemporary taxation, capital deductions, tax credits, and tax exemptions stand as fundamental elements, each playing distinct roles in shaping economic behavior and achieving policy objectives (Smith, 2018). The interplay and synergy between these mechanisms give rise to a conducive environment for economic growth, innovation, and job creation. Governments strategically utilize these tools to incentivize investment in priority sectors, foster innovation, and stimulate overall economic progress (Li & Narayanan, 2021). By understanding the implications of these components, individuals and businesses can make well-informed decisions that optimize their tax outcomes, leading to a thriving economy. A thoughtfully designed tax system that effectively leverages the potential of capital deductions, tax credits, and tax exemptions can create an environment conducive to growth and development, benefiting both taxpayers and society at large.

The concept of capital deductions involves the recognition of certain expenses and investments, allowing taxpayers to deduct these from their taxable income (Smith, 2018). This mechanism incentivizes businesses and individuals to invest in activities that contribute to economic progress and development. By encouraging such investment, governments promote innovation and entrepreneurship, driving technological advancements and enhancing competitiveness in the market. As businesses invest in research and development, infrastructure, and other ventures, they contribute to overall economic growth and societal welfare.

Tax credits, in contrast, serve as direct incentives to encourage targeted activities that align with the government's developmental goals (Johnson, 2019). Unlike deductions,

tax credits offer a dollar-for-dollar reduction in tax liability, further motivating taxpayers to engage in specific initiatives. For example, tax credits may be offered to businesses involved in research and development or to those adopting sustainable practices. This not only reduces the tax burden on the business but also serves as a catalyst for fostering innovation, promoting environmentally friendly practices, and addressing societal challenges.

Similarly, tax exemptions focus on driving economic growth and development by excluding certain income or transactions from the tax base (Abugre, 2018). Governments may grant tax exemptions to encourage investment in specific priority sectors, such as technology, infrastructure, or healthcare. By doing so, governments attract more capital and direct resources towards areas that align with their policy objectives. Tax exemptions create an environment where businesses and investors are incentivized to invest in priority sectors, stimulating economic growth, and creating job opportunities.

The combination of capital deductions, tax credits, and tax exemptions leads to a synergistic tax framework that aligns with the government's policy objectives and supports economic development (OECD, 2021). Businesses are encouraged to invest in research and development through capital deductions, while tax credits further motivate them to pursue innovative projects. Simultaneously, tax exemptions attract investments to priority sectors, fostering economic growth and generating employment opportunities.

By understanding the interactions and implications of these tax mechanisms, individuals and businesses can optimize their tax planning and make informed financial decisions. Staying informed and seeking professional advice is crucial as tax laws

continue to evolve, ensuring effective navigation of the complexities of taxation (Li & Narayanan, 2021).

In conclusion, capital deductions, tax credits, and tax exemptions form integral components of modern taxation, each serving distinct roles in shaping economic behavior and achieving policy objectives. Their interplay and strategic utilization by governments create an environment conducive to economic growth, innovation, and job creation. By leveraging the potential of these mechanisms, a well-designed tax system can drive prosperity and progress while benefiting both taxpayers and society at large (Smith, 2018).

1.1.7 Listed Firms at the Nairobi Securities Exchange

The Nairobi Securities Exchange (NSE) has evolved significantly since its establishment in 1954 as a voluntary organization of stockbrokers. It has emerged as one of the most dynamic and thriving markets in Africa (NSE Handbook, 2010). In 2011, the NSE underwent a transformative process, changing its name to the Nairobi Securities Exchange and becoming a publicly quoted company under the Companies Act Cap 486. This transformation solidified its position as a prominent player in the region's financial landscape. Additionally, the NSE joined the African Securities Exchanges Association (ASEA) in the same year, fostering collaboration and expanding its reach (Mwenda, 2016). Notably, the NSE has consistently ranked at the top in terms of performance and influence in East and Central Africa (Economic Survey, 2018).

The growth and development of the NSE has been remarkable. By December 2018, the total number of shares traded on the exchange increased by an impressive 41.2% to reach 8.3 billion, while market capitalization surged by 51% to approximately Ksh 2013

billion. These figures reflect the NSE's appeal to investors and the confidence it has gained over the years (Economic Survey, 2018). The NSE 20 share index, a key benchmark for the exchange, also witnessed significant growth, rising by 19.2% from 4133 points in 2012 to 4927 points in 2018. These indicators highlight the NSE's significance as a vital component of Kenya's financial ecosystem.

As of Q1 2023, the NSE market capitalization stood at Sh1.75 trillion, as reported by the Capital Markets Authority (CMA) Q4 Statistical Bulletin (CMA Handbook, 2023). This figure underscores the sustained strength and stability of the NSE, reaffirming its position as a critical hub for investment and trading activities from January to June 2023.

This study focuses on the companies listed on the Nairobi Securities Exchange, which serves as a secure platform for individuals to invest their money and earn returns. It acts as an incentive for people to save more and reduce consumption (NSE Handbook, 2022). The NSE plays a vital role in facilitating the exchange of shares of publicly quoted companies, government bonds, and various other financial instruments, contributing to the growth and stability of the economy (Machuki, V.N. 2011)

Globally, there are 60 major stock exchanges, each with its own size and trading volume. Among these, the ten largest stock exchanges by market capitalization are particularly noteworthy. Notable examples include the New York Stock Exchange (NYSE) with an estimated market capitalization of $22.77 trillion, NASDAQ with $16.24 trillion, Shanghai Stock Exchange (SSE) with $6.74 trillion, EURONEXT with $6.06 trillion, Japan Stock Exchange (JPX) with $5.38 trillion, Shenzhen Stock Exchange (SZSE) with $4.7 trillion, Hong Kong Stock Exchange (SEHK) with $4.56 trillion, National Stock Exchange (NSE) with $3.34 trillion, LSE Group with $3.10

trillion, and the Saudi Stock Exchange with $2.38 trillion. Additionally, the Johannesburg Stock Exchange ranks among the top ten in Africa, boasting a market capitalization of $1.12 trillion and earning membership in the exclusive "$1 Trillion Club" (World Federation of Exchange, 2022).

The Capital Markets Authority (CMA), operating under the Ministry of Finance, plays a crucial role in regulating the companies listed on the NSE. Compliance with both NSE and CMA regulations is essential for companies to continue selling shares on the exchange (CMA Handbook, 2022, Kinuu, 2018). The approval of the CMA paved the way for the Nairobi Securities Exchange (NSE) to become the second African exchange, following the Johannesburg Securities Exchange (JSE) Ltd., to transform into a publicly listed company on its exchange. The Companies Act mandates that these listed companies publish audited financial statements in accordance with International Accounting Standards (IAS) for each accounting period. These companies, which include both locally and foreign-incorporated entities, operate across various sectors of the Kenyan economy (Aosa, E.2011).

To ensure efficient organization and representation, the NSE groups its listed companies into three distinct market segments: Main Investment Market Segment (MIMS), Alternative Investment Market Segment (AIMS), and Fixed Income Securities Market Segment (FISMS). The majority of companies operate within the Main Investment Market Segment, which encompasses sectors such as agriculture, commerce and services, finance and banking, and industrial and allied industries. It is important to note that companies across all market segments are subject to industry-specific regulations and influenced by macroeconomic and industry-specific developments (NSE Handbook, 2022).

For this study, the target population consists of 57 listed companies on the Nairobi Securities Exchange as of 2022. These companies represent a diverse array of sectors, providing industry heterogeneity that is conducive to cross-industry comparisons. Despite operating within the same macroeconomic environment, variations in financial performance among these companies can be attributed to factors such as structural configuration, strategic orientation, and regulatory compliance (Kinuu, D., 2014).

1.2 Problem Statement

With the increasing collapse of global and local companies, shareholders and other stakeholders are increasingly becoming more concerned of the financial performance of their firms. Financial performance of companies is a subject that has attracted a lot of attention and interests from financial experts, researchers and management of corporate entities. This is because a company can have very high profitability yet in a bad situation with its cashflows. The financial performance can be measured in terms of return on assets, dividends growth, profitability, sales turnover among others. A debate still exists on how best to measure the financial performance of listed companies and the factors that affect the financial performance of companies. Several factors must be put into play to ensure a healthy financial performance of companies.

This research delves into the intricate web of tax planning and its impact on the financial performance of NSE-listed companies in Kenya. The financial well-being of these entities holds paramount importance for investors, policymakers, and market participants, directly correlating with the effectiveness of employed tax planning strategies (Desai & Dharmapala, 2006). Effective tax planning has the potential to bolster a company's competitiveness, augment cash flows, enhance profitability, and optimize returns for shareholders (Kenya Revenue Authority, 2021). Noteworthy

examples in the Kenyan context include KenGen, the nation's leading power producer, which experienced a substantial increase in net profit from Ksh 13.9 billion in 2019 to Ksh 18.3 billion in 2020, underscoring the success of its tax planning strategies (Kenya Electricity Generating Company, 2021). In contrast, Safaricom, a prominent telecommunications company, faced allegations of aggressive tax planning, leading to a decline in public trust and financial criticism. This situation manifested in Safaricom's financial performance, witnessing a significant net loss in 2021 and 2022 following years of robust profits (Kenya National Bureau of Statistics,2019- 2023).

Understanding the intricate relationship between tax planning strategies and financial performance is imperative. This comprehension is vital for overcoming challenges and fostering sustainable growth for NSE-listed companies in Kenya (Desai & Dharmapala, 2006). The study's objective is to provide invaluable insights for policymakers, investors, and market participants by meticulously exploring this intricate relationship. Through rigorous analysis and in-depth examination, this research seeks to shed light on the nuanced dynamics between tax planning practices and the financial health of companies within the Kenyan market.

1.3 Objectives of the Study

The study discussed the general objective and the specific objectives of the study.

1.3.1 General Objective

To determine the effect of corporate tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya

1.3.2 Specific objectives:

The specific objectives of the study were:

i. Determine the effect of capital deductions on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.

ii. Determine the influence of tax credits on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.

iii. Establish the effect of tax exemptions on financial performance of listed companies at the Nairobi Securities Exchange in Kenya.

1.4 Research Hypotheses

The study was guided by the following research hypotheses;

H_{01}: Capital deductions do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.

H_{02}: Tax credits do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.

H_{03}: Tax exemptions do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.

1.5 Significance of the Study

Government agencies like KRA, Central Bank will be able to make informed decisions and formulate effective tax policies that encourage compliance, minimize tax evasion risks, and promote sustainable economic development.

For tax professionals, financial managers, and business executives, the research findings will be a goldmine of knowledge. They will significantly benefit from understanding the nuanced impact of tax planning on the financial performance of the Kenyan market. These insights will pave the way for well-informed decisions and the implementation of effective tax planning strategies. Moreover, the research data will facilitate the alignment of tax planning practices with legal requirements, ethical

considerations, and financial objectives, thereby guiding practitioners toward sound and strategic financial decisions.

Investors and corporations operating within the Nairobi Stock Exchange will find the research data valuable. By delving into the relationship between tax planning and financial outcomes, the research will provide crucial insights that inform investment decisions. This knowledge will equip investors with the tools necessary to navigate the complex financial landscape, facilitating the making of well-informed investment choices within the Nairobi Stock Exchange.

From a future academic perspective, this research will contribute significantly to the existing body of knowledge concerning the impact of tax planning on Kenyan financial performance. Rooted in comprehensive data analysis, the study will expand our understanding of the intricate relationship between tax planning strategies and financial outcomes. The wealth of comprehensive data collected will serve as a foundational basis for future scholarly research, encouraging further exploration and in-depth study within this field of inquiry.

1.6 Scope of the Study

The conducted research delved into the connection between corporate tax planning and the financial performance of listed companies at the Nairobi Securities Exchange. The analysis focused on secondary data from the financial annual reports of listed companies over a 10-year period, spanning from 2013 to 2022. The research was framed within an explanatory and longitudinal design, aiming to elucidate how tax planning influenced financial outcomes for companies listed on the Nairobi Securities Exchange.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The literature review serves as a critical component of this study, providing an in-depth analysis of the existing knowledge on the relationship between corporate tax planning and financial performance in listed companies at the Nairobi Securities Exchange (NSE). This chapter encompasses a conceptual review, theoretical review, empirical review, conceptual framework, and identification of research gaps. By examining relevant concepts, theories, empirical studies, and gaps in the literature, this review establishes the foundation for the current study, guiding the research methodology and contributing to the advancement of knowledge in this field.

2.1 Conceptual Review

The conceptual review of the key concepts related to financial performance, specifically focusing on return on investments (ROI). The review aims to provide a comprehensive understanding of these concepts and their significance in evaluating a company's overall financial performance.

2.1.1 Financial Performance

Financial performance is a critical aspect in evaluating the success and viability of a company (Kieschnick, Laplante & Moussawi, 2013). It serves as a fundamental metric to assess a company's ability to generate profits and create value for its stakeholders. Key components of financial performance include return on investments (ROI), which offer valuable insights into a company's overall financial health and success.

Return On Investments: ROI evaluates the efficiency and effectiveness of investments made by a company. It measures the return earned on an investment

relative to its cost and is expressed as a percentage (Lynch, 2015). A positive ROI indicates a successful investment that generates more return than the initial investment, while a negative ROI suggests a loss.

ROI is a valuable tool for companies to assess the performance of individual investments, projects, or the overall company. By calculating the ROI of various projects, management can prioritize investments with the highest potential return, leading to better capital allocation and improved overall financial performance.

Profitability and ROI are closely related and interconnected in evaluating a company's financial performance. A company with high profitability is more likely to achieve a positive ROI on its investments, as it has more resources available for reinvestment (Sohag, Mahfuz & Sufian, 2019). Higher profitability enables a company to finance new projects and capital expenditures, leading to potential growth opportunities and increased ROI.

Conversely, a company with low profitability may face challenges in generating significant returns on investments due to limited financial resources. Such companies may need to rely on external funding, which can increase costs and potentially reduce ROI.

Profitability and ROI are critical indicators for company management, investors, and stakeholders. Consistent profitability signals a well-managed company with healthy financials, increasing confidence among investors and creditors (Kumar & Siddiquee, 2018). High profitability also enhances a company's ability to attract new investors and raise capital for expansion.

ROI helps investors and management evaluate the efficiency and effectiveness of capital investments. By focusing on projects with positive ROI, companies can optimize their capital allocation and ensure that investments generate the desired returns (Cheng & Gou, 2019). Maximizing ROI enables a company to utilize its resources effectively and drive overall growth and success.

In conclusion, financial performance, ROI, plays a crucial role in assessing a company's viability and success. Profitability measures the company's ability to generate profits from its core operations, while ROI evaluates the efficiency and effectiveness of investments. High profitability and positive ROI are indicative of financial strength and efficient resource management, enhancing the company's ability to create value for stakeholders. Companies should emphasize both profitability and ROI to ensure sustained growth and competitiveness in the dynamic business landscape. By utilizing these key metrics, managers and investors can make informed decisions and strategize for the company's future success.

2.1.2 Capital Deductions

Taxation is a fundamental aspect of government revenue generation that impacts companies' financial performance in various countries and regions (Harrison, 2020). To optimize financial outcomes and minimize tax liabilities, businesses employ tax planning strategies (Harrison, 2020). Tax planning involves the strategic management of tax liabilities while adhering to tax laws and regulations (Smith, 2018). One essential element of tax planning is capital deductions, which allow businesses to deduct capital expenses associated with asset production or acquisition, reducing their taxable income (Smith, 2018).

The significance of capital deductions lies in their ability to reduce tax liabilities for businesses, offering financial relief and encouraging investment in long-term assets (Johnson, 2021). By deducting a portion of capital expenses, companies can recoup their investments over time, promoting economic growth through capital expenditure (Davis, 2019). The utilization of capital deductions serves as an incentive for businesses to invest in machinery, equipment, or property, leading to increased productivity and efficiency (Smith, 2018).

Furthermore, capital deductions have broader implications for the overall economy. By encouraging businesses to invest in long-term assets, they contribute to increased productivity, streamlined operations, and enhanced technological capabilities, driving economic growth (Johnson, 2021). These investments facilitate improvements in manufacturing processes, driving business growth and innovation (Davis, 2019). Additionally, capital deductions free up financial resources that companies can allocate towards research and development initiatives, fostering innovation and creativity (Smith, 2018).

The positive impact of capital deductions is evident in the example of KenGen, the largest power producer in Kenya (Kenya Electricity Generating Company, 2021). KenGen showcased the effectiveness of its tax planning strategies through a substantial increase in net profit from Ksh 13.9 billion in 2019 to Ksh 18.3 billion in 2020, representing a year-on-year growth of approximately 31.7% (Kenya Electricity Generating Company, 2021). In contrast, Safaricom plc, the leading telecommunications company in Kenya, faced allegations of engaging in aggressive tax planning strategies, leading to a loss of public trust and criticism for failing to fulfill its tax obligations (Ochieng, 2022). These financial indicators suggest that allegations of

aggressive tax planning strategies may have had a negative effect on the company's profitability and overall financial performance (Safaricom press release, 2019-2023).

Comprehending the effect of tax planning, particularly capital deductions, on the financial performance of companies listed on the Nairobi Securities Exchange (NSE) in Kenya is crucial for addressing challenges and fostering sustainable growth (Desai & Dharmapala, 2006). This study aims to explore the relationship between tax planning strategies and financial performance indicators, providing valuable insights for policymakers, investors, and market participants (Desai & Dharmapala, 2006).

Arguably, capital deductions play a significant role in tax planning, encouraging investment in long-term assets and promoting economic growth. By reducing tax liabilities and offering financial relief, capital deductions foster innovation and support research and development initiatives. Governments and businesses should recognize the importance of effective tax planning, including capital deductions, to promote long-term growth and sustainability in the economy.

2.1.3 Tax credits

Tax credits are instrumental financial incentives provided by governments to promote specific activities, industries, or behaviors (Bloomquist, 2014). These credits play a vital role in shaping corporate decisions, financial strategies, and overall economic growth. They come in various types, each tailored to achieve different policy objectives and support economic development (Devereux, 2019). Some common types of tax credits include investment tax credits, research and development (R&D) tax credits, energy tax credits, and social or environmental incentive credits.

Investment tax credits serve to encourage companies to invest in capital assets and infrastructure (Stewart, 2017). By providing tax credits for qualifying capital

expenditures, governments aim to stimulate investment and modernization, which can lead to increased productivity and economic growth (Gupta & Newberry, 2017). These credits can provide companies with the financial incentive needed to undertake significant capital investments, thereby contributing to economic expansion and job creation.

R&D tax credits are designed to incentivize companies to invest in innovation and technological advancement (Bloomquist, 2014). These credits reward businesses engaged in qualifying research and development activities, encouraging them to pursue cutting-edge technologies and product development (Polder et al., 2018). By supporting R&D endeavors, governments foster a culture of innovation and contribute to the advancement of industries and technologies.

Energy tax credits are aimed at promoting the use of renewable energy sources and energy-efficient technologies (Higashide & Sinclair, 2018). Companies adopting sustainable energy practices or investing in renewable energy projects can avail themselves of tax credits, reducing their energy-related expenses and promoting environmental sustainability (Chetty & Looney, 2021). These credits not only support the growth of the green energy sector but also contribute to environmental conservation efforts.

Social or environmental incentive credits are designed to encourage socially responsible behaviors and environmentally friendly practices (Devereux, 2019). Companies that undertake initiatives related to job creation in economically disadvantaged areas, environmental conservation, or community development may qualify for these credits, reinforcing their commitment to societal and environmental

well-being (Buiatti & Pampurini, 2018). These credits align with the broader goal of promoting corporate social responsibility and sustainable business practices.

The calculation and utilization of tax credits are critical aspects that determine their impact on businesses and the economy (Hickson & Holm, 2015). Governments establish specific rules and guidelines governing the calculation and utilization of tax credits to ensure fairness, effectiveness, and compliance (Gupta & Newberry, 2017). Understanding these rules is crucial for businesses to maximize the benefits of tax credits and remain compliant with tax regulations.

The method of calculating tax credits can vary depending on the type of credit and the eligible activities or expenses (Chetty & Looney, 2021). Investment tax credits may be calculated as a percentage of qualifying capital expenditures, while R&D tax credits may be based on eligible research expenses (Polder et al., 2018). Understanding the intricacies of these calculations is essential for businesses to accurately claim the tax credits they are eligible for.

Companies can utilize tax credits to offset their tax liabilities (Bloomquist, 2014). Some tax credits are fully refundable, meaning if the credit exceeds the tax liability, the excess is refunded to the company. Non-refundable tax credits, on the other hand, can only be used to reduce tax liability to zero but cannot generate a refund (Stewart, 2017). The type of tax credit affects its potential impact on a company's financial position.

The effective calculation and utilization of tax credits can significantly impact a company's financial performance and decision-making (Devereux, 2019). Businesses must understand the specific rules and requirements to claim tax credits successfully, as missteps could result in missed opportunities or tax compliance issues (Hickson &

Holm, 2015). Companies should carefully assess their eligibility for various tax credits and strategize their financial decisions accordingly.

Generally, tax credits are powerful tools that play a pivotal role in shaping economic activities and encouraging desired behaviors in various sectors (Buiatti & Pampurini, 2018). Understanding the different types of tax credits and the intricacies of their calculation and utilization is vital for companies to leverage these incentives effectively (Gupta & Newberry, 2017). By strategically utilizing tax credits aligned with their goals, companies can optimize their financial performance, promote innovation, foster sustainable practices, and contribute to economic growth (Chetty & Looney, 2021). Policymakers also play a crucial role in designing and implementing tax credit programs to ensure they are targeted, transparent, and impactful in achieving their intended objectives (Polder et al., 2018).

2.1.4 Tax Exemptions

Taxation is a crucial aspect of government fiscal policy, providing the necessary revenue for public services and governance. Within the realm of taxation, several key concepts hold significance for individuals and businesses: tax exemptions, trade bad debts, and interest expense on loans. These concepts have far-reaching implications on the financial landscape, influencing taxpayers and shaping economic behavior (Abugre, 2018).

Tax exemptions are provisions that exclude specific income or transactions from the taxable base, resulting in reduced or zero tax liability for taxpayers. Governments grant tax exemptions strategically to encourage activities aligned with their developmental goals, such as investments in priority sectors like technology, infrastructure, or

healthcare (Abugre, 2018). By promoting targeted investments, tax exemptions play a crucial role in fostering economic growth and development.

Trade bad debts, on the other hand, refer to debts that businesses classify as uncollectible and subsequently write off as losses. In taxation, businesses can claim bad debt deductions to offset their taxable income (Williams et al., 2016). This deduction serves as a mechanism for businesses to manage financial risks associated with non-payment of debts, promoting prudent financial practices, and providing financial relief.

Interest expense on loans is the cost businesses incur for borrowing money, and they can deduct this expense from their taxable income. This deduction serves as an incentive for businesses to invest and expand their operations, as it reduces the financial burden of borrowing (Cao et al., 2018). By promoting investment and expansion, interest expense deductions contribute to economic activity and growth.

The interplay between tax exemptions, trade bad debts, and interest expense on loans has significant implications for individuals, businesses, and the overall economy. Tax exemptions encourage targeted investments in priority sectors, while bad debt deductions help businesses manage financial risks and enhance financial stability. Interest expense deductions stimulate business investments, supporting economic activity and job creation (Abugre, 2018; Cao et al., 2018; Williams et al., 2016).

Moreover, the combination of these concepts influences financial decision-making. A business investing in a priority sector may benefit from both tax exemptions on its income and interest expense deductions on loans used for financing the investment (Abugre, 2018). This synergy between tax incentives encourages businesses to make strategic financial choices that align with the government's developmental goals.

The implications of tax exemptions, trade bad debts, and interest expense deductions extend beyond individual businesses and impact the broader economy. Tax exemptions can drive economic growth and innovation in targeted sectors, spurring job creation and enhancing competitiveness (Abugre, 2018). Bad debt deductions promote responsible financial practices, contributing to overall financial stability. Interest expense deductions incentivize investments and expansion, driving economic activity and contributing to the overall economic health (Cao et al., 2018; Williams et al., 2016).

Therefore, tax exemptions, trade bad debts, and interest expense on loans are essential concepts within the realm of taxation. Their strategic use and interplay influence economic behavior, incentivize investments, and foster economic growth and development (Abugre, 2018; Cao et al., 2018; Williams et al., 2016). Understanding the implications of these concepts is crucial for businesses and policymakers to make informed financial decisions and create a conducive environment for growth and prosperity. By leveraging these tax mechanisms effectively, governments can promote economic progress while benefiting both businesses and the broader economy.

2.2 Theoretical Review

A theoretical framework is a conceptual structure that provides guidance for the development of a research study (APA Dictionary of Psychology, 2020). It comprises interconnected concepts, definitions, and propositions, serving as the foundation for understanding and investigating a specific phenomenon or research problem. The theoretical framework aided in the organization and interpretation of data, as well as the generation of hypotheses and drawing of conclusions.

In the context of this study, three theories were utilized: Signaling Theory, Efficient Tax Planning Theory and Hoffman's Tax Planning Theory. These theories consist of

systematically interrelated principles, definitions, and propositions that are developed to explain and predict phenomena or reality. They provided a theoretical basis for examining the effect of corporate tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya during the period from 2013 to 2022.

2.2.1 Signaling Theory

Signaling Theory is relevant to financial performance as it sheds light on how tax exemptions serve as effective signals of a company's alignment with government priorities and commitment to responsible tax planning. When companies claim tax exemptions, they communicate their willingness to engage in government-supported activities and demonstrate dedication to sustainable growth and responsible financial management (Hickson & Holm, 2015). The act of claiming tax exemptions becomes a powerful communication tool, signifying that the company's operations are in line with government objectives.

Tax exemptions, as provisions that exclude certain income or transactions from the taxable base, play a vital role in strategic fiscal policy. Governments grant tax exemptions to encourage specific behaviors or investments that align with their policy objectives, stimulating economic growth, promoting socially responsible activities, and attracting investments in targeted industries or regions (Abugre, 2018). By providing incentives to individuals and businesses, tax exemptions create an environment that fosters economic development and societal welfare.

By utilizing tax exemptions in targeted sectors, companies signal their commitment to participating in activities that the government deems crucial for economic development. This alignment fosters a positive relationship between the private sector and the

government, promoting a cooperative environment for mutual progress (Hickson & Holm, 2015). Moreover, claiming tax exemptions can be seen as a proactive step in managing tax liabilities, reflecting a company's dedication to responsible tax planning and financial management.

Furthermore, tax exemptions serve as signals of a company's dedication to sustainable growth. Companies that invest in priority sectors or engage in socially responsible activities often qualify for tax exemptions. By claiming these incentives, companies demonstrate their commitment to environmentally friendly initiatives, job creation in disadvantaged regions, or community development projects (Abugre, 2018). This signaling effect enhances a company's reputation as a responsible corporate citizen, potentially attracting socially conscious investors and positively influencing consumer perceptions.

The signaling effect of tax exemptions extends beyond the private sector and reaches investors and financial markets. Observing a company claim tax exemptions strategically, investors may interpret it as a positive signal of the company's financial strength and prudent management (Hickson & Holm, 2015). The perception that a company is taking advantage of tax incentives in a responsible and strategic manner can enhance investor confidence and potentially attract more investment. This positive impact on investor sentiment may lead to increased stock prices and market valuation for the company.

2.2.2 Efficient Tax Planning Theory

The efficient tax planning theory posits that companies engage in tax planning to maximize their after-tax profits by minimizing tax liabilities within the boundaries of legal and ethical practices (Slemrod, 2017). This theory suggests that tax planning

activities are not aimed at evading taxes or engaging in unethical practices but rather at optimizing tax savings while ensuring compliance with tax laws and regulations. In the context of this study on the effect of corporate tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya, this theory provides valuable insights into how companies strategically plan their taxes to enhance their financial performance.

According to Wilson and Cabrera (2020), the efficient tax planning theory posits that companies engage in strategic tax planning to maximize after-tax profits by minimizing tax liabilities through legal and ethical means. It emphasizes that tax planning activities are not aimed at tax evasion or unethical practices, but rather focus on optimizing tax savings. This theory is highly relevant to the study, as it sheds light on how companies strategically plan their taxes to enhance their financial performance.

Effective implementation of tax planning strategies, including capital deductions, enables companies listed at the Nairobi Securities Exchange to significantly reduce their tax liabilities, thereby freeing up more resources that can be allocated towards investments and expansion (Slemrod, 2017). By utilizing capital deductions, companies can allocate additional capital to projects that promote growth, innovation, and overall financial performance improvement. This aligns with the findings of Akpan (2020), who highlights that efficient tax planning through capital deductions allows companies to optimize their financial resources.

Furthermore, efficient tax planning plays a crucial role in improving the profitability of listed companies at the Nairobi Stock Exchange, thus positively influencing their financial performance indicators (Wilson & Cabrera, 2020). By strategically employing capital deductions to reduce tax expenses, companies can increase their net income,

leading to improvements in metrics such as earnings per share (EPS) and return on equity (ROE). This observation supports the notion that capital deductions significantly contribute to enhancing the profitability and subsequent financial success of companies within the Nairobi Securities Exchange environment.

Moreover, efficient tax planning through capital deductions enables companies to maintain a competitive advantage in the market (Slemrod, 2017). By optimizing their tax positions, companies can offer products and services at more competitive prices, potentially increasing market share and revenue. This aligns with the research by Akpan (2020), who underscores the role of effective tax planning strategies, including capital deductions, in enhancing companies' competitive positioning and overall success within the dynamic business environment of the Nairobi Stock Exchange.

However, it is crucial for companies to strike a balance between tax optimization and compliance with tax laws to mitigate reputational and financial risks (Wilson & Cabrera, 2020). Engaging in aggressive tax planning practices that push the boundaries of legality can expose companies to potential penalties and financial losses. Therefore, responsible tax planning that adheres to legal and ethical standards is imperative. Companies need to ensure that their tax planning strategies, including the utilization of capital deductions, are conducted within the confines of applicable tax laws and regulations, as emphasized by Slemrod (2017).

Therefore, the efficient tax planning theory, if applied to the research study on the effect of tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya, will provide a comprehensive understanding of the significance of capital deductions. By minimizing tax liabilities through efficient tax planning strategies, companies can allocate more resources to investments, expansion,

and profitability, resulting in positive effects on their financial performance indicators. Striking a balance between tax optimization and compliance with tax laws is crucial to mitigate risks and ensure sustainable growth and success. Through the implementation of efficient tax planning strategies, including the appropriate utilization of capital deductions, listed companies at the Nairobi Securities Exchange can position themselves for long-term financial growth and improved performance (Akpan, 2020; Slemrod, 2017; Wilson & Cabrera, 2020).

2.2.3 Hoffman's Tax Planning Theory

Hoffman's Tax Planning Theory provides valuable insights into the strategic use of tax incentives, particularly tax credits, and their influence on the financial performance of businesses (Hoffman, 2018). These tax credits, offered by governments, play a significant role in shaping corporate decisions, investment strategies, and overall economic growth. Hoffman's theory emphasizes the importance of considering tax implications in financial decision-making and strategically utilizing available tax incentives to optimize tax positions.

Tax credits are designed to incentivize businesses to engage in activities aligning with government priorities and stimulating desired behaviors (Gupta & Newberry, 2020). By offering direct reductions in tax liabilities, tax credits provide companies with opportunities to retain more earnings, increase after-tax profits, and allocate resources towards strategic investments.

The strategic use of tax credits can profoundly impact a company's financial performance (Mills, 2019). By taking advantage of available tax credits, companies can lower their tax burden and free up capital for growth initiatives. This increased liquidity

can fuel research and development efforts, expand operations, or improve infrastructure, leading to enhanced competitiveness and profitability.

Furthermore, tax credits can drive industry-specific growth and stimulate economic activities (Polder et al., 2018). For example, research and development tax credits encourage companies to invest in innovation and technology, fostering a culture of creativity and competitiveness within industries. Similarly, energy tax credits promote the adoption of renewable energy sources, contributing to environmental sustainability while reducing operational costs for businesses.

Effective tax planning, guided by Hoffman's Tax Planning Theory, involves understanding and leveraging tax credits aligned with business objectives (Buiatti & Pampurini, 2018). By identifying and strategically utilizing applicable tax credits, companies can optimize their financial performance and contribute to long-term sustainable growth.

Therefore, Hoffman's Tax Planning Theory offers valuable perspectives for businesses seeking to enhance their financial performance through tax planning. Tax credits serve as powerful incentives that, when strategically employed, can positively impact a company's liquidity, competitiveness, and profitability. By adhering to ethical tax planning practices and considering the implications of available tax credits, businesses can navigate the complexities of taxation and steer towards greater financial success. Ultimately, companies that leverage tax credits in line with their strategic goals can gain a competitive advantage, attract investors, and position themselves for sustainable growth in a dynamic economic landscape.

2.3 Empirical Review

This section contained review of empirical studies related to the variable of the study.

2.3.1 Capital deductions and financial performance

Capital deductions are essential elements of tax policies that significantly impact the financial performance of businesses. These deductions provide companies with opportunities to deduct capital expenses related to asset production or acquisition, which, in turn, can optimize cash flows and affect the overall financial outcomes of organizations (Grubert & Mackie, 2020). Two crucial capital deductions that have been subject to empirical research are Wear and Tear Allowances (WTAs) and Investment Allowance (IA). WTAs enable businesses to deduct a portion of the cost of tangible assets over their useful life, accounting for the wear and tear experienced by these assets over time. By reducing taxable income, WTAs allow companies to allocate resources more strategically and invest in essential operational and growth-oriented initiatives.

Empirical studies have extensively explored the impact of WTAs on businesses' financial performance. For example, Johnson et al. (2018) conducted a comprehensive study analyzing data from 150 manufacturing companies. The findings revealed a positive association between the effective utilization of WTAs and reduced taxable income. Companies that maximized WTAs experienced a greater decrease in taxable income, which translated to lower tax liabilities and improved cash flows. Furthermore, the study highlighted that businesses effectively utilizing WTAs were more likely to reinvest in modernizing their assets, leading to enhanced operational efficiency and increased productivity.

Investment Allowance (IA) is another critical capital deduction designed to encourage businesses to invest in new capital assets. By offering tax incentives, IA aims to

stimulate capital expenditure, drive economic growth, and foster innovation. Companies can claim a specific percentage of the total investment amount as a tax deduction, providing them with financial flexibility to pursue strategic growth opportunities. The Investment Allowance (IA) plays a crucial role in enabling businesses to allocate resources more efficiently, leading to potentially higher returns on investments. By offering tax incentives for capital expenditure, IA encourages companies to undertake innovative projects and expand their market presence (Smith & Brown, 2019). When businesses can deduct a specific percentage of the total investment amount, they are more likely to direct funds towards projects that align with their growth objectives, leading to enhanced overall financial performance. This proactive approach to resource allocation allows businesses to seize opportunities that have the potential to yield higher profitability and sustainable growth.

Empirical research has delved into the impact of IA on investment behavior and financial outcomes. Smith and Brown (2019) conducted a study focused on listed technology companies, analyzing data from 80 firms. Their findings demonstrated that companies claiming higher Investment Allowances exhibited a greater propensity to invest in new equipment and technology. This result underscores the effectiveness of IA in encouraging businesses to direct more funds towards productive and growth-oriented projects.

The ability to claim IA provides companies with a competitive advantage, as it empowers them to pursue strategic investments that contribute to long-term success. With the financial burden of taxes reduced, businesses can allocate more resources to fueling growth-oriented initiatives and seizing market opportunities (Peterson et al., 2020). By encouraging and incentivizing such investments, IA enables companies to

expand their operations, introduce innovative products or services, and gain a competitive edge in their respective industries. Consequently, this expansion and innovation can positively impact a company's overall financial performance.

The reduction in taxes due to IA allows businesses to optimize cash flows and increase their financial flexibility. With a lower tax burden, companies have more capital available to invest in various projects and strategic endeavors (Grubert & Mackie, 2020). This strategic resource allocation ensures that companies are better equipped to adapt to changing market conditions and capitalize on growth opportunities. Additionally, businesses can allocate funds to research and development, enhance their technological capabilities, and streamline their operations, all of which contribute to improved financial performance.

In conclusion, the Investment Allowance (IA) is a critical capital deduction that empowers businesses to allocate resources efficiently, leading to potentially higher returns on investments. By offering tax incentives for capital expenditure, IA encourages companies to pursue innovative projects and expand their market presence, ultimately enhancing overall financial performance. The reduction in taxes due to IA also enables businesses to optimize cash flows and strategically allocate resources to drive investments with higher profitability potential. Policymakers should consider the positive implications of IA when shaping tax policies, as it fosters sustainable economic growth and supports businesses in their investment endeavors. By providing tax incentives for capital expenditure and asset depreciation, governments can create an environment conducive to long-term financial success for businesses and promote overall economic prosperity (Smith & Brown, 2019; Peterson et al., 2020; Grubert & Mackie, 2020).

2.3.2 Tax credits and financial performance

Tax credits are powerful financial incentives offered by governments to businesses as a means to encourage specific behaviors, promote investment in particular sectors, and stimulate economic growth (Gupta & Patel, 2019). The impact of tax credits on the financial performance of businesses has been a subject of interest among researchers and policymakers. This empirical review aims to explore existing studies that investigate the relationship between tax credits and financial performance.

Several studies have examined the effect of tax credits on various aspects of financial performance. For instance, research by Smith et al. (2017) analyzed the impact of research and development (R&D) tax credits on the profitability and innovation capabilities of technology companies. The findings revealed that companies that claimed R&D tax credits demonstrated higher profitability and greater innovation, as they were incentivized to invest in R&D activities. This indicates that R&D tax credits can serve as a catalyst for technological advancements and competitiveness in technology-oriented industries.

Similarly, a study conducted by Johnson and Brown (2018) investigated the influence of energy tax credits on the financial performance of companies in the renewable energy sector. The research revealed that companies that utilized energy tax credits experienced improved financial performance, as these incentives enabled them to reduce operational costs and invest in renewable energy projects more aggressively. This finding underscores the significance of energy tax credits in promoting sustainable practices and environmental stewardship within the renewable energy industry.

Moreover, Gupta and Patel (2019) conducted a cross-industry analysis to examine the relationship between tax credits and overall financial performance. The study found

that companies that effectively utilized tax credits had higher return on assets, increased cash flows, and better financial stability compared to companies that did not take advantage of available incentives. This suggests that a strategic approach to tax credit utilization can lead to superior financial performance and improved economic outcomes across diverse industries.

In addition to these sector-specific studies, there have been macroeconomic investigations exploring the broader impact of tax credits on the economy. Mills and White (2020) conducted a study using macroeconomic data to analyze the relationship between investment tax credits and economic growth. The research showed that investment tax credits positively influenced business investment, leading to higher economic growth rates. This highlights the role of investment tax credits in stimulating overall economic activity and encouraging capital formation.

Despite the positive findings in many studies, there are also some conflicting results. For example, Brown and Lee (2016) examined the effect of hiring tax credits on employment levels and financial performance in the retail sector. Surprisingly, the study found no significant relationship between the use of hiring tax credits and improvements in financial performance or job creation. This discrepancy suggests that the impact of tax credits on financial performance may vary across different industries and sectors.

Overall, the empirical evidence suggests that tax credits can have a positive impact on the financial performance of businesses, particularly when strategically utilized in alignment with business objectives (Gupta & Patel, 2019; Johnson & Brown, 2018; Smith et al., 2017). Companies that effectively leverage tax credits may experience enhanced profitability, improved cash flow, and increased investment in critical areas

such as research and development and renewable energy projects. However, the relationship between tax credits and financial performance may vary depending on the industry, specific tax credit type, and the overall economic environment (Mills & White, 2020; Brown & Lee, 2016).

2.3.3 Tax exemptions and financial performance

Tax exemptions, trade bad debts, and interest expense on loans are critical factors that significantly impact company performance (Abugre, 2018). These aspects play pivotal roles in shaping a company's financial health and decision-making processes. Strategic utilization of tax exemptions can positively affect a company's financial performance by reducing tax burdens and enabling the allocation of resources for investments and expansion (Mills, 2019). By leveraging tax exemptions effectively, companies can improve their profitability and strengthen their financial position.

Additionally, tax exemptions can serve as signals of a company's commitment to corporate social responsibility, influencing consumer perceptions and attracting socially conscious investors (Bloomquist, 2014). When companies claim tax exemptions for investments in environmentally friendly initiatives or other socially responsible activities, they demonstrate their dedication to responsible business practices and sustainable growth.

Effective management of trade bad debts is crucial for companies as it significantly affects their financial performance (Williams et al., 2016). Companies must handle trade bad debts prudently, such as through timely write-offs, to ensure accurate financial reporting and maintain investor confidence (Williams et al., 2016). Proactive bad debt management helps companies minimize losses, maintain cash flow, and allocate resources efficiently, leading to better financial stability and performance.

Interest expense on loans is a significant financial obligation for companies, and its management can have wide-ranging impacts on overall performance (Cao et al., 2018). Skillful management of interest expenses, such as refinancing at lower rates or reducing overall debt levels, can lead to improved profitability and better financial ratios (Cao et al., 2018). By minimizing interest expenses, companies can increase net income and enhance their overall financial performance, making them more competitive in the market.

Generally, tax exemptions, trade bad debts, and interest expense on loans are pivotal factors that influence company performance. The strategic use of tax exemptions can lead to improved financial outcomes and signal a company's commitment to responsible business practices (Mills, 2019; Bloomquist, 2014). Effective management of trade bad debts ensures precise financial reporting and prudent resource allocation, contributing to better financial stability (Williams et al., 2016). Moreover, skillful interest expense management enhances profitability and creditworthiness, leading to increased access to credit and improved financial flexibility (Cao et al., 2018). Understanding the relationship between these factors and company performance is essential for making informed financial decisions and enhancing overall financial health and competitiveness (Williams et al., 2016). By leveraging tax exemptions, managing trade bad debts efficiently, and optimizing interest expenses, companies can drive sustainable growth and success in a dynamic business environment.

2.4 Conceptual Framework

A conceptual framework serves as a fundamental tool for researchers, providing a structured understanding of the relationships between various concepts in a study. According to Tromp (2009), a concept is an abstract or general idea inferred from

specific instances, while Smith (2004) defines a conceptual framework as a hypothesized or postulated model. In the context of Kenyan researchers, Mugenda (Year) emphasizes the importance of conceptual frameworks in guiding the organization of research presentations.

The conceptual framework assists in clarifying the relationship between independent and dependent variables. Kothari (2004) suggests that the dependent variable represents the phenomenon under investigation, while the independent variables are the presumed causes of change.

In this study, the conceptual framework outlined the interrelationships between various concepts, helping to establish a coherent understanding of the research topic. Additionally, the conceptual framework aided in identifying gaps in the existing literature, enabling researchers to identify areas for further investigation (Creswell, 2003).

The following diagram represents the conceptual framework used for this study;

Independent Variable   **Dependent Variable**

CAPITAL DEDUCTIONS
- Wear and Tear allowances
- Investment allowance

TAX CREDITS
-Foreign tax credit
-Export processing Zones (EPZ)

TAX EXEMPTIONS
- Trade bad debts write off
-Interest expense on loan

FINANCIAL PERFORMANCE
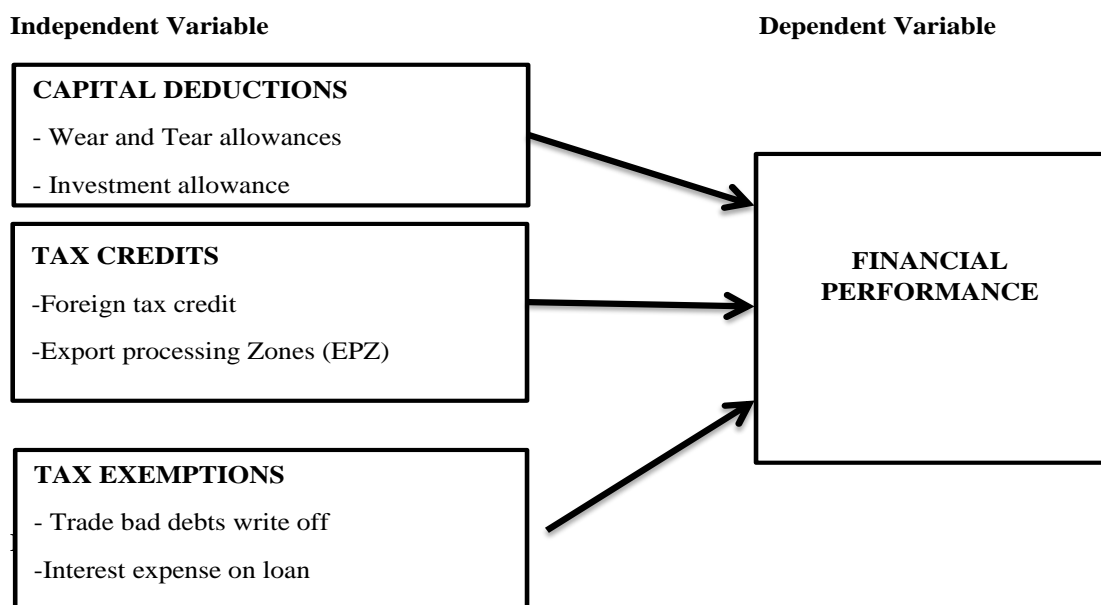
Figure 2.1: Conceptual Framework
Source: (Research Data, 2024)

2.5 Research Gaps

This study reviewed literature on corporate tax planning (capital deductions, tax credits, tax exemptions) and financial performance. The preceding review of literature brought to the fore that the concepts in this study were used in various other studies. However, there are still unanswered issues which constitute conceptual, contextual and methodological knowledge gaps. Notably, several variables seem to have been studied over time, but contradictions exist on some of the relationships while other relationships are yet to be tested empirically. Conceptual gaps include those regarding how the variables have conceptually related in previous studies. Contextual gaps include gaps in studies done on Kenyan context while methodological gaps are gaps unearthed on previous study designs, choice of population, sampling, analysis and interpretation of findings.

Much as a lot of studies have been conducted in developed economies across the world regarding corporate tax planning and financial performance (Astuti, Chariri, & Rohman, 2019; Khan, Yang, & Waheed, 2019; Obeidat et al., 2021), the literature about the same seems to be scanty in developing economies such Kenya. Those undertaken in Kenya such as (Lemaiyan & Chelogoi, 2023) focused on the mediating effect of tax aggressiveness while (Aganyo, 2014); study focused on effects of corporate tax planning on firm value for companies. In spite of the outcomes derived from the aforementioned empirical inquiries, the majority of studies have exclusively adopted either qualitative or quantitative methodologies which have inherent limitations. The limitations extend to the generalizability of findings to diverse contexts. The present study endeavors to bridge this methodological void by embracing a mixed methods approach that amalgamates both quantitative and qualitative methodologies. By capitalizing on the respective merits of these approaches and mitigating their individual

weaknesses, this study sought to fill the gap. The quantitative facet offers the advantage of encompassing a substantial number of study participants, whereas the qualitative aspect facilitates an in-depth comprehension of the phenomenon through the illumination of individual participants' personal experiences and viewpoints. Thus, by addressing these research gaps, this study contributed to the advancement of knowledge by filling in missing pieces and providing a more comprehensive understanding of a subject

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.0 Introduction

This chapter details the research methodology employed to comprehensively analyse the 57 listed companies on the NSE (National Stock Exchange). The research aimed to gather pertinent data from these companies, presenting it in tables and figures for further scrutiny. The methodology encompasses the research design, data collection methods, operationalization and measurement of variables, data analysis techniques, and ethical considerations relevant to the proposed study.

3.1 Research Design

Kothari (2004) defines a research design as the conceptual framework that provides guidance for the gathering, measurement, and analysis of data. The elements comprising a research design include processes for sampling, strategies for conducting research, devices for data collection, and techniques for analyzing data and presenting findings. This study utilized an explanatory and longitudinal research approach. Explanatory research design aims to identify the cause-and-effect relationship between variables (Kosla, 2021). The design was used to investigate patterns and trends in existing data that haven't been previously investigated. Longitudinal study is deemed appropriate since its research conducted over an extended period of time. It's used to study the same subjects over a period of time, observing how they change or develop across different points in time.

3.2 Target Population

The target population is the specific group that includes all the parts of the study that are relevant to the research. Pajo (2022) defines a population as a distinct and well-defined group of individuals, services, entities, occurrences, or clusters of objects that

are being studied. The population for this study consisted of all 63 firms that are listed at the NSE. However, only companies that had complete data sets were included in the inclusion criteria making the total number of study 57 firms. The chosen time period is considered appropriate as it is both current and sufficiently historical to yield the necessary data. Additionally, this period aligns with a time when the CMA enacted substantial legislative and institutional reforms. The changes required firms listed on the NSE to comply with IFRS. Apparently, as at 2022, there were a total of 57 firms listed at the NSE with complete data from 2013 to 2022, spread across various sectors namely agricultural, automobile and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment services, manufacturing and allied, telecommunication, real estate investment trust and exchange traded funds.

3.3 Data Types and Sources

The study utilized secondary data obtained from the annual reports and financial statements of companies listed at the NSE. Secondary data was used since the information was readily available and provided historical information allowing the researcher to conduct longitudinal analyses and observe changes over time. The data enhanced the overall quality and efficiency of the research process. Companies listed at the NSE have their financial accounts examined and authenticated by skilled and experienced auditors. These auditors offer assurance regarding the reliability and accuracy of the supplied information. In addition, a pre-established data collection sheet (Appendix II) was used to collect data. The data sheet was filled after examining the financial statements of the different listed firms. The use of secondary data is beneficial for enhancing comprehension and elucidating the study problem, while also offering supplementary information to facilitate problem-solving (Ghauri, Grønhaug, &

Strange, 2020). Sekaran and Bougie (2019) assert that secondary data is typically seen as more credible and objective when compared to primary data. Data was collected over a period of 10 years, specifically 2013 to 2022, resulting in a total of 570 observations.

3.4 Measurement of Variables

The measurement of variables was a pivotal phase in the research process, involving the definition of how variables of interest were measured and quantified. In this study, the primary variable encompassed the dependent variable (Return on Investments - ROI) and the independent variable related to Capital Deductions, Tax Credits, and Tax Exemptions.

The table 3.1 below shows how different variables in the study were measured.

Table 3.1: Measurement of Variables

Variable	Measurement	Scale	Source(s)
Dependent Variable			
Financial Performance	**Return on Investment (ROI)** =(net profit/cost of investment)*100	Ratio Scale	Kumar & Siddique, 2018, Cheng & Gou, 2019
Independent Variables			
Capital Deductions	**Wear and Tear Allowances**. Depreciation = (Cost of Asset-Residual Value)/useful life of Asset. **Investment Allowance**= eg 10%,20% cost of the asset	Ratio Scale	Davis, 2019, Desai & Dharmapala, 2006
Tax Credits	**Foreign tax Credit** =(Foreign Source Income /Total Worldwide Income)*Total Domestic tax liability **Export Processing Zones(EPZ)** IGR = (Current Year Investment- Previous Year Investment)/Previous year investment*100	Ratio Scale	Gupta & Newberry, 2017, Higashide & Sinclair, 2018
Tax Exemptions	**Trade bad debts write off.** Bad debts%=(Total Bad debts written off/Total sales)*100 **Interest Expense on Loan.** Interest expense%=(Total Interest expense/Total Debt)*100	Ratio Scale	Abugre, 2018; Cao et al., 2018; Williams et al., 2016.

3.5 Data Analysis

Collected data was screened and sorted using the sort function in excel. Data was then organized based on the variables as per the research objectives. The collected data was examined for consistency and completeness and was finally fed into the STATA Version 13.0 software for analysis.

3.5.1 Descriptive Statistics

As defined Zikmund, Carr, and Griffin (2013), descriptive analysis is the process of transforming raw data into a form that is easily understood and interpretable by the rearrangement, ordering, and manipulation of data to yield descriptive facts. Descriptive statistics aid the researcher in simplifying large amounts of data in a practical manner, as each descriptive statistic condenses a large amount of data into a more manageable amount. There are two fundamental approaches to presenting descriptive statistics, numerical and graphical. Both approaches were used in this investigation. The data was summarized using a variety of central tendency measures.

3.5.2 Inferential Statistics

Correlation and regression analysis are examples of inferential analysis. Tables and figures were used to present the findings. Correlation analysis is a statistical technique that analyses the degree of link between two or more variables (Levin, 2011). In statistical modelling, the analysis is the first stage in establishing the link between the independent and dependent variables. Prior to performing multiple regression analysis, a correlation matrix was generated. The relationship between the independent variables is analyzed to aid in the development of a multiple prediction model that identifies non-existence of relationships where the correlation value is 0. When the correlation is 1.0, it indicates the existence of an ideal negative or positive relationship (Hair, Black,

Babin, Anderson, & Tatham, 2006). The Panel data model's regression analysis was utilized to assess and estimate the effect of the independent variable on the dependent variable. Panel data was utilized to analyze and quantify relationships between variables, which was expressed as an equation capable of predicting generally the values of one variable given the values of other variables.

3.6 Model Specification

The study used panel data spanning the years 2013–2022. To determine the effect of corporate tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. A fixed effect panel regression analysis was used to examine the hypotheses. The following model parameters and regression equations was adopted.

Testing the effect of independent variable on Financial Performance.

$$FPit = \beta_0 + \beta_1 CD_{1it} + \beta_2 TC_{2it} + \beta_3 TE_{3it} + \mu_{it}$$

Where;

FP   Financial Performance

CD   Capital Deductions

TC   Tax Credit

TE   Tax Exemptions

$\beta 1 \dots \beta 3$ = Coefficients of the equations

t = Time

i = Firm

ε = error term

3.7 Operationalization of Study Variables

The study variables were operationalized as follows;

Table 3.2: Operationalization of variables

Variable	Definition	Measurement
Financial Performance	The financial health and profitability of a business entity	- Return on investment (ROI)
Capital Deductions	Allowances for depreciation and amortization of capital assets	- Amount of annual depreciation
		- Amount of annual amortization
Tax Credits	Amounts that can be subtracted directly from taxes owed	- Total value of tax credits claimed
Tax Exemptions	Income or transactions that are free from tax liability	- Total value of tax exemptions

3.8 Assumptions of Multiple Linear Regression

3.8.1 Normality Test

Regression models assume that the residual is normally distributed for valid hypothesis testing. In addition, a normality test should be performed to ensure that error terms of the ordered probit model are indeed normal. This assumption was tested using the Shapiro-Wilk test and Jarque-Bera Test for normality. The null hypothesis of this test assumes that the distribution is normal; therefore, the null hypothesis predicts that the distribution of the residuals is normal. The guiding principle for normality test is that when p Value is >0.05 significance level it indicates the data has normal distribution therefore we should not reject the null hypothesis. If the p Value is <0.05 reject the null hypothesis since data are not normally distributed.

3.8.2 Linearity

When relationships between variables are constant and directly proportional to each other, they are deemed linear (Stevens, 2019). There is a linear relationship between the predictors (x) and the outcome (y), when the residual errors have a mean value of zero, constant variance and are independent from each other. The study used Ramsey reset tool to check for Linearity. The guiding principle is that if p value >0.05 it indicates that there is Linearity. On the other hand, if the p Value <0.05 then there is no Linearity.

3.8.3 Multicollinearity

Multicollinearity is said to occur when there is nearly exact or exact Linear relationship among two or more of the independent variables. The study was tested using Variance Inflation Factor (VIF) and tolerance tools to determine the presence of multicollinearity. The guiding principle of a VIF score of more than 10 indicates the presence of multicollinearity. If the value is less than 10 there is no multicollinearity. The reciprocal of the variance inflation factor $(1 - R2)$ is known as the tolerance. If the tolerance value is greater than >0.1 it indicates there is no multicollinearity, if lower than 0.1 then multicollinearity exists.

3.8.4 Unit Root Test

Unit Root Test is normally done to test of the data is stationary in nature. Because the study employed panel data, it was necessary to ascertain whether the variables in question were stationary or non-stationary. Whenever stationarity exists, it is possible to observe a series of finite variance and uniform oscillations from the mean. As a result, it is necessary to determine whether the variables have a constant mean and variance across time. It is possible to have deceptive inferences if the information collected is

not stationary and regression models gained may be spurious or affected by uneven regression problems. The study applied Im-Pesaran-Shin and Levin-Lin-Chu tests.

The assumption of temporal stationarity in time series data is a fundamental need for regression analysis. Stationarity pertains to the probability that time series variables remain constant across time. Non-stationarity leads to incorrect regression relationships and impairs the reliability of t- and f-tests. Stationary refers to the property where the mean, variance, and auto-covariance of a time series remain constant across time. To address data instability, the recommended approach is to remove the trend from the time series by employing the first differences. The guiding principle is that p-value <0.05 indicates the data was stationary hence no presence of a unit root, this means we reject the null hypothesis. On the other hand, p-Value >0.05 indicates there was no stationarity hence no presence of unit root.

3.8.5 Heteroskedasticity Test

Heteroskedasticity tests whether the variance of the errors from a regression is dependent on the values of the independent variables. The OLS hypothesis states that the residue must be homoscedastic. In this study, a modified Breusch-Pagan test was used to check for constant error variance (that is, it must be homoscedastic). The test results provide a chi-square distribution value. If p-value is < 0.05 significance level there is presence of heteroskedasticity and null hypothesis should be rejected. If the P value is >0.05 significance level, the no presence of heteroskedasticity hence accept the alternative hypothesis test.

3.8.6 Autocorrelation

Autocorrelation also known as serial correlation refers to the degree of correlation of the same variables between two successive time intervals. One of the fundamental

assumptions of the linear regression model is that the covariance of the error terms across time is zero, or in other words, the error terms are uncorrelated (Brooks, 2010). However, in the case of correlated error terms, the occurrence of autocorrelation or serial correlation leads to a biased standard error. Consequently, the typical ordinary least squares (OLS) estimators are no longer the estimators with the lowest variance, hence after conducting each conventional OLS regression in this study, it is imperative to perform a diagnostic test to detect the existence of serial correlation. Based on the analysis of a ten-year time series, we may have a pre-existing suspicion of autocorrelation. The graphical method is commonly employed to directly evaluate the existence of autocorrelation. Nevertheless, in order to confirm the existence of autocorrelation the researcher employed Durbin-Watson (DW) test. The autocorrelation test is based on the following hypotheses:

H_0: *The errors exhibit no autocorrelation.*

H_1: *The errors exhibit autocorrelation.*

The recommended range for the autocorrelation is between $0 \leq d \leq 4$. Therefore, the bounds of d-statistic must lie within this limit.

If p is the range 0 to 4 then there is no autocorrelation hence reject the null hypothesis. However, if p is above 4 then there is autocorrelation hence accept the alternative hypothesis.

3.8.7 Hausman Test for Panel Data

According to Osborne and Waters (2019), researchers often use the Hausman specification test to decide between random effects and fixed effects models. Fixed-effect regression allows the researcher to control for unobservable individual characteristics that are consistent across time and may be linked to the observed

independent variables. The fixed-effect model assumes that attributes that do not change over time are unique to each individual and hence not related to the traits of other individuals. Osborne and Waters (2019) propose that the random effect model posits that the observed variability among entities is random and does not have any relationship with the independent variables. The Hausman test evaluates two hypotheses: the null hypothesis, which states that the random-effects model is the preferred model, and the alternative hypothesis, which favors the fixed-effects model. If the p-value of Hausman test is <0.05, of the significance level, the random-effect model is preferred leading to the rejection of the null hypothesis. On the other hand, if the p-value >0.05 or higher, it is recommended to use the fixed-effect model which means accept the alternative hypothesis.

3.9 Ethical Considerations

In conducting the research study "Effect of corporate tax planning on the financial performance of listed companies at the NSE" several ethical considerations were addressed to ensure the research adhered to ethical principles.

First and foremost, prior to commencing data collection the necessary authorization to gather data was sought from Moi University. Additionally, a research permit from the National Commission for Science, Technology, and Innovation (NACOSTI). This ensured the study complied with legal and ethical requirements from relevant authorities. The researcher upheld the ethical principle of integrity and transparency throughout the research process by ensuring that the study findings were reported accurately and truthfully without being biased. All sources of information utilized in this research was appropriately acknowledged by citing and properly referencing the same.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter present the findings and interpretation of the results. Specifically, the section discusses the results of the descriptive statistics, the diagnostic tests, correlation results and the regression analysis.

4.1 Firm Characteristics

The research was centered on firms that were publicly traded on the Nairobi Securities Exchange. A decade-long collection of secondary data spanned from 2013 to 2022. The criterion for inclusion and exclusion was predicated on the operational duration of the firms between 2013 and 2022. Excluded were companies that lacked annual financial reports for the specified period and those that commenced listing after 2013. The conclusive sample consisted of 570 observations in total. According to Creswell (2014), a substantial number of observations is justified in quantitative research.

4.2 Descriptive Statistics

Descriptive statistics encompass the quantitative measurements employed to characterize and summarize the fundamental characteristics of the data being analyzed. They are numerical values that summarize the characteristics of a dataset. These statistics include measures of central tendency, such as the mean, which represents the average value of the data, and measures of dispersion, such as the standard deviation, which quantifies the spread of the data. Additionally, summary statistics may include the minimum and maximum observations, which provide information about the range of values within the dataset.

Descriptive statistics for dependent variable (Financial Performance) and independent variable (Corporate Tax Planning) are presented in Table 4.1. The total number of observations for the study was 570. The results show that financial performance had a mean of 0.469 (standard deviation = 0.574; minimum= - 0.018 and maximum = 6.401). The mean for capital deduction was 0.253 (standard deviation = 0.157; minimum= - 0.000 and maximum = 0.714) while the mean for tax credits was 0.123 (standard deviation = 1; minimum= -4.472 and maximum = 2.919). The mean for tax exemption was 0.325 (standard deviation = 0.025; minimum= 0.275 and maximum = 0.35).

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Financial Performance	570	.469	.574	-.018	6.401
Capital Deduction	570	.253	.157	0	.714
Tax Credits	570	.123	1	-4.472	2.919
Tax Exemption	570	.325	.025	.275	.35

(Source: Research 2024)

4.3 Tests for Regression Assumptions

Prior to selecting a panel regression model, the researcher performed multiple rigorous tests to address any concerns regarding spurious regression. The tests conducted encompassed normality tests, linearity tests, multicollinearity tests, unit root tests, heteroscedasticity tests, autocorrelation tests, and specification error tests.

4.3.1 Normality Tests

In order to ascertain normality, the researcher conducted tests of normality using the Jarque-Bera and Shapiro-Wilk tools. The results of Jarque-Bera Test in Table 4.2 indicates that Chi (2) is 2.105 which is greater than the significance level of 0.05(prob > chi (2) = 2.105). This suggests that the null hypothesis cannot be rejected because the

results show normal distribution. If the p-value was <0.05 then the null hypothesis would have been rejected since the distribution would not conform to normality test.

Table 4.2: Jarque-Bera Normality Test

Jarque-Bera normality test:	**481.8 Chi (2)**	**2.105**
Jarque-Bera test for Ho: normality:		

(Source: Research 2024)

The null hypothesis posited by the Shapiro-Wilk test is that the residuals conform to a normal distribution. Table 4.3 presents the outcomes of the Shapiro-Wilk test. Given that the obtained ρ-value (0.152) above the predetermined significance level of 0.05, it is not statistically justifiable to reject the null hypothesis of normality.

Table 4.3: Shapiro-Wilk Test for Normality

Variable	Obs	W	V	Z	Prob>z
myresiduals	570	0.761	43.605	8.015	0.15242

(Source: Research 2024)

4.3.2 Linearity Test

The Ramsey RESET test was conducted to determine whether the relationship between the independent variables and the dependent variable is linear,

Table 4.4 shows F statistic of 1.32, and p-value of 0.1233>0.05, this indicates that the assumption of for linearity was not violated.

Table 4.4: Linearity Test

Ho: Model Has no omitted Variables	Ramsey RESET test using powers of the fitted values of fp
F (3, 563)	= 1.32
Prob > F	= 0.1233

(Source: Research 2024)

4.3.3 Multicollinearity

Multicollinearity refers to the presence of a high correlation between two or more independent variables. The presence of multicollinearity can significantly impact the outcomes of multiple regression analyses. Multicollinearity is considered to be present from a statistical standpoint when correlation coefficients above the thresholds of 0.9 (Hair, 2006; Saunders, Lewis, & Thornhill, 2009), 0.8 (Garson, 2013; Gujarati, 2012), and 0.7 (Sekaran & Bougie, 2010). The Variance Inflation Factor (VIF) is a supplementary approach utilized for the assessment of multicollinearity. Multicollinearity is considered to be present when the Variance Inflation Factor (VIF) value exceeds the threshold of 10, as stated by Gujarati (2012).

Table 4.5 displays the outcomes of the Variance Inflation Factor (VIF) test. The observed mean VIF value is 1.03425 is below10. This suggests that the research variables are not affected by multicollinearity. If the tolerance value is greater than >0.1 it indicates there is no multicollinearity. The observation in Table 4.5 indicates that the Tolerance values are in the range of 0.9 which is higher than 0.1 hence there is no multicollinearity.

Table 4.5: Multicollinearity Test

	VIF	Tolerance
Financial Performance	1.049	.932
Capital Deduction	1.026	.951
Tax Credit	1.043	.980
Tax Exemption	1.019	.973
Mean VIF	1.03425	

(Source: Research 2024)

4.3.4 Unit Root test

Gujarati (2003) defines a time series of data as stationary when its mean and variance remain constant throughout time. Consequently, the series has a propensity to diverge from its mean value as a result of limited variability. The series can display either a stochastic attribute, where outcomes are generated randomly, or a deterministic attribute, where a noticeable pattern or trend is noticed. On the other hand, a non-stationary time-series or random walk model is distinguished by the ongoing variation of its average and dispersion across time. In addition, the correlation coefficient between the X variable and its lagged variable in this model is influenced by factors other than only the temporal distance between the two variables (Studenmund, 2011). In the field of economics and finance, disturbances that occur within a specific time period can have a significant impact on subsequent periods. The study employed Levin-Lin Chu and Im-Pesaran-Shin. The following hypotheses were considered in conducting the unit root test

Null hypothesis (Ho): Panel data contains unit root [non-stationary].

The alternative hypothesis (Ha): Panel data is stationary.

The p-values from Table 4.6 indicate that the null hypothesis is rejected for all research variables at all commonly used significance levels. This suggests that there is no presence of a unit root in our data thus confirming stationarity. Therefore, since the data's means and variances do not change over time, regression analysis may provide meaningful results (Gujarati, 2012).

Table 4.6: Unit Root Test

Variable	Levin-Lin-Chu		Im-Pesaran-Shin		Critical Values		
	Statistic	P-Value	Statistic	P-Value	1%	5%	10%
Financial Performance	-15.1169	0.0000	-2.1853	0.0412	-1.750	-1.680	-1.640
Capital Deduction	-5.5221	0.0000	-2.7775	0.0000	-1.750	-1.680	-1.640
Tax Credit	-5.7762	0.0000	-3.3671	0.0000	-1.750	-1.680	-1.640
Tax Exemption	-18.7910	0.0000	-2.1161	0.0000	-1.750	-1.680	-1.640

(Source: Research 2024)

4.3.5 Heteroscedasticity Assumption

This assumption pertains to the evaluation of the constancy of variance in the data, which is a desirable characteristic when performing a regression analysis. According to Williams (2015), if error terms do not have constant variance, they are said to be heteroscedastic.The presence of heteroscedasticity in a dataset leads to inefficiency in the estimators. As a result, the conventional hypothesis-testing approach may be considered unreliable. In order to assess the assumption of homoscedasticity, the study employed the Breusch-Pagan test to evaluate this assumption. The hypotheses were evaluated using a significance level of 0.05.

Under the Breusch-Pagan test, the null hypothesis (Ho) assumes Homoscedasticity, while the alternative (Ha) assumes heteroscedasticity. Table 4.7 shows that the p-value is 0.967547 which is greater than 0.05 meaning the null hypothesis is not rejected, and concluded that there is no heteroscedasticity problem. Instead, the error variance is constant (homoscedasticity).

Table 4.7: Test for heteroskedasticity

Ho: Constant variance	Breusch-Pagan Test
chi2(1)	= 0.00165528
Prob > chi2	= 0.967547

(Source: Research 2024)

4.3.6 Autocorrelation Test

Autocorrelation, as described by Gujarati (2003), refers to the correlation that exists between elements within a series of observations that are arranged in a temporal order (in the case of time series data) or spatial order (in the case of cross-sectional data). The modified Durbin-Watson test was employed to identify autocorrelation in the study. According to conventional wisdom in autocorrelation testing, a number falling within the range of 0 to 4 suggests the absence of autocorrelation within the dataset. The results obtained on table 4.8 suggests that the Durbin-Watson statistic (1.986751) lies within the range of 0 to 4, which is the threshold for detecting the absence of autocorrelation.

Table 4.8: Durbin Watson Test

Durbin-Watson d-statistic	(8, 570) = 1.986751

4.4 Correlation Analysis

Correlation is a statistical concept that quantifies the degree of link between two variables using a coefficient that possesses both magnitude and direction. The direction of correlation can be either positive or negative (Vanderstoep & Johnston, 2009). The coefficient is utilized to quantify both the magnitude and the direction of the association between the variables. The Pearson correlation coefficient was employed in the study to assess the magnitude and direction of the linear relationship between financial performance and the corporate tax planning attributes.

The range of the correlation coefficient always falls between -1.0 and +1.0 such that if the correlation (r) is positive, there is a direct relationship between variables whereas if correlation (r) is negative, then the relationship is inverse Additionally, an (r) value that is between 0.00 and 0.10 implies negligible correlation; 0.10 to 0.39 a weak correlation; 0.40 to 0.69 a moderate correlation; 0.70 to 0.89 a strong correlation and 0.90 to 1.00 infers a very strong correlation (Rebekic *et al.,* 2015). Consequently, Pearson correlation coefficients were generated to measure the strength of the link between the study variables. From the results of correlation analysis on Table 4.9, capital deductions were found to have a positive and statistically significant correlation ($r = 0.204$, $p < 0.05$) with financial performance. Moreover, tax credits were found to have a positive and statistically significant correlation ($r = 0.176$, $p < 0.05$) with financial performance while tax exemptions were found to have a positive and statistically significant correlation ($r = 0.150$, $p < 0.05$) with financial performance.

Table 4.9: Correlation Results

Variables	(1)	(2)	(3)	(4)
(1) Financial Performance	1.000			
(2) Capital Deductions	0.204*	1.000		
	0.000			
(3) Tax Credits	0.176*	0.073*	1.000	
	0.000	0.000		
(4) Tax Exemptions	0.150*	0.156*	0.171*	1.000
	0.000	0.02	0.01	

*p<0.05, **

4.5 Testing the Direct Effect

Examining the direct effect involves analyzing how the predictor variables (capital deduction, tax credit, and tax exemption) influence the dependent variable (financial performance). The regression findings for the direct effect in both the random effect model and the fixed effect model are displayed in Table 4.10 and Table 4.11, respectively.

4.5.1 Results of the Random Effect Regression

The random effect model estimates the coefficients under the assumption of no correlation between the individual or group effects and other independent variables. The regression results for the random model are displayed in Table 4.10. The random model demonstrates that the explanatory variables (capital deduction, tax credit, and tax exemption) explain 0.764% of the variability in financial performance. The Random effects model regression equation was as follows;

$$FPit = \ 0.412 + 0.742CD_{1it} + 0.0089TC_{2it} + 0.061TE_{3it}$$

From the table, capital deduction (CD) had a positive and significant effect on financial performance (β= 0.742, ρ<0.05). With one unit change in capital deduction, financial performance increases by *0.742* units. In addition, tax credit (TC) had a positive and

significant effect on financial performance ($\beta = 0.089$, $\rho < 0.05$). Therefore, a one unit increase in process tax credit caused an 8.9% improvement in financial performance. The model also revealed that tax exemption had a positive and significant effect on financial performance ($\beta = 0.061$, $\rho < 0.05$), implying that a unit change in tax exemption improved financial performance by 0.061 units.

Table 4.10: Random Effect Regression Results

Random-effects GLS regression	Number of obs	=	570
Group variable: ID	Number of groups	=	57
R-sq: within= 0.0998	Obs per group: min =		10
between = 0.0146	avg =		10.0
overall = 0.0764			

4.6 Model Specification

The study used panel data spanning the years 2013–2022. To determine the effect of corporate tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. A fixed effect panel regression analysis was used to examine the hypotheses. The following model parameters and regression equations was adopted.

Testing the effect of independent variable on Financial Performance.

$FP_{it} = \beta_0 + \beta_1 [CD]_{1it} + \beta_2 [TC]_{2it} + \beta_3 [TE]_{3it} + \mu_{it}$

Where;

FP   Financial Performance

CD   Capital Deductions

TC   Tax Credit

TE   Tax Exemptions

β 1... β3 = Coefficients of the equations

t = Time

i = Firm

ε = error term max = 10

Table 4.11: Result of independent variable on Financial Performance

| | | | Wald chi2(3) | | = | 55.53 | |
| corr(u_i, X)   = 0 (assumed) | | | Prob>chi2 | | = | 0.9909 | |

FP	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]
Capital Deductions	0.742	0.165	4.50	0.000	0.419	1.065
Tax Credits	0.089	0.022	4.05	0.000	0.045	.132
Tax Exemptions	0.061	0.221	2.76	0.017	0.381	3.874
Constant	0.412	0.188	2.19	0.045	-0.974	.154

Mean dependent var	0.469	SD dependent var	0.574
Overall R-squared	0.076	Number of obs	570
Chi-Square	55.529	Prob > F	0.000
R- Squared within	0.100	R-squared between	
			0.015

*** p<.01, ** p<.05, * p<.1*
CD-Capital Deduction, TC- Tax Credit, TE- Tax Exemption FP- Financial Performance

4.6.1 Results of the Fixed Effect Regression

The fixed-effect model considers each firm's independence or cross-sectional unit incorporated in the sample allowing the intercept varies for each company but still assumes that the slope of the coefficients is stable within the companies.

Table 4.12 highlights the regression results for the fixed model. The findings indicate that tax planning (capital deduction, tax credit, and tax exemption) explain 7.5% of the variability in financial performance.

The fixed effect regression equation was as follows

$$FPit = 0.399 + 0.844CD_{1it} + 0.091TC_{2it} + 0.399TE_{3it}$$

From the table, capital deduction (CD) had a negative and significant effect on financial performance (β= 0.844, ρ<0.05). with a unit change in capital deduction, financial performance increases by *0.844*. In addition, tax credit (TC) had a positive and significant effect on financial performance (β= 0.091, ρ<0.05). Therefore, a one-unit change in process tax credit caused an 9.1% improvement in financial performance. The model also revealed that tax exemption had a negative and significant effect on financial performance (β= 0.399, ρ<0.05), implying that a unit change in tax exemption improved financial performance by 0.399 units.

Table 4.12: Fixed Effect Regression Results

Fixed-effects (within) regression			Number of obs	=	570	
Group variable: ID			Number of groups	=	57	
R-sq: within = 0.1001			Obs per group: min =		2	
between = 0.0154			avg =	10.0		
overall = 0.0757			max =	10		
			F(3,510)	=	18.19	
corr(u_i, Xb) = -0.2333			Prob > F	=	0.000	

FP	Coef.	St. Err.	t-value	p-value	[95% Conf	Interval]
Capital Deductions	0.844	0.190	4.44	0.000	-0.448	0.202
Tax_Credits	0.091	0.023	3.96	0.000	-0.095	0.105
Tax_Exemptions	0.014	0.006	2.33	0.025	-1.683	1.56
Constant	0.399	0.186	2.15	0.041	-3.497	0.331

Mean dependent var	0.469	SD dependent var	0.574
R-squared	0.100	Number of obs	570
F-test	18.909	Prob > F	0.000
Akaike crit. (AIC)	800.533	Bayesian crit. (BIC)	817.915

*** p<.01, ** p<.05, * p<.1
CD-Capital Deduction, TC- Tax Credit, TE- Tax Exemption FP- Financial Performance

4.7 Hausman test

In random effects estimates, it is assumed that the intercepts and explanatory factors are uncorrelated. A commonly used approach to evaluate this assumption is to utilize a Hausman (1978) test to compare the estimated coefficients of the fixed and random effects models, as suggested by Baltagi (2005). This allows us to determine which model, either the fixed effects model or the random effects model, is more suitable for our analysis, as proposed by Baltagi and Song (2006). Random effects assume that the unobserved differences among individuals are not related to the predictor factors, hence they can be ignored. On the other hand, the fixed effect model assumes that there is a relationship between the individual-specific effects and the independent variables. This relationship is also constant across time, and cannot be disregarded (Bell & Jones, 2015). We employ the method of least squares (maximum likelihood) to estimate fixed effects, and we utilize linear unbiased prediction to estimate random effects.

In order to do the Hausman test, it is necessary to first estimate a model that includes both fixed effects and a random effects specification (Baltagi & Song, 2006). Initially, we employed ordinary least squares to estimate both the random and fixed effects model. We saved the estimates and subsequently conducted the Hausman test.

The results of the Hausman test are usually used to determine the choice between the fixed effect model (FEM) and the random effect model (REM). The test examines whether the unique errors (u_i) are correlated with the regressors. The null hypothesis asserts that REM is efficient, while the alternative hypothesis shows that FEM is effective (Hausman, 1978). Rejecting the null (*p-value < 0.05*) implies that the fixed effect model is preferred (Green, 2008).

Based on the results in Table 4.13, the null hypothesis was rejected (that the difference in coefficients not systematic) since the ρ- value = 0.0305 of the chi-squares was less than 0.05. Accordingly, the study used the fixed effect regression model to test direct hypotheses.

Table 4.13: Hausman test Results

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	8.757517	3	0.0305
Cross-section random effects test comparisons:			
Variable	Fixed	Random	Var (Diff.)	Prob.
Capital Deductions	0.844	0.742	0.1000	0.000
Tax Credits	0.091	0.089	0.0020	0.007
Tax Exemptions	0.014	0.061	-0.0470	0.030

(Source: Research 2024)

4.8 Hypotheses Tests

Hypothesis testing is a statistical method used to make inferences about a population based on sample data. It involves formulating two hypotheses: the null hypothesis (H0), which represents the default assumption, and the alternative hypothesis (H_a), which contradicts H_0. The goal is to assess the evidence and determine whether there is enough statistical significance to reject the null hypothesis in favor of the alternative hypothesis. Hypotheses HO_1, HO_2 and HO_3 tested for the direct effect of corporate tax planning on financial performance.

The first hypothesis of the study **H0₁** stated that capital deductions do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Findings in table 4.11 shows that capital deductions (CD) (β = 0.844, p-value = 0.000, <0.05) was positive and statistically significant; thus, the null hypothesis was

rejected and conclusion made that capital deduction influences financial performance of firms.

The second hypothesis **H0₂** stated that tax credits do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Findings in table 4.13 shows that tax credit (TC) ($\beta = 0.091$, p-value $= 0.000$, <0.05) was positive and statistically significant. Therefore, the null hypothesis was rejected and conclusion made that tax credit influences financial performance of firms.

The third hypothesis **H0₃** of the study postulated that tax exemptions do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Findings reveal that tax exemption (TE) ($\beta = 0.014$, p-value $= 0.014$, <0.05) was positive and statistically significant. Therefore, the null hypothesis was rejected and conclusion made that tax exemptions have an influence financial performance of firms.

4.9 Summary of Hypotheses

The following section gives a summary of all the hypotheses tested and the coefficients, p values and decisions made on each hypothesis and are presented in table 4.14.

Table 4.14: Summary of Results for Test of Hypotheses

HO	Hypotheses formulated Main Effect	Beta	p-values	Decision
H_{O1}	Capital deductions do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.	0.844	0.000<0.05	Reject
H_{O2}	Tax credits do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya.	0.091	0.000<0.05	Reject
H_{O3}	Tax exemptions do not significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya	0.014	0.025<0.05	Reject

(Source: Research 2024)

4.10 Discussion of Findings

4.10.1 Capital Deductions on the Financial Performance

The first specific objective was to determine the effect of capital deductions on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. This highlights the importance of capital deductions in enhancing financial outcomes. This study concurs with Johnson et al. (2018) who conducted a comprehensive study analyzing data from 150 manufacturing companies. The findings revealed a positive association between the effective utilization of WTAs and reduced taxable income. Companies that maximized WTAs experienced a greater decrease in taxable income, which translated to lower tax liabilities and improved cash flows. The findings of this study are consistent with extant empirical studies such as Githonga, Kuria and Kamau (2023), and Kuria, Achoki and Omboi (2017) who concluded that capital deduction tax incentive had a positive and significant relationship with performance

4.10.2 Tax Credits on The Financial Performance

The second specific objective was to determine the influence of tax credits on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. The study found that there was a positive and significant correlation between tax credits and financial performance r=0.176 p<0.05, This suggests that as tax credits increase, financial performance tends to improve. Further investigation found that tax credits positively influence financial performance β=0.091 p<0.05. This implies that tax credits are a beneficial factor in enhancing financial performance, even when other variables are considered. This study concurred with Gupta and Patel (2019) who conducted a cross-industry analysis to examine the relationship between tax credits and overall financial performance. The study found that companies that effectively utilized tax credits had higher return on assets, increased cash flows, and better financial stability compared to companies that did not take advantage of available incentives. The findings echo and corroborate the findings of Czarnitzki, Hanel, and Rosa (2011) found through the Canadian innovation survey conducted by statistics Canada in 1999 that the recipients of tax credits realized more product innovations and increased the sales share of new and improved products. Notably, it lends credence to the study of Guan and Yam (2015) who by studying the Beijing manufacturing companies in China from 1993 to 1995, the survey questionnaire, found in the special loan fiscal incentives and tax credits and the innovation of Beijing manufacturing company sales and profits are significant positive correlation.

4.10.3 Tax Exemptions on Financial Performance

The third specific objective was to establish the effect of tax exemptions on financial performance of listed companies at the Nairobi Securities Exchange in Kenya. The study found that there was a positive and significant correlation between tax exemptions

and financial performance r=0.150 p<0.05, further investigation found that tax exemptions positively influence financial performance β=0.014 p<0.05. This suggests that as tax exemptions increase, financial performance also improves, albeit modestly. The study concurred with (Bloomquist, 2014).Who stated that when companies claim tax exemptions for investments in environmentally friendly initiatives or other socially responsible activities, they demonstrate their dedication to responsible business practices and sustainable growth. The finding of this study lends support to the findings of Sun, Bland and Yue (2022) whose study established that tax exemptions had a positive and significant effect on financial performance It however contradicts the results of a study by Miranda et.al., (2022) whose study established that tax exemptions did not contribute to the economic growth of Brazilian municipalities.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the findings and how the results relate to both empirical evidence in the extant literature and the theory underpinning the study. Additionally, the chapter covers the conclusion, implications to both theory and practice, and suggestions for further research.

5.1 Summary of the Findings

The objective of the study was to determine the effect of tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Panel regression approach was used to test the hypotheses formulated for the study. The signaling theory, efficient tax planning theory and Hoffman's tax planning theory were utilized to guide the study. The target population for the study comprised 57 firms listed at the Nairobi Securities Exchange (NSE). A 10-year data analysis was conducted for the periods from 2013 to 2022, resulting to a total of 570 firm-year observations. The findings established by the study are summarized below as follows;

5.1.1 Effect of Capital Deductions on Financial Performance

The first specific objective was to investigate the effect of capital deductions on financial performance of listed firms at the Nairobi Securities Exchange in Kenya. Conceptually, this was operationalized as the amount of wear and tear allowances claimed for capital assets. The fixed effect regression results showed that the effects of capital deductions on financial performance (CD) ($\beta = 0.844$, p-value = 0.000, <0.05) were positive and statistically significant; thus, the null hypothesis was rejected and conclusion made that capital deduction influences financial performance of firms.

This finding lends support to the results earlier established from a study by Gitonga, Kuria and Riro (2024) who concluded that there exists a significant relationship between capital allowance and the financial performance of manufacturing firms. It also lends support to the finds of a study by Kuria, Achoki and Omboi (2017) who found that capital deductions had a positive and significant relationship with performance.

5.1.2 Effect of Tax Credits on The Financial Performance

The second objective of this study sought to establish the effect of tax credits on the performance of listed firms at the Nairobi Securities Exchange in Kenya. Results revealed that the effects of tax credit on financial performance (TC) ($\beta = 0.091$, p-value = 0.000, <0.05) was positive and statistically significant. Therefore, the null hypothesis was rejected and conclusion made that tax credit influences financial performance of firms. This lends support to previous studies (Chen and Yang, 2019; Muruny, 2021; Eniema and Ledibabari, 2024) which found out that tax credit has a positive effect on the financial performance.

5.1.3 Effect of Tax Exemptions on Financial Performance

The third objective of the study was to establish the effect of tax exemptions on financial performance of listed firms in Kenya. Findings reveal that there was a positive and significant effect of tax exemptions and financial performance. This supports the findings of a study by who concluded that tax exemptions significantly affect the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Findings reveal that the effects of tax exemption on financial performance (TE) ($\beta = 0.041$, p-value = 0.025, <0.05) were positive and statistically significant. Therefore, the null hypothesis was rejected and conclusion made that tax exemptions have an influence financial performance of firms.

This finding corroborates the results of a study by Onyango (2015) whose study found a statistically significant strong positive relationship between tax exemptions and financial performance of Five-Star Hotels in Nairobi County. However, it contradicts the results of a study by Tembur (2016) who found a negative relationship with the financial performance.

5.2 Conclusions of the Study

The main objective of this study was to examine the effect of tax planning on the financial performance of listed companies at the Nairobi Securities Exchange in Kenya. Consistent with the signaling theory, the study found that all the dimensions of tax planning; capital deductions, tax credits and tax exemptions, had a positive and significant effect on financial performance. Three hypotheses were tested in this study were supported by the findings. These study findings have significant implications for both managerial practitioners and academic researchers. Based on the results of the study it can be concluded that not only does capital deduction have a significant impact on financial performance, but so does tax credits and tax exemptions.

The study provides evidence that corporate tax planning predicts financial performance in listed firms in Kenya. This means that listed and all firms in general should practice corporate tax planning that will lead to an increase in financial performance because this translates to improved shareholder wealth which is the main goal of a firm.

5.3 Recommendations of the Study

Several contributions emerge from this research. This section covers the theoretical, methodological, and practical as well as policy implications together with limitations and recommendations for future research.

5.3.1 Practical Implications

The study established that there was a positive and significant effect of corporate tax planning on financial performance of listed firms. This study therefore recommends that adequate measures should be put in place by management of the listed firms to improve their financial performance through corporate tax planning. Listed firms in general should practice corporate tax planning.

The study findings were beneficial to government and policy makers in evaluating the impact of various tax incentives which constitute tax planning mechanisms by companies on company financial performance. It also benefited corporate managers in identifying the optimum tax planning approaches to be utilized by firms to improve on their financial performance.

5.3.2 Theoretical Implications

From a theoretical perspective, the findings supported the following frameworks which underpinned the current study; signaling theory, efficient tax planning theory and Hoffman's tax planning theory.

5.3.3 Methodological Contribution

The study makes a methodological contribution to extant literature mainly in the area of corporate governance. First, the content analysis categories used in this study are unique to developing contexts, where social contribution needs differ from those in developed countries. This study addresses the major concern about the categorization adopted in previous studies in content analysis which ignored contextual variances, leading to results that were either skewed or incomplete. This suggests that more care and attention should be paid to relevant differences in content analysis categorization, since they may have a major bearing on the ultimate result.

Furthermore, because most previous studies used a cross-sectional design, they were unable to identify potential causality between corporate tax planning and financial performance of listed firms.

By using a longitudinal approach to examine sample firm annual reports over a number of years, this study aimed to reduce endogeneity issues, thereby strengthening methodology of existing literature in the area of corporate tax planning, by demonstrating causal inference between tax planning and financial performance.

Managers should invest in capital assets that qualify for significant wear and tear allowances to improve financial performance.

Managers should actively seek and apply for all available tax credits to enhance financial health.

5.4 Suggestions for Future Research

The study's context comprised of firms listed at the Kenyan Nairobi Stock Exchange and therefore the study recommends future researchers to explore on the effect of indirect taxes incentives on financial performance in other contexts, more so the developed nations, where firms are more heterogeneous in nature. Future researchers should also explore the use of control variable such as firm size and industry type to understand the effect of corporate tax planning strategies on financial performance.

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APPENDICES

Appendix I: Data Sheet

DATA SHEET _ Data on Capital Deductions, tax Credits, tax exemptions and Financial Performance					
Company	Year	Financial Performance	Capital Deductions	Tax Credits	Tax Exemptions
Agricultural					
Eaagads Ltd	2013	0.136	0.000	-0.572	0.287
Eaagads Ltd	2014	0.166	0.000	-0.378	0.311
Eaagads Ltd	2015	0.199	0.083	-0.166	0.323
Eaagads Ltd	2016	0.270	0.182	-0.165	0.330
Eaagads Ltd	2017	1.463	0.500	2.353	0.350
Eaagads Ltd	2018	0.401	0.222	0.107	0.335
Eaagads Ltd	2019	0.413	0.222	0.229	0.343
Eaagads Ltd	2020	0.091	0.000	-3.699	0.275
Eaagads Ltd	2021	0.547	0.273	0.850	0.343
Eaagads Ltd	2022	0.656	0.333	1.853	0.350
Kapchorua Tea Co. Ltd.	2013	0.023	0.000	-0.793	0.275
Kapchorua Tea Co. Ltd.	2014	0.078	0.067	-0.560	0.287
Kapchorua Tea Co. Ltd.	2015	0.136	0.125	-0.431	0.311
Kapchorua Tea Co. Ltd.	2016	0.225	0.182	-0.389	0.323
Kapchorua Tea Co. Ltd.	2017	0.245	0.200	-0.337	0.330
Kapchorua Tea Co. Ltd.	2018	0.378	0.222	-0.053	0.335
Kapchorua Tea Co. Ltd.	2019	0.407	0.222	0.148	0.343
Kapchorua Tea Co. Ltd.	2020	0.517	0.250	0.446	0.343
Kapchorua Tea Co. Ltd.	2021	0.861	0.273	0.477	0.350
Kapchorua Tea Co. Ltd.	2022	1.021	0.400	1.738	0.350
Kakuzi Ltd.	2013	0.024	0.000	-4.472	0.275
Kakuzi Ltd.	2014	0.024	0.111	-2.487	0.287
Kakuzi Ltd.	2015	0.039	0.143	-1.027	0.311

Kakuzi Ltd.	2016	0.230	0.167	-0.770	0.323
Kakuzi Ltd.	2017	0.275	0.200	-0.741	0.330
Kakuzi Ltd.	2018	0.333	0.222	-0.534	0.335
Kakuzi Ltd.	2019	0.394	0.250	0.125	0.343
Kakuzi Ltd.	2020	0.482	0.250	0.187	0.343
Kakuzi Ltd.	2021	0.569	0.500	0.329	0.350
Kakuzi Ltd.	2022	0.639	0.667	0.885	0.350
Williamson Tea Kenya Ltd.	2013	0.026	0.000	-0.936	0.275
Williamson Tea Kenya Ltd.	2014	0.131	0.143	-0.799	0.287
Williamson Tea Kenya Ltd.	2015	0.152	0.143	-0.267	0.311
Williamson Tea Kenya Ltd.	2016	0.317	0.200	-0.121	0.323
Williamson Tea Kenya Ltd.	2017	0.318	0.222	-0.033	0.330
Williamson Tea Kenya Ltd.	2018	0.321	0.222	0.064	0.335
Williamson Tea Kenya Ltd.	2019	0.325	0.273	0.104	0.343
Williamson Tea Kenya Ltd.	2020	0.468	0.364	0.121	0.343
Williamson Tea Kenya Ltd.	2021	0.953	0.375	0.329	0.350
Williamson Tea Kenya Ltd.	2022	1.104	0.400	0.485	0.350
Sasini Ltd	2013	0.314	0.111	-0.177	0.350
Sasini Ltd	2014	0.311	0.133	1.889	0.335
Sasini Ltd	2015	0.339	0.417	-0.174	0.287
Sasini Ltd	2016	0.301	0.273	0.074	0.343
Sasini Ltd	2017	0.297	0.417	0.155	0.311
Sasini Ltd	2018	0.308	0.111	0.339	0.323

Sasini Ltd	2019		0.294	0.417	0.818	0.275
Sasini Ltd	2020		0.339	0.438	-0.292	0.343
Sasini Ltd	2021		0.304	0.111	-0.027	0.330
Sasini Ltd	2022		0.339	0.500	-0.472	0.350
Limuru Tea Co. Ltd.	2013		0.338	0.438	-0.053	0.335
Limuru Tea Co. Ltd.	2014		0.337	0.333	-0.936	0.287
Limuru Tea Co. Ltd.	2015		0.337	0.333	-0.903	0.311
Limuru Tea Co. Ltd.	2016		0.338	0.364	-0.453	0.323
Limuru Tea Co. Ltd.	2017		0.338	0.400	-0.389	0.330
Limuru Tea Co. Ltd.	2018		0.338	0.467	0.333	0.343
Limuru Tea Co. Ltd.	2019		0.337	0.227	-3.966	0.275
Limuru Tea Co. Ltd.	2020		0.339	0.500	0.410	0.343
Limuru Tea Co. Ltd.	2021		0.341	0.500	0.477	0.350
Limuru Tea Co. Ltd.	2022		0.345	0.500	1.998	0.350
Automobiles & Accessories						
Car & General (K) Ltd.	2013	0.026	0.182	-2.507	0.275
Car & General (K) Ltd.	2014	3.291	0.500	2.600	0.350
Car & General (K) Ltd.	2015	0.174	0.313	-0.817	0.311
Car & General (K) Ltd.	2016	0.349	0.333	-0.404	0.323
Car & General (K) Ltd.	2017	0.354	0.350	-0.307	0.330
Car & General (K) Ltd.	2018	0.358	0.375	0.148	0.335
Car & General (K) Ltd.	2019	0.362	0.389	0.187	0.343
Car & General (K) Ltd.	2020	0.081	0.222	-1.166	0.287
Car & General (K) Ltd.	2021	0.367	0.500	0.230	0.343

Car & General (K) Ltd.	2022	0.371	0.500	0.819	0.350
Sameer Africa Ltd.	2013	0.001	0.222	-1.339	0.275
Sameer Africa Ltd.	2014	0.136	0.500	2.548	0.350
Sameer Africa Ltd.	2015	0.001	0.300	-0.785	0.287
Sameer Africa Ltd.	2016	0.007	0.357	-0.685	0.323
Sameer Africa Ltd.	2017	0.008	0.417	-0.575	0.330
Sameer Africa Ltd.	2018	0.009	0.429	0.125	0.335
Sameer Africa Ltd.	2019	0.049	0.444	0.438	0.343
Sameer Africa Ltd.	2020	0.121	0.500	0.473	0.343
Sameer Africa Ltd.	2021	0.002	0.313	-0.711	0.311
Sameer Africa Ltd.	2022	0.136	0.500	1.567	0.350
Marshalls (E.A) Ltd.	2013	0.001	0.000	-0.393	0.275
Marshalls (E.A) Ltd.	2014	0.136	0.438	0.635	0.350
Marshalls (E.A) Ltd.	2015	0.017	0.111	-0.180	0.311
Marshalls (E.A) Ltd.	2016	0.024	0.222	-0.177	0.323
Marshalls (E.A) Ltd.	2017	0.007	0.000	-0.301	0.287
Marshalls (E.A) Ltd.	2018	0.024	0.222	-0.018	0.330
Marshalls (E.A) Ltd.	2019	0.043	0.233	0.063	0.335
Marshalls (E.A) Ltd.	2020	0.123	0.333	0.403	0.350
Marshalls (E.A) Ltd.	2021	0.053	0.273	0.064	0.343
Marshalls (E.A) Ltd.	2022	0.102	0.273	0.339	0.343
Banking					
ABSA Bank Kenya Plc	2013	0.049	0.000	-0.174	0.350
ABSA Bank Kenya Plc	2014	0.007	0.500	0.073	0.335
ABSA Bank Kenya Plc	2015	0.212	0.083	-0.491	0.323
ABSA Bank Kenya Plc	2016	0.069	0.182	0.013	0.330
ABSA Bank Kenya Plc	2017	0.053	0.222	0.236	0.343
ABSA Bank Kenya Plc	2018	0.005	0.333	0.059	0.311
ABSA Bank Kenya Plc	2019	0.023	0.125	1.954	0.275
ABSA Bank Kenya Plc	2020	0.042	0.222	-0.888	0.287
ABSA Bank Kenya Plc	2021	0.345	0.067	0.692	0.343

ABSA Bank Kenya Plc	2022	0.068	0.200	-0.130	0.350
BK Group Plc	2013	0.011	0.182	-0.936	0.287
BK Group Plc	2014	0.027	0.222	-0.801	0.311
BK Group Plc	2015	0.172	0.250	-0.610	0.330
BK Group Plc	2016	0.326	0.250	-0.431	0.335
BK Group Plc	2017	0.337	0.273	-0.128	0.343
BK Group Plc	2018	1.528	0.400	0.148	0.343
BK Group Plc	2019	0.001	0.000	-1.567	0.275
BK Group Plc	2020	0.131	0.222	-0.684	0.323
BK Group Plc	2021	2.335	0.500	0.207	0.350
BK Group Plc	2022	6.145	0.667	2.919	0.350
Diamond Trust Bank Kenya Ltd	2013	0.117	0.111	-0.663	0.287
Diamond Trust Bank Kenya Ltd	2014	1.076	0.222	0.453	0.343
Diamond Trust Bank Kenya Ltd	2015	0.120	0.143	-0.522	0.311
Diamond Trust Bank Kenya Ltd	2016	0.319	0.143	-0.399	0.323
Diamond Trust Bank Kenya Ltd	2017	0.347	0.143	0.125	0.330
Diamond Trust Bank Kenya Ltd	2018	0.413	0.167	0.151	0.335
Diamond Trust Bank Kenya Ltd	2019	0.670	0.200	0.438	0.343
Diamond Trust Bank Kenya Ltd	2020	0.042	0.000	-1.260	0.275
Diamond Trust Bank Kenya Ltd	2021	1.672	0.250	2.509	0.350
Diamond Trust Bank Kenya Ltd	2022	2.309	0.364	2.567	0.350
Equity Group Holdings Plc	2013	0.126	0.000	-0.408	0.287
Equity Group Holdings Plc	2014	0.429	0.111	-0.332	0.323
Equity Group Holdings Plc	2015	0.529	0.133	-0.177	0.330
Equity Group Holdings Plc	2016	0.123	0.000	-0.487	0.275
Equity Group Holdings Plc	2017	0.643	0.200	-0.164	0.335

Equity Group Holdings Plc	2018	0.767	0.222	0.063	0.343
Equity Group Holdings Plc	2019	0.922	0.273	0.111	0.343
Equity Group Holdings Plc	2020	1.017	0.375	0.298	0.350
Equity Group Holdings Plc	2021	0.222	0.111	-0.408	0.311
Equity Group Holdings Plc	2022	5.769	0.400	2.177	0.350
I&M Holdings Plc	2013	0.110	0.000	-0.750	0.275
I&M Holdings Plc	2014	0.113	0.000	-0.632	0.287
I&M Holdings Plc	2015	2.237	0.500	0.651	0.350
I&M Holdings Plc	2016	0.161	0.000	-0.567	0.311
I&M Holdings Plc	2017	0.300	0.083	-0.431	0.323
I&M Holdings Plc	2018	0.388	0.143	0.116	0.335
I&M Holdings Plc	2019	1.435	0.154	0.157	0.343
I&M Holdings Plc	2020	0.316	0.125	-0.034	0.330
I&M Holdings Plc	2021	1.570	0.182	0.219	0.343
I&M Holdings Plc	2022	2.192	0.333	0.255	0.350
HF Group Plc	2013	0.336	0.273	-0.888	0.350
HF Group Plc	2014	1.042	0.182	0.593	0.335
HF Group Plc	2015	0.041	0.222	-0.130	0.323
HF Group Plc	2016	0.649	0.222	-0.810	0.330
HF Group Plc	2017	0.215	0.273	-1.063	0.343
HF Group Plc	2018	0.893	0.222	0.213	0.311
HF Group Plc	2019	0.123	0.375	-0.615	0.275
HF Group Plc	2020	0.416	0.000	0.293	0.287
HF Group Plc	2021	0.985	0.182	-0.224	0.343
HF Group Plc	2022	0.623	0.667	-0.431	0.350
KCB Group Plc	2013	0.513	0.308	-0.915	0.350
KCB Group Plc	2014	0.743	0.250	1.617	0.335
KCB Group Plc	2015	0.340	0.222	0.126	0.323

KCB Group Plc	2016	0.136	0.250	-0.464	0.330
KCB Group Plc	2017	6.401	0.111	-0.387	0.343
KCB Group Plc	2018	2.432	0.222	-0.607	0.311
KCB Group Plc	2019	0.351	0.125	0.393	0.275
KCB Group Plc	2020	0.179	0.000	-0.663	0.287
KCB Group Plc	2021	1.592	0.000	0.671	0.343
KCB Group Plc	2022	0.125	0.125	2.282	0.350
National Bank of Kenya Ltd	2013	0.430	0.222	0.064	0.350
National Bank of Kenya Ltd	2014	0.333	0.000	-0.522	0.335
National Bank of Kenya Ltd	2015	0.122	0.364	0.123	0.323
National Bank of Kenya Ltd	2016	1.742	0.182	-0.487	0.330
National Bank of Kenya Ltd	2017	2.482	0.250	-0.433	0.343
National Bank of Kenya Ltd	2018	0.373	0.111	-0.432	0.311
National Bank of Kenya Ltd	2019	1.157	0.364	1.631	0.275
National Bank of Kenya Ltd	2020	0.045	0.000	-0.867	0.287
National Bank of Kenya Ltd	2021	0.720	0.000	-0.164	0.343
National Bank of Kenya Ltd	2022	0.238	0.125	-0.177	0.350
NCBA Group Plc	2013	0.991	0.143	2.214	0.350
NCBA Group Plc	2014	0.136	0.100	0.339	0.335
NCBA Group Plc	2015	0.461	0.000	0.558	0.323
NCBA Group Plc	2016	1.093	0.182	0.157	0.330
NCBA Group Plc	2017	0.691	0.000	0.311	0.343
NCBA Group Plc	2018	0.569	0.000	0.679	0.311
NCBA Group Plc	2019	0.824	0.143	-0.657	0.275
NCBA Group Plc	2020	0.333	0.375	0.078	0.287
NCBA Group Plc	2021	0.394	0.083	-0.838	0.343
NCBA Group Plc	2022	0.039	0.182	-0.221	0.350
Co-operative Bank of Kenya Ltd	2013	0.024	0.154	0.175	0.350
Co-operative Bank of Kenya Ltd	2014	0.024	0.200	0.450	0.335

Co-operative Bank of Kenya Ltd	2015	0.026	0.125	2.576	0.323
Co-operative Bank of Kenya Ltd	2016	0.131	0.300	-0.876	0.330
Co-operative Bank of Kenya Ltd	2017	1.104	0.182	2.102	0.343
Co-operative Bank of Kenya Ltd	2018	0.953	0.222	1.808	0.311
Co-operative Bank of Kenya Ltd	2019	0.468	0.222	2.123	0.275
Co-operative Bank of Kenya Ltd	2020	0.152	0.333	-0.768	0.287
Co-operative Bank of Kenya Ltd	2021	0.317	0.222	0.178	0.343
Co-operative Bank of Kenya Ltd	2022	0.325	0.500	-0.838	0.350
Commercial and Services					
Deacons (East Africa) Plc	2013	0.321	0.000	0.293	0.350
Deacons (East Africa) Plc	2014	0.318	0.182	-0.224	0.335
Deacons (East Africa) Plc	2015	0.314	0.714	-0.228	0.323
Deacons (East Africa) Plc	2016	0.311	0.308	-0.419	0.330
Deacons (East Africa) Plc	2017	0.308	0.250	-0.610	0.343
Deacons (East Africa) Plc	2018	0.304	0.125	0.471	0.311
Deacons (East Africa) Plc	2019	0.301	0.308	-0.276	0.275
Deacons (East Africa) Plc	2020	0.297	0.091	-0.401	0.287
Deacons (East Africa) Plc	2021	0.294	0.222	-0.607	0.343

Deacons (East Africa) Plc	2022	0.339	0.250	0.533	0.350
Express Kenya Plc	2013	0.339	0.000	-0.663	0.350
Express Kenya Plc	2014	0.339	0.000	2.526	0.335
Express Kenya Plc	2015	0.339	0.125	-1.402	0.323
Express Kenya Plc	2016	0.338	0.222	0.644	0.330
Express Kenya Plc	2017	0.568	0.000	0.223	0.343
Express Kenya Plc	2018	0.007	0.364	2.510	0.311
Express Kenya Plc	2019	0.785	0.182	-0.966	0.275
Express Kenya Plc	2020	0.680	0.167	-0.791	0.287
Express Kenya Plc	2021	0.357	0.333	-0.453	0.343
Express Kenya Plc	2022	0.444	0.364	1.535	0.350
Homeboyz Entertainment Plc	2013	0.027	0.000	-0.867	0.350
Homeboyz Entertainment Plc	2014	2.691	0.000	0.154	0.335
Homeboyz Entertainment Plc	2015	0.835	0.125	-0.177	0.323
Homeboyz Entertainment Plc	2016	0.119	0.188	-0.312	0.330
Homeboyz Entertainment Plc	2017	0.146	0.100	1.007	0.343
Homeboyz Entertainment Plc	2018	0.096	0.000	-0.228	0.311
Homeboyz Entertainment Plc	2019	0.319	0.182	0.739	0.275

Homeboyz Entertainment Plc	2020	0.293	0.000	0.502	0.287
Homeboyz Entertainment Plc	2021	0.267	0.000	0.377	0.343
Homeboyz Entertainment Plc	2022	0.241	0.143	-0.174	0.350
Kenya Airways Ltd	2013	0.189	0.500	-0.097	0.350
Kenya Airways Ltd	2014	0.189	0.083	-0.335	0.335
Kenya Airways Ltd	2015	0.163	0.200	-1.444	0.323
Kenya Airways Ltd	2016	0.163	0.154	-1.391	0.330
Kenya Airways Ltd	2017	0.111	0.200	0.606	0.343
Kenya Airways Ltd	2018	0.086	0.000	0.606	0.311
Kenya Airways Ltd	2019	0.196	0.300	-0.801	0.275
Kenya Airways Ltd	2020	0.179	0.167	1.986	0.287
Kenya Airways Ltd	2021	0.162	0.222	-1.076	0.343
Kenya Airways Ltd	2022	0.145	0.250	-1.076	0.350
Longhorn Publishers Plc	2013	0.007	0.333	-0.636	0.350
Longhorn Publishers Plc	2014	0.761	0.222	0.293	0.335
Longhorn Publishers Plc	2015	0.659	0.444	-0.607	0.323
Longhorn Publishers Plc	2016	0.346	0.000	-1.189	0.330
Longhorn Publishers Plc	2017	0.431	0.273	2.033	0.343
Longhorn Publishers Plc	2018	0.026	0.375	-0.562	0.311
Longhorn Publishers Plc	2019	2.608	0.333	0.008	0.275

Longhorn Publishers Plc	2020	0.809	0.250	-0.341	0.287
Longhorn Publishers Plc	2021	0.338	0.111	-0.524	0.343
Longhorn Publishers Plc	2022	0.550	0.308	0.096	0.350
Nairobi Business Ventures Ltd	2013	0.093	0.091	0.711	0.350
Nairobi Business Ventures Ltd	2014	0.299	0.222	-0.409	0.335
Nairobi Business Ventures Ltd	2015	0.275	0.222	2.593	0.323
Nairobi Business Ventures Ltd	2016	0.250	0.000	-0.993	0.330
Nairobi Business Ventures Ltd	2017	0.226	0.000	-0.120	0.343
Nairobi Business Ventures Ltd	2018	0.202	0.125	-0.678	0.311
Nairobi Business Ventures Ltd	2019	0.178	0.111	2.440	0.275
Nairobi Business Ventures Ltd	2020	0.153	0.125	-1.038	0.287
Nairobi Business Ventures Ltd	2021	0.122	0.364	-0.947	0.343
Nairobi Business Ventures Ltd	2022	0.122	0.250	-0.280	0.350
Nation Media Group Plc	2013	0.080	0.125	0.055	0.350
Nation Media Group Plc	2014	0.184	0.333	-1.024	0.335
Nation Media Group Plc	2015	0.168	0.400	0.154	0.323
Nation Media Group Plc	2016	0.152	0.000	-0.177	0.330
Nation Media Group Plc	2017	0.137	0.000	-0.248	0.343
Nation Media Group Plc	2018	0.121	0.125	1.007	0.311
Nation Media Group Plc	2019	0.611	0.200	-0.500	0.275
Nation Media Group Plc	2020	0.008	0.100	0.124	0.287

Nation Media Group Plc	2021	0.844	0.000	-0.214	0.343
Nation Media Group Plc	2022	0.731	0.182	0.883	0.350
Sameer Africa Plc	2013	0.384	0.143	-0.523	0.350
Sameer Africa Plc	2014	0.478	0.000	-0.335	0.335
Sameer Africa Plc	2015	0.029	0.143	-1.438	0.323
Sameer Africa Plc	2016	2.894	0.286	-0.097	0.330
Sameer Africa Plc	2017	0.898	0.083	-0.719	0.343
Sameer Africa Plc	2018	0.127	0.200	-1.164	0.311
Sameer Africa Plc	2019	0.157	0.077	0.302	0.275
Sameer Africa Plc	2020	0.104	0.125	0.302	0.287
Sameer Africa Plc	2021	0.332	0.000	2.184	0.343
Sameer Africa Plc	2022	0.305	0.182	-0.182	0.350
Standard Group Plc	2013	0.278	0.091	-0.799	0.350
Standard Group Plc	2014	0.251	0.222	-0.524	0.335
Standard Group Plc	2015	0.224	0.364	0.096	0.323
Standard Group Plc	2016	0.197	0.300	-0.370	0.330
Standard Group Plc	2017	0.170	0.143	0.293	0.343
Standard Group Plc	2018	0.143	0.333	-0.607	0.311
Standard Group Plc	2019	0.116	0.000	-1.189	0.275
Standard Group Plc	2020	0.089	0.455	2.005	0.287
Standard Group Plc	2021	0.205	0.375	-0.562	0.343

Standard Group Plc	2022	0.187	0.231	0.017	0.350
TPS Eastern Africa Ltd	2013	0.169	0.250	-0.177	0.350
TPS Eastern Africa Ltd	2014	0.151	0.000	-0.947	0.335
TPS Eastern Africa Ltd	2015	0.134	0.308	-1.301	0.323
TPS Eastern Africa Ltd	2016	0.338	0.000	0.863	0.330
TPS Eastern Africa Ltd	2017	0.338	0.111	-0.409	0.343
TPS Eastern Africa Ltd	2018	0.338	0.222	2.767	0.311
TPS Eastern Africa Ltd	2019	0.337	0.000	-0.993	0.275
TPS Eastern Africa Ltd	2020	0.337	0.000	1.477	0.287
TPS Eastern Africa Ltd	2021	0.337	0.125	0.236	0.343
TPS Eastern Africa Ltd	2022	0.341	0.111	0.005	0.350
WPP Scangroup Plc	2013	0.345	0.125	-0.179	0.350
WPP Scangroup Plc	2014	0.349	0.273	-0.899	0.335
WPP Scangroup Plc	2015	0.354	0.250	-0.503	0.323
WPP Scangroup Plc	2016	0.358	0.167	-0.340	0.330
WPP Scangroup Plc	2017	0.362	0.333	-0.561	0.343
WPP Scangroup Plc	2018	0.367	0.273	0.160	0.311
WPP Scangroup Plc	2019	0.371	0.000	0.154	0.275
WPP Scangroup Plc	2020	0.338	0.000	-0.360	0.287
WPP Scangroup Plc	2021	0.338	0.143	0.979	0.343
WPP Scangroup Plc	2022	0.338	0.267	0.126	0.350
Construction & Allied					

ARM Cement Plc	2013	0.337	0.100	-0.464	0.350
ARM Cement Plc	2014	0.337	0.000	-0.387	0.335
ARM Cement Plc	2015	0.337	0.182	-0.607	0.323
ARM Cement Plc	2016	0.341	0.143	0.393	0.330
ARM Cement Plc	2017	0.345	0.000	-0.663	0.343
ARM Cement Plc	2018	0.349	0.143	0.671	0.311
ARM Cement Plc	2019	0.354	0.200	2.282	0.275
ARM Cement Plc	2020	0.358	0.083	0.064	0.287
ARM Cement Plc	2021	0.362	0.100	-0.522	0.343
ARM Cement Plc	2022	0.367	0.077	0.123	0.350
Bamburi Cement Ltd	2013	0.371	0.000	-0.487	0.350
Bamburi Cement Ltd	2014	0.105	0.111	-0.433	0.335
Bamburi Cement Ltd	2015	0.089	0.200	-0.432	0.323
Bamburi Cement Ltd	2016	0.073	0.100	1.631	0.330
Bamburi Cement Ltd	2017	0.057	0.111	-0.867	0.343
Bamburi Cement Ltd	2018	0.041	0.300	-0.164	0.311
Bamburi Cement Ltd	2019	0.025	0.300	-0.177	0.275
Bamburi Cement Ltd	2020	0.025	0.100	2.214	0.287
Bamburi Cement Ltd	2021	0.026	0.500	0.339	0.343
Bamburi Cement Ltd	2022	0.026	0.000	0.558	0.350
Crown Paints Kenya Plc	2013	0.026	0.364	0.157	0.350
Crown Paints Kenya Plc	2014	0.026	0.375	0.311	0.335
Crown Paints Kenya Plc	2015	0.027	0.167	0.679	0.323
Crown Paints Kenya Plc	2016	0.027	0.167	-0.657	0.330
Crown Paints Kenya Plc	2017	0.027	0.111	0.078	0.343
Crown Paints Kenya Plc	2018	0.116	0.308	-0.838	0.311

Crown Paints Kenya Plc	2019	0.098	0.000	-0.221	0.275
Crown Paints Kenya Plc	2020	0.081	0.111	0.175	0.287
Crown Paints Kenya Plc	2021	0.063	0.222	1.601	0.343
Crown Paints Kenya Plc	2022	0.045	0.000	2.576	0.350
E.A. Cables Ltd	2013	0.028	0.000	-0.876	0.350
E.A. Cables Ltd	2014	0.028	0.125	2.102	0.335
E.A. Cables Ltd	2015	0.028	0.111	1.808	0.323
E.A. Cables Ltd	2016	0.029	0.125	2.123	0.330
E.A. Cables Ltd	2017	0.029	0.273	-0.768	0.343
E.A. Cables Ltd	2018	0.029	0.100	0.178	0.311
E.A. Cables Ltd	2019	0.030	0.143	-0.838	0.275
E.A. Cables Ltd	2020	0.030	0.333	0.293	0.287
E.A. Cables Ltd	2021	0.030	0.364	-0.224	0.343
E.A. Cables Ltd	2022	0.238	0.000	-0.228	0.350
E.A. Portland Cement Co. Ltd	2013	0.232	0.000	-0.419	0.350
E.A. Portland Cement Co. Ltd	2014	0.197	0.167	-0.610	0.335
E.A. Portland Cement Co. Ltd	2015	0.199	0.267	0.471	0.323
E.A. Portland Cement Co. Ltd	2016	0.111	0.100	-0.276	0.330
E.A. Portland Cement Co. Ltd	2017	0.162	0.146	-0.401	0.343
E.A. Portland Cement Co. Ltd	2018	0.039	0.000	-0.607	0.311
E.A. Portland Cement Co. Ltd	2019	0.074	0.182	0.533	0.275
E.A. Portland Cement Co. Ltd	2020	0.122	0.000	-0.663	0.287
E.A. Portland Cement Co. Ltd	2021	0.125	0.000	2.526	0.343
E.A. Portland Cement Co. Ltd	2022	0.255	0.143	-1.402	0.350
Energy And Petroleum					
KenGen Co. Plc	2013	0.139	0.200	0.644	0.350
KenGen Co. Plc	2014	0.610	0.083	0.223	0.335
KenGen Co. Plc	2015	0.644	0.100	2.510	0.323
KenGen Co. Plc	2016	0.590	0.077	-0.966	0.330

KenGen Co. Plc	2017	0.591	0.000	-0.791	0.343
KenGen Co. Plc	2018	0.579	0.091	-0.453	0.311
KenGen Co. Plc	2019	0.605	0.200	1.535	0.275
KenGen Co. Plc	2020	0.653	0.100	-0.867	0.287
KenGen Co. Plc	2021	0.588	0.091	0.154	0.343
KenGen Co. Plc	2022	0.699	0.300	-0.177	0.350
Kenya Power & Lighting Co. Plc	2013	0.589	0.364	-0.312	0.350
Kenya Power & Lighting Co. Plc	2014	0.447	0.200	1.007	0.335
Kenya Power & Lighting Co. Plc	2015	0.416	0.500	-0.228	0.323
Kenya Power & Lighting Co. Plc	2016	0.122	0.000	0.739	0.330
Kenya Power & Lighting Co. Plc	2017	0.250	0.364	0.502	0.343
Kenya Power & Lighting Co. Plc	2018	0.401	0.143	0.377	0.311
Kenya Power & Lighting Co. Plc	2019	0.368	0.231	-0.174	0.275
Kenya Power & Lighting Co. Plc	2020	0.383	0.273	-0.335	0.287
Kenya Power & Lighting Co. Plc	2021	0.371	0.100	-1.444	0.343
Kenya Power & Lighting Co. Plc	2022	0.567	0.154	-0.097	0.350
Total Kenya Ltd	2013	0.605	0.000	-1.391	0.350
Total Kenya Ltd	2014	0.414	0.125	0.606	0.335
Total Kenya Ltd	2015	0.582	0.167	0.606	0.323
Total Kenya Ltd	2016	0.453	0.000	-0.801	0.330
Total Kenya Ltd	2017	-0.018	0.000	1.986	0.343
Total Kenya Ltd	2018	0.238	0.111	-1.076	0.311
Total Kenya Ltd	2019	0.232	0.111	-1.076	0.275
Total Kenya Ltd	2020	0.197	0.125	-0.524	0.287
Total Kenya Ltd	2021	0.400	0.273	0.096	0.343
Total Kenya Ltd	2022	0.270	0.091	-0.636	0.350
Umeme Ltd	2013	0.510	0.143	0.293	0.350
Umeme Ltd	2014	0.540	0.300	-0.607	0.335
Umeme Ltd	2015	0.383	0.364	-1.189	0.323
Umeme Ltd	2016	0.371	0.000	2.033	0.330
Umeme Ltd	2017	0.567	0.000	-0.562	0.343
Umeme Ltd	2018	0.605	0.143	0.008	0.311

Umeme Ltd	2019	0.414	0.067	-0.341	0.275
Umeme Ltd	2020	0.400	0.100	-0.947	0.287
Umeme Ltd	2021	0.000	0.091	1.921	0.343
Umeme Ltd	2022	0.440	0.318	0.711	0.350
Insurance					
Britam Holdings Plc	2013	0.410	0.438	-0.409	0.350
Britam Holdings Plc	2014	0.400	0.429	2.593	0.335
Britam Holdings Plc	2015	0.420	0.500	-0.993	0.323
Britam Holdings Plc	2016	0.400	0.450	-0.120	0.330
Britam Holdings Plc	2017	0.270	0.500	-0.678	0.343
Britam Holdings Plc	2018	0.510	0.250	2.440	0.311
Britam Holdings Plc	2019	0.540	0.346	-1.038	0.275
Britam Holdings Plc	2020	0.470	0.429	-0.280	0.287
Britam Holdings Plc	2021	0.540	0.364	2.315	0.343
Britam Holdings Plc	2022	0.670	0.500	0.055	0.350
CIC Insurance Group Ltd	2013	0.657	0.450	-1.024	0.350
CIC Insurance Group Ltd	2014	0.357	0.500	0.154	0.335
CIC Insurance Group Ltd	2015	0.491	0.400	-0.177	0.323
CIC Insurance Group Ltd	2016	0.469	0.273	-0.248	0.330
CIC Insurance Group Ltd	2017	0.706	0.400	1.007	0.343
CIC Insurance Group Ltd	2018	0.650	0.313	-0.500	0.311
CIC Insurance Group Ltd	2019	0.678	0.250	0.124	0.275
CIC Insurance Group Ltd	2020	0.489	0.364	-0.214	0.287
CIC Insurance Group Ltd	2021	0.315	0.429	0.883	0.343
CIC Insurance Group Ltd	2022	0.244	0.500	-0.523	0.350
Jubilee Holdings Ltd	2013	0.561	0.227	-0.387	0.350
Jubilee Holdings Ltd	2014	0.491	0.300	-0.607	0.335
Jubilee Holdings Ltd	2015	0.469	0.500	0.393	0.323
Jubilee Holdings Ltd	2016	0.706	0.250	-0.663	0.330
Jubilee Holdings Ltd	2017	0.650	0.375	0.671	0.343
Jubilee Holdings Ltd	2018	0.540	0.333	2.282	0.311
Jubilee Holdings Ltd	2019	0.470	0.250	0.064	0.275
Jubilee Holdings Ltd	2020	0.540	0.417	-0.522	0.287
Jubilee Holdings Ltd	2021	0.670	0.444	0.123	0.343
Jubilee Holdings Ltd	2022	0.657	0.444	-0.993	0.350
Kenya Re Insurance Corporation Ltd	2013	0.403	0.500	-0.120	0.350
Kenya Re Insurance Corporation Ltd	2014	0.403	0.500	0.124	0.335
Kenya Re Insurance Corporation Ltd	2015	0.504	0.500	-0.214	0.323

Kenya Re Insurance Corporation Ltd	2016	0.504	0.357	-0.678	0.330
Kenya Re Insurance Corporation Ltd	2017	0.670	0.400	-0.500	0.343
Kenya Re Insurance Corporation Ltd	2018	0.670	0.273	0.883	0.311
Kenya Re Insurance Corporation Ltd	2019	0.615	0.417	-0.523	0.275
Kenya Re Insurance Corporation Ltd	2020	0.682	0.214	-0.335	0.287
Kenya Re Insurance Corporation Ltd	2021	0.668	0.429	-1.438	0.343
Kenya Re Insurance Corporation Ltd	2022	0.644	0.467	-0.097	0.350
Sanlam Kenya Plc	2013	0.631	0.200	0.302	0.350
Sanlam Kenya Plc	2014	0.571	0.167	2.184	0.335
Sanlam Kenya Plc	2015	0.720	0.318	-0.182	0.323
Sanlam Kenya Plc	2016	0.600	0.429	-0.799	0.330
Sanlam Kenya Plc	2017	0.610	0.429	-0.524	0.343
Sanlam Kenya Plc	2018	0.730	0.429	0.096	0.311
Sanlam Kenya Plc	2019	0.744	0.450	-0.370	0.275
Sanlam Kenya Plc	2020	0.620	0.500	-0.719	0.287
Sanlam Kenya Plc	2021	0.662	0.200	-1.164	0.343
Sanlam Kenya Plc	2022	0.624	0.346	0.302	0.350
Investment					
Centum Investment Co Plc	2013	0.560	0.429	2.005	0.350
Centum Investment Co Plc	2014	0.298	0.333	-0.562	0.335
Centum Investment Co Plc	2015	0.406	0.500	0.017	0.323
Centum Investment Co Plc	2016	0.523	0.450	-0.177	0.330
Centum Investment Co Plc	2017	0.231	0.500	-0.947	0.343
Centum Investment Co Plc	2018	0.342	0.400	-1.301	0.311
Centum Investment Co Plc	2019	0.351	0.300	0.863	0.275
Centum Investment Co Plc	2020	0.510	0.400	0.293	0.287
Centum Investment Co Plc	2021	0.530	0.313	-0.607	0.343

Centum Investment Co Plc	2022	0.420	0.250	-1.189	0.350
Home Afrika Ltd	2013	0.367	0.182	1.477	0.350
Home Afrika Ltd	2014	0.407	0.438	0.236	0.335
Home Afrika Ltd	2015	0.405	0.500	0.005	0.323
Home Afrika Ltd	2016	0.466	0.333	-0.179	0.330
Home Afrika Ltd	2017	0.500	0.389	-0.899	0.343
Home Afrika Ltd	2018	0.493	0.500	-0.503	0.311
Home Afrika Ltd	2019	0.529	0.250	-0.340	0.275
Home Afrika Ltd	2020	0.309	0.333	-0.409	0.287
Home Afrika Ltd	2021	0.421	0.333	2.767	0.343
Home Afrika Ltd	2022	0.394	0.278	-0.993	0.350
Trans-Century Plc	2013	0.639	0.417	-0.360	0.350
Trans-Century Plc	2014	0.631	0.438	0.979	0.335
Trans-Century Plc	2015	0.625	0.444	0.073	0.323
Trans-Century Plc	2016	0.706	0.500	-0.491	0.330
Trans-Century Plc	2017	0.667	0.500	0.013	0.343
Trans-Century Plc	2018	0.686	0.500	0.236	0.311
Trans-Century Plc	2019	0.645	0.357	0.059	0.275
Trans-Century Plc	2020	0.506	0.333	-0.561	0.287
Trans-Century Plc	2021	0.539	0.273	0.160	0.343
Trans-Century Plc	2022	0.606	0.417	0.154	0.350
Manufacturing & Allied					
British American Tobacco Kenya Plc	2013	0.639	0.214	-0.130	0.350
British American Tobacco Kenya Plc	2014	0.466	0.417	-0.684	0.335
British American Tobacco Kenya Plc	2015	0.500	0.200	-0.936	0.323
British American Tobacco Kenya Plc	2016	0.493	0.200	-0.128	0.330
British American Tobacco Kenya Plc	2017	0.529	0.100	2.919	0.343
British American Tobacco Kenya Plc	2018	0.506	0.273	0.148	0.311
British American Tobacco Kenya Plc	2019	0.621	0.429	0.207	0.275
British American Tobacco Kenya Plc	2020	0.673	0.429	1.954	0.287
British American Tobacco Kenya Plc	2021	0.539	0.429	-0.888	0.343

British American Tobacco Kenya Plc	2022	0.606	0.429	0.692	0.350
Carbacid Investments Ltd	2013	0.197	0.500	-1.567	0.350
Carbacid Investments Ltd	2014	0.199	0.350	2.567	0.335
Carbacid Investments Ltd	2015	0.111	0.346	0.151	0.323
Carbacid Investments Ltd	2016	0.162	0.438	-0.399	0.330
Carbacid Investments Ltd	2017	0.039	0.438	0.438	0.343
Carbacid Investments Ltd	2018	0.074	0.500	-0.663	0.311
Carbacid Investments Ltd	2019	0.122	0.455	0.125	0.275
Carbacid Investments Ltd	2020	0.485	0.500	-0.431	0.287
Carbacid Investments Ltd	2021	0.632	0.318	-0.801	0.343
Carbacid Investments Ltd	2022	0.581	0.250	-0.610	0.350
East African Breweries Ltd	2013	0.621	0.357	2.509	0.350
East African Breweries Ltd	2014	0.485	0.222	-0.487	0.335
East African Breweries Ltd	2015	0.240	0.300	-0.408	0.323
East African Breweries Ltd	2016	0.263	0.273	-0.408	0.330
East African Breweries Ltd	2017	0.285	0.438	0.111	0.343
East African Breweries Ltd	2018	0.372	0.500	-0.332	0.311
East African Breweries Ltd	2019	0.298	0.375	-0.164	0.275
East African Breweries Ltd	2020	0.125	0.429	-1.260	0.287
East African Breweries Ltd	2021	0.255	0.500	0.453	0.343
East African Breweries Ltd	2022	0.506	0.250	-0.522	0.350
Mumias Sugar Co. Ltd	2013	0.485	0.333	0.063	0.350

Mumias Sugar Co. Ltd	2014	0.632	0.333	0.157	0.335
Mumias Sugar Co. Ltd	2015	0.581	0.250	-0.431	0.323
Mumias Sugar Co. Ltd	2016	0.592	0.417	0.651	0.330
Mumias Sugar Co. Ltd	2017	0.730	0.438	-0.632	0.343
Mumias Sugar Co. Ltd	2018	0.718	0.444	-0.034	0.311
Mumias Sugar Co. Ltd	2019	0.688	0.500	-0.750	0.275
Mumias Sugar Co. Ltd	2020	0.406	0.500	-0.177	0.287
Mumias Sugar Co. Ltd	2021	0.523	0.500	2.177	0.343
Mumias Sugar Co. Ltd	2022	0.621	0.333	0.298	0.350
Unga Group Ltd	2013	0.679	0.333	0.116	0.350
Unga Group Ltd	2014	0.698	0.273	-0.888	0.335
Unga Group Ltd	2015	0.731	0.417	0.593	0.323
Unga Group Ltd	2016	0.779	0.167	-0.130	0.330
Unga Group Ltd	2017	0.778	0.429	-0.810	0.343
Unga Group Ltd	2018	0.788	0.200	-1.063	0.311
Unga Group Ltd	2019	0.750	0.200	-0.027	0.275
Unga Group Ltd	2020	0.695	0.100	0.219	0.287
Unga Group Ltd	2021	0.723	0.273	0.255	0.343
Unga Group Ltd	2022	0.691	0.417	-0.567	0.350
Kenya Orchards Ltd	2013	0.715	0.429	-0.174	0.350
Kenya Orchards Ltd	2014	0.685	0.429	-0.292	0.335
Kenya Orchards Ltd	2015	0.761	0.450	-0.472	0.323
Kenya Orchards Ltd	2016	0.787	0.500	-0.903	0.330
Kenya Orchards Ltd	2017	0.739	0.350	0.410	0.343
Kenya Orchards Ltd	2018	0.785	0.231	-3.966	0.311
Kenya Orchards Ltd	2019	0.771	0.400	1.998	0.275
Kenya Orchards Ltd	2020	0.747	0.438	0.074	0.287
Kenya Orchards Ltd	2021	0.731	0.500	0.155	0.343
Kenya Orchards Ltd	2022	0.693	0.458	0.818	0.350
Flame Tree Group Holdings Ltd	2013	0.731	0.500	-0.053	0.350
Flame Tree Group Holdings Ltd	2014	0.779	0.375	-0.936	0.335
Flame Tree Group Holdings Ltd	2015	0.610	0.222	0.333	0.323
Flame Tree Group Holdings Ltd	2016	0.630	0.333	-0.817	0.330
Flame Tree Group Holdings Ltd	2017	0.550	0.222	0.148	0.343
Flame Tree Group Holdings Ltd	2018	0.640	0.300	0.230	0.311

Flame Tree Group Holdings Ltd	2019	0.610	0.182	0.819	0.275
Flame Tree Group Holdings Ltd	2020	0.774	0.438	-0.389	0.287
Flame Tree Group Holdings Ltd	2021	0.731	0.500	0.477	0.343
Flame Tree Group Holdings Ltd	2022	0.779	0.375	-0.453	0.350
Telecommunication					
Safaricom Plc	2013	0.787	0.500	2.600	0.350
Safaricom Plc	2014	0.739	0.500	0.187	0.335
Safaricom Plc	2015	0.785	0.227	-0.404	0.323
Safaricom Plc	2016	0.698	0.333	0.438	0.330
Safaricom Plc	2017	0.731	0.278	-1.339	0.343
Safaricom Plc	2018	0.779	0.250	0.125	0.311
Safaricom Plc	2019	0.778	0.417	-0.785	0.275
Safaricom Plc	2020	0.630	0.438	-1.166	0.287
Safaricom Plc	2021	0.550	0.389	-0.307	0.343
Safaricom Plc	2022	0.779	0.500	-2.507	0.350
Real Estate Investment Trust					
ILAM FAHARI I-REIT	2013	0.761	0.500	-0.685	0.350
ILAM FAHARI I-REIT	2014	0.729	0.500	-0.575	0.335
ILAM FAHARI I-REIT	2015	0.720	0.375	1.567	0.323
ILAM FAHARI I-REIT	2016	0.600	0.333	-0.301	0.330
ILAM FAHARI I-REIT	2017	0.610	0.300	-0.393	0.343
ILAM FAHARI I-REIT	2018	0.730	0.417	0.064	0.311
ILAM FAHARI I-REIT	2019	0.580	0.167	-0.177	0.275
ILAM FAHARI I-REIT	2020	0.723	0.375	0.473	0.287
ILAM FAHARI I-REIT	2021	0.755	0.200	-0.711	0.343
ILAM FAHARI I-REIT	2022	0.798	0.200	2.548	0.350
Exchange-Traded Funds					
NEW GOLD ETF	2013	0.610	0.111	-0.018	0.350
NEW GOLD ETF	2014	0.630	0.273	0.403	0.335

NEW GOLD ETF	2015	0.550	0.429	0.635	0.323
NEW GOLD ETF	2016	0.590	0.429	-0.399	0.330
NEW GOLD ETF	2017	0.618	0.429	0.438	0.343
NEW GOLD ETF	2018	0.730	0.438	-1.166	0.311
NEW GOLD ETF	2019	0.580	0.500	-0.307	0.275
NEW GOLD ETF	2020	0.580	0.364	-0.180	0.287
NEW GOLD ETF	2021	0.580	0.308	-2.507	0.343
NEW GOLD ETF	2022	0.684	0.400	0.339	0.350

Appendix II: Listed Companies

Firm ID	Company
1	Eaagads Ltd
2	Kapchorua Tea Co. Ltd.
3	Kakuzi Ltd.
4	Williamson Tea Kenya Ltd.
5	Sasini Ltd
6	Limuru Tea Co. Ltd.
7	Car & General (K) Ltd.
8	Sameer Africa Ltd.
9	Marshalls (E.A) Ltd.
10	ABSA Bank Kenya Plc
11	BK Group Plc
12	Diamond Trust Bank Kenya Ltd
13	Equity Group Holdings Plc
14	I&M Holdings Plc
15	HF Group Plc
16	KCB Group Plc
17	National Bank of Kenya Ltd
18	NCBA Group Plc
19	Co-operative Bank of Kenya Ltd
20	Deacons (East Africa) Plc
21	Express Kenya Plc
22	Homeboyz Entertainment Plc
23	Kenya Airways Ltd
24	Longhorn Publishers Plc
25	Nairobi Business Ventures Ltd
26	Nation Media Group Plc
27	Sameer Africa Plc
28	Standard Group Plc
29	TPS Eastern Africa Ltd
30	WPP Scangroup Plc
31	ARM Cement Plc
32	Bamburi Cement Ltd
33	Crown Paints Kenya Plc
34	E.A. Cables Ltd
35	E.A. Portland Cement Co. Ltd
36	KenGen Co. Plc
37	Kenya Power & Lighting Co. Plc
38	Total Kenya Ltd
39	Umeme Ltd
40	Britam Holdings Plc
41	CIC Insurance Group Ltd
42	Jubilee Holdings Ltd
43	Kenya Re Insurance Corporation Ltd
44	Sanlam Kenya Plc
45	Centum Investment Co Plc
46	Home Afrika Ltd
47	Trans-Century Plc
48	British American Tobacco Kenya Plc
49	Carbacid Investments Ltd
50	East African Breweries Ltd
51	Mumias Sugar Co. Ltd
52	Unga Group Ltd
53	Kenya Orchards Ltd
54	Flame Tree Group Holdings Ltd
55	Safaricom Plc
56	ILAM FAHARI I-REIT
57	NEW GOLD ETF

Appendix III: KESRA Introductory Letter

KENYA REVENUE AUTHORITY

PUBI

ISO 9001:2015 CERTIFIED

KENYA SCHOOL OF REVENUE ADMINISTRATION

REF: KESRA/NBI/036

29th November 2023

TO: WHOM IT MAY CONCERN

Dear Sir/Madam,

RE: REQUEST FOR ASSISTANC FOR ESTHER WAMBUI MWANGI OF REGISTRATION NO.: KESRA105/0004/2022 UNDERTAKING MASTERS AT KESRA

This is to confirm that the above named is a student at Kenya School of Revenue Administration (KESRA) Nairobi Campus pursuing Masters in Tax and Customs Administration.

The named student is undertaking Research on TOPIC: *"Effect of tax planning on the financial performance on listed companies at the Nairobi Securities Exchange in Kenya."*

The purpose of this letter is to request for your kind facilitation in enabling the student progress in her research project by allowing access to any relevant information and/or conduct interviews, which are relevant to the project.

Your support to the student in this regard will be highly appreciated.

Thank you.

Damacrine Masira
Manager Academic Research
KESRA

DEAN OF STUDIES
0 4 DEC 2023
PUBLIC AFFAIRS DIVISION

Tulipe Ushuru, Tujitegemee!

Appendix IV: NACOSTI Research License

Ref No: 983299

Date of Issue: 13/March/2024

RESEARCH LICENSE

This is to Certify that Miss.. Esther Mwangi of Moi University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EFFECT OF CORPORATE TAX PLANNING ON THE FINANCIAL PERFORMANCE OF LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE IN KENYA for the period ending : 13/March/2025.

License No: NACOSTI/P/24/33872

983299

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE,TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013 (Rev. 2014)
Legal Notice No. 108: The Science, Technology and Innovation (Research Licensing) Regulations, 2014

The National Commission for Science, Technology and Innovation, hereafter referred to as the Commission, was the established under the Science, Technology and Innovation Act 2013 (Revised 2014) herein after referred to as the Act. The objective of the Commission shall be to regulate and assure quality in the science, technology and innovation sector and advise the Government in matters related thereto.

CONDITIONS OF THE RESEARCH LICENSE

1. The License is granted subject to provisions of the Constitution of Kenya, the Science, Technology and Innovation Act, and other relevant laws, policies and regulations. Accordingly, the licensee shall adhere to such procedures, standards, code of ethics and guidelines as may be prescribed by regulations made under the Act, or prescribed by provisions of International treaties of which Kenya is a signatory to
2. The research and its related activities as well as outcomes shall be beneficial to the country and shall not in any way;
    i. Endanger national security
    ii. Adversely affect the lives of Kenyans
    iii. Be in contravention of Kenya's international obligations including Biological Weapons Convention (BWC), Comprehensive Nuclear-Test-Ban Treaty Organization (CTBTO), Chemical, Biological, Radiological and Nuclear (CBRN).
    iv. Result in exploitation of intellectual property rights of communities in Kenya
    v. Adversely affect the environment
    vi. Adversely affect the rights of communities
    vii. Endanger public safety and national cohesion
    viii. Plagiarize someone else's work
3. The License is valid for the proposed research, location and specified period.
4. The license any rights thereunder are non-transferable
5. The Commission reserves the right to cancel the research at any time during the research period if in the opinion of the Commission the research is not implemented in conformity with the provisions of the Act or any other written law.
6. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research.
7. Excavation, filming, movement, and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
8. The License does not give authority to transfer research materials.
9. The Commission may monitor and evaluate the licensed research project for the purpose of assessing and evaluating compliance with the conditions of the License.
10. The Licensee shall submit one hard copy, and upload a soft copy of their final report (thesis) onto a platform designated by the Commission within one year of completion of the research.
11. The Commission reserves the right to modify the conditions of the License including cancellation without prior notice.
12. Research, findings and information regarding research systems shall be stored or disseminated, utilized or applied in such a manner as may be prescribed by the Commission from time to time.
13. The Licensee shall disclose to the Commission, the relevant Institutional Scientific and Ethical Review Committee, and the relevant national agencies any inventions and discoveries that are of National strategic importance.
14. The Commission shall have powers to acquire from any person the right in, or to, any scientific innovation, invention or patent of strategic importance to the country.
15. Relevant Institutional Scientific and Ethical Review Committee shall monitor and evaluate the research periodically, and make a report of its findings to the Commission for necessary action.

National Commission for Science, Technology and
Innovation(NACOSTI),
Off Waiyaki Way, Upper Kabete,
P. O. Box 30623 - 00100 Nairobi, KENYA
Telephone: 020 4007000, 0713788787, 0735404245
E-mail: dg@nacosti.go.ke
Website: www.nacosti.go.ke

Appendix V: Plagiarism Awareness Certificate

THESIS WRITING COURSE

PLAGIARISM AWARENESS CERTIFICATE

This certificate is awarded to

MWANGI, ESTHER WAMBUI

KESRA/105/0004/2022

In recognition for passing the University's plagiarism

Awareness test for Thesis **entitled: EFFECT OF CORPORATE TAX PLANNING ON THE FINANCIAL PERFORMANCE OF LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE IN KENYA** similarity index of 10% and striving to maintain academic integrity.

Word count:21065

Awarded by

Prof. Anne Syomwene Kisilu

CERM-ESA Project Leader   Date: 27/08//2024