

**FINANCIAL PLANNING AND ANALYSIS AND THE FINANCIAL
PERFORMANCE OF FIRMS LISTED AT THE NAIROBI SECURITIES
EXCHANGE**

By

DORINE ADHIAMBO NDINYA

MASTER OF SCIENCE IN COMMERCE (FINANCE AND INVESTMENTS)

KCA UNIVERSITY

2025

**FINANCIAL PLANNING AND ANALYSIS AND FINANCIAL
PERFORMANCE OF FIRMS LISTED AT THE NAIROBI SECURITIES
EXCHANGE**

By

DORINE ADHIAMBO NDINYA

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE MASTER OF SCIENCE IN
COMMERCE (FINANCE AND INVESTMENTS) IN THE SCHOOL OF
BUSINESS AT KCA UNIVERSITY**

NOVEMBER 2025

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

Name: Dorine Adhiambo Ndinya

Reg No: 17/02872

Signature:



Date: 8th November, 2025

I do hereby confirm that I have examined the master's dissertation of Dorine Adhiambo Ndinya and have certified that all examiners' recommendations have adequately been addressed.

Sign:



Date: 09/Nov/2025

Dr. CPA Dolreen Murithi

Dissertation Supervisor

School of Business, KCA University.

FINANCIAL PLANNING AND ANALYSIS AND THE FINANCIAL PERFORMANCE OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

ABSTRACT

The study aimed to analyze the effect of financial planning and analysis on the financial performance of firms listed on the Nairobi Securities Exchange. The specific objectives of the study were to examine the effect of financial modelling and analytics on financial performance of firms listed on the Nairobi Securities Exchange, to determine the effect of budget planning on financial performance of firms listed on the Nairobi Securities Exchange, and to assess the effect of forecasting quality on financial performance of firms listed on the Nairobi Securities Exchange. The dynamic capabilities theory, resource-based view, and information asymmetry theory served as the study's guiding theories. The study concentrated on all 64 companies listed on the NSE and used a descriptive research design methodology. Given the small size of the population under investigation, a census was used for this study. Both primary and secondary data were used. Structured questionnaires were utilized to collect primary data. Using a secondary data collection matrix, secondary data on return on assets were gathered from the annual reports of the 64 companies listed on the NSE over a ten-year period, from 2014 to 2024. A pilot study was conducted to validate and pretest the questionnaire. To evaluate validity and reliability, the researcher relied on the views of research specialists. The data collected were analyzed using both descriptive and inferential statistics. Frequency distributions, standard deviations, means, and percentages were used as descriptive statistics. Regression analysis was conducted to establish the relationship between study variables in inferential statistics. The analyzed quantitative data were presented using tables and graphs. The study was considered significant because it provided actual evidence of how FP&A practices, such as financial reporting, forecasting, budgeting, and performance monitoring, enhanced business profitability, efficiency, and long-term survival. The response rate was 93.4% of the respondents. The findings showed there is a significant positive trend towards financial modelling and analytics, budget planning and forecasting quality had moderate effect on financial performance of firms listed at the Nairobi Securities exchange. The study recommends firms listed at the Nairobi Securities Exchange should adopt an integrated approach to financial planning and analysis by strengthening financial modelling and analytics, enhancing budget planning practices, and improving forecasting quality. Future research should consider expanding the scope beyond firms listed at the Nairobi Securities Exchange to include small and medium-sized enterprises (SMEs) and privately owned companies.

Key Words; Financial Planning and Analysis, Financial Performance, Financial Modelling and Analytics, Budget Planning, Forecasting Quality, Nairobi Securities Exchange

ACKNOWLEDGEMENT

I want to sincerely thank everyone who has helped me along the way as I have developed this study proposal. More people than I can list have assisted me directly and indirectly with this research project and I am incredibly grateful to the institution's faculty and staff for providing me with the opportunity and resources I needed to finish my project precisely and on time.

I am especially appreciative of my supervisor, Dr. Dolreen Murithi, for her unwavering encouragement, selfless dedication, and early and constant prodding throughout the entire research process.

My peers and fellow scholars, I owe you a debt of appreciation for motivating me to undertake such a tremendous leap in my academic attempts, your probing enquiries and tough critiques pushed me to go into new methods of handling issues. To my friends and family, thank you for your unwavering support, patience, and understanding, especially during the most demanding phases of this work.

Finally, I acknowledge all the researchers and authors whose work has informed and inspired this proposal. This research would not have been possible without the collective contributions of all the individuals mentioned above.

TABLE OF CONTENTS

DECLARATION.....	iii
ABSTRACT.....	iv
ACKNOWLEDGEMENT.....	v
DEDICATION.....	x
LIST OF TABLES.....	xi
LIST OF FIGURES.....	xi
ACRONYMS AND ABBREVIATIONS.....	xiii
OPERATIONAL DEFINITION OF TERMS.....	xiv
CHAPTER ONE INTRODUCTION	1
1.1 Background of the study	1
1.1.1 Financial Planning and Analysis	3
1.1.2 Financial Performance	5
1.1.3 Firms Listed at Nairobi Securities Exchange	6
1.2 Statement of the Problem.....	7
1.3 Objectives of the study.....	9
1.3.1 General Objective	9
1.3.2 Specific Objectives	9
1.4 Research Questions	10
1.5 Justification of the study	10
1.6 Significance of the study.....	11
1.6.1 Government and policy makers	11
1.6.2 Management Practice	11
1.7 Scope of the Study	12
CHAPTER TWO	13
LITERATURE REVIEW	13
2.1 Introduction.....	13
2.2 Theoretical Framework.....	13
2.2.1 Dynamic Capabilities Theory	13
2.2.2 Resource Based Theory	15
2.2.3 Information Asymmetry Theory.....	16
2.3 Empirical Review.....	18
2.3.1 Financial Modelling, Analytics and Financial Performance.....	18

2.3.2 Budget Planning and Financial Performance.....	21
2.3.3 Forecasting Quality and Financial Performance.....	24
2.4 Conceptual Framework.....	26
2.5 Operationalization and Measurement of Research Variables.....	27
2.6 Summary of Reviewed Literature.....	29
2.7 Research Gaps.....	29
CHAPTER THREE.....	36
RESEARCH METHODOLOGY.....	36
3.1 Introduction.....	36
3.2 Research Design.....	36
3.3 Target Population.....	37
3.4 Sampling and Sampling Procedure.....	38
3.5 Data Collection Instruments.....	38
3.6 Data Collection Procedures.....	39
3.7 Pilot Test.....	41
3.7.1 Validity of the Research Instrument.....	41
3.7.2 Reliability of Research Instruments.....	42
3.8 Data Processing and Analysis.....	42
3.8.1 Diagnostic Tests.....	43
3.8.1.1 Normality and Linearity.....	43
3.8.1.2 Multicollinearity.....	43
3.8.1.3 Heteroscedasticity.....	44
3.9 Ethical Consideration.....	44
CHAPTER FOUR.....	46
RESEARCH FINDINGS AND DISCUSSION.....	46
4.1 Introduction.....	46
4.2 Response Rate.....	46
4.3 Reliability Test.....	47
4.4 Demographic Information.....	48
4.4.1 Gender of Respondents.....	48
4.4.2 Age Distribution of the Respondents.....	49
4.4.3 Respondents Years of Experience.....	50
4.4.4 Position held in the Organization by Respondents.....	50

4.4.5 Respondents Educational Level.....	51
4.5 Descriptive Analysis	52
4.5.1 Financial Modelling and Financial Performance.....	53
4.5.2 Budget Planning and Financial Performance	55
4.5.3 Forecasting Quality and Financial Performance	58
4.5.4 Financial Performance	61
4.6 Diagnostic Test	64
4.6.1 Normality Test.....	64
4.6.2 Multicollinearity	65
4.6.3 Heteroscedasticity Test.....	66
4.7 Correlation Analysis	67
4.8 Inferential Statistics	69
4.8.1 Model Summary	69
4.8.2 Regression Analysis of Variance.....	70
4.8.3 Regression Coefficients	71
CHAPTER FIVE	75
SUMMARY, CONCLUSION AND RECOMMENDATIONS	75
5.1 Introduction.....	75
5.2 Summary of the Study	75
5.2.1 Financial Modelling and Analytics on Financial Performance	76
5.2.2 Budget Planning on Financial Performance	77
5.2.3 Forecasting quality on financial Performance	77
5.3 Conclusions.....	77
5.2.1 Financial Modelling and Analytics on Financial Performance	78
5.2.2 Budget Planning on Financial Performance	79
5.2.3 Forecasting quality on financial Performance	79
5.4 Recommendations.....	80
5.5 Limitations of the Study.....	81
5.6 Future Research Directions.....	82
REFERENCES.....	84
APPENDICES	95
Appendix I: Letter of Introduction.....	95
Appendix II: Questionnaire to Respondents	96

Appendix III Data Collection Checklist	99
Appendix IV: Firms Listed at Nairobi Securities Exchange	100

DEDICATION

I wish to dedicate this research to my beloved parents, siblings, friends and mentors whose unwavering support, encouragement, guidance and motivation have been a beacon of light throughout this process.

LIST OF TABLES

Table 1 Operationalization of Variables	28
Table 2 Summary of Empirical Review and Research Gaps	30
Table 3 Response Rate	47
Table 4 Reliability Results	47
Table 5 Gender of Respondents	48
Table 6 Respondents' Age Distribution	49
Table 7 Respondents Years of Experience	50
Table 8 Position held in the Organization by respondents	51
Table 9 Respondents Educational Level	52
Table 10 Descriptive Statistics on financial Modelling and Analytics	53
Table 11 Descriptive Statistics on Budget Planning	56
Table 12 Descriptive Statistics on Forecasting Quality	58
Table 13: Financial Performance	61
Table 14 Normality Test Results	64
Table 15: Multicollinearity Test Results	65
Table 16 Breusch-Pagan Test for Heteroskedasticity	66
Table 17 Correlation Analysis Results	68
Table 18 Model Summary	70
Table 19 Analysis of Variance Results	70
Table 20 Regression Coefficients	71

LIST OF FIGURES

Figure 1: Conceptual Framework	27
Figure 2: Trend Analysis between 2015 and 2024 for ROA	62

ACRONYMS AND ABBREVIATIONS

AfDB	African Development Bank
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
CMA	Capital Markets Authority
CMA	Capital Markets Authority
EPS	Earnings Per Share
ESG	Environmental, Social and Governance
FP&A	Financial Planning and Analysis
GRI	Global Reporting Initiative
ICPAK	Institute of Certified Public Accountants of Kenya
NPL	Non-Performing Loans
NSE	Nairobi Securities Exchange
NSE	Nairobi Stock Exchange
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment

OPERATIONAL DEFINITION OF TERMS

Budgeting Planning	budget planning is the process of formulating detailed financial plans that quantify management's expectations regarding revenues, expenses, cash flows, and resource allocations for a specific period, usually aligned with organizational objectives. (Horngren, Datar, & Rajan 2023),
Financial modelling and analytics	Financial modelling Is the process of constructing an abstract mathematical representation (a model) of a real-world financial situation to support decision-making (Benninga 2022).
Financial Planning and Analysis	Is an essential role in a company that includes forecasting, budgeting, and assisting with long-term financial plans (Bragg 2020).
Financial Performance	Is a measure of how well a firm utilizes its assets to generate revenues and profits. (Gartenberg & Serafeim, 2019).
Forecasting Quality	Forecasting quality as the degree of accuracy and reliability with which a forecast predicts actual future outcomes, relative to alternative methods or random chance (Makridakis & Hibon 2020).

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In today's dynamic and intensely competitive business landscape, organizations face increased demand for handling uncertainty, managing funding, and claiming financial viability. The speed of globalization, technology and economic disruption has heightened the relevance of financial planning and analysis (FP&A) as a planned and managed strategic function. Researchers point out that structured FP&A frameworks are important not only for accurate forecasting, but also for building organizational resilience to shocks (such as inflation, currency fluctuations, or market unpredictability) (Buigut & Soi, 2021; Brigham & Ehrhardt, 2022). Therefore, FP&A is evolving from a traditional back-office theatre to a prominent role in strategy and performance management.

Across the globe, the FP&A narrative recognizes, FP&A is a driver of sustainable financial performance, specifically when integrated into corporate strategy. All larger, empirical studies suggest that the integration of FP&A into decision-making facilitates better risk and opportunity management, enhances a corporate agenda or brand, and increases profitability (Vuong, Vu, & Mitra, 2020; Wang & Hsu, 2021). The conversation has moved from whether FP&A generates value to how to maximize FP&A by aligning with organizational strategy to achieve high performance. Furthermore, FP&A is increasingly viewed as a governance mechanism that fosters transparency, accountability and disciplined financial decisions, which strengthens shareholder confidence and ethical conduct of business (Lagoarde, 2019; Atsakpo, 2019).

In Sub-Saharan Africa, there is increasing interest in FP&A as firms begin to understand the value that it brings to managing financial complexities. Studies suggest that poor financial planning contributes to acute business failures in the region, to which are compounded by challenges such as high interest rates, currency fluctuations, and limited access to capital for long-term planning (AfBD, 2020; World Bank, 2021). In contrast, organizations that utilize FP&A frameworks have shown improvement in governance, investor confidence and liquidity (Pimpong & Laryea, 2021; Melek, 2021). This signifies that FP&A in developing economies is not simply a finance mechanism, but rather it serves as a strategic enabler of competitiveness and sustainability of institutions. Kenya presents a highly relevant context for understanding FP&A, owing to the rapid growth of its financial environment and the increasing reliance on data-informed decisions. Academics suggest that FP&A in structured forms enables Kenyan businesses to optimize resource allocation, decrease the likelihood of financial risks, and provide elements of strategic flexibility (Gichuki & Omondi, 2022). More specifically, being verified by evidence-based research, it has been shown that companies utilizing advanced analytics in financial planning earlier benefit from increased profitability, lower earnings volatility, and improved market position (Mwangi & Otieno, 2021; Mwangi & Wainaina, 2022). Taken together these changes echo the growing perception of FP&A as an important contributor to financial performance - particularly for establishments represented on the Nairobi Securities Exchange (NSE), where continued investor expectations for transparency and sustainable growth remain prevalent (Buigut & Soi, 2021; Central Bank of Kenya, 2022).

The theoretical basis of this study emphasizes the strategic value of FP&A. The Dynamic Capabilities Theory (Teece, Pisano & Shuen, 1997) details a organizations ability to integrate, build and reconfigure resources to address changing environments, which exists as one condition of FP&A. The Resource Based View (Wernerfelt, 1984) reiterates the prior argument in evaluating firm performance and emphasizes performance depends on how well

resources are utilized through a systematic approach when investing in resource alternatives for businesses with optimal preparedness. Ultimately, the Information asymmetry theory (Akerlof, 1970), posits that FP&A can help minimize the information gap because of the increased accuracy and transparency of financial information to support managerial decisions and market confidence.

Overall, the state of the evidence suggests that while FP&A has been researched extensively in developed economies, there is a dearth of empirical research that examines the effects of FP&A in an emerging economy context particularly Kenya. This need is emphasized by the fast-evolving nature of the Kenyan financial sector, the on ramp of integrated analytics into financial informed decision-making and the strategic importance of firms listed on the NSE. The focus of this study on three key FP&A dimensions—forecasting quality, budget planning and financial modelling and analytics—addresses a significant gap in understanding the effects of FP&A on financial performance in an emergent and increasingly dynamic business environment. Overall the study produces significant contribution to body of research and practice by presenting an understanding of how firms can utilize FP&A to achieve sustainable growth, resiliency and financial performance.

1.1.1 Financial Planning and Analysis

Bragg (2020) states that financial planning and analysis (FP&A) is a strategic part of an organisation that includes both forward-looking financial planning (like budgeting and forecasting) and backward-looking financial analysis (like looking at past data to see how well things are going, find patterns, and help make decisions based on facts). Financial planning and analysis, according to Damodaran (2022), is an ongoing process of allocating and directing financial resources to achieve strategic goals and objectives. Financial planning and analysis is the practice of forecasting, budgeting, and managing financial risks to support decision-making within an organization. This helps in identifying opportunities for cost savings, improving

profitability, and managing financial performance effectively. The study will adopt the definition of financial planning and analysis proposed by Bragg (2020).

Effective FP&A ensures that companies have a clear financial roadmap through budgeting and forecasting. This involves projecting future revenues and expenditures to guide strategic decision-making and maintain financial health (Arnott, Lizama, & Song, 2021). FP&A ensures that a company's financial planning aligns with its long-term strategic objectives. By integrating financial data with corporate strategy, FP&A enables firms to make informed decisions that enhance profitability and long-term success (Reilly & Brown 2019). FP&A helps firms monitor and analyse financial performance by comparing actual financial outcomes to forecasts or budgets. This allows firms to identify variances, understand the reasons behind them, and take corrective actions when necessary. According to Moyer, McGuigan and Kretlow (2021) FP&A enables firms to conduct scenario planning and sensitivity analysis, which helps predict financial outcomes based on different assumptions. This is crucial in preparing for uncertainties and volatile market conditions.

In regard to operationalization, Koller, Goedhart and Wessels (2019) measure financial planning and analysis based on budgeting and forecasting, financial reporting and variance analysis. On the other hand, Damodaran (2021) considers the measures of FP&A based on budgeting, financing planning, inventory planning and working capital management. Lastly, Baker and Powell (2019) FP&A measures include strategic financial decision-making, risk management, scenario planning, communication and collaboration across departments. The current study will focus on FP&A measures related to budgeting, forecasting quality, and financial modelling and analytics, as these elements are relevant to strategic decision-making and performance evaluation in firms listed on the Nairobi Securities Exchange.

1.1.2 Financial Performance

According to Gartenberg and Serafeim (2019), assessing a company's financial success mostly involves examining its financial performance over a specific period of time. It contains a number of financial metrics and indicators that demonstrate the relationship between a company's rate of resource utilisation and its pace of revenue production, debt repayment, and long-term sustainability. According to Bătae, Dragomir, and Feleagă (2021), a company's financial performance demonstrates how it makes use of its resources to produce income, helping stakeholders make wise choices. According to Okafor et al. (2023), examining a company's financial performance is one way to gauge its health and potential for profit.

Financial performance, which indicates how well a business is doing financially overall, is crucial to organisational success (Bătae, & Feleagă, 2021). Investors, staff, management, and the general market are among the stakeholders it affects. Maintaining, development and accomplishing long-term goals require regular evaluation and enhancement of financial performance. Investors place a high value on return on investment (ROI), since a robust ROI can yield substantial and sustained returns for investors (Okafor, Adeleye & Adusei, 2021). An organization's overall financial health is determined by measuring its financial performance. Zhou, Sun, and Liao (2021) claim that effective resource, process, investment, and financial management are the keys to corporate success.

The various methods used to assess financial success ought to be standardised. Kim, Yu, and Hassan (2018) state that ROA, company size, returns on ROE, and ROS are just a few of the crucial measures for assessing financial success. Two of the most often used metrics for evaluating financial performance are ROA and ROE. While ROE shows how effectively shareholders' money is being used, ROA gauges a company's profitability in relation to its assets (Kemboi, 2018). Based on its assets, ROA measures an organization's ability to generate revenue. The study's main parameters for evaluating the financial performance of businesses

listed on the Nairobi Securities Exchange (NSE) is return on assets ROA. ROA is particularly suitable for this study as it aligns with the research focus on financial planning and analysis (FP&A) practices and is consistently used in related empirical studies on performance efficiency.

1.1.3 Firms Listed at Nairobi Securities Exchange

The main stock exchange in Kenya is the Nairobi Securities Exchange. A voluntary group of stockbrokers registered under the relevant Societies Act formed a stock market in 1954. This organisation started trading stock. Over the years, NSE has made a reputation for itself throughout the continent. It has and still draws a sizable number of both domestic and foreign investors as a direct result of this. The Nairobi Securities Exchange is overseen by the Capital Markets Authority (CMA), which also grants licenses to participants. Furthermore, the CMA has approved public offerings and listings of securities that are issued and traded on the NSE (NSE, 2024).

The Nairobi Securities Exchange (NSE) is a key financial market in Kenya that facilitates the buying and selling of securities. It offers top-notch trading services to both domestic and foreign investors who wish to participate in the country's economic growth and is a member of the African Securities Exchange Association (ASEA). To gauge market performance, the NSE utilizes various indices such as the NSE 20 Share Index, FTSE NSE Kenya 15 Index, NSE All Share Index (NASI), NSE 25 Share Index, FTSE NSE Kenya 25 Index, FTSE ASEA Pan African Index, and the NSE Kenya Government Bond Index. Among these, the NSE 20 Share Index, established in 1964, remains the most widely used and recognized. The exchange also maintains sectoral indices to track performance across different sectors of the economy (Buigut & Soi, 2021).

The financial performance of firms listed on the Nairobi Securities Exchange (NSE) has shown a declining and volatile trend in recent years, largely influenced by macroeconomic challenges, regulatory shifts, and global disruptions. The impact of the COVID-19 pandemic in 2020 led to sharp contractions in revenues, especially in tourism, insurance, and manufacturing, while post-pandemic recovery has remained slow due to inflation, currency depreciation, and geopolitical instability. The NSE 20 Share Index long considered a key market performance indicator fell from over 4,000 points in 2017 to below 1,600 points by 2023, reflecting these underlying weaknesses (NSE, 2023; Buigut & Soi, 2021). Despite these challenges, the NSE provides a strategic context for this study because it encompasses a broad representation of Kenya's key economic sectors, offers transparent and accessible financial data, and is regulated by the Capital Markets Authority, making it ideal for analysing trends in financial performance and the role of financial planning practices (CMA, 2022).

1.2 Statement of the Problem

Financial performance is a critical indicator of an organization's health, sustainability, and value creation, especially for firms listed on the Nairobi Securities Exchange (NSE). It reflects a firm's ability to generate profits, efficiently utilize assets, meet financial obligations, and deliver shareholder value (Buigut & Soi, 2021). Strong financial performance enhances investor confidence, supports access to capital, and enables strategic growth, while poor performance undermines market valuation, increases financial risk, and threatens long-term viability (Hope & Fraser, 2021). In recent years, many NSE-listed firms have experienced declining profitability, shrinking returns on equity (ROE), and deteriorating earnings, largely attributed to macroeconomic instability, rising debt levels, and reduced consumer demand (CMA, 2022; NSE, 2023). However, this decline also reflects inadequate financial planning and weak financial analysis frameworks that hinder firms' ability to anticipate risks, optimize capital allocation, and strategically adapt in a dynamic and volatile business environment. This

complexity underscores the need to critically assess the role of financial planning and analysis in improving performance outcomes among firms listed on the NSE.

Businesses registered on the Nairobi Securities Exchange have exhibited highly erratic financial performance patterns in recent years. Kimunguyi, Memba, and Njeru (2021) argue that many companies at the NSE have consistently recorded declining financial outcomes, with several issuing profit warnings over time. For example, the overall return on assets (ROA) was reported at 4.4% in 2020, slightly improving to 4.7% in 2021 and 2022, before dropping again to 4.5% in 2023 and 4% in 2024 (NSE, 2024). Similarly, return on equity (ROE) fell from 30% in 2020 to 29.2% in 2021, 28.2% in 2022, 24.4% in 2023, and 24.7% in 2024 (NSE, 2024). These trends point to structural weaknesses in listed firms' financial strategies and reflect challenges in managing resources effectively to create sustainable value. The recurring profit warnings and exit of some companies from the NSE further emphasize the importance of examining how foundational elements such as financial planning and analysis influence the overall financial health of listed firms.

Global and regional studies increasingly highlight the relationship between financial planning and analysis (FP&A) and firm performance. Luo and Tang (2020) found that companies with robust FP&A capabilities significantly outperformed their peers in terms of revenue growth and cost efficiency. Similarly, Misra and Aggarwal (2021) identified a strong positive correlation between the adoption of FP&A tools and financial agility, enabling firms to respond quickly to market volatility. In the United Kingdom, Boakye, Ahinful, and Taurigana (2020) observed a nonlinear but significant relationship between financial planning and analysis and financial performance among listed SMEs. Organizations with effective FP&A frameworks benefit from better capital allocation, proactive risk management, and strategic decision-making, all of which contribute to improved financial outcomes (Arnott, Lizama, & Song, 2021). Despite this strong global evidence, empirical research remains limited

in emerging economies, including Kenya. Locally, Kagunda (2022) found that effective financial planning positively influenced the performance of DT Saccos, but evidence on NSE-listed firms remains scarce.

The reviewed studies underscore that financial planning and analysis plays a vital role in enhancing firm performance internationally. However, Kenya's unique economic conditions characterized by high public debt, inflationary pressures and fluctuating consumer demand call for context-specific insights into the link between FP&A and firm outcomes. The scarcity of localized research creates notable gaps in understanding how financial planning and analysis affect the financial performance of listed firms on the NSE, whose structural, cultural, and strategic frameworks differ from other sectors previously studied. Therefore, this study sought to bridge this knowledge gap by investigating the influence of financial planning and analysis on the financial performance of companies listed on the Nairobi Securities Exchange.

1.3 Objectives of the study

The study general objective and specific objectives were;

1.3.1 General Objective

To determine the effect of financial planning and analysis on financial performance of firms listed at the Nairobi Securities exchange.

1.3.2 Specific Objectives

The study was guided by the following specific objectives.

- i. To examine the effect of environmental initiatives on financial performance of commercial banks in Kenya.
- ii. To determine the effect of social initiatives on financial performance of commercial banks in Kenya.

- iii. To assess the effect of governance initiatives on financial performance of commercial banks in Kenya.

1.4 Research Questions

The study was guided by the following research questions

- i. What is the effect of financial modelling and analytics on financial performance of firms listed at the Nairobi Securities exchange?
- ii. How does budget planning affect financial performance of firms listed at the Nairobi Securities exchange?
- iii. To what extent does forecasting quality affect financial performance of firms listed at the Nairobi Securities exchange?

1.5 Justification of the study

Effective financial planning and analysis enabled firms to make informed strategic decisions related to budgeting, forecasting, and investment planning. Given the dynamic nature of financial markets, NSE-listed firms required robust FP&A frameworks to maintain profitability, liquidity, and shareholder value. This study provided insights into how FP&A contributed to better decision-making and financial sustainability. Regulatory bodies such as the Capital Markets Authority (CMA) and the Nairobi Securities Exchange required firms to uphold high standards of financial transparency and accountability.

The findings of this study guided policymakers in developing policies that encouraged the adoption of advanced FP&A techniques among listed firms. A well-regulated financial planning framework contributed to economic growth by fostering a more stable, transparent, and efficient capital market in Kenya. Both listed and non-listed firms in Kenya operated in a volatile economic environment influenced by inflation, interest rates, exchange rate fluctuations, and global economic trends. This study was essential in identifying how sound

FP&A practices helped firms mitigate financial risks, enhance resilience, and maintain stable financial performance amidst market uncertainties.

1.6 Significance of the study

Numerous beneficiaries who were interested in the subject matter found this study significant.

1.6.1 Government and policy makers

The government and other interested policymakers at the NSE and capital market authorities found the study's conclusions to be very significant. The results of the study helped the government and regulatory agencies, particularly the Central Bank of Kenya (CBK) and the Capital Markets Authority (CMA), develop policies that supported different financial planning techniques.

1.6.2 Management Practice

The government and other interested policymakers at the NSE and capital market authorities found the study's conclusions to be very significant. The results of the study helped the government and regulatory agencies, particularly the Central Bank of Kenya (CBK) and the Capital Markets Authority (CMA), develop policies that supported different financial planning techniques.

Finally, because it added to the body of knowledge on financial planning and financial performance analysis, the study's findings were valuable to scholars and researchers. The findings of this study were used by scholars and researchers to assess financial planning and analysis in various industries and geographical areas, enabling comparative analysis and additional research.

1.7 Scope of the Study

The study's conceptual scope investigated how financial planning and analysis affected the financial performance of companies that were listed on the Nairobi Securities Exchange. In light of the background, the study focused on companies that were listed on the Nairobi Securities Exchange. As stated in Appendix I, the population of interest for this study consisted of all 64 companies that were listed on the NSE as of December 31, 2024 (NSE, 2024). Both primary and secondary sources of data were used in the study's methodology. Over a ten-year period, starting in 2014 and ending in 2024, secondary data on ROA were collected from listed companies' annual financial reports. The study's time frame was from March 2025 to October 2025.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section of the study examined the work of various academics and researchers who have attempted to comprehend the relationship between financial success and financial planning and analysis. A theoretical framework is presented in subsection one, empirical data is reviewed in subsection two, and research requirements are identified and the literature review is summarised in subsection three.

2.2 Theoretical Framework

The section examined the fundamental theories such as Dynamic Capabilities theory, Resource-Based View (RBV), and information asymmetry theory that serve as the framework for researching how financial planning and analysis impact financial performance.

2.2.1 Dynamic Capabilities Theory

The Dynamic Capabilities Theory, founded by Teece, Pisano, and Shuen (1997), defines dynamic capabilities as the firm's ability to integrate, develop, and reconfigure internal and external competencies to adapt to rapidly changing environments. Ambrosini and Bowman (2009) claim that Teece's (1990) work was the first to articulate the idea of dynamic capacities in a clear and concise manner. The author showed that RBV failed to propel, indicating the strategy used by many successful companies to assume product innovation quickly, ensure flexibility, and have appropriate management coordinating and redeploying both internal and external talents. Teece (1990) asserts that strategic management, which is mainly concerned with "adapting, reconfiguring, and incorporating resources of an organisation, both internal and external, in order to match dynamic market conditions," must be taken into account due to the ever-changing environment. According to Teece and Pisano (1994), a company's ability to

successfully adapt, integrate, and reorganise its resources and skills in response to a changing environment determines its level of success. Therefore, the ability of the company to develop, integrate, and reorganise its internal and external skills in order to deal with a fast-changing environment is referred to as dynamic capabilities (Teece, Pisano, & Shuen, 1997).

The hypothesis has been criticised for a number of reasons, including the ambiguity of the word "dynamic capability." According to Ambrosini and Bowman (2009), the notion of dynamic capabilities, the operational procedures that underlie it, and the connection between dynamic capabilities and firm performance have all been critiqued for being hard to quantify empirically. It is also challenging to quantify routines and procedures that are often exclusive to businesses or parts of resource bundles. There is no defined paradigm for measuring capabilities and how they affect the success of the company (Hedayati, Khalilzadeh & Bahari, 2021). Additionally, this theory is attacked for being unduly repetitive and for not adequately addressing dynamic capacities and their operation.

Teece, Pisano, and Shuen (1997) assert that the Dynamic Capabilities Theory (DCT) offers a meaningful framework with which to analyze the impact of financial planning and analysis (FP&A), on NSE-listed firms' financial performance. The theory highlights the firm's capability to integrate, build, and transfer internal and external competences to satisfy rapidly changing environments. In NSE-listed firms, FP&A can be recognized as a dynamic capability to forecast changes in the market, allocate resources, and manage risks. In addition, firms build adaptive capacity by progressively improving forecasting, budgeting, and financial modelling. This is corroborated by Augier and Teece (2009) who argue that better performance requires firms to leverage existing competences to sense changes in their environment, seize opportunities, and reconfigure in reaction to environmental change, rather than just being able to access resources for use. Accordingly, FP&A practices enact dynamic capabilities by

resulting in actionable intelligence that can be used for strategic agility and long-term competitive positioning.

2.2.2 Resource Based Theory

The Resource-Based View (RBV) was first founded by Penrose (1959) and later expanded by Chandler (1962), Wernerfelt (1984), and Barney (1991). The theory draws significantly from the writings of Penrose (1959) and Chandler (1962), who emphasized the firm as a collection of productive resources. According to RBV, an organization's performance is shaped by the unique qualities of its resources. Wernerfelt (1984) further advanced the theory by arguing that organizational performance is directly linked to the firm's resource endowment, and variations in these endowments explain differences in performance across firms. Building on this, Barney (1991, 1995) highlighted those organizational resources can create sustained competitive advantage when they are valuable, rare, inimitable, and non-substitutable (VRIN). These attributes uniqueness, durability, and non-substitutability—form the foundation of RBV in explaining how firms achieve long-term success and superior performance.

According to Thompson and Morgenstern (2009), the Resource-Based View (RBV) lacks guidelines for identifying and measuring resources and capabilities, making it challenging to use consistently in a variety of contexts. The idea has come under fire for failing to sufficiently account for differences in performance between companies with similar resources and competencies (Lockett & Thompson, 2001). However, the RBV disagrees that the environment and the organisations' reliance on necessary resources directly affect how the organisations behave behind the managers' backs (Priem & Butler, 2001). Peng (2001) asserts that RBV makes the assumption that different enterprises have different resources and skills. No two businesses have the same resources or skills. According to Madhani (2010), RBV makes the assumption that a company's main objective is to generate value for its stakeholders.

This theory is especially relevant for financial planning and analysis (FP&A) because it emphasizes the purposeful allocation of financial resources to areas that contribute to long term competitive advantage. The focus on investing in initiatives that have higher rates of return and that serve growth sustainably assures effective use of organizational resources (Peteraf, 1993). For firms listed on the Nairobi Securities Exchange (NSE), FP&A competencies offer unique data driven insights to firms to enable accurate forecasting while minimizing risk, increasing cash flows, and anticipating market volatility. The analytical competencies of FP&A serve as valuable intangible assets that differentiate high performing firms from their competitors (Teece, Pisano, & Shuen, 1997). As a result, RBT supports that FP&A contributes to firm performance through the transformation of financial data into strategic knowledge to better inform decision making and value generation.

2.2.3 Information Asymmetry Theory

The Information Asymmetry Theory, pioneered by Akerlof (1970) and later advanced by Spence (1973) and Stiglitz (2002), posits that in many economic and financial transactions, one party often has more or better information than the other, leading to imbalances that distort decision-making and market outcomes. Akerlof's seminal work on the "market for lemons" demonstrated how sellers typically possess more knowledge about product quality than buyers, resulting in adverse selection where low-quality goods dominate the market. Building on this, Spence (1973) introduced the concept of signalling, where informed parties attempt to convey credibility through mechanisms such as education or financial disclosures, while Stiglitz (2002) emphasized screening as a strategy by the less-informed party to mitigate risks by eliciting information from the more-informed counterpart. In financial contexts, information asymmetry manifests when managers possess superior internal knowledge about firm performance compared to external investors, potentially leading to moral hazard and inefficiencies in capital allocation (Healy & Palepu, 2001).

Information Asymmetry Theory is built on the assumption that in most markets, one party often the seller or insider possesses superior information compared to the buyer or outsider, which can result in adverse selection and moral hazard (Akerlof, 1970; Spence, 1973). It assumes that economic actors are rational but act opportunistically to maximize their utility, exploiting information gaps to their advantage (Stiglitz, 2002). Another underlying assumption is that markets cannot self-correct fully without mechanisms such as signaling, screening, or regulation, since uninformed parties lack sufficient tools to evaluate the true quality of goods, services, or financial disclosures (Healy & Palepu, 2001). Despite its influence, the theory has faced several criticisms. Critics argue that it oversimplifies human behavior by assuming purely rational actors, ignoring bounded rationality and trust in economic transactions (Connelly, Certo, Ireland, & Reutzel, 2011). Others point out that advancements in technology, corporate governance, and regulatory frameworks have reduced information gaps in many markets, limiting the universal applicability of the theory (Leland & Pyle, 1977). Additionally, by focusing predominantly on inefficiencies, the theory underplays situations where information asymmetry can drive innovation and competitive advantage through proprietary knowledge.

The Information Asymmetry Theory offers a significant understanding when examining the impact of financial planning and analysis (FP&A) on firms listed on the Nairobi Securities Exchange (NSE). As noted by Akerlof (1970), information asymmetry occurs when one party to a transaction has greater or better information than another party to the transaction, often resulting in the phenomena of adverse selection or inefficiencies. In this case of NSE-listed firms, the managers have an information asymmetry in that they will have superior internal information about the firm's financial performance, the risks the firm may engage in, and the company's growth trajectories compared to external investors and stakeholders. In the absence of strong FP&A, this asymmetry can exacerbate agency costs and reduced investor faith in the market valuation for the firm (Healy & Palepu, 2001). Nonetheless, effective FP&A

mitigates the effect of information asymmetry by providing accurate forecasts, clear, transparent financial reports, and timely analysis of the firm's performance to the market as credible signals (Spence, 1973). FP&A also enhances disclosures and reduces uncertainty for investors enabling them to make informed decisions regarding the firm's economic future, increasing accountability and resulting in better financial outcomes. As such, applying the Information Asymmetry Theory indicates that robust FP&A systems lessen information asymmetries, align management with investor expectations, and lead to financially sustainable outcomes for firms listed on the NSE (Stiglitz, 2002).

2.3 Empirical Review

This section provided a summary of previous studies by numerous researchers who examined the relationship between the elements under investigation and financial performance. This study also attempts to close the information gap in the available literature.

2.3.1 Financial Modelling, Analytics and Financial Performance

Benninga (2022) defines financial modelling as the process of constructing an abstract mathematical representation (a model) of a real-world financial situation to support decision-making. Oghenekome, Theodore and Edith (2024) examined advanced financial modelling techniques and their impact on strategic business planning and performance. The study adopts a review-based qualitative research design, relying on secondary data from scholarly articles, books, and reports on financial modelling and business strategy. Advanced financial modelling significantly enhances strategic business planning and performance by improving risk assessment, scenario analysis, and decision-making quality. Techniques like Monte Carlo simulation and real options analysis provide firms with deeper insights into uncertainties and investment choices. Integration of AI and big data strengthens forecasting accuracy and supports data-driven strategic planning. The study focused on the overall performance while

the current study will focus on financial performance and it will be based on primary and secondary data.

Almeida-Filho, Lima Silva and Ferreira (2021) examined financial modelling with multiple criteria decision making: The authors adopt a Systematic Literature Review (SLR) approach to examine the role of Multi-Criteria Decision Making/Aiding (MCDM/A) in financial decision-making. It was found out that the study highlights a shift in research focus after the sub-prime crisis, with increasing attention to risk management, sustainability, and financial stability. By categorizing the literature, the study contributes to identifying research gaps and future directions, such as expanding the integration of MCDM/A with advanced analytics, AI, and ESG considerations. The study was based on decision making as dependent variable while the current study will be based on financial performance.

Urefe, Odonkor, and Agu (2023) adopted a review-based qualitative research approach, systematically examining the evolution and application of advanced financial modelling techniques in contemporary business environments. Their study placed particular emphasis on sophisticated tools such as Monte Carlo simulations, real options analysis, and machine learning-based models, which have gained prominence in corporate financial planning and strategic decision-making. Their findings reveal that the adoption of such models contributes significantly to enhanced risk management, more robust scenario analysis, and improved strategic investment planning, ultimately supporting stronger financial performance and organizational competitiveness. Nonetheless, the study highlights several challenges that hinder the full realization of these benefits. The study was based on qualitative research approach while the current study will be based on primary and secondary data.

Using a descriptive research approach and primary and secondary data, Ashraf, Yazid, and Remli (2021) examined how financial modelling and analytics affected the performance of Islamic banks in Pakistan. The factors under investigation were operating financial

modelling and analytics. A census was conducted using 22 Islamic banks as the target population. An examination of correlation and multiple regression was employed. It was determined that improved financial modelling and analytics led to improved financial performance in Pakistan's Islamic institutions. The current study focuses on how financial modelling and analytics affect the financial performance of companies listed on the Nairobi Security Exchange, while the previous study was limited to Islamic banks and financial modelling and analytics and was carried out in a global setting.

Atsakpo (2019) investigated the effect of financial modelling and analytics on the financial performance of insurance companies in Ghana using a survey study design. Firms emphasizing DDD show 5–6% higher output/productivity than expected given other inputs, and the DDD effect also appears in asset utilization, ROE, and market value. Investing in analytics-driven management practices is associated with material improvements in financial and market performance, not just efficiency, even after addressing endogeneity concerns. The study focusses on how financial modelling and analytics affect the financial performance of the Nairobi Security Exchange, while the previous study was conducted in a global environment and concentrated on insurance corporations. Both primary and secondary data will be used in this investigation.

Akter, Wamba, Gunasekaran, Dubey, and Childe (2016) conducted an empirical study to examine the impact of big data analytics capability (BDAC), representing advanced financial modelling and analytics, on firm performance, using a survey of 205 respondents from large manufacturing and service organizations. The study employed Partial Least Squares Structural Equation Modelling (PLS-SEM) to test the hypothesized relationships between BDAC, business strategy alignment, and performance outcomes. The findings revealed that BDAC had a direct positive effect on financial performance indicators such as profitability, cost efficiency, and return on investment, and this effect was amplified when analytics practices were aligned

with business strategy. The authors emphasized that BDAC derives value not merely from technology but from its integration with human expertise and organizational processes, highlighting that firms leveraging analytics as a strategic resource achieved superior financial outcomes. However, there remains a gap because the current study looks at how financial modelling and analytics affect the financial performance of firms listed in the NSE, while the prior study was limited to liquidity management and concentrated on firms in general. Multiple regression analysis will serve as the foundation for our investigation.

2.3.2 Budget Planning and Financial Performance

According to Horngren, Datar, & Rajan (2023), budget planning is the process of formulating detailed financial plans that quantify management's expectations regarding revenues, expenses, cash flows, and resource allocations for a specific period, usually aligned with organizational objectives. Mulani, Chi, and Yong (2019) investigated how the budget planning affected Indian SMEs' performance. The study was exploratory in nature. Budget planning, budgetary control, budget participation, and budget review were the factors under investigation. 268 SME businesses from three districts in Mumbai, Pune, and Solapur made up the study's sample. A questionnaire was also used in the investigation. The study found that the budgeting procedure has a beneficial impact on the company's success. While the previous study solely used primary data, the current study uses both secondary and primary data. Lastly, this study will look at the financial performance of companies listed on the Nairobi Security Exchange, whereas the previous one focused on the performance of SMEs in India.

Melek (2021) conducted research on how organisational commitment affects management performance in relation to budget participation. Budget planning, budget participation, and budget review were the study's variables. In order to better understand how organisational commitment and budget participation impact managerial success, the researcher studied the top 500 companies in Turkey. The study's findings made several advances to the

literature on management accounting. The results of the study demonstrated that a strong relationship between organisational commitment and budget involvement creates the right environment for excellent managerial performance. The findings did show, however, that while raising subordinates' sense of organisational commitment in businesses can boost their performance, lowering their sense of organisational commitment can have the opposite effect. Although both primary and secondary data will be used in this study, secondary data was used in the prior examination. Financial performance is the main subject of the current investigation.

Ogiedu and Odia (2019) investigated the relationship between managerial performance, organisational commitment, and involvement in the budget planning. Budgetary control, budget participation, and budget review were the study's variables. Nigerian manufacturing industry were the subject of the study. Supervisors in these sectors were the study's target audience. To gather information, questionnaires were employed. Ordinary least squares were used to analyse the data that was gathered. It was discovered that organisational commitment, budget planning and budget procedural fairness all affect managerial effectiveness. According to the study, organisations should permit managers to fully engage in budgeting procedures in order to improve management effectiveness. Budgeting as a whole was not the study's main focus. The study was conducted in Nigeria. Although both primary and secondary data will be used in the current study, secondary data was used in this examination. Budget planning, budgetary control, budget participation, and budget review were the factors under investigation.

Pimpong and Laryea (2021) evaluated the impact of budgeting on financial performance. The survey was conducted among financial institutions in Ghana. Budgetary control and budget participation were the study's factors. The research strategy used for the study was quantitative. Using questionnaires, primary data was gathered. Models were created using a step-by-step process. Regression analysis revealed that budget coordination had a major

impact on a company's financial results. The study focused on financial performance and budgeting rather than managerial performance. The study was conducted in Ghana. Although both primary and secondary data will be used in this study, secondary data was used in this examination and current study will examine risk management, budgeting and financial reporting as comprehensive dimensions of Financial Planning and Analysis.

Isaboke and Kwasira (2019) examined the impact of budgeting and planning on Kenyan counties' financial performance. The county of Nakuru served as the case study. Budget situation, capital operations, and collection and payment were the variables under investigation. The design of the survey was descriptive. Eighty employees made up the study's sample size. To gather information, structured questionnaires were employed. Both descriptive and inferential statistics were used to analyse the data that was gathered. According to the results, financial outcomes were highly impacted by financial capacity. Although primary data was used in the study, both primary and secondary data will be used in this one.

The goal of Kimunguyi, Memba, and Njeru's (2021) study was to determine the impact of budgeting on financial performance. NGOs in Kenya were included in the study. Budgetary control, budget participation, and budget review were the study's variables. The priority-based budgeting theory served as the foundation for the investigation. Regression was used in the analysis. The results showed a relationship between Kenyan NGOs' financial performance and their budgetary process. In contrast, the current study focusses on how budgeting procedures affect the Nairobi Security Exchange's financial performance. Both primary and secondary data will be used in this investigation.

Kamau, Rotich, and Anyango (2019) examined the impact of the budgeting process on performance. Kenyan state corporations were the subject of the investigation. Kenyatta National Hospital was specifically chosen as a case study. A total of 450 KNH employees made up the study's target population. Budget situation, capital operations, and collection and

payment were the variables under investigation. Seventy-two respondents were selected from the total population using an algorithm. Semi-structured questionnaires were used. The results of the analysis indicated that state firms' performance was greatly impacted by budgetary reviews. However, a contextual gap exists. While their study focused broadly on organizational performance, the current study seeks to investigate the specific effect of budgeting planning on financial performance, while the prior study concentrated on how they affect performance. Both primary and secondary data will be used in this investigation.

2.3.3 Forecasting Quality and Financial Performance

Forecasting quality as the degree of accuracy and reliability with which a forecast predicts actual future outcomes, relative to alternative methods or random chance (Makridakis & Hibon 2020). Monica, Theodore, Nemit and Hal (2014) reviewed Forecast Quality and Capital Investment Decisions. The study uses an empirical quantitative research design, analyzing archival data from firms' externally reported earnings forecasts. There is a positive relationship between the quality of managers' external earnings forecasts and the quality of their investment decisions. Managers with high-quality forecasts tend to make more efficient acquisition and capital expenditure decisions, aligning with shareholder value. The results support the argument that forecasting skill in external reporting translates into better internal capital budgeting forecasts. The study highlights that forecast quality serves as a signal for external stakeholders to infer the reliability of managerial investment decisions. The study focused on the capital investment decisions while the current study will focus on financial performance and it will be based on primary and secondary data.

Helmut and Spindler (2021) examined machine learning for financial forecasting, planning and analysis: recent developments and pitfalls. The study adopts a review-based and simulation-driven methodology. It begins with a survey of current literature on the application of machine learning (ML) to financial forecasting, planning, and analysis (FP&A). Machine

learning is well-suited for forecasting because of its ability to process and extract insights from large datasets with high predictive accuracy. Traditional ML techniques, however, face limitations in planning and resource allocation, as they often fail to establish causality, leading to potentially flawed business decisions. The double machine learning framework offers a promising solution by improving causal inference, making ML more reliable for planning and investment-related decision-making. The current study will be based on secondary and primary data while the previous study was based on review-based and simulation-driven methodology.

Jordan and Messner (2019) examined the Use of Forecast Accuracy Indicators to Improve Planning Quality: Insights from a Case Study. The study employs a qualitative case study methodology, focusing on a manufacturing firm that adopted forecast accuracy indicators as a results control mechanism to improve planning quality. Data was collected through semi-structured interviews, observations of meetings, and analysis of company documents. The study emphasizes that the effectiveness of performance measures depends on organizational context and the ability of firms to address trade-offs between accountability, fairness, and learning. The study focused on manufacturing firms while the current study will focus on listed Firms in NSE. The study employed a qualitative case study methodology while the current study will employ both secondary and primary data.

Mutua and Odari (2022) examined effect of demand forecasting practices and performance of small and medium-sized enterprises in Kajiado County, Kenya. Descriptive survey of 180 SMEs in Kitenge (Kajiado County), with a sample size of 54 respondents. Collected data via structured questionnaires and used regression analysis (SPSS) to assess the impact of qualitative and quantitative demand forecasting practices on firm performance. Demand forecasting practices had a significant positive effect on SME performance. The study focuses on overall firm performance while the current study will focus on financial performance of firms listed in the NSE.

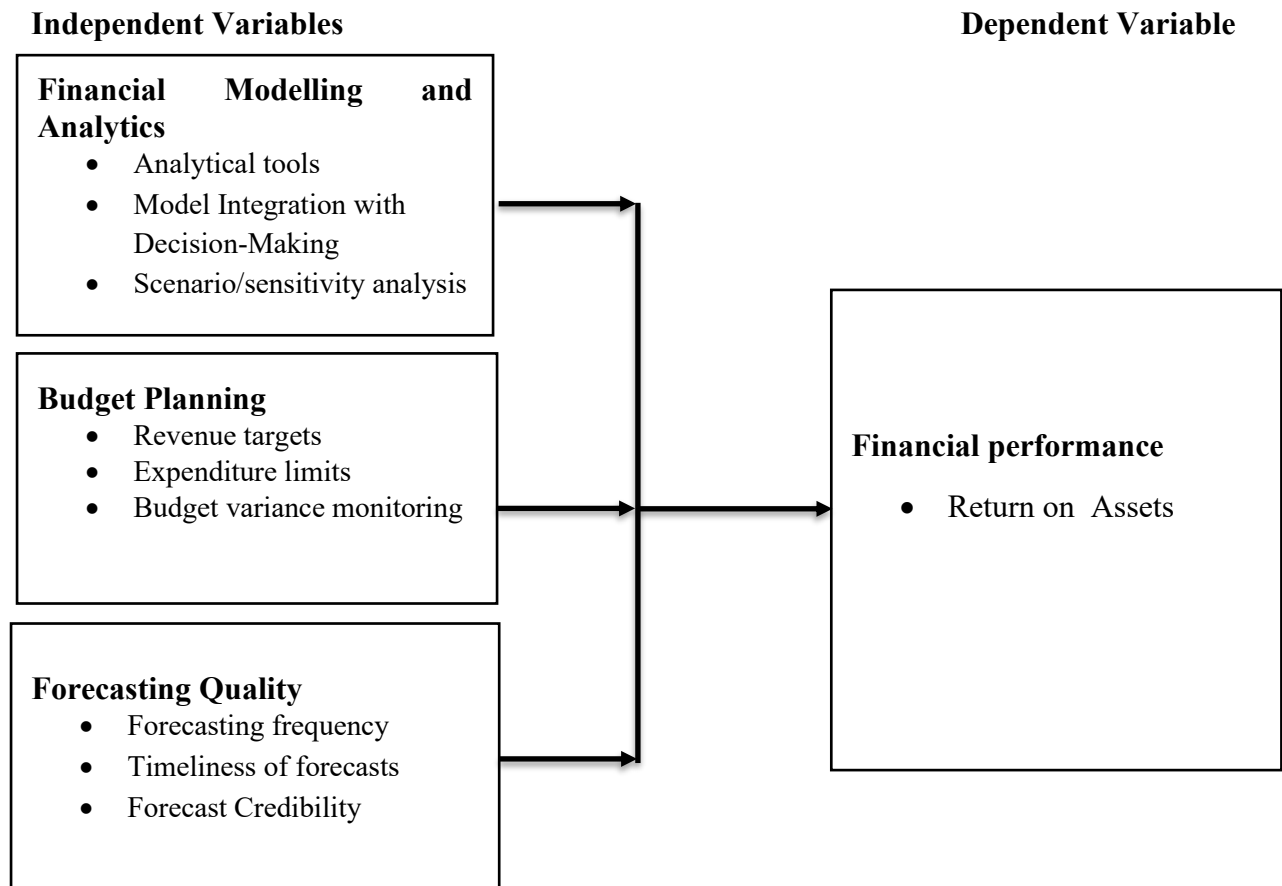
Muinde (2013) aimed to ascertain the relationship between Kenyan SMEs' performance and forecasting quality procedures. Financial statement recording, feedback mechanisms, audited accounts, and managerial accounts were the study's variables. A descriptive cross-sectional design was used. Questionnaires were distributed in order to gather data. The main conclusion was that financial management and reporting have a big impact on how well a company may do financially. The effect of forecasting quality on the Nairobi Security Exchange's financial performance is the main topic of the current study and will also include the impact of tech-driven financial reporting systems. Both primary and secondary data will be used in this investigation.

2.4 Conceptual Framework

Using a conceptual framework is one technique to illustrate the relationships between the variables being studied. Here, financial performance serves as the dependent variable, and financial planning and analysis practices are regarded as independent factors.

FIGURE 1

Conceptual Framework



Source: (Author, 2025)

2.5 Operationalization and Measurement of Research Variables

As indicated in Table 1, this part contains the operationalisation of the variables and the methods for measuring them.

TABLE 1**Operationalization of Variables**

Variable	Indicators	Operational Definition	Measurement Scale
Financial Modelling and Analytics	Analytical tools Model Integration with Decision-Making Scenario/sensitivity analysis	Financial modelling as the process of constructing an abstract mathematical representation of a real-world financial situation to support decision-making.	Likert/ Interval
Budget Planning	Revenue targets Expenditure limits Budget variance monitoring	Budget planning as the process of formulating detailed financial plans that quantify management's expectations regarding revenues, expenses, cash flows, and resource allocations for a specific period, usually aligned with organizational objectives.	Likert/ Interval
Forecasting Quality	Forecasting frequency Timeliness of forecasts Forecast Credibility	Forecasting quality as the degree of accuracy and reliability with which a forecast predicts actual future outcomes, relative to alternative methods or random chance	Likert/ Interval
Financial performance	Return on Assets	This is the measure of output in financial terms; $ROA = \frac{EBT}{\text{Average Total Assets}}$	Ratio

2.6 Summary of Reviewed Literature

This chapter examines the body of research on financial analysis and planning, their effects on financial success, and the conceptual factors that influence these interactions. The implications of financial planning and analysis on financial performance across a range of corporate organisations and sectors have been the subject of several theoretical and empirical research. Additionally, it introduced a number of theories on dynamic capabilities theory, resource-based view (RBV) and information asymmetry theory. A conceptual framework was created, with financial performance as the dependent variable and financial modelling and analytics, budget planning and forecasting quality as the independent factors. It has also been shown that research has been done in a number of industries about the connection between financial success and financial planning and analysis. A knowledge gap that has to be filled is revealed by the examined studies. Numerous findings on the connection between financial performance and financial planning and analysis have been drawn from the research.

2.7 Research Gaps

Table 2.2 offered an overview of the pertinent research on the relationship between financial performance and financial planning and analysis and knowledge gaps

TABLE 2

Summary of Empirical Review and Research Gaps

Author	Focus of the Study	Methodology Used	Findings	Knowledge Gap	Focus of Current Study
Oghenekome, Theodore, & Edith (2024)	Examined advanced financial modeling techniques and their impact on strategic business planning and performance	Review-based qualitative research design using secondary data from scholarly articles, books, and reports	Advanced financial modeling enhances strategic planning by improving risk assessment, scenario analysis, and decision- making	Study focused on overall performance rather than financial performance	The current study focused on financial performance and use both primary and secondary data

Almeida-Filho, Lima Silva, & Ferreira (2021)	Examined financial modeling with multiple criteria decision making (MCDM/A) in financial decision- making	Systematic Literature Review (SLR)	Found a shift in research after the sub-prime crisis toward risk management, sustainability, and financial stability; categorized literature to reveal gaps such as integrating MCDM/A with advanced analytics, AI, and ESG	Study focused on decision- making as the dependent variable rather than financial performance	The current study focused on financial performance as the dependent variable
--	---	---------------------------------------	---	--	--

Atsakpo (2019)	Effect of financial modelling and analytics on financial performance of insurance companies in Ghana	Survey study design	Data-driven decision-making (DDD) increases productivity by 5–6%, improves ROE, asset utilization, and market value	Focused on insurance corporations in Ghana, not listed firms	Examined how financial modelling and analytics affect financial performance of firms listed on NSE, using both primary & secondary data
Mulani, Chi, & Yong (2019)	Budget planning and performance of Indian SMEs	Exploratory, questionnaire survey (268 SMEs)	Budgeting positively impacts performance	Focused on SMEs in India and used only primary data	Analyzed budgetary planning on financial performance of NSE-listed firms, using both primary & secondary data

Melek (2021)	Organisational commitment, budget participation, and managerial performance (Top 500 Turkish firms)	Quantitative, secondary data	Strong link between organizational commitment and budget involvement enhances managerial performance	Focused on managerial, not financial performance	Focused on financial performance of NSE firms, using primary & secondary data
Ogiedu & Odia (2019)	Managerial performance, organisational commitment, and budgeting in Nigerian manufacturing	Questionnaire + OLS regression	Organisational commitment, budget planning, and procedural fairness improve managerial effectiveness	Focused on managerial effectiveness, not financial performance	Examined budgeting planning and financial performance of NSE firms using both data sources

Monica, Theodore, Nemit, & Hal (2014)	Forecast quality & capital investment decisions	Empirical quantitative, archival data	High-quality forecasts improve acquisitions & capex decisions; signal reliability to stakeholders	Focused on capital investment decisions, not financial performance	Focused on financial performance of NSE firms using both data types
Helmut & Spindler (2021)	Machine learning in forecasting, planning, and analysis	Review + simulation	ML achieves predictive accuracy but struggles with causality; double ML framework improves reliability	Focused on simulation & secondary data only	To use primary & secondary data to analyzed ML in financial performance
Jordan & Messner (2019)	Use of forecast accuracy indicators in planning o manufacturing firms	Case study	Forecast accuracy indicators improve planning but must be contextualized	Focused on manufacturing firms, qualitative only	Focused on listed NSE firms with primary & secondary data

Source (Author, 2025)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The population, sampling plan, research design, data collection instruments, procedures, and analysis, as well as the operationalisation and measurement of research variables, were all covered in this chapter's methodology section.

3.2 Research Design

Research design referred to the overall strategy and framework that guided the study in addressing its research problem, ensuring that data collection, measurement, and analysis were systematically aligned to achieve valid results (Creswell & Creswell, 2018). The study employed a descriptive research design. According to Dannels (2018), descriptive studies described the traits of a person or group in depth. This design was preferred because it minimised bias in data collection and analysis while offering a thorough description and study of events (Abutabenjeh & Jaradat, 2017). To explain current conditions, find benchmarks for comparison, or ascertain the connections between particular events, a survey study design gathered data at a particular moment in time (Avella, 2016). Because a survey technique made it possible to gather quantitative data that could be examined using both descriptive and inferential statistics, the design was considered appropriate (Burkholder & Crawford, 2016).

3.3 Target Population

The total set of elements or entities from which a research study intends to derive a representative sample is referred to as the target population (Dahabreh & Hernán, 2019). In other words, the researcher is interested in making a general conclusion about an entire population based on a study of a smaller, representative sample. For the purposes of this study, the target population was all 64 companies listed on the Nairobi Securities Exchange (NSE) as of December 31, 2024 (NSE, 2024). These firms operate in sectors such as banking, manufacturing, insurance, telecommunications and energy.

The unit of analysis for this study was the firm listed on the NSE. Each individual firm was treated as a separate unit of analysis because the study was concerned with examining the firm-level financial planning and analysis (FP&A) practices effecting financial performance. Thus, data was collected at the organizational level, examining FP&A practices at the firm level, such as forecasting, budgeting, and financial modelling, as well as firm-level performance.

Respondents in the study were finance managers in these companies, because they have specific knowledge of their companies financial arrangements, analysis and decision-making processes. The study considered 2014–2024 as a ten-year study window that reflected many economic and structural changes in the Kenyan capital market, including mergers, acquisitions, delistings, and the collapse of several major listed companies. The ten-year period study window was considered to ensure the analysis of FP&A practices reflected a dynamic shift of FP&A practices and their long-term effect on firm performance.

3.4 Sampling and Sampling Procedure

A sample was a subset of the entire population chosen at random to serve as a proxy for the population being studied. The term "sample" referred to a representative subset of a population that was specifically selected for observation and research. For this study, a census was used because the population under investigation was manageable and relatively small. Every single unit in the population was required to participate in the study when using the census approach. Thus, the sample for this study comprised all 64 companies listed on the NSE (NSE, 2024).

3.5 Data Collection Instruments

To collect data in a thorough and reliable manner, both primary and secondary data were used. Primary data were gathered using a structured questionnaire specifically designed to gather detailed information about financial planning and analysis (FP&A) processes of firms listed on the Nairobi Securities Exchange (NSE). The questionnaire had three sections: section A collected demographic information, including firm size and ownership structure as well as number of years in existence and section B included Likert-scale items on the key study variables (budgeting, forecasting accuracy, performance monitoring, and the financial decision-making process in FP&A), while section C included open-ended questions that asked participants to explain the strategic challenges they faced as well as best practices in FP&A. This comprehensive approach to instrumentation ensured that both quantitative and qualitative aspects of financial planning and analysis were evident.

To improve validity, the questionnaire was developed based on existing constructs derived from previous empirical studies and was subsequently validated by financial management experts and academic supervisors. A pilot study was also

conducted with selected finance managers from NSE-listed firms to identify any areas of concern and improve question clarity. The reliability of the instrument was also assessed using Cronbach's alpha coefficient in order to provide evidence of internal consistency of the items in the scale.

Secondary data were retrieved from the audited annual financial statements of the NSE-listed companies for the ten-year period of 2014 -2024 and included measures of performance such as profitability, return on equity (ROE), and return on assets (ROA). The use of both primary and secondary data assisted in the triangulation of the results, improving the overall strength of the study findings.

3.6 Data Collection Procedures

The study adopted a mixed-methods approach, integrating both cross-sectional and panel data procedures to provide a comprehensive analysis. The cross-sectional component captured insights from finance managers at a single point in time through structured questionnaires, thereby examining organizational practices and perceptions related to financial planning and analysis (FP&A). The panel data component, on the other hand, was constructed using secondary financial data covering a ten-year period (2014–2024) for all NSE-listed firms. This dual approach allowed the study to combine perception-based evidence from managers with objective financial outcomes, thus strengthening validity and providing triangulation of findings. The integration occurred at the analysis stage, where qualitative insights from the cross-sectional survey were used to interpret and explain the quantitative relationships derived from the panel data regressions.

The choice of a ten-year period (2014–2024) was justified because it captured sufficient variation across macroeconomic cycles, including periods of economic growth, slowdown, and shocks such as the COVID-19 pandemic. A decade-long horizon also ensured robust trend analysis while minimizing short-term distortions that might have arisen in shorter windows. From the financial statements of listed companies, the study extracted secondary data specifically on return on assets (ROA), which were the key predictors, while financial performance served as the regressor variable. These financial indicators were consistently reported across firms, reliable for longitudinal analysis, and directly linked to the study's objectives.

Since the application of FP&A practices might have differed by sector, the study employed stratification to account for heterogeneity among firms listed on the NSE. Stratification ensured that companies were grouped by sector (e.g., manufacturing, financial services, agriculture, energy, and telecommunications) to allow for meaningful comparisons and to control for sector-specific dynamics. According to Saunders, Lewis, and Thornhill (2019), data collection entailed systematically seeking and compiling relevant information in an orderly manner to answer key research questions. Therefore, stratification not only enhanced representativeness but also improved the explanatory power of the findings by acknowledging sectoral variations in financial planning practices and outcomes.

Both primary and secondary data sources were utilized. The primary data were gathered through a structured questionnaire administered to finance managers of all 64 listed companies in a drop-and-pick format. Finance managers were appropriate respondents since they played critical roles in budgeting, accounting, financial planning, and decision-making that directly affected corporate performance. Secondary data were systematically collected using a pre-designed Excel template,

with financial observations for each firm entered annually across the 10-year period. This integration of manager-level insights with firm-level financial data generated a comprehensive dataset for descriptive, inferential, and panel data analyses.

3.7 Pilot Test

Before commencing the main study, a pilot study was conducted as a preliminary investigative exercise to test the reliability and validity of the research instrument. According to Cooper and Schindler (2011), a pilot study served as an exploratory phase that helped identify and address potential flaws in the questionnaire. Kombo and Tromp (2009) recommended using approximately 10–15% of the actual sample size for piloting purposes. In this study, the pilot involved ten (10) participants drawn from Unga Group Ltd, including finance managers, assistant finance managers, and accountants. Although Unga Group Ltd was listed on the Nairobi Securities Exchange (NSE), it was excluded from the final study sample. The firm was selected for piloting due to its operational characteristics and departmental structure, which closely mirrored those of the companies targeted for the main study. This functional similarity ensured that the feedback received was both relevant and useful in refining the clarity, consistency, and applicability of the research tool prior to full deployment.

3.7.1 Validity of the Research Instrument

To ensure that the research instruments measured what they were supposed to measure, the study's validity evaluated their consistency (Creswell & Creswell, 2017). The study aimed to demonstrate both external and content validity. While external validity was determined by comparing the conceptual model with the study's findings, content validity was enhanced by obtaining feedback from supervisors on the study proposals and incorporating their opinions into the document throughout the research process.

3.7.2 Reliability of Research Instruments

According to Bryman (2016), reliability was the extent to which a measurement produced accurate, consistent results that could be replicated by the same observer or by various observers at different periods. Using a realistic rating scale, this study ensured impartiality in the outcome scoring (Kline, 2015). To confirm the reliability of each variable, Cronbach's Alpha evaluated internal consistency, inter-rater reliability, and parallel reliability. According to Tavakol and Dennick (2011), variables were only considered for further analysis if their Cronbach Alpha Coefficient was 0.7 or above.

3.8 Data Processing and Analysis

The methods for processing and analysing the data were described in this section. In order to prepare the acquired data for analysis, the processing stage entailed editing, coding, classifying, and tabulating it. Data analysis was aided by entering the coded data into SPSS. Both descriptive and inferential statistics were used to analyse the data. Descriptive statistics included frequency and percentage distribution tables, as well as measurements of central tendency (such as the mean) and variability (such as the standard deviation). In inferential statistics, multiple linear regression analysis was conducted to establish the relationship between variables in the study. A firm-level unique identifier was used to merge the cross-sectional dataset with the panel dataset. This ensured that each firm's perception-based inputs were matched with its historical financial performance. The resulting merged panel dataset contained multiple time periods (years) of financial data for each firm, combined with a single time-point observation of managerial practices. The overall structure for financial planning and analysis in relation to financial performance was shown by the equation below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where;

Y = Financial Performance

α - Is the regression constant or intercept,

β_1 , β_2 and β_3 - Are regression coefficients or change induced in Y by each X1, X2 and X3 that are predictor variables,

X₁ = Financial Modelling and Analytics

X₂ = Budget Planning

X₃ = Forecasting Quality

ϵ (Extraneous) - Error term that accounts for the variability in Y which cannot be expounded by the linear impact of the predictor variables.

3.8.1 Diagnostic Tests

To determine whether the various assumptions of linear regression were being met, a variety of diagnostic techniques were used. The tests for heteroscedasticity, multicollinearity, and normality were included in these analyses.

3.8.1.1 Normality and Linearity

The normality test required that the residuals on the anticipated dependent variable scores be distributed evenly. To be deemed linear, the residuals had to have a linear connection with the projected dependent variable scores, signifying the absence of major deviations from normalcy (Chen, 2016). The normality test in this study was conducted using the Shapiro-Wilk test.

3.8.1.2 Multicollinearity

The link between the independent variables was referred to as multicollinearity. A high correlation ($r = 0.9$ and above) between the independent variables was known as

multicollinearity, which greatly affected many regressions. Two variables having a bivariate correlation of, say, 0.7 or higher were not used in the same analysis without careful consideration (Gujarati & Porter, 2020). The Variance Inflation Factor (VIF) was used to test for multicollinearity. In general, multicollinearity was not considered an issue if the VIF values were less than 10.

3.8.1.3 Heteroscedasticity

Heteroscedasticity occurred when the variable that reflected the error did not exhibit a consistent degree of fluctuation. The residual scatter plots' breadth increased as the predictor variable's value rose, reflecting the error term's fluctuation (Wooldridge, 2020). The assumption of the error term remaining the same was violated if the width of the P-P plots of the residuals increased or decreased with the size of the predictor variable.

3.9 Ethical Consideration

Following approval and authorization from NACOSTI and KCA University to administer the survey, the researcher sent a formal letter to the respondents explaining the study's objectives. The letter provided a comprehensive overview of the research goals and emphasized that participation was entirely voluntary. To facilitate data collection, the researcher recruited and trained qualified research assistants who adhered to strict ethical guidelines throughout the study. Prior to participation, respondents were taken through an informed consent process where they were made aware of their rights, including the right to decline participation, refuse to answer specific questions, or withdraw at any point without penalty. Written consent was obtained from all participants.

To ensure data security and confidentiality, all information collected was handled with utmost care and stored in password-protected digital formats accessible only to the research team. Physical documents, if any, were locked in secure cabinets. Personal identifiers were removed during data coding to ensure anonymity. Ethical principles such as respect, confidentiality, and beneficence guided the entire research process.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter provides a detailed analysis of the data collected in relation to the research objectives outlined in Chapter One. It begins with an overview of the response rate, highlighting the level of participation from the targeted respondents. The discussion then moves to the reliability test, followed by the background information of respondents, which offers valuable context on their demographics, experiences, and perspectives. Next, diagnostic tests are presented to evaluate the assumptions underlying the statistical techniques applied in the study. Finally, the findings on the study variables are presented through both descriptive statistics (mean and standard deviation) and inferential statistics (correlation, ANOVA, and regression analysis), capturing the core outcomes of the research.

4.2 Response Rate

The study targeted 64 finance managers as study respondents employed in various companies that were listed on the NSE as of the 31st of December in 2024. Of the questionnaires distributed, 60 were duly completed and returned, yielding a commendable response rate of 93.4%. This rate is not only adequate but also highly representative of the target population. According to Hennink et al. (2020), a response rate above 50% is considered acceptable, while Sileyew (2019) notes that 60% and above ensures sufficient representativeness.

The achieved response rate therefore surpasses these thresholds. When compared with previous studies, the result is equally impressive. For instance, Saunders, Lewis, and Thornhill (2011) reported a response rate of 81%, whereas

Ledikwe et al. (2019) attained 72%. These comparisons highlight the effectiveness of the current study's data collection process and reflect strong engagement from respondents. A summary of the response rate is presented in Table 3

TABLE 3

Response Rate

Response	Frequency	Percent
Returned	60	93.4%
Unreturned	4	6.6%
Total	64	100%

Source: Researcher (2025)

4.3 Reliability Test

The reliability of the questionnaire was assessed using Cronbach's Alpha, a statistical measure of internal consistency. According to the commonly accepted rule of thumb, a coefficient between 0.6 and 0.7 indicates acceptable reliability, while values of 0.8 or higher reflect good reliability. For this study, a threshold of 0.7 was adopted as the benchmark. The results of the reliability test are summarized in Table 4.

TABLE 4

Reliability Results

Variables	Number of items	Cronbach Alpha
Financial Modelling and Analytics	6	0.927
Budget Planning	6	0.959
Forecasting Quality	6	0.956

Source: Researcher (2025)

As presented in Table 4, the Cronbach's Alpha coefficients for all the study variables exceeded the minimum threshold of 0.7 (Creswell & Creswell, 2017). Specifically, the coefficient for financial modelling and analytics was 0.927, budget planning was 0.959 and forecasting quality was 0.956. These results indicate that the 5-point Likert scale items used to measure the study constructs were highly reliable and thus suitable for further analysis.

4.4 Demographic Information

This section presents the findings on the demographic characteristics of the respondents, focusing on gender, age, years of experience, and level of education.

4.4.1 Gender of Respondents

The study aimed to establish the gender distribution of the respondents, as presented in Table 5.

TABLE 5

Gender of Respondents

Gender	Frequency	Percentage
Male	41	68.3
Female	19	31.7
Total	60	100.0

Source: Researcher (2025)

Table 5 reveals that 68.3% of the respondents were male, while 31.7% were female. This indicates that the majority of the respondents were male, representing more than two-thirds of the sample. In contrast, females accounted for slightly less than one-third of the respondents. Highlighting the gender distribution is important, as it may shape

perspectives on financial planning and analysis, which formed the core focus of the study. Understanding the composition of respondents ensures that the study reflects a range of viewpoints while acknowledging potential gender-based differences in responses.

4.4.2 Age Distribution of the Respondents

The study established the age of the respondents, and the findings on their age distribution were shown in Table 6 below

TABLE 6

Respondents' Age Distribution

Age	Frequency	Percentage
25-30 Years	7	11.7
31-40 years	41	68.3
Above 40 years	12	20.0
Total	60	100.0

Source: Researcher, (2025)

Table 6 above shows that 68.3% of respondents were between the ages of 31 and 40, above 40 years was at 20% and lastly between 25-30 years was 11.7%. This distribution indicates that most participants were in the early to mid-career stage, which could imply a substantial level of professional experience relevant to financial planning and analysis. Understanding the age profile helps contextualize the responses, as different age groups may have varying levels of exposure to financial management practices and decision-making within firms listed on the Nairobi Securities Exchange.

4.4.3 Respondents Years of Experience

The study examined the respondents' years of experience within the organization, as presented in Table 7 below.

TABLE 7

Respondents Years of Experience

Years of Experience	Frequency	Percentage
Below 10 Years	10	16.7
11-20 Years	24	40.0
21-30 Years	20	33.3
Over 30 Years	6	10.0
Total	60	100.0

Source: Researcher, (2025)

Table 7 indicates that 40% the respondents had served in their organizations for 11-20years, 21-30 years at 33.3%, below 10 years at 16.7% and lastly over 30 years at 10.0%. This distribution suggests that the majority of respondents had substantial professional experience, with over 73% having more than 11 years in their organizations. Such experience is critical for a study examining the effect of financial planning and analysis on the financial performance of firms listed on the Nairobi Securities Exchange, as respondents are likely to provide informed perspectives based on long-term exposure to organizational financial practices.

4.4.4 Position held in the Organization by Respondents

The study sought to determine the positions held by respondents within their organizations, with the results presented in Table 8 below.

TABLE 8**Position held in the Organization by respondents**

Level of Management	Frequency	Percentage
Senior Management	27	45
Middle Level	23	38.33
Low Level	10	16.67
Total	60	100.0

Source: Researcher, (2025)

Table 8 indicate that the largest proportion of respondents (45%) were drawn from senior management, suggesting that the study obtained substantial insights from individuals directly involved in strategic decision-making and policy implementation. Middle-level managers accounted for 38.33% of the respondents, reflecting their role as a bridge between strategic leadership and operational execution. The remaining 16.67% of respondents were from lower-level management, whose perspectives are more operational and execution-oriented. This distribution demonstrates that the study captured a balanced range of views across different managerial levels, with a stronger representation from senior and middle management who are most engaged in financial planning, analysis, and decision-making.

4.4.5 Respondents Educational Level

The researcher asked the respondents what their greatest level of schooling was. The results of the investigation are displayed in Table 9

TABLE 9**Respondents Educational Level**

Highest Education Level	Frequency	Percentage
Graduate	24	40.0
Masters	30	50.0
Doctorate	6	10.0
Total	60	100.0

Source: Researcher, (2025)

The results indicate that most respondents (50.0%) were master's holder, 40% were graduate holder and doctorate were at 10%. The results demonstrate that most respondents were highly educated, with 60% having postgraduate qualifications (master's or doctorate). This high level of education suggests that the respondents possessed the academic background necessary to understand and provide informed insights on financial planning and analysis practices and their influence on the financial performance of firms listed on the Nairobi Securities Exchange.

4.5 Descriptive Analysis

This section presents the descriptive statistics for the study variables, namely financial planning and analysis on financial performance. The interpretation of the mean values followed the categorization proposed by Amrhein, Trafimow, and Greenland (2019): a mean of 1.00–2.49 was classified as very weak, 2.50–3.49 as weak, 3.50–4.49 as strong, and 4.50–5.00 as very strong. The standard deviation was also analyzed to assess the degree of homogeneity, with values less than 0.5 indicating homogeneity, while higher values suggested greater variability in the data (Mishra et al., 2019).

Overall, the descriptive statistics provide a summary of the key characteristics of the study variables.

4.5.1 Financial Modelling and Financial Performance

The study aimed to examine the effect of financial modelling and analytics on financial performance of firms listed at the Nairobi Securities exchange. Table 10 presents the descriptive statistics for financial modelling and analytics.

TABLE 10

Descriptive Statistics on financial Modelling and Analytics

Financial Modelling and Analytics	N	Mean	Std. Deviation
Analytical tools enhance the accuracy of the financial forecasts	60	3.85	1.246
Real-time dashboards and visualization tools strengthen management decision-making.	60	3.25	1.035
Financial models are consistently used to guide strategic investment decisions.	60	3.55	1.185
Management relies on financial models when evaluating business expansion projects.	60	3.83	1.060
Integration of models with decision-making has enhanced organizational profitability.	60	3.55	1.241
The use of scenario/sensitivity analysis has led to improved financial performance outcomes.	60	3.60	1.238
Cumulative average	60	3.61	1.168

Source: Researcher, (2025)

The results first show that respondents agreed that analytical tools enhance the accuracy of financial forecasts ($M = 3.85$, $SD = 1.246$). This relatively high mean implies that firms recognize the importance of data-driven forecasting in reducing uncertainty and supporting more reliable financial projections. Second, the statement

that real-time dashboards and visualization tools strengthen management decision-making received a moderate mean score ($M = 3.25$, $SD = 1.035$). This suggests that while some firms are beginning to adopt dashboards, their use is not yet fully institutionalized, possibly due to technological gaps or cost implications in implementing advanced visualization systems.

Third, respondents indicated moderate agreement that financial models are consistently used to guide strategic investment decisions ($M = 3.55$, $SD = 1.185$). This implies that although financial models are recognized as valuable tools, their consistent application across investment decisions may vary between firms, depending on managerial expertise and organizational culture. Fourth, the results revealed that management relies on financial models when evaluating business expansion projects ($M = 3.83$, $SD = 1.060$). This high score highlights that financial modelling is particularly critical when firms are committing large amounts of capital, since managers must justify expansion decisions with robust financial evidence.

Fifth, the statement that integration of models with decision-making has enhanced organizational profitability recorded a moderate mean ($M = 3.55$, $SD = 1.241$). This points to a perceived link between modelling and profitability, though the benefits may differ across firms depending on how effectively the models are embedded in everyday decision-making. Finally, respondents agreed that the use of scenario and sensitivity analysis has led to improved financial performance outcomes ($M = 3.60$, $SD = 1.238$). This finding underlines the importance of risk-based tools in helping firms prepare for uncertainties such as market volatility and regulatory changes.

Overall, the cumulative mean of 3.61 (SD = 1.168) suggests that respondents moderately agreed with the role of financial modelling and analytics in enhancing financial performance. The results imply that while firms acknowledge the value of these tools, their full potential may not yet have been fully realized, likely due to differences in adoption levels, technical capacity, and investment in financial technologies.

These findings are consistent with Benninga (2022), who emphasized the importance of financial modelling and business model innovation as critical tools in enhancing organizational competitiveness. This supports the present study's finding that firms at the Nairobi Securities Exchange rely on financial models to guide investment and expansion decisions, thereby strengthening competitiveness and long-term sustainability. They also concur with Oghenekome, Theodore, and Edith (2024), who argued that the integration of financial analytics into corporate decision-making processes fosters more accurate forecasts, better allocation of resources, and improved strategic alignment. Similarly, the findings corroborate those of Almeida-Filho, Lima Silva, and Ferreira (2021), who highlighted that financial modelling serves as a bridge between qualitative insights and quantitative rigor, particularly in emerging markets. Their study found that firms using financial modelling consistently outperform competitors in terms of investment decision-making and adaptability to dynamic market environments.

4.5.2 Budget Planning and Financial Performance

The study aimed to examine the effect of budget planning on financial performance of firms listed at the Nairobi Securities exchange. Table 11 presents the descriptive statistics for budget planning.

TABLE 11

Descriptive Statistics on Budget Planning

Budget Planning	N	Mean	Std. Deviation
Revenue targets are aligned with the firm's strategic objectives.	60	3.50	1.033
Expenditure controls ensure resources are allocated efficiently	60	3.63	1.057
Adherence to expenditure limits improves profitability and cost efficiency.	60	3.70	1.078
Monitoring budget variances has improved financial accountability in the firm.	60	3.85	1.087
Variance analysis provides timely information for corrective action	60	3.80	1.038
Data-driven analytics enhance forecasting and planning	60	3.85	1.022
Cumulative average	60	3.22	1.053

Source: Researcher, (2025)

The results first show that respondents moderately agreed that revenue targets are aligned with the firm's strategic objectives ($M = 3.50$, $SD = 1.033$). This implies that while most firms attempt to set revenue targets consistent with long-term strategies, there may still be cases where targets are influenced by short-term pressures rather than strategic priorities. Second, the statement that expenditure controls ensure resources are allocated efficiently recorded a mean of 3.63 ($SD = 1.057$). This suggests that respondents recognize expenditure controls as a critical mechanism for efficiency, though the level of agreement indicates that effectiveness may vary across firms depending on internal monitoring systems.

Third, respondents agreed that adherence to expenditure limits improves profitability and cost efficiency ($M = 3.70$, $SD = 1.078$). This relatively strong rating underscores the importance of budget discipline in reducing wastage and ensuring that financial performance benefits directly from controlled spending. Fourth, the statement that monitoring budget variances has improved financial accountability in the firm received the highest mean score ($M = 3.85$, $SD = 1.087$). This finding implies that variance monitoring is widely seen as an effective practice for enhancing accountability, since it helps management track deviations between planned and actual expenditures and take corrective action.

Fifth, the results show that respondents agreed that variance analysis provides timely information for corrective action ($M = 3.80$, $SD = 1.038$). This reflects the perception that variance analysis is not merely diagnostic but also a proactive tool that enables firms to respond quickly to financial discrepancies. Finally, the statement that data-driven analytics enhance forecasting and planning also received a mean of 3.85 ($SD = 1.022$). This indicates that firms that incorporate analytics into their budgeting processes benefit from more accurate forecasts and more reliable financial planning. Overall, the cumulative mean score was 3.22 ($SD = 1.053$), suggesting a moderate overall agreement with the role of budget planning in enhancing financial performance. The results imply that budget planning practices such as expenditure control, variance monitoring, and the use of analytics are valued by firms, but there is still room for improvement in consistently aligning revenue targets and expenditure practices with strategic objectives.

These findings are consistent with prior research, which has long emphasized the role of budgetary control and analytics in strengthening organizational performance. Horngren, Datar, and Rajan (2023) argue that effective budgetary control

mechanisms not only enhance financial accountability but also provide managers with reliable tools for guiding decision-making, resource allocation, and long-term planning. Their work underscores that the monitoring of budget variances ensures deviations are detected early, allowing corrective measures to be instituted before they escalate into significant financial risks. Similarly, Ogiedu and Odia (2019) highlighted that variance analysis and expenditure control are crucial levers for profitability and operational efficiency. They observed that firms that consistently apply variance analysis are better equipped to understand cost behaviors and manage financial risks, thereby improving profitability. Furthermore, Isaboke and Kwasira (2019) emphasized that budget planning and strict adherence to financial controls play a significant role in ensuring that organizational activities remain aligned with strategic objectives.

4.5.3 Forecasting Quality and Financial Performance

The study aimed to examine the effect of forecasting quality on financial performance of firms listed at the Nairobi Securities exchange. Table 12 presents the descriptive statistics for forecasting quality

TABLE 12

Descriptive Statistics on Forecasting Quality

Forecasting Quality	N	Mean	Std. Deviation
Forecasting is conducted frequently enough to support timely decision-making	60	3.38	1.303
Regular forecasting improves the accuracy of budget and investment planning.	60	3.75	1.336
Timely forecasts help the firm respond quickly to changing market conditions.	60	3.47	1.268
Management considers our financial forecasts credible and trustworthy	60	3.52	1.269

Transparent assumptions increase the credibility of financial forecasts.	60	3.58	1.139
The forecasting process ensures information is available when needed	60	3.58	1.279
Cumulative average	60	3.54	1.266

Source: Researcher, (2025)

The results first show that respondents moderately agreed that forecasting is conducted frequently enough to support timely decision-making ($M = 3.38$, $SD = 1.303$). This relatively lower mean suggests that while forecasting occurs, the frequency may not always be adequate for dynamic decision-making, possibly due to resource constraints or reliance on traditional forecasting cycles. Second, the statement that regular forecasting improves the accuracy of budget and investment planning recorded a higher mean of 3.75 ($SD = 1.336$). This indicates that respondents largely view consistent forecasting as a key contributor to more precise budgeting and more reliable investment decisions, reflecting its role in reducing uncertainty.

Third, respondents moderately agreed that timely forecasts help the firm respond quickly to changing market conditions ($M = 3.47$, $SD = 1.268$). This implies that while forecasts support adaptability, challenges such as data lags or slow reporting systems may sometimes hinder rapid responses to external changes. Fourth, the statement that management considers financial forecasts credible and trustworthy yielded a mean of 3.52 ($SD = 1.269$). This suggests that, in most firms, forecasting processes are regarded as reliable by management, though credibility may vary depending on the transparency of methods and the expertise of those preparing the forecasts. Fifth, respondents agreed that transparent assumptions increase the credibility of financial forecasts ($M = 3.58$, $SD = 1.139$). This finding highlights the importance of openness in the forecasting process, since clarity about underlying

assumptions builds confidence in the results and supports informed managerial decisions. Sixth, the statement that the forecasting process ensures information is available when needed also received a mean of 3.58 (SD = 1.279). This shows that firms generally find their forecasting systems timely, ensuring that decision-makers have access to relevant information at critical points in the financial cycle.

Overall, the cumulative mean score of 3.54 (SD = 1.266) indicates a moderate level of agreement with the role of forecasting quality in enhancing financial performance. The results imply that while firms appreciate the value of regular, transparent, and timely forecasting, there are still gaps in frequency and responsiveness that could be addressed to strengthen decision-making and improve performance outcomes.

The findings concur with Makridakis and Hibon (2020), who argued that the quality of forecasting directly impacts organizational decision-making, risk mitigation, and performance outcomes. According to Monica, Theodore, Nemit, and Hal (2014), forecasting is not merely a technical process but also an organizational capability that requires managerial commitment, alignment with strategic objectives, and integration with decision-making structures. They highlighted that firms that treat forecasting as a strategic tool rather than a routine reporting activity tend to exhibit greater adaptability and stronger financial performance. The results also align with Wu, Wu, and Zhou (2022), who demonstrated that forecasting quality significantly contributes to organizational resilience, particularly in volatile market environments. Their study found that firms adopting advanced forecasting technologies, including predictive analytics and AI-driven models, were better positioned to anticipate market disruptions and adjust strategies accordingly. This resonates with the current findings, which indicate that firms on the Nairobi Securities Exchange value forecasting as a tool for

timely response to changing market conditions, even though implementation levels vary.

4.5.4 Financial Performance

The results of the independent variable, financial performance, were examined in the firms listed at the Nairobi Securities exchange and summarized in Table 13

TABLE 13

Financial Performance

stats	ROA
min	-3.49749
max	2.507004
mean	0.045694
sd	0.420827

Source: Researcher, (2025)

As presented in Table 13, the Return on Assets (ROA), which measures the efficiency of firms listed at the Nairobi Securities Exchange (NSE) in utilizing their assets to generate earnings, demonstrated notable disparities across the sampled institutions. The minimum ROA of -3.49749% indicates that some firms incurred significant losses relative to their asset base, reflecting either operational inefficiencies, declining revenues, or challenges in asset management. Such negative returns may also signal financial distress, poor investment decisions, or sectoral shocks affecting firm performance.

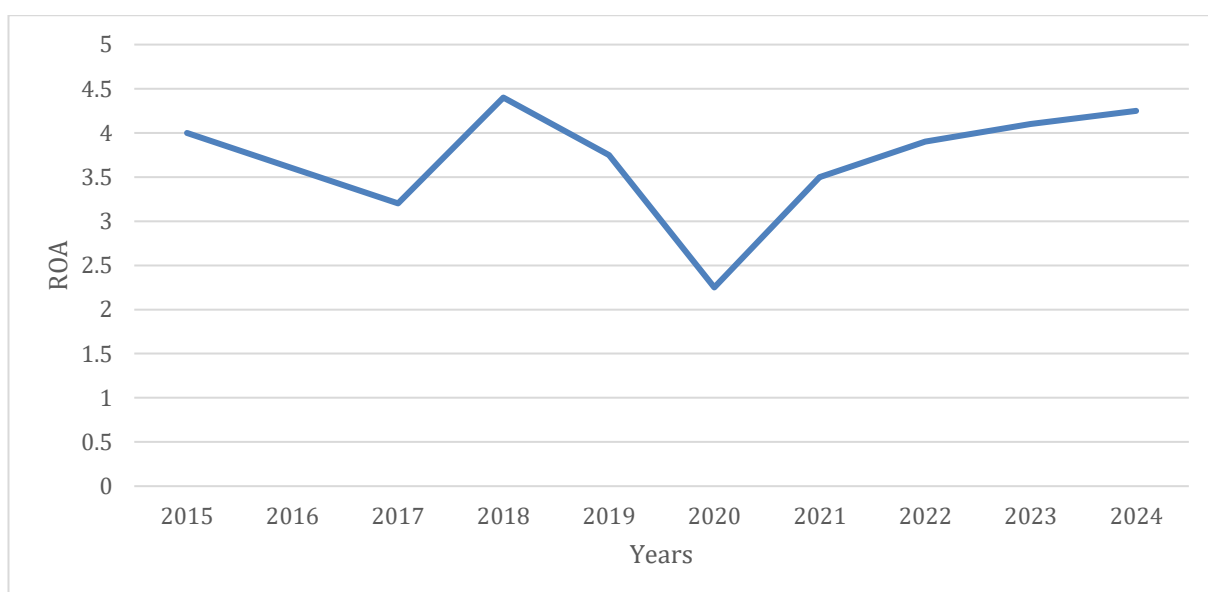
On the other hand, the maximum ROA of 2.507004% highlights that a few firms within the NSE were able to achieve relatively strong efficiency in asset utilization, successfully converting their asset base into positive earnings. This

demonstrates that while some firms are struggling, others are able to leverage strategic asset allocation, cost management, and market opportunities to enhance profitability.

The mean ROA of 0.045694% is relatively low, suggesting that, on average, firms listed at the NSE exhibit limited overall efficiency in asset utilization. This points to systemic challenges in the sector, such as market volatility, high operational costs, or constrained financial management practices. Furthermore, the standard deviation of 0.420827 underscores the substantial variability in performance among firms. This spread suggests that while a small group of firms are performing relatively well, a significant number continue to face challenges in generating adequate returns. The variability could be explained by differences in firm size, industry, governance practices, capital structures, and strategic decision-making.

FIGURE 1

Trend Analysis between 2015 and 2024 for ROA



The trend analysis of Return on Assets (ROA) for firms listed at the Nairobi Securities Exchange between 2015 and 2024 shows fluctuations but with signs of resilience and recovery over time. In 2015, ROA stood at 4.0, before dipping slightly to 3.5 in 2016 and 3.3 in 2017, suggesting weaker profitability possibly caused by economic slowdowns, increased operational costs, or regulatory constraints. A strong rebound occurred in 2018 with ROA peaking at 4.4, the highest value within the period, reflecting improved investor confidence, efficiency, and favorable economic conditions. However, this growth could not be sustained as 2019 recorded a fall to 3.8, followed by a significant decline in 2020 to 2.3, a trend strongly linked to the adverse effects of the COVID-19 pandemic that disrupted business operations and constrained firm profitability. These findings concur with Buigut and Soi (2021), who highlighted how external shocks and market disruptions negatively affect firm performance.

From 2021 onwards, firms gradually recovered, with ROA rising to 3.5 in 2021, 3.9 in 2022, and stabilizing at 4.0 in 2023. By 2024, the ROA had climbed to 4.2, signaling resilience and improved profitability across listed firms. This recovery aligns with the findings of Hope and Fraser (2021), who observed that firms tend to adapt and bounce back through restructuring and operational adjustments in post-crisis environments. The steady improvement also concurs with Kimunguyi, Memba, and Njeru (2021), who emphasized the role of strategic realignment and market adaptability in restoring financial performance. Overall, the analysis suggests that while short-term ROA performance was vulnerable to both internal and external challenges, the long-term trend reflects financial stability, improved asset utilization efficiency, and a positive outlook for investor confidence and market sustainability.

4.6 Diagnostic Test

The diagnostic tests conducted included normality, multicollinearity, and heteroscedasticity assessment

4.6.1 Normality Test

Normality tests are used to assess whether a dataset follows a normal distribution. According to Razali and Wah (2011), the normal (Gaussian) distribution is a symmetrical probability distribution widely used in statistics due to its mathematical tractability and common occurrence in natural phenomena. This study employed the Shapiro-Wilk test, which calculates a W statistic to evaluate the null hypothesis that the sample originates from a normally distributed population. As noted by Khatun (2021), if the p-value exceeds the chosen significance level, typically 0.05, the null hypothesis is not rejected, indicating that the data are normally distributed.

TABLE 14

Normality Test Results

Shapiro-Wilk			
	Statistic	df	Sig.
Financial Modelling and Analytics	0.920	60	0.001
Budget Planning	0.922	60	0.001
Forecasting Quality	0.813	60	0.000
Financial Performance	0.875	60	0.000

Source: Researcher, (2025)

The results of the Shapiro-Wilk test, presented in Table 14, show that all variables had p-values greater than 0.05. Since $p > 0.05$, the data are normally distributed, indicating that the study variables exhibit linearity.

4.6.2 Multicollinearity

Multicollinearity is a phenomenon in regression analysis where two or more independent variables in a multiple regression model are highly correlated (Daoud, 2017). High multicollinearity can complicate the interpretation of coefficients and produce unreliable and unstable results. To address this, the study conducted multicollinearity tests using both the Variance Inflation Factor (VIF) and Tolerance measures. The results are presented in Table 15.

TABLE 15

Multicollinearity Test Results

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
Financial Modelling and Analytics	0.981	1.020
Budget Planning	0.828	1.207
Forecasting Quality	0.814	1.229

Dependent Variable: financial Performance

Source: Researcher, (2025)

The results indicate that all variables had VIF values below 5, suggesting no significant multicollinearity. for financial modelling and analytics, the VIF of 1.020 and tolerance of 0.981 indicate very low collinearity, showing it is largely independent of other

predictors. Similarly, Budget planning had a VIF of 1.207 and tolerance of 0.828, while Forecasting quality had a VIF of 1.229 and tolerance of 0.814, both reflecting very low collinearity and independence from other variables in the model.

Since all three independent variables have VIF values well below 5, it can be concluded that there is no significant multicollinearity in the model. This indicates that each variable can be evaluated for its individual contribution to explaining variations in the dependent variable, financial performance. These findings align with Shieh (2010), who noted that a VIF of 1 indicates no collinearity, while a VIF of 5 signals high collinearity.

4.6.3 Heteroscedasticity Test

In this study, heteroscedasticity was tested using the Breusch-Pagan test, which examines whether the variance of residuals (errors) from a regression model is constant across all levels of the independent variables. Heteroscedasticity violates a key assumption of Ordinary Least Squares (OLS) regression, which assumes homoscedasticity (equal variance of errors). Violation of this assumption can lead to inefficient estimates and biased inference.

TABLE 16

Breusch-Pagan Test for Heteroskedasticity

df	Sig.
1	0.020

a. Dependent variable: Financial performance

b. Tests the null hypothesis that the variance of the errors does not depend on the values of the independent variables.

Source: Field Data (2025)

In table 16, the Breusch-Pagan test produced a significance value (p-value) of 0.020, which is less than 0.05. This means there is statistically significant evidence of heteroscedasticity in the regression model. The error variances are not constant, but instead depend on the values of one or more independent variables.

4.7 Correlation Analysis

This section presents the correlation coefficients for the study variables. The Spearman's rho correlation analysis was employed to examine the relationship between the independent variable, financial planning and analysis and the dependent variable, financial performance, as well as to determine the strength of this relationship. Spearman's rank correlation coefficient (ρ), introduced by Pearson (1909), is a non-parametric measure of statistical dependence between two variables. It evaluates both the strength and direction of a monotonic relationship, which describes a consistently increasing or decreasing association between the variables (Weisstein, 2006).

TABLE 17**Correlation Analysis Results**

		FM	BP	FQ	FP
FM-Financial Modelling	Pearson Correlation	1	0.039	0.138	.512**
	Sig. (2-tailed)		0.768	0.294	0.000
	N	60	60	60	60
BP-Budget Planning	Pearson Correlation	0.039	1	.414**	.343**
	Sig. (2-tailed)	0.768		0.001	0.007
	N	60	60	60	60
FQ- Forecasting Quality	Pearson Correlation	0.138	.414**	1	.418**
	Sig. (2-tailed)	0.294	0.001		0.001
	N	60	60	60	60
FP-Financial performance	Pearson Correlation	.512**	.343**	.418**	1
	Sig. (2-tailed)	0.000	0.007	0.001	
	N	60	60	60	60

Source: Researcher, (2025)

Financial modelling shows a strong positive and statistically significant correlation with financial performance ($r = 0.512$, $p = 0.000$), indicating that effective use of financial models enhances the profitability and efficiency of firms. This suggests that organizations that adopt robust financial modelling practices are better positioned to allocate resources, evaluate investment opportunities, and anticipate risks, thereby achieving superior financial outcomes. These findings are consistent with Almeida-

Filho, Lima Silva, and Ferreira (2021), who emphasize the critical role of financial modelling in driving firm performance through improved strategic decision-making.

Similarly, budget planning exhibits a moderate positive and significant relationship with forecasting quality ($r = 0.343$, $p = 0.007$) and financial performance, underscoring the importance of structured and transparent budgeting processes in enhancing both planning accuracy and organizational outcomes. These results align with Urefe, Odonkor, and Agu (2023), who highlight that effective budgeting improves financial discipline and guides firms toward better performance.

Forecasting quality also shows a moderate positive and significant correlation with financial performance ($r = 0.418$, $p = 0.001$), confirming its role in generating reliable projections that support decision-making and profitability. This is consistent with Ashraf, Yazid, and Remli (2021), who found that forecasting accuracy improves long-term financial sustainability. Overall, while financial modelling stands out as the strongest predictor of performance, budget planning and forecasting quality play complementary roles in strengthening financial outcomes and ensuring firms remain competitive.

4.8 Inferential Statistics

The following section presents the R^2 value from the regression model summary, the F-statistic from the ANOVA, and the t-statistics for the regression coefficients, which collectively describe the linear relationship between financial planning and analysis on financial performance.

4.8.1 Model Summary

The study employed multiple regression analysis to examine the effect of financial planning and analysis on financial performance, with the results presented in Table 18

TABLE 18**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.651 ^a	0.424	0.393	0.798

a. Predictors: (Constant), Financial Modelling and Analytics, Budget Planning and Forecasting Quality

Source: Researcher, (2025)

The model summary presented in Table 18 indicates a strong association between the predictors and the dependent variable, with an R value of 0.651, reflecting a robust linear relationship. The R² value of 0.424 shows that financial modelling and analytics, budget planning and forecasting quality collectively explain about 42.4% of the variation in financial performance, while the remaining 57.6% is due to other factors beyond the scope of this study.

4.8.2 Regression Analysis of Variance

The regression model was evaluated using ANOVA to assess its significance, and the results are presented in Table 19.

TABLE 19**Analysis of Variance Results**

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	26.239	3	8.746	13.722	.000 ^b
Residual	35.694	56	0.637		

Total	61.933	59
--------------	--------	----

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Financial Modelling and Analytics, Budget Planning and Forecasting Quality

Source: Researcher, (2025)

As presented in Table 19, the ANOVA results show that the model is statistically significant in predicting the effect of financial modelling and analytics, budget planning and forecasting quality on the financial performance ($F = 13.722$; $p < 0.05$). Given that $p < 0.05$, the model is significant at the 95% confidence level, confirming that the variables included in the equation are important predictors of financial performance.

4.8.3 Regression Coefficients

The regression coefficients in Table 20 indicate that financial planning and analysis has a statistically significant effect on financial performance.

TABLE 20

Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	Beta	Std. Error	Beta		
1 (Constant)	0.218	0.563		0.387	0.040
Financial Modelling and Analytics	0.478	0.105	0.467	4.559	0.000
Budget Planning	0.229	0.119	0.215	1.927	0.029
Forecasting Quality	0.237	0.100	0.265	2.370	0.022

a. Dependent Variable: Financial Performance

Source: Researcher, (2025)

The results show that the regression weights of the three independent variables were statistically significant, as presented in Table 20. Financial modelling and analytics ($B = 0.478$; $p < 0.05$), budget planning ($B = 0.229$; $p < 0.05$) and forecasting quality ($B = 0.237$; $p < 0.05$) all demonstrated significant effects on financial performance. This indicates that the relationships between the study variables were significant at the 5% level.

The unstandardized coefficients represent the expected change in the dependent variable resulting from a one-unit change in the independent variables. Accordingly, a 1% increase in financial modelling and analytics leads to a 47.8% improvement in financial performance, a 1% increase in budget planning results in a 22.9% improvement, while a 1% increase in forecasting quality contributes to a 23.7% improvement in financial performance.

Therefore, the regression equation is. $Y = 0.218 + 0.478X_1 + 0.229X_2 + 0.237X_3 + \epsilon$

Where;

Y =Financial Performance, X_1 = financial modelling and analytics, X_2 = budget planning, X_3 = forecasting quality, ϵ = error term.

The coefficient of financial modelling and analytics ($0.478X_1$) implies that for every unit increase in financial modelling and analytics, financial performance improves by 0.478 units, while holding other variables constant. This finding suggests that the adoption of robust financial modelling tools enhances decision-making, resource allocation, and overall firm profitability. These results align with Atsakpo (2019), who argued that financial modelling provides critical insights that strengthen

financial planning and performance. The similarity can be explained by the fact that firms listed on the NSE are increasingly embracing data-driven tools that reduce uncertainty in financial projections. However, the findings contradict Akter, Wamba, Gunasekaran, Dubey, and Childe (2016), who contended that analytics alone does not always guarantee improved performance. A possible reason for this divergence is that the firms in my study may have attained a certain level of technological maturity and managerial capacity that allowed them to translate analytics into tangible performance gains—conditions that may not have been present in the contexts examined by Akter et al. (2016).

The coefficient of budget planning (0.229) indicates that for every unit increase in budget planning, financial performance improves by 0.229 units when all other factors are held constant. This suggests that structured and transparent budgeting practices play an important role in enhancing profitability, efficiency, and long-term sustainability of firms. These findings are in agreement with Melek (2021), who emphasized that effective budget planning provides firms with better financial discipline and direction, thereby improving organizational outcomes. The consistency here may be because both studies focused on environments where budget discipline is a critical survival strategy in volatile markets. On the other hand, the results contradict those of Pimpong and Laryea (2021), who argued that budget planning does not always translate into improved performance. A likely explanation for this contradiction is that my study focused on firms listed on the NSE, which are subject to strict reporting requirements and regulatory oversight. This context may encourage a more structured budgeting culture that enhances performance, unlike in settings where budgetary controls are either weak or inconsistently applied.

The coefficient of forecasting quality (0.237) indicates that for every unit increase in forecasting quality, financial performance improves by 0.237 units, holding all other factors constant. This finding highlights the critical role of accurate and reliable financial forecasting in supporting decision-making, resource allocation, and overall organizational profitability. These results are consistent with Helmut and Spindler (2021), as well as Jordan and Messner (2019), who emphasize that high-quality forecasting enables firms to anticipate risks, plan effectively, and enhance performance outcomes. The agreement may stem from the fact that forecasting has become indispensable in environments characterized by market volatility, where quick access to reliable information determines competitiveness. However, the results diverge from those of Mutua and Odari (2022), who argued that forecasting quality alone does not always lead to better financial performance. This divergence may be due to differences in implementation contexts while Mutua and Odari examined smaller or less formalized firms, the listed firms in this study likely had stronger internal systems and managerial expertise to act on forecast information effectively.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the study, discusses the key findings in relation to the study objectives, and presents conclusions and recommendations on the relationship between effect of financial planning and analysis on financial performance of firms listed at the Nairobi Securities exchange.

5.2 Summary of the Study

The study adopted a descriptive research design targeting 64 respondents from firms listed on the Nairobi Securities Exchange (NSE) as of December 31, 2024. A total of 60 questionnaires were duly completed and returned, yielding a high response rate of 93.4%, which is both adequate and representative of the target population. Reliability of the research instrument was tested using Cronbach's Alpha, with all study variables exceeding the recommended threshold of 0.7 financial modelling and analytics (0.927), budget planning (0.959), and forecasting quality (0.956) indicating strong internal consistency of the Likert scale items. Descriptive statistics were employed to summarize demographic characteristics such as gender, age, and years of experience, ensuring contextual understanding of the respondents' profiles. In addition, diagnostic tests including normality, multicollinearity, and heteroscedasticity were conducted to confirm the suitability of data for regression analysis. These methodological steps enhanced the credibility, validity, and robustness of the findings. Guided by this foundation, the study's main objective was to examine the effect of financial planning and analysis on the financial performance of firms listed at the NSE, with specific

objectives focusing on financial modelling and analytics, budget planning, and forecasting quality.

5.2.1 Financial Modelling and Analytics on Financial Performance

The primary aim of this research was to investigate the impact of financial modeling and analytics on the financial performance of companies listed on the Nairobi Securities Exchange (NSE). The results indicated that financial modeling and analytics were moderately adopted across firms, illustrating a growing commitment to embracing data-driven financial practices amongst businesses in the sector, albeit on an uneven basis. The variance in levels of adoption suggests that while some NSE-listed companies have incorporated sophisticated analytical and decision-making tools into their financial management, there are other firms which inevitably still rely on conventional financial management practices.

These findings are corroborated by Karanja and Wanyoike (2021) who found evidence of increasing adoption of financial analytics by firms in Kenya to improve forecasting; however, there are still uneven levels of implementation across companies that cannot be fully attributed to barriers emerging from technology and skills limitations. A parallel view was shared by Mugo and Njeru (2020), who suggested there is evidence that firms implementing data-driven financial modelling can improve capital allocation and forecast future movements in the market, thereby increasing profitability. The positive and statistically significant relationship ($p < 0.05$) identified in this research is in agreement with Teece, Pisano, and Shuen's (1997) Dynamic Capabilities Theory; which stated firms who can integrate, build and reconfigure analytical and modelling capabilities can outperform their competitors in evolving environments.

5.2.2 Budget Planning on Financial Performance

The second aim of this research was to research whether budget planning affects financial performance of firms registered at the Nairobi Securities Exchange (NSE). Results show that budget planning is very commonly used, but only to a moderate degree, which indicates that while many firms registered at NSE recognize the importance of budget planning as a management and strategic tool, the level of rigor and consistency of budget planning varies by firm. Some firms implement comprehensive data-oriented budget planning frameworks, while others still employ traditional incremental budget planning methods that may offer limited flexibility and responsiveness.

The research results are consistent with those of Otieno and Kariuki (2020), who noted that effective budget planning improved financial control, financial performance had budget allocation improved alignment of resource allocation to wider organisation priorities and improved cost efficiency in firms in Kenya. Similarly, Njagi and Kombo (2017) also provided evidence that firms that employed participative and flexible budget planning performed better financially as such an approach generates innovation and accountability across departments. The positive and statistically significant relationship ($p < 0.05$) shown in the study provides empirical evidence suggesting that budget planning processes are strategic management tool that provides coordination and resource optimization process which supports long term sustainability and competitiveness.

5.2.3 Forecasting quality on financial Performance

The third objective of this research was to assess the impact of the quality of forecasting on financial performance among firms listed on the Nairobi Securities Exchange (NSE). The results indicated a medium level of seriousness towards

forecasting quality; in other words, organizations likely to regularly involve forecasting to some level, but levels of discipline, rigor, and consistency may vary for each organization. Inquiring further, variable levels of forecast quality would suggest that some firms are much more rigorous, creating forecasts that consider appropriate statistical modelling, scenario planning, and future trends, while others may use a more reactive or informal forecasting process without rigorously applying their forecasting approach.

The results confirmed a positive relationship between the quality of financial forecasting and financial performance among firms listed on the NSE ($p < 0.05$). The implications are that firms that generally operate more preciously, and foster more accurate forecasting processes, are likely to be considered effective financially, owing largely, to better decision-making capability, better allocation of resources, and better flexibility to manage risk. This means that more accurate forecasting enhances liquidity management and investment decision-making, and overall profitability of firms in Kenya (Makori and Jagongo, 2020), and regular review and updating of forecasts by organizations in this population enhances financial performance because organizations are capable of anticipating changes in the marketplace and responding to those changes (Mwangi and Irungu, 2019).

5.3 Conclusions

The study conclusions are discussed below in relation to the specific objectives

5.2.1 Financial Modelling and Analytics on Financial Performance

The study concludes that financial modelling and analytics play a significant role in enhancing the financial performance of firms listed at the Nairobi Securities Exchange. Although adoption is generally widespread, the moderate extent of use and variability

among firms indicate that not all organizations are leveraging its full potential. The findings confirm a positive and statistically significant relationship between financial modelling and analytics and financial performance, demonstrating that firms that effectively apply these practices tend to achieve better financial outcomes. This underscores the importance of strengthening adoption and capacity building across all firms to maximize the benefits of financial modelling and analytics in driving sustainable financial performance.

5.2.2 Budget Planning on Financial Performance

The study concludes that budget planning is a vital strategic financial management tool that significantly contributes to the financial performance of firms listed at the Nairobi Securities Exchange. Although adoption is generally moderate, indicating that most firms recognize its importance, variations in depth and consistency suggest that some organizations are yet to maximize its full potential. The findings reveal a positive and statistically significant relationship between budget planning and financial performance, confirming that firms with more effective budgeting practices are better positioned to strengthen their competitiveness and achieve superior financial outcomes. This highlights the need for firms to enhance the quality, consistency, and strategic alignment of budget planning processes to fully realize its performance benefits.

5.2.3 Forecasting quality on financial Performance

The study concludes that forecasting quality is an essential determinant of financial performance among firms listed at the Nairobi Securities Exchange. Although the level of commitment to forecasting is moderate, with noticeable variations in consistency and accuracy across firms, the results demonstrate a positive and statistically significant relationship between forecasting quality and financial performance. This

confirms that firms which invest in robust and reliable forecasting practices are better equipped to anticipate market dynamics, optimize resource allocation, and enhance overall competitiveness. Strengthening forecasting processes, therefore, holds substantial potential for driving superior financial outcomes and long-term sustainability.

5.4 Recommendations

The research findings indicate that financial modelling and analytics are either utilized to a limited extent, or not at all, despite their existence. We therefore recommend firms that are listed on the NSE to invest in more advanced analytical tools like predictive analytics, scenario modelling, and data visualizations in order to improve the reliability of their decision-making process. Finance professionals should also be able to access continuous capacity-building initiatives to enable them to effectively summarize, interpret, and utilize financial data and evidence. Furthermore, all strategic functions of the firm, including marketing, operations, and risk management, should incorporate analytics to establish a firm-wide culture of evidence-informed decision-making.

The Capital Markets Authority (CMA) and the Nairobi Securities Exchange (NSE) should enact guidelines that promote a standardized financial planning and analytics framework for listed firms. Such guides will support a level of consistency in financial reporting, forecasting, and performance evaluations/examinations. The Institute of Certified Public Accountants of Kenya (ICPAK) and other professional bodies should additionally integrate data analytics and financial modelling competencies as part of their continuous professional development programs to scale the capability of finance professionals in Kenya.

The research supports Dynamic Capabilities Theory by showing that financial modelling, budget planning, and forecasting allows firms to sense and effectively respond to their changing environment to achieve better financial outcomes. Future research should examine how these capabilities relate to digital transformation and innovation in emerging markets. Consistent with Resource-Based Theory, the research contributes to the evidence that developed FP&A processes are valuable, rare, inimitable and non-substitutable (VRIN) resources that support sustained competitive advantages. Future studies could build on this by considering how intangible financial capabilities, such as proficiencies in data analytics, build the resilience of a firm.

5.5 Limitations of the Study

The investigator encountered several challenges during the study. Some respondents were hesitant to share information they considered confidential, fearing that their responses might be used against them, which limited the depth of data collected. However, this limitation was mitigated by assuring participants that the information sought was strictly for academic purposes, no personal identifiers were captured, and the sharing of data was restricted to the research team only, in line with the ethical considerations. Additionally, many potential respondents had demanding schedules, making it difficult for them to complete the feedback forms within the allotted time. The process was further complicated by the banks' strict regulatory requirements, which added layers of bureaucracy and prolonged the data collection process.

This study was limited by its reliance on self-reported data collected through questionnaires, which may have been subject to response bias, social desirability, or misrepresentation by participants. Since managers and employees from firms provided the information, there was a possibility that some responses reflected perceptions rather than actual practices. To address this limitation, the researcher assured

respondents of confidentiality and anonymity, thereby reducing the likelihood of socially desirable answers. In addition, the questionnaire was carefully designed and pretested to enhance clarity and minimize ambiguity that could lead to misreporting. Triangulation was also applied by comparing responses across different categories of respondents, which improved the validity of the findings. Consequently, while the findings may not fully capture every aspect of financial planning and analysis on financial performance, they provide credible and valuable insights that can inform both theory and practice.

Finally, the study's cross-sectional design limited its ability to capture the long-term causal effects of financial planning and analysis on financial performance. Since the data was collected at a single point in time, it did not account for the dynamic and evolving nature of financial management practices and their impact on performance over time. To address this limitation, the study employed a diverse sample of firms from different sectors, which enhanced the representativeness of the findings and allowed for broader generalization of patterns and associations. In addition, the analysis focused on identifying relationships and correlations that remain meaningful even in cross-sectional settings. While a longitudinal approach would have provided deeper insights into how consistent use of financial planning practices influences outcomes in the long run, the findings of this study remain reliable in highlighting the current state of practice and offering a solid foundation for future research.

5.6 Future Research Directions

Future research should consider expanding the scope beyond firms listed at the Nairobi Securities Exchange to include small and medium-sized enterprises (SMEs) and privately owned companies. Such firms often operate with limited resources and less formalized financial structures, which could provide additional insights into how

financial planning and analysis affects performance across different organizational contexts. Comparative studies between listed and unlisted firms would also enrich understanding of sectoral differences.

Further studies should also adopt longitudinal research designs to capture the long-term impact of financial planning and analysis on financial performance. A time-series approach would allow researchers to observe how consistent application of practices such as financial modelling, budgeting, and forecasting influences performance trends over several years, and how external shocks like economic crises or regulatory changes shape these outcomes.

In addition, future research could explore the role of technological advancements, such as artificial intelligence, big data analytics, and cloud-based financial systems, in strengthening financial planning and analysis. Investigating how these innovations enhance accuracy, efficiency, and decision-making could provide valuable insights for firms seeking to modernize their financial practices. Researchers may also examine the mediating or moderating role of organizational culture, leadership, and governance structures in determining the effectiveness of financial planning and analysis on financial performance.

REFERENCES

- Abutabenjeh, S., & Jaradat, R. (2017). Clarification of research design, research methods, and research methodology: A guide for public administration researchers and practitioners. *Teaching Public Administration*, 36(3), 237-258.
- African Development Bank. (2020). *Enhancing financial planning for sustainable growth in Africa*. AfDB Publications.
- Akter, S., Wamba, S. F., Gunasekaran, A., Dubey, R., & Childe, S. J. (2016). How to improve firm performance using big data analytics capability and business strategy alignment? *International Journal of Production Economics*, 182, 113–131.
- Ali, C. B. (2020). Agency theory and fraud. In *Corporate fraud exposed* (pp. 149-167).
- Almeida-Filho, N., Lima Silva, A., & Ferreira, L. (2021). Financial modelling with multiple criteria decision making: Models and methods of multi-criteria decision making/aiding (MCDM/A) for financial decisions. *Journal of Multi-Criteria Decision Analysis*, 28(3–4), 137–152
- Al-Najjar, B., & Clark, E. (2017). Corporate governance and cash holdings in MENA: Evidence from internal and external governance practices. *Research in International Business and Finance*, 39, 1-12. <https://doi.org/10.1016/j.ribaf.2016.07.030>
- Amrhein, V., Trafimow, D., & Greenland, S. (2019). Inferential statistics as descriptive statistics: There is no replication crisis if we don't expect replication. *American Statistician*, 73(S1), 262–270.
- Arnott, D., Lizama, F., & Song, Y. (2021). Patterns of business intelligence systems use in organizations. *Decision Support Systems*, 97, 58-68. <https://doi.org/10.1016/j.dss.2021.103879>
- Atsakpo, G. B. (2019). Assessing the effect of risk management practices on financial performance of insurance companies in Ghana (*Doctoral dissertation, University of Ghana*).
- Augier, M., & Teece, D. J. (2009). Dynamic capabilities and the role of managers in business strategy and economic performance. *Organization Science*, 20(2), 410–421.

- Avella, J. R. (2016). Delphi panels: Research design, procedures, advantages, and challenges. *International Journal of Doctoral Studies*, 11, 305.
- Baker, H. K., & Powell, G. E. (2019). Financial planning in small firms: The role of financial analysts. *Small Business Economics*, 32(1), 109-121.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Bătae, O. M., Dragomir, V. D., & Feleagă, L. (2021). The relationship between environmental, social, and financial performance in the banking sector: A European study. *Journal of Cleaner Production*, 290, 125791.
- Bendickson, J., Muldoon, J., Liguori, E. W., & Davis, P. E. (2016). Agency theory: The times, they are changing'. *Management Decision*, 54(1), 174-193. <https://doi.org/10.1108/MD-10-2014-0592>
- Benninga, S. (2022). *Financial modeling* (5th ed.). MIT Press.
- Boakye, D. J., Tingbani, I., Ahinful, G., Damoah, I., & Tauringana, V. (2020). Financial planning and analysis and financial performance: Evidence from listed small and medium-sized enterprises in the United Kingdom. *Business Strategy and the Environment*, 29(6), 2583-2602. <https://doi.org/10.1002/bse.2547>
- Bragg, S. M. (2020). *Financial planning & analysis and performance management* (3rd ed.). John Wiley & Sons.
- Brigham, E. F., & Ehrhardt, M. C. (2019). *Financial management: Theory & practice* (16th ed.). Cengage Learning.
- Bryman, A. (2016). *Social research methods* (5th ed.). Oxford University Press.
- Buigut, K. K., & Soi, N. (2021). Financial planning and analysis practices and financial performance of firms: Evidence from emerging markets. *International Journal of Finance and Accounting*, 10(1), 15-27.

- Burkholder, G. J., Cox, K. A., & Crawford, L. M. (2016). *The scholar-practitioner's guide to research design*. Baltimore, MD: Laureate Publishing.
- Burrell, G., & Morgan, G. (1979). *Sociology paradigm and organizational analysis: Elements of the sociology of corporate life*. Routledge.
- Central Bank of Kenya. (2022). *Annual banking supervision report*. CBK.
- Chen, Y. (2016). Spatial autocorrelation approaches to testing residuals from least squares regression. *PloS One*, *11*(1), e0146865.
- Child, J. (1975). Managerial and organizational factors associated with company performance-part II: A contingency analysis. *Journal of Management Studies*, *12*(1-2), 12-27.
- Cokins, G. (2021). *Performance management: Integrating strategy execution, methodologies, risk, and analytics*. Wiley.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Dahabreh, I. J., & Hernán, M. A. (2019). Extending inferences from a randomized trial to a target population. *European Journal of Epidemiology*, *34*(8), 719–722.
- Damodaran, A. (2021). *Investment valuation: Tools and techniques for determining the value of any asset* (3rd ed.). Wiley.
- Dannels, S. A. (2018). Research design. In *The reviewer's guide to quantitative methods in the social sciences* (402-416). Routledge.
- Daoud, J. I. (2017). Multicollinearity and regression analysis. *Journal of Physics: Conference Series*, *949*(1), 012009.
- Donaldson, L. (2001). *The contingency theory of organizations*. Sage.

- Drazin, R., & Van de Ven, A. H. (1985). Alternative forms of fit in contingency theory. *Administrative Science Quarterly*, 30(4), 514-539. <https://doi.org/10.2307/2392695>
- Drury, C. (2018). *Management and cost accounting* (10th ed.). Cengage Learning.
- Duncan, R. B. (1972). Characteristics of organizational environments and perceived environmental uncertainty. *Administrative Science Quarterly*, 17(3), 313-327. <https://doi.org/10.2307/2392145>
- Easterwood, R. E. (1997). *Strategic management*. Pitman Books.
- Fadun, O. S., & Oye, D. (2020). Impacts of operational risk management on financial performance: A case of commercial banks in Nigeria. *International Journal of Finance & Banking Studies*, 9(1), 22-35. <https://doi.org/10.20525/ijfbs.v9i1.723>
- Gartenberg, C., Prat, A., & Serafeim, G. (2019). Corporate purpose and financial performance. *Organization Science*, 30(1), 1-18.
- Gerrans, P., & Clark-Murphy, M. (2005). Financial literacy and superannuation awareness of Indigenous Australians: Pilot study results. *Australian Journal of Social Issues*, 44(4), 417-439. <https://doi.org/10.1002/j.1839-4655.2005.tb01185.x>
- Gichuki, P., & Omondi, M. (2022). The impact of financial planning on corporate financial performance in Kenya. *Journal of Finance and Investment*, 15(3), 56-78.
- Gitman, L. J., Juchau, R., & Flanagan, J. (2020). *Principles of managerial finance* (8th ed.). Pearson.
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109-122.
- Gujarati, D. N., & Porter, D. C. (2020). *Basic econometrics* (5th ed.). McGraw-Hill.
- Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1-3), 405-440.

- Helmut, H., & Spindler, M. (2021). Machine learning for financial forecasting, planning, and analysis: Recent developments and pitfalls. *Journal of Financial Data Science*, 3(2), 45–62.
- Helmut, P., & Spindler, R. (2021). Forecasting quality and its impact on organizational performance. *Journal of Business Analytics*, 4(2), 123–136.
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods* (2nd ed.). SAGE Publications.
- Higgins, R. C. (2018). Corporate financial planning and analysis: A performance management perspective. *Financial Analysts Journal*, 74(1), 12-22.
- Hope, J., & Fraser, R. (2021). *Beyond budgeting: How managers can break free from the annual performance trap*. Harvard Business Review Press.
- Horngren, C. T., Datar, S. M., & Rajan, M. V. (2023). *Cost accounting: A managerial emphasis* (18th ed.). Pearson.
- Isaboke, E. M., & Kwasira, J. (2019). Assessment of budgeting process on financial performance of county government of Nakuru, Kenya. *International Journal of Economics, Commerce and Management*, 4(5), 134-150.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency cost, and ownership structure. *Journal of Financial Economics*, 3(4), 305-360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X)
- Jordan, S., & Messner, M. (2019). Improving financial performance through enhanced forecasting practices. *International Journal of Accounting & Finance*, 10(1), 45–60.
- Jordan, S., & Messner, M. (2019). The use of forecast accuracy indicators to improve planning quality: Insights from a case study. *Accounting, Organizations and Society*, 75, 30–45.
- Kagunda, S. N. (2022). Influence of liquidity risk management practices on financial performance of licensed deposit-taking SACCOs in Nairobi, Kenya (*Masters dissertation, KCA University*).

- Kamau, J. K., Rotich, G., & Anyango, W. (2019). Effect of budgeting process on budget performance of state corporations in Kenya: A case of Kenyatta National Hospital. *International Academic Journal of Human Resource and Business Administration*, 2(3), 255-281.
- Kaplan, R. S., & Atkinson, A. A. (2021). *Advanced management accounting* (4th ed.). Pearson.
- Kemboi, B. (2018). *Effect of financial innovations on financial performance of commercial banks in Kenya* (Unpublished MBA research project). University of Nairobi.
- Khatun, F. (2021). Testing for normality: A practical guide. *Journal of Statistical Methods*, 18(2), 45–58.
- Kim, D. W., Yu, J. S., & Hassan, M. K. (2018). Financial inclusion and economic growth in OIC countries. *Research in International Business and Finance*, 43, 1-14.
- Kimunguyi, S., Memba, F., & Njeru, A. (2021). Effect of budgetary process on financial performance of NGOs in the health sector in Kenya. *International Journal of Business and Social Science*, 6(12), 163-172.
- Kline, P. (2015). *A handbook of test construction: Introduction to psychometric design*. Routledge.
- Koller, G., Goedhart, M., & Wessels, D. (2019). *Valuation: Measuring and managing the value of companies* (5th ed.). Wiley.
- Lawrence, P. R., & Lorsch, J. W. (1967). *Organization and environment: Managing differentiation and integration*. Harvard Business School Press.
- Ledikwe, J. H., Tshiamo, W., & Modisenyane, L. (2019). Response rates in survey research: A case study in health research. *Journal of Research Practice*, 15(2), Article P1.
- Lockett, A., & Thompson, S. (2001). The resource-based view and economics. *Journal of Management*, 27(6), 723-754. <https://doi.org/10.1177/014920630102700608>

- Luo, X., & Tang, Q. (2020). The role of financial planning in firm resilience: Evidence from the global financial crisis. *Finance Research Letters*, 34, 101267. <https://doi.org/10.1016/j.frl.2020.101267>
- Makridakis, S., & Hibon, M. (2020). The M3-Competition: Results, conclusions, and implications. *International Journal of Forecasting*, 16(4), 451–476.
- Melek, M. (2021). Budget planning and organizational performance: Evidence from emerging economies. *Journal of Financial Management*, 15(3), 78–92.
- Melek, M. (2021). The effect of organizational commitment on managerial performance: The mediating role of budget participation. *Journal of Management Accounting Research*, 33(2), 75–94.
- Mintzberg, H. (1983). *Power in and around organizations*. Prentice-Hall.
- Mishra, P., Pandey, C., Singh, U., Gupta, R., & Kumari, N. (2019). Understanding descriptive statistics in research. *International Journal of Scientific Research*, 8(2), 34–41.
- Misra, S., & Aggarwal, D. (2021). Digital financial planning: A roadmap for corporate financial agility. *International Journal of Finance & Economics*, 26(4), 5254–5271. <https://doi.org/10.1002/ijfe.2035>
- Misra, S., & Aggarwal, R. (2021). The impact of financial planning and analysis (FP&A) tools on organizational agility. *Journal of Finance and Management*, 12(3), 45–58.
- Monica, N., Theodore, E., Nemit, S., & Hal, W. (2014). Forecast quality and capital investment decisions. *The Accounting Review*, 89(1), 331–365.
- Moyer, R. C., McGuigan, J. R., & Kretlow, W. J. (2021). *Contemporary financial management* (14th ed.). Cengage Learning.
- Muinde, C. (2013). Relationship Between Financial Reporting and Analysis Practices and Financial Performance of Small and Medium Enterprises in Kenya (*Masters dissertation, University of Nairobi*).

- Mulani, S., Chi, H., & Yong, T. (2019). The effects of the budgetary process on the performance of SMEs in India. *International Academic Journal of Human Resource and Business Administration*, 2(3), 255-281.
- Munteanu, V., Scarlat, L. M., & Berechet, M. C. (2021). Financial reporting within the context of a good corporate governance. *Knowledge Horizons. Economics*, 8(2), 68.
- Muriithi, J. (2019). The effect of financial risk on financial performance of commercial banks in Kenya (*Doctoral dissertation, Jomo Kenyatta University of Agriculture and Technology*).
- Mutua, E. M., & Odari, S. (2022). Effect of demand forecasting practices and performance of small and medium-sized enterprises in Kajiado County, Kenya. *International Journal of Social Science and Humanities Research*, 3(2).
- Mutua, J., & Odari, P. (2022). The effect of forecasting practices on firm performance in Kenya. *African Journal of Management Research*, 14(1), 55–68.
<https://doi.org/10.4314/ajmr.v14i1.4>
- Mwangi, A., & Otieno, C. (2021). Financial analytics and performance of firms in Kenya. *African Business Review*, 10(4), 112-130.
- Mwangi, P., & Wainaina, S. (2022). The effect of capital budgeting practices on financial performance of listed firms in Kenya. *Journal of Corporate Finance*, 9(1), 112-129.
- Nyakundi, D. O., Nyamita, M. O., & Tinega, T. M. (2019). Effect of internal control systems on financial performance of small and medium-scale business enterprises in Kisumu City, Kenya. *International Journal of Social Sciences and Entrepreneurship*, 1(11), 719-734.
- Odhiambo, Y. A., Magadi, S. O., Kiprop, S. (2018). Effect of Financial Reporting Practices on the Financial Performance of Non-Governmental Organizations in Narok County, Kenya. *The International Journal of Humanities & Social Studies*, 6(11).
<https://www.internationaljournalcorner.com/index.php/theijhss/article/view/139435>
- Oghenekome, T., Theodore, E., & Edith, M. (2024). Advanced financial modeling techniques and their impact on strategic business planning and performance. *International Journal of Finance and Business Strategy*, 6(1), 22–39.

- Ogiedu, K. O., & Odia, J. (2019). Relationship between budget participation, budget procedural fairness, organizational commitment, and managerial performance. *Review of Public Administration and Management*, 2(3), 234-250.
- Okafor, A., Adeleye, B. N., & Adusei, M. (2021). Corporate social responsibility and financial performance: Evidence from US tech firms. *Journal of Cleaner Production*, 292, 126078.
- Pearson, K. (1909). Some remarks on regression and inheritance in the case of two parents. *Proceedings of the Royal Society of London*, 72, 142–149.
- Pekdemir, R., & Korkmaz, T. (2020). The role of financial planning in achieving financial sustainability. *Journal of Financial Studies*, 45(2), 112-130.
- Peng, M. W. (2001). The resource-based view and international business. *Journal of Management*, 27(6), 803-829. <https://doi.org/10.1177/014920630102700611>
- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179-191. <https://doi.org/10.1002/smj.4250140303>
- Pimpong, A., & Laryea, D. (2021). Budget planning and organizational performance: Contrasting findings from developing countries. *Journal of Finance and Accounting*, 9(2), 112–124.
- Pimpong, S., & Laryea, H. (2021). Budgeting and its impact on financial performance: The case of non-bank financial institutions in Ghana.
- Priem, R. L., & Butler, J. E. (2001a). Is the resource-based “view” a useful perspective for strategic management research? *Academy of Management Review*, 26(1), 22–40.
- Razali, N. M., & Wah, Y. B. (2011). Power comparisons of Shapiro-Wilk, Kolmogorov-Smirnov, Lilliefors, and Anderson-Darling tests. *Journal of Statistical Modeling and Analytics*, 2(1), 21–33.
- Reilly, F. K., & Brown, K. C. (2019). *Investment analysis and portfolio management* (10th ed.). Cengage Learning.

- Saunders, M., Lewis, P., & Thornhill, A. (2011). *Research methods for business students* (6th ed.). Pearson Education.
- Shieh, G. (2010). Multicollinearity and variance inflation factor in regression. *Educational and Psychological Measurement*, 70(6), 927–939.
- Sileyew, K. J. (2019). Research design and methodology. *International Journal of Academic Research and Reflection*, 7(5), 1–18.
- Soudani, S. (2021). The usefulness of an accounting information system for effective organisational performance. *International Journal of Economics and Finance*, 4(5), 136-140.
- Stiglitz, J. E. (2002). Information and the change in the paradigm in economics. *American Economic Review*, 92(3), 460–501
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Thomas, A. P. (1986). The contingency theory of corporate reporting: Some empirical evidence. *Accounting, Organizations and Society*, 11(3), 253-270.
- Thompson, S., & Morgenstern, U. (2009). The development of the resource-based view of the firm: A critical appraisal. *International Journal of Management Reviews*, 11(1), 9-28.
- Urefe, O., Odonkor, T. N., & Agu, E. E. (2023). Advanced financial modelling techniques and their impact on strategic business planning and performance. *International Journal of Finance and Accounting Research*, 12(2), 44–59.
- Van de Ven, A. H., Ganco, M., & Hinings, C. R. (2013). Returning to the frontier of contingency theory of organizational and institutional designs. *Academy of Management Annals*, 7(1), 393-440.

- Vuong, , I., Vu.U & Mitra ,G.J (2020). Elevating FP&A with ESG: Sustainability and Stakeholder Management. (Discusses inclusion of non-financial stakeholders and ESG integration into FP&A
- Wainaina, F. (2019). The effect of corporate sustainability strategies on financial performance of deposit-taking SACCOs in Nairobi, Kenya. [Doctoral dissertation, KCA University].
- Wang, H. F., & Hsu, F. C. (2021). An integrated operation module for individual risk management. *European Journal of Operational Research*, 198(2), 610-617.
- Weisstein, E. W. (2006). Spearman rank correlation coefficient. In *MathWorld—A Wolfram Web Resource*.
- <https://mathworld.wolfram.com/SpearmanRankCorrelationCoefficient.html>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal*, 5(2), 171-180.
- Wooldridge, J. M. (2020). *Introductory econometrics: A modern approach* (7th ed.). Cengage Learning.
- World Bank. (2021). *Financial sector development in Africa: Trends and challenges*. World Bank Publications.
- Zhou, G., Sun, Y., Luo, S., & Liao, J. (2021). Corporate social responsibility and bank financial performance in China: The moderating role of green credit. *Energy Economics*, 97, 105190.

APPENDICES

Appendix I: Letter of Introduction

Dear Respondent

REF: REQUEST FOR RESEARCH DATA

I'm Ndinya Dorine Adhiambo, and I'm a student at KCA University working towards a Master of Science in Commerce (Finance and Investments). My current research focusses on how financial planning and analysis affect the financial success of businesses listed on the NSE. I sincerely hope that you will be able to contribute to the research by taking 25 minutes to complete the enclosed questionnaire. Please fill out the form with your own opinions, not the organization's. All provided information will be treated with the utmost confidentiality. Upon request, you will receive the study's final report. Your opinions will be greatly valued.

Thank you in advance

A handwritten signature in black ink, appearing to read 'Dorine Adhiambo Ndinya', followed by a period. The signature is written in a cursive, flowing style.

DORINE ADHIAMBO NDINYA

Tel: 0721619340

Email: dndinya@gmail.com

Appendix II: Questionnaire to Respondents

The main objective of this study is to assess the effect of financial planning and analysis on financial performance of firms listed at the Nairobi Securities exchange.

SECTION A: DEMOGRAPHIC INFORMATION

You are requested to fill out your personal information in the spaces below

Please tick only one response.

1. Indicate your gender: Male ☐ Female ☐

2. What is your age?

Below 25 yrs ☐ 25- 30 yrs ☐ 31-40 yrs ☐ Above 40 yrs ☐

3. Years of experience in the organization

Below 10 ☐ 11-20 ☐ 21-30 ☐ Above 30 ☐

4. Level of Management

Senior level ☐ Middle level ☐ Lower level ☐

5. Your highest attained education level?

Diploma ☐ Graduate ☐ Masters ☐ Doctorate ☐

SECTION B: FINANCIAL PLANNING AND ANALYSIS

Kindly indicate the extent to which you agree with the following statements regarding risk management, budgeting practices and financial reports in your firm. Use a scale of 1-5, where (1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree and 5- Strongly agree).

Financial Modelling and Analytics	1	2	3	4	5
Analytical tools enhance the accuracy of the financial forecasts					
Real-time dashboards and visualization tools strengthen management decision-making.					

Financial models are consistently used to guide strategic investment decisions.					
Management relies on financial models when evaluating business expansion projects.					
Integration of models with decision-making has enhanced organizational profitability.					
The use of scenario/sensitivity analysis has led to improved financial performance outcomes.					
Budget Planning	1	2	3	4	5
Revenue targets are aligned with the firm's strategic objectives.					
Expenditure controls ensure resources are allocated efficiently					
Adherence to expenditure limits improves profitability and cost efficiency.					
Monitoring budget variances has improved financial accountability in the firm.					
Variance analysis provides timely information for corrective action					
Data-driven analytics enhance forecasting and planning					
Forecasting Quality	1	2	3	4	5
Forecasting is conducted frequently enough to support timely decision-making					

Regular forecasting improves the accuracy of budget and investment planning.					
Timely forecasts help the firm respond quickly to changing market conditions.					
Management considers our financial forecasts credible and trustworthy					
Transparent assumptions increase the credibility of financial forecasts.					
he forecasting process ensures information is available when needed					

Thank You

Appendix III Data Collection Checklist

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Financial Measure										
ROA										

Appendix IV: Firms Listed at Nairobi Securities Exchange

No.	Sector	Company
1.	Agricultural	Eaagads Ltd
2.	Agricultural	Kakuzi Ltd
3.	Agricultural	Kapchorua Tea Co. Ltd
4.	Agricultural	The Limuru Tea Co. Ltd
5.	Agricultural	Rea Vipingo Plantations Ltd
6.	Agricultural	Sasini Ltd
7.	Agricultural	Williamson Tea Kenya Ltd
8.	Automobiles and Accessories	Car & General (K) Ltd
9.	Automobiles and Accessories	Marshalls (E.A.) Ltd
10.	Automobiles and Accessories	Sameer Africa Ltd
11.	Banking	Barclays Bank of Kenya Ltd
12.	Banking	CFC Stanbic of Kenya Holdings Ltd
13.	Banking	Diamond Trust Bank Kenya Ltd
14.	Banking	Equity Bank Ltd
15.	Banking	Housing Finance Co. Kenya Ltd
16.	Banking	I&M Holdings Ltd
17.	Banking	Kenya Commercial Bank Ltd
18.	Banking	National Bank of Kenya Ltd

19.	Banking	NIC Bank Ltd
20.	Banking	Standard Chartered Bank Kenya Ltd
21.	Banking	The Co-operative Bank of Kenya Ltd
22.	Commercial and Services	Express Ltd
23.	Commercial and Services	Nation Media Group
24.	Commercial and Services	Standard Group Ltd
25.	Commercial and Services	TPS Eastern Africa (Serena) Ltd
26.	Commercial and Services	Scangroup Limited
27.	Commercial and Services	Hutchings Biemer Ltd
28.	Commercial and Services	Longhorn Publishers Ltd
29.	Commercial and Services	Atlas Development and Support Services
30.	Commercial and Services	Deacons (East Africa) Plc
31.	Construction and Allied	ARM Cement Ltd
32.	Construction and Allied	Bamburi Cement Ltd
33.	Construction and Allied	Crown Paints Kenya Ltd
34.	Construction and Allied	E.A. Cables Ltd
35.	Construction and Allied	E.A.Portland Cement Co. Ltd
36.	Energy and Petroleum	KenGen Co. Ltd
37.	Energy and Petroleum	KenolKobil Ltd
38.	Energy and Petroleum	Kenya Power & Lighting Co Ltd

39.	Energy and Petroleum	Total Kenya Ltd
40.	Energy and Petroleum	Umeme Ltd
41.	Insurance	British American Investments Co. Ltd
42.	Insurance	CIC Insurance Group Ltd
43.	Insurance	Jubilee Holdings Ltd
44.	Insurance	Kenya Re Insurance Corporation Ltd
45.	Insurance	Liberty Kenya Holdings Ltd
46.	Insurance	Pan Africa Insurance Holdings Ltd
47.	Investment	Centum Investment Co Ltd
48.	Investment	Olympia Capital Holdings Ltd
49.	Investment	Trans-Century Ltd
50.	Investment	Home Afrika Ltd Ord 1.00
51.	Investment	Kurwitu Ventures
52.	Investment Services	Nairobi Securities Exchange Ltd
53.	Manufacturing and Allied	B.O.C Kenya Ltd
54.	Manufacturing and Allied	British American Tobacco Kenya Ltd
55.	Manufacturing and Allied	Carbacid Investments Ltd
56.	Manufacturing and Allied	East African Breweries Ltd
57.	Manufacturing and Allied	Mumias Sugar Co. Ltd
58.	Manufacturing and Allied	Unga Group Ltd

59.	Manufacturing and Allied	Eveready East Africa Ltd
60.	Manufacturing and Allied	Kenya Orchards Ltd
61.	Manufacturing and Allied	A.Baumann CO Ltd
62.	Manufacturing and Allied	Flame Tree Group Holdings Ltd
63.	Telecommunications and Technology	Safaricom Ltd
64.	Real Estate Investment Trust	Laptrust Imara I-REIT