PORTFOLIO COMPOSITION AND FINANCIAL PERFORMANCE OF MUTUAL FUNDS IN KENYA

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A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS AND ECONOMICS & TOURISIM IN PARTIAL FULLFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE IN MASTER OF BUSINESS ADMINISTRATION (FINANCE OPTION) KENYATTA UNIVERSITY

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DECLARATION

This project is my original work that has never been submitted to any learning institution for any academic award.

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This project is submitted with my approval as the University supervisor.

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DEDICATION

This project is dedicated to my wife Winfred Kirimi, my father and my mother for the encouragement as well as their support in this course.

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First is to thank God whose faithfulness and grace kept me strong and healthy throughout this course. Truly with God, all things are possible. I extend my sincere appreciation to my supervisor Dr. Charity Njoka because of her invaluable support and guidance to ensure that I succeed in this proposal.

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ABBREVIATIONS AND ACRONYMS

AUM	Assets under Management
CAGR	Compound Annual Growth Rate
CMA	Capital Market Authority
GOK	Government of Kenya
IMF	International Monetary Fund
MPT	Modern Portfolio Theory
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Squares
RBT	Resource-Based Theory
ROA	Return on Assets
ROI	Return on Investment
SACCOs	Savings and Credit Cooperative Organizations

OPERATIONAL DEFINITION OF TERMS

Bonds: This refers to a contract between two parties where one party (borrower) obtains a fixed loan instrument from another (investor). This is either corporate bonds or treasury bonds. In this study, bonds will be measured by the amount a mutual fund has invested in treasury and corporate bonds, and the proportion of this amount relative to the fund's total investment portfolio.

Equity Securities: These are financial assets of a mutual fund that represent shares of a fund. Investors buy them as an investment option in ownership of the fund. In this study, equity securities will be measured by the total amount a mutual fund has invested in stocks and the proportion of this amount relative to the fund's total investment portfolio.

Financial Performance: This refers to the general measure of a mutual fund's effectiveness and efficiency in utilizing its available assets for generating revenue over a given period of time which is reflected in the firms' results and operations in monetary terms. In this study, financial performance will be measured in terms of return on assets and return on investment.

Fund Manager: This is the person (also known as a portfolio manager) who decides when, how, where and the amount a mutual fund will invest its assets in different markets available to maximize the fund's returns to its investors.

Money Market: This refers to the financial market segment where highly liquid short term financial instruments are traded. These high liquid short term assets include treasury bills.

Mutual Fund: This is an investment vehicle consisting of funds pooled from diverse investors and is usually under the management of a professional fund manager. The collected funds are invested by the manager in a diverse portfolio of securities including equity/stock, bonds, money market instruments and other authorized securities, with the goal of generating returns for the fund's investors.

Portfolio Composition: The portfolio composition is the mix of different securities that make up a fund's investment holdings which may include stocks, bonds, real estate, commodities, or other assets. The goal is to create a balanced portfolio that can provide a certain level of risk and return for the investors in the fund. In this study, portfolio composition will entail the mix of the different securities a mutual fund has invested in especially bonds, equity and real estate investments.

Stock: A stock, also known as a share or equity, represents a unit of ownership in a publicly traded corporation which investors usually buy and sell in stock markets such as the Nairobi Securities Exchange (NSE) in Kenya. When an investor buys a stock, they are buying a piece of the company and hence become a partial owner.

Unit Trust: This is an investment fund that pool resources from different areas; the resources are or is priced and sold in different mixtures of the security underlying the fund. Mutual funds are sometimes called unit trusts or collective investment schemes.

ABSTRACT

Mutual funds provide investors with access to diverse investment opportunities in regional and international markets. In Kenya, the first mutual fund was approved in December 2001 and since then to date; the number of registered mutual funds in the country has grown to 35. Despite the steady growth in assets under management in the mutual funds from Ksh.56.6 billion in 2018 to about Ksh.175.97 billion in June 2023, there has been downturn in performance of several of these funds which may be a discouragement to investors. Several of them have been reporting losses. For instance, in 2022, CIC Unit Trust Scheme and NCBA Unit Trust reported losses of 22.1 million and 8.7 million shillings respectively from their equity investment funds. This research therefore sought to analyze how equity investment, bonds investment and money market investment affect Kenya's mutual funds' financial performance. The study's theoretical foundation was constituted by three theories: the resource based theory, modern portfolio theory and agency theory. The study used explanatory research design. Purposive sampling technique was used whereby the study only covered 27 mutual funds recognized by the Capital Market Authority as at June 2023. Secondary data was used which was obtained from sources such as CMA, NSE, and mutual funds official website published financial reports. The data was analyzed using SPSS where the process entailed descriptive statistic analysis, correlation and regression analysis. The findings revealed that over the period 2019-2022, the mutual funds decreased equity investment while they increased bonds investment and money markets investment in their portfolios. The study also found that that equity investment, bonds investment and money market investment were each positively correlated with financial performance of the mutual funds. The study concluded that equity investment, bonds investment and money market investment significantly influence performance of the mutual funds. The research recommends a careful analysis of equity investment options by fund managers before investing to ensure they identify equity investment alternative(s) that offer better returns. Besides, they should consider introducing more robust diversification policies among other measures.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A mutual fund, also called unit trust or collective investment scheme (CIS), refers to a fund where a different people (investors) pool money that is managed by a professional manager (Kumar, 2023). Usually, a team of portfolio managers is in charge of managing the investments in mutual funds who provides professional management and diversification of the investments, hence make it easy for the investors who do not have expertise in investing in capital markets, to invest their money (Murthy, Anjaneyulu, Bhatt & Kumar, 2022). While there are diverse categories of investment products in which the funds can be invested including bonds and stocks (Kumar, 2023), a fundamental question is, how does the portfolio composition affect the mutual funds' financial performance? This was investigated in this study focusing on mutual funds in Kenya.

Usually, investors being risk averse have a tendency of doing whatever they can to reduce risk without causing any negative effect on their investment returns. One strategy they apply to accomplish this is the diversification of their investment into several assets like equity, real estates, bonds, money market instruments etc. Investment diversification is where the investor holds a portfolio of assets with no positive correlation such that in case of loss from one asset, the others are in a position to yield returns that will compensate the investor. By diversifying their portfolios across different asset classes,

sectors, geographies, and securities, mutual funds can help minimize investment risk and provide investors with a more stable long-term return.

Despite the portfolio diversification been associated with reducing investment risk, investors are hesitant to invest in foreign markets because of the high cost of investing in stocks abroad. Although there has been increased market integration over the recent past, major hindrances to international equity ownership still exist. To diversify internationally, investors can either invest directly in stocks abroad or indirectly via international corporate diversification. Direct investment allows investors to have some stake in a variety of foreign stocks, but may be limited by issues such as low liquidity and limited information. Indirect investment allows domestic companies to diversify through foreign direct investment, potentially enhancing shareholder value. However, this strategy can also be complex and inefficient. A study assessing mutual funds from 29 nations between 2005 and 2015 found that significant portion of the funds' total exposure to stock markets was due to the indirect international exposure, suggesting that funds diversify through investing in domestic firms with foreign sales (Demirci, Ferreira, Matos & Sialm, 2022). This indirect exposure positively affected the fund risk-adjusted performance.

Lee, Wang and Lee (2020) found that a properly diversified portfolio can be created by making good use of relatively smaller investment in a study they conducted in the German, French, US, UK, Canadian, and Japanese markets, as compared to the average investment amount in the US financial market (less than $10,000). Nguyen and Elisabeta (2016) found that investing across diverse sectors yielded better performance than

investing across different countries for stock markets in China, Malaysia, Philippines, Indonesia, and Thailand.

Lately, African countries have focused on developing their capital markets to promote domestic resource mobilization, efficient allocation of existing resources, and provision of long- and short-term capital (Izunwanne, Ezeoha, & Okoye, 2020). Besides, Investors seeking returns should explore new markets, and one such market is Africa, which has tremendous investment potential but has been largely overlooked (Hruby, Arditti, 2022). Despite the region's demographic dynamism, with an average growth rate of 4.5% to 5% over the past two decades and some countries achieving over 6%, investors have not given adequate attention to Africa (Bradfield & Munro, 2017). This is despite the continent’s attractiveness for investment. For instance, during the COVID-19 recession, African countries were more resilient than wealthy countries, experiencing a contraction of only 2% compared to the 5.5% contraction in the OECD countries (Zaimovic, Omanovic, & Arnaut-Berilo, 2021).

Even so, through bilateral and multilateral trade relationships, infrastructure investments, regional integration, and increased disposable income have supported diversification and growth in African markets. China for instance, has become Africa's largest trading partner, providing $23 billion in infrastructure financing between 2007 and 2020, with $7 billion of that going to telecom infrastructure (Zaimovic et al., 2021. Mobile penetration and digitization, accelerated by COVID-19, are driving exponential growth in venture capital in Africa, with over $4 billion flowing into the region in 2021, with the majority going to Nigeria, Egypt, South Africa, and Kenya, and over 60% of the capital coming

from US-linked entities (Hruby, Arditti, 2022). As the financial world evolves, it is essential to understand the factors that influence mutual fund performance.

In Kenya, mutual funds have been in existence for several decades, with the first mutual fund, the Unit Trust of Kenya, established in 1965. Kenyan mutual funds sector has grown and evolved, with a variety of fund types and investment strategies now available to investors. Historically, mutual funds in Kenya have had mixed performance, with some funds achieving strong returns, while others have struggled to perform (Ndegwa & Mutunga, 2016). Factors that have influenced mutual fund performance in Kenya include macroeconomic conditions, the performance of the Kenyan stock market, and the investment strategies and management skills of the fund managers (Mwangi, 2019). Performance of mutual funds may vary significantly based on specific fund, its investment objectives, as well as the time period being considered. Some mutual funds in Kenya have performed well over the long term, providing investors with consistent returns, while others have experienced more volatility and lower returns hence the necessity to interrogate the portfolio composition and financial performance of Kenya's mutual funds.

1.1.1 Financial Performance of Mutual Funds

Mutual fund management entails an arrangement by a company to pool money from individual investors' contributions and utilize the same to generate profits or income on the investors' behalf. The fund offers an investor competitive return at a relatively low risk at a fee which the fund managers charge for their service of managing the investors' funds. Measuring mutual funds' financial performance is a complex process that involves evaluating various indicators and metrics. Financial performance measures are used to

evaluate the profitability, efficiency, and risk of mutual funds, and can help investors in making better informed decisions on where they may consider investing their money. One of the most common measures of financial performance of mutual funds is the return on investment (ROI). ROI is computed by dividing an investment's net gain or loss by the initial investment. For mutual funds, ROI is typically measured as the total return, which includes both capital gains and income distributions, over a certain period of time. Research has shown that ROI is a useful measure of performance for mutual funds, as it provides a comprehensive view of the fund's overall profitability (Makori & Sigei, 2019).

Another important measure of financial performance for mutual funds is the expense ratio which is simply the portion of a fund's assets used in covering its operating expenditure, such as management fees, marketing and administrative costs. Research has revealed that funds whose expense ratio is lower usually perform better than those with high expense ratio (Chen & Zheng, 2019).

The risk-adjusted return is another measure of financial performance which considers the risk level that is attributed to an investment. This measure is typically calculated using the Sharpe ratio, Sharpe ratio, which refers to the ratio of a fund's surplus return to its standard deviation of returns. A high Sharpe ratio indicates good risk-adjusted performance of the fund. It has been revealed in research that mutual funds that have higher Sharpe ratios are usually preferred by investors, as they provide a better balance between risk and return (Mutemi & Mwangi, 2020).

Choi (2017) observed that when investors invest in more than one asset, they reduce the portfolio risk, through which they are able to get the benefits of diversification. A diversified portfolio's risk is less than the level of risk in case of having just one

investment stock. Therefore, in the long term, there is higher certainty of an investor's returns from a portfolio of assets and the returns are likely to exceed the returns the investor would have gotten if they held a single investment. Firm-specific risk reduction ability is dependent on how the assets in the portfolio are relatively correlated. In case the investment portfolio assets are lowly correlated, the investor has a higher ability of reducing risks and increasing the expected returns.

Mutual funds have become a popular investment option in Kenya over the last decade, providing investors with an opportunity for diversifying their portfolios and accessing variety of asset categories. However, how mutual funds have been performing in the country has been a subject of much debate, with some investors expressing concerns about the consistency and sustainability of returns. Chepkorir (2018) looked at the Kenyan mutual funds' performance from 2009-2015 and found that on average, equity funds outperformed both bond funds and money market funds. Equity funds had an average annual return of 17.3%, compared to 11.3% for bond funds and 8.8% for money market funds. However, the study also noted that there was significant variation in performance across individual funds within each category, with some funds delivering much higher or lower returns than the average Capital Markets Authority (2018).

Aloice and Odundo (2019) looked specifically at the performance of equity mutual funds in Kenya from 2006 to 2016 found that on average, these funds had an annual return of 14.6%. However, the study also found that there was significant variation in performance across individual funds, with some funds delivering much higher or lower returns than the average. The study identified several factors that were associated with superior performance, including lower expense ratios, higher portfolio turnover, and smaller fund

sizes. The ICEA Lion Equity Fund, that is among the largest equity funds in Kenya, delivered an annual return of 18.2% over the five-year period from 2015 to 2020. The fund's strong performance was attributed to its focus on high-quality stocks and its active management strategy (ICEA Lion Asset Management, 2021).

Fund managers have invested the investors' money pooled in the mutual funds in diversified portfolios which has triggered the interest to investigate if this strategy is really benefiting the investors. Researchers have reported differing arguments on the issue. One of the views is that by diversifying the investment portfolio, there is an impact on the risk adjusted performance but the financial performance is not significantly impacted (Rumelt, 2014). Another argument has been that portfolio composition particularly when there is economic crisis has been affecting financial performance significantly (Kuppuswamy & Belen, 2010). One of the impacts reported on financial performance according to Rotich (2011) is improved efficiency. On the other hand, those of opposed to the view have argued that with every added product to the portfolio there is additional cost and as such, the financial performance does not increase. Therefore, it still remains unclear how shareholders' value and thus performance, is impacted by diversification of investment portfolio within firms that are profit-oriented (Ghysels, Santa-Clara & Valkanov, 2015).

1.1.2 Portfolio Composition of Mutual Funds

Based on the investment objectives of a given fund, the fund managers invest the money pooled in the fund in diverse securities. Portfolio composition refers to the collective investment vehicles (investment products) that an investment firm has bought or invested into such as bonds, stocks among others (Makau & Ambrose, 2017). Reinhart (2014)

articulated that portfolio is a state where the investor has investments in two or more assets and this is also referred to as “diversification”. It is a crucial investment technique which is useful in reducing investment risk by way of having investments allocated in different financial instruments or invested in diverse industries. Its goal is returns maximization by having investments in different assets where occurrence of the same event would cause varying effect on the investments. For financial securities, investors often invest in a portfolio of stocks whereas large organizations may have a portfolio of business. Portfolio composition of mutual funds can therefore be termed as how mutual funds spread the assets allocation.

Assets allocation is termed as the strategy that allows a fund manager in a mutual fund to distribute the available resources to various asset classes including equity, debt, liquid and money markets. These allocations determine how resources will be invested in the named assets to attain optimum returns. Investment managers in this unit trusts track the assets’ allocation of their clients by reviewing them periodically to minimize the overall risk in terms of expected returns fluctuating (Lintner, 2011).

As at December 2022, CIC Unit Trust Scheme, NCBA Unit Trust Scheme and Sanlam Unit Trust Scheme were the leading mutual funds in the country in terms of assets under management with 60.6 billion, 23.1 billion and 14.5 billion shillings worth of assets under management respectively (CMA, 2022). Generally, the mutual funds have experienced consistent growth in assets under management as illustrated in figure 1.1

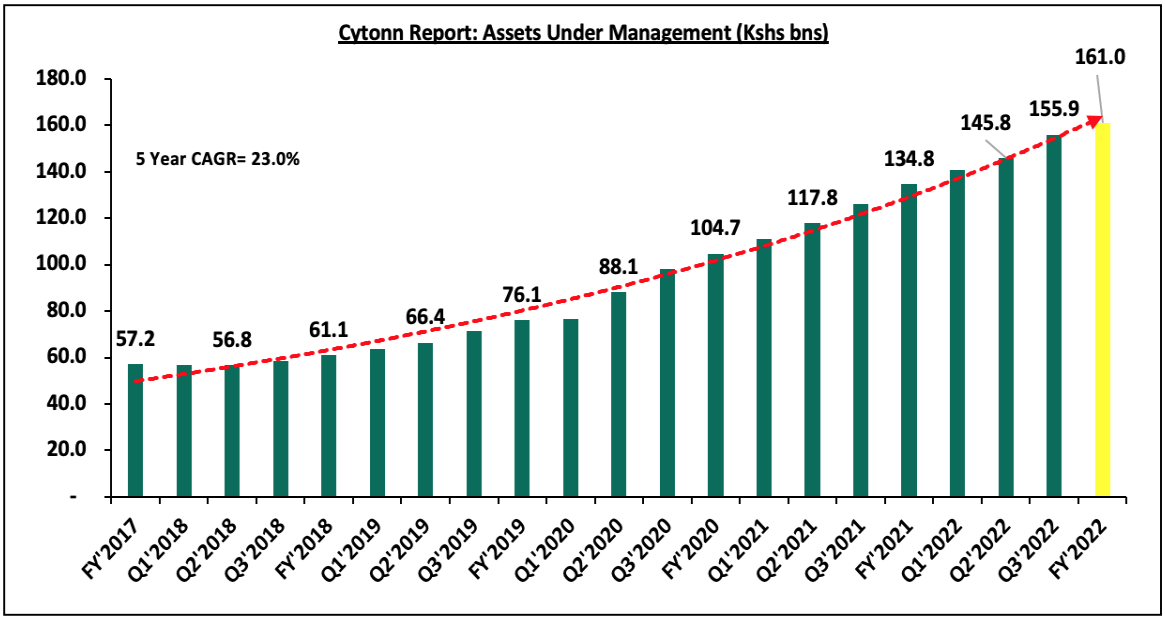

Figure 1.1: Growth in assets under management in mutual funds from 2017 to 2022

Source: Cytonn Report (2023)

Wealth maximization goal of the investor is easily achieved through proper composition of the investment allocation (Bettis & Hall, 2012). Any good investment has three major drivers: the need for capital appreciation, need to preserve capital and the need for income. With regard to the need for income, investors hope to gain future income from their investment. In most case an investor would desire to start getting the income in the immediate future. Capital preservation need is where some investors primarily seek to maintain the original value of their money or in other words, to preserve it. If the drive is capital appreciation, the investors want to set aside their money been assured that there is no risk of the money losing its purchasing power at any point in future, and that the same will be readily available. Since the investor's motive is to have the real value of the capital invested preserved, increase in the investment's nominal value is often commensurate with the pace of the change in inflation. Where the drive is the need for

capital appreciation, investors invest their money with the hope the capital invested will increase in value, or have its value grow to the point of meeting a future need. In this case, they are interested in increasing the value of the capital invested at a rate that exceeds the inflation rate such that even after adjustments for tax and inflation effect, the investor still gets positive returns. Mostly, investors are driven by capital appreciation needs that are attached to risk exposure for getting the returns desired. For optimal investment for profit margins, the organization should be indifferent on having resources invested today and having the same transferred to tomorrow. This is so long as one identifies appropriate discount rate for discounting the payoff in the next period (Sharpe, 2013).

Mutual funds in Kenya have varied portfolio compositions depending on the type of fund. On average, equity funds have a higher allocation to equities, bond funds have a higher allocation to fixed income securities, and money market funds have a higher allocation to cash and cash equivalents. Aloice and Odundo (2019) found that equity funds in Kenya had an average allocation of 69% to equities, 6% to fixed income securities, and 17% to cash and cash equivalents; bond funds had an average allocation of 80% to fixed income securities, 8% to equities, and 5% to cash and cash equivalents. Money market funds had an average allocation of 57% to cash and cash equivalents, 32% to fixed income securities, and 3% to equities (Ndegwa & Mutunga, 2016). Muturi (2018) conducted a study that analyzed the performance of mutual funds in Kenya from 2009 to 2015 and found that equity funds had an average allocation of 67% to equities, 17% to cash and cash equivalents, and 10% to fixed income securities. Bond funds had an average allocation of 85% to fixed income securities, 8% to cash and cash equivalents, and 4% to

equities. Money market funds had an average allocation of 69% to cash and cash equivalents, 28% to fixed income securities, and 2% to equities (Aloice & Odundo, 2019). Portfolio composition of mutual funds in Kenya keeps changing depending on the investment objectives and strategies of each fund.

1.1.3 Mutual Funds in Kenya

Kenya's mutual funds are regulated by the Capital Markets Authority (CMA) under the Capital Markets Authority Regulations 2001. The first mutual fund in the country was established in December 2001 when CMA licensed African Alliance Kenya to establish the first regulated mutual fund institution (Ojung'a, Namusonge & Sakwa, 2018). In its 2022 annual report, CMA highlighted that the CMA regulations 2001 currently guiding the regulation of mutual funds are about to be overhauled as the Authority seeks to address the market dynamics and capture key developments in the industry since their establishment in 2001, besides aligning with global practice. The regulations are set to be replaced by Draft Capital Markets (Collective Investment Schemes) Regulations and the Draft Capital Markets (Collective Investment Schemes [Alternative Investment Funds] Regulations, 2022 developed by CMA in collaboration with the Financial Sector Deepening Africa. The regulations are generally aimed at regulating the pooling of funds and management of the same including licensing key players like the fund manager, custodian, trustee and the intermediary service platform provider (CMA, 2022).

There are 35 registered mutual funds in Kenya by CMA (See Appendix I). The assets under management (AUM) in the mutual funds have been increasing steadily over the past six years having grown from Ksh.56.6 billion as at the end of March 2018 to about Ksh.175.97 billion by the end of June 2023. The funds had 44% of the AUM invested in

fixed deposits, 43% invested in government securities while the rest was invested in cash and demand deposits (5%), listed securities (3%), unlisted securities (3%), other CIS (0.7%), off-shore investments (0.4%) and immovable property (0.2%) (CMA, 2023).

1.2 Statement of the Problem

The importance of mutual funds cannot be overemphasized. According to Ndanu and Gatauwa (2023), they provide investors with access to diverse investment opportunities in regional and international markets. Through mutual funds, investors are able to bargain for better returns for the investment than when they invest independently, as well as been able to pool funds which minimize the cost of trading (buying and selling) securities. Mutual funds pool funds from the investors and jointly invest it in portfolio including equity/stock, bonds, money market instruments and other authorized securities, where they generate returns through dividends, capital gains and interest earned (Muthomi & Muturi, 2019). Nevertheless, for a fund to be successful and perform well, it must be able to consistently generate returns that are above average (Dawe, Pokhariyal & Mwaura, 2014) implying the need for careful investments selection for their portfolio composition.

A critical look into the performance of mutual funds in Kenya shows that despite reporting a steady growth in assets under management (AUM) from Ksh.56.6 billion in 2018 to about Ksh.175.97 billion in June 2023 (CMA, 2023), several of them have been reporting losses. For instance, in 2022, CIC Unit Trust Scheme reported a loss of 22.1 million shillings in their equity investment (CIC Unit Trust Scheme, 2022) while NCBA Unit Trust, the second large mutual fund reported a loss of 8.7 million shillings from similar investment (NCBA, 2022). Besides, several researchers (like Wafula, Yugi & Alala, 2023; Ndanu & Gatauwa, 2023; Muthomi & Muturi, 2019) who have assessed the

mutual funds' performance in the country have also highlighted the downturn in several mutual funds' performance in the country. As Nthimba, Jagongo and Wamugo (2021) warned, the poor performance been reported by mutual funds continuously may discourage both corporate and individual investors. A critical question then is, how does investment portfolio composition affect performance of the mutual funds?

Although there is considerable conceptual literature documented on portfolio composition and financial performance, the interplay between portfolio composition and financial performance within the context of Kenya's mutual funds has scarcely been investigated. Some have been conducted outside Kenya hence their findings cannot be generalized to Kenyan mutual funds. For instance, Barnes and Burnie (2014) assessed bond portfolio composition and performance of companies listed in the Canadian Stock Exchange. Similarly, Ilo, Yinusa and Elumah (2018) assessed portfolio composition and performance of mutual funds in Nigeria. Related studies done in Kenya have gaps that limit the generalization of their findings to Kenyan mutual funds. For instance, Obiero (2019) investigated how portfolio diversification impacted listed investment firms' performance in Kenya. Since the scope of the study was investment firms listed on NSE, the findings may not precisely apply to all mutual funds in Kenya since not all mutual funds are listed, and the firms covered were not all mutual funds. Kimeu (2015) assessed the impact of portfolio composition on how investment firms were performing in Nairobi, while Kamwaro (2013) analyzed the effect of diversifying investment on performance of listed commercial banks using multiple linear regression analysis. The findings however cannot be applied to mutual funds since none of the studies specifically addressed mutual funds.

How portfolio composition and financial performance in Kenya's mutual funds are related thus remains unclear because as evident in the reviewed empirical studies, scholars have seldom considered the topic in their research. Consequently, there is shortage of adequate reliable empirical insights to guide strategic intervention in portfolio composition in Kenya's mutual funds geared towards enhancing their financial performance which as aforementioned has been dwindling in many of them. In bid to address this shortage therefore, this research explores portfolio composition and its effect on Kenya's mutual funds' performance.

1.3 Objectives of the Study

1.3.1 General Objective

To assess how portfolio composition affects financial performance of Kenyan mutual funds.

1.3.2 Specific Objectives

i. To analyze how equity investment affects financial performance of mutual funds in Kenya.

ii. To investigate how bonds investment on financial performance affects mutual funds' performance in Kenya.

iii. To assess how money market investment affects mutual funds' performance in Kenya

1.4 Research Hypotheses

Ho1: Equity investment does not have significantly affect mutual funds' financial performance in Kenya.

Ho2: Bonds investment does not have significantly affect mutual funds 'financial performance in Kenya.

Ho3: Money market investment has no significant effect on mutual funds 'financial performance in Kenya.

1.5 Scope of the Study

The study focused on examining impact of portfolio diversification on the financial performance of Kenya's mutual funds, specifically in terms of bond investments, equity investments and money market investments on return on performance of mutual funds. The study collected data covering a four-year period from 2019 to 2022 because CMA, the regulator of mutual funds, has published reports for mutual funds investments from 2019. Reports for earlier years were not published by CMA at the time of this study. The study focused on the 35 mutual funds registered in Kenya by the CMA as outlined in Appendix I.

1.6 Significance of the Study

Financial sector in Kenya is quite crucial to each and every part and parcel in the country ranging from individual to corporate level and therefore this research is critical in determining financial performance of mutual funds in the country. Mutual funds can gain insights on some of the deficiencies that they should address to address the problem of

low performance or how to maximize profits. Secondly the study is also beneficial to the government of Kenya since mutual funds play a critical role in the national economy.

The government can use the insights from the study to put up strategies that will boost economy in the country thus enabling various organizations to edge out their competitors. Thirdly, the CMA as the regulator of mutual funds can also use the findings to gain insights on the areas that need to be streamlined with respect to the laws governing or regulating the operations of mutual funds in the country. Last but not least, this study can help other scholars and academicians who would like to do further exploration in the same area of study. They can use the study as part of their references in their research work.

1.7 Limitations of the Study

Given the time and resources constraints, the study did not consider the entire period from when mutual funds were established in Kenya. Rather, it was limited to a five year period from 2019 to 2022. Therefore, while the findings reflect a relatively current state of the trends in portfolio composition and financial performance in the mutual funds, the findings have not incorporated data in the earlier years. As such, the inferences drawn from the findings are based on a limited period analysis.

The study used secondary data which was obtained from published reports especially by CMA and from the organizations' websites. Data for some of the mutual funds was not available in the reports for some of the years which limited the data analyzed in this study. As such, the findings do not include the data for all the mutual funds in all the years covered.

1.8 Organization of the Study

The work has five chapters as follows: chapter one contains the study background. Thus, it lays down research problem, objectives and the scope of the research. It also provides the significance of the research and limitations. Chapter two encompasses a review of relevant literature including theoretical and empirical literature. Chapter three articulates the methodology that was applied to carry out the research. It thus explains the research design, methods and techniques and techniques applied in gathering and analyzing data for this research. Chapter four presents the research findings and their discussion while the chapter five mainly contains a recap of the key findings, and articulates the conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The section begins by reviewing theoretical literature that entails relevant theories that will anchor the assessment of portfolio composition and financial performance. Then, empirical literature is reviewed where relevant empirical studies are reviewed. Lastly, a summary is provided highlighting the literature gaps identified followed by a conceptual framework illustrating the investigation that will be conducted in this study.

2.2 Theoretical Review

The research was based on the modern portfolio theory, agency theory, as well as resource-based theory. These are discussed in sections 2.2.1 through 2.2.3.

2.2.1 Modern Portfolio Theory (MPT)

The proponent of the theory is Markowitz (1952). It avers that in investment, it is possible to have an optimal portfolio that efficiently generates maximum expected return at particular or minimum risk level that can be constructed in a four-basic steps process: valuation of security, allocating assets, optimizing portfolio and measuring performance (Muthomi & Muturi, 2019). Thus, based on MPT, investment decision in mutual funds entails two key questions: which among possible investment alternatives should the funds be invested in, and what is the weight of each investment (how much should be invested in each alternative considered).

The MPT is often criticized because of its simple assumptions and its potential lack of applicability in reality, as it relies on predicted future estimates of risk and yield. MPT also does not take into account non-financial factors that influence investment decisions, such as personal, strategic, environmental, or social factors (Makau & Ambrose, 2017). Nonetheless, despite its limitations, MPT is still a useful tool for investors to categorize, estimate, and manage risk and return. In this study, MPT provided insights to understand how mutual funds chose their portfolio composition.

2.2.2 Agency Theory

The theory was proposed by Jensen and Meckling (1976). The theory considers organization managers as agents employed by shareholders/investors (principals) who have invested in the organization to maximize their wealth (Ojung'a, Namusonge & Sakwa, 2018). The theory asserts that in the corporate world where ownership through shareholding is common, the action of managers who are employed by the shareholders (owners) usually deviate from what maximization of shareholders return would require (Zeckhauser & Pratt, 1985). This often leads to agency loss because the investors' objectives differ from the managers' objectives – managers prefer holding more cash within firms rather than increase payouts to shareholders (which the shareholders are interested in) especially when the firm has poor investment opportunities (Jensen, 1986).

Therefore, in the context of mutual funds, the managers of a particular mutual fund (agents) may fail to undertake actions that would maximize returns to the investors who have invested their money in the fund (principal). Based on the agency theory, in determining if an agent's action is in the interest of the principal, "agency loss standard" is usually used. This standard is the variation between the principal's best possible

outcome and the consequences of the action of the agent. For example, when the agent's actions are consistent with the interest of the principal, there is zero agency loss (Thuo, 2011). The higher the deviation of the action of the agent from the principals' interest, the higher the agency loss. In this regard, when the managers of a mutual fund act entirely in their own self-interests against the investors' interests, it means the agency loss in this case would be high.

The agency theory is however not without critics. One objection to agency theory is that it assumes that agents tend to be self-interested individuals seeking to achieve maximum personal wealth (Bowman, 2015). Donaldson (1990) also criticized the theory in relation to regressive simplification, methodology individualism, ideological framework, narrow defined motivation model, corporate governance's defensive and organizational economics. According to Donaldson (1990), the advents of the agency theory including Jensen and Meckling had very little attention on the research of organizational behavior where they ignored the research and eventually came up with assumptions that disregarded important conclusions from the traditional management theory. Even so, the agency theory provided useful insights in this study to understand how portfolio composition is linked to mutual funds' performance by providing informative insights on how the fund manager as the agent with the investors as the principal relates to maximize performance.

2.2.3 Resource-Based Theory

Barney (1991) is widely acknowledged as the key proponent of the resource-based theory (RBT). The theory asserts that if a few firms possess valuable resources (which are costly and cannot be imitated easily), such firms can control such resources in a manner that

generate competitive advantage in the firms' performance relative to competitors (Barney, 1991). Therefore, according to Adner and Helfat (2003), a firm's performance in RBT is a reflection of how they have been recombining or reconfiguring their various kinds or resources to serve the market. In this regard therefore, within the context of mutual funds, the performance of the funds including the returns the funds are yielding to the investors is a reflection of how the managers of the funds have been managing the funds.

In a mutual fund, the resources entails the assets under management in the funds, the fund managers' capabilities, the attributes of the fund itself (size, image, market share etc), information the managers access among others. Therefore, the firm's operation according to Barney (2007), acts as the adjustment factor in determining its ability in enabling or hindering the realization of the benefits attached to its resources been valuable, uncommon and hard for imitation. Therefore, as Kozlenkova, Samaha and Palmatier (2014) assert, the firm must be effective in leveraging resources as opposed to only possessing them. This theory was therefore useful in this study in assessing the performance of mutual funds. Insights from the theory were instrumental in understanding the variation of an individual fund's performance relative to the industry's average.

2.3 Empirical Review

2.3.1 Equity Investment and Financial Performance

Ilo, Yinusa and Elumah (2018) assessed the performance of mutual funds in Nigeria. Data from 37 mutual funds that were operating in the period 2012-2015 was analyzed. The analyzed data pertained to six categories of portfolios where the findings revealed

that equity investment positively affected mutual funds' performance. Nevertheless, having focused on Nigerian mutual funds, the study cannot be generalized to the Kenyan mutual funds because the portfolio composition and management of the mutual funds in the two countries are not the same.

Shukrani, Ifire, Yeya and Banafa (2022) applied descriptive research design using secondary data to analyze through inferential statistics analysis, how portfolio choice impacted the performance of investment firms quoted in NSE. Findings showed insignificant effect of investment in equity on performance. However, Obiero (2019) in an investigation regarding portfolio diversification and performance of the same firms indicated that investments in equities significantly affected the financial performance. Both studies (Shukrani, Ifire, Yeya & Banafa, 2022; Obiero, 2019) were similar but in different times and found inconsistent results which makes the findings in them unreliable to extrapolate to any specific firm.

The influence of equity investment on performance was also assessed by Kioko and Ochieng (2020). Using a six-year data (2014-2019) analyzed through multiple linear regression model, the results indicated that equity investment had a significant positive influence on return on investment. The study was however limited to the period 2014-2019 hence the findings may not accurately reflect the current state in the mutual funds because of changes in portfolio composition as well as fund management over time.

Kimani and Aduda (2016) did a research to assess how portfolio size affects fiscal productivity of Kenyan investment firms. The research used a five-year period secondary data collected from 45 investment firms. The study revealed that stock investment yielded the best returns, then bonds, and money markets in that order. Real estate

portfolios had the least yield. Since the scope was investment firms in Kenya and all of them are not necessarily mutual funds, the findings may be unreliable to be generalized as a reflection of the case in Kenyan mutual funds.

2.3.2 Bond Investment and Financial Performance

Barnes and Burnie (2014) assessed bond portfolio composition and how it affected diverse industries' performance listed in the Canadian Stock Exchange between 2008 and 2013. They adopted use of yield curves and regression models as the research methodology. These yield curves were applied in generating returns on which basis ex-ante expectations were determined in calculating the optimal bond portfolio return during the investment period. The regression model was used to calculate actual portfolio performance during the period. The results revealed that the maturity of the individual bonds differed hence the ex-ante expectations generated from the time-series returns did not cause any increase in the performance. Even so, these results were based on data from firms in diverse sectors represented in the Canadian Stock Exchange which doubtless cannot be a good representation of Kenyan mutual funds hence the results cannot be applied to the later.

Hanin, Noriza and Mohamad (2017) researched on how bond securities including treasury and corporate bonds impacted profitability of listed Turkish insurance firms. The study focused on 12 firms which had invested in both treasury and corporate bonds between 2012 and 2016. The researchers obtained data from Securities Commission and Bursa of Turkey. Findings revealed that bonds investment significantly influenced profitability. This study nonetheless focused on insurance companies whose modus

operandi is not the same as in mutual funds, which makes the findings unreliable to apply to Kenyan mutual funds.

The study conducted by Mwangi, Makau and Kosimbei (2014) to determine how bond investment and performance of quoted non-financial companies in NSE. Explanatory non-experimental design was applied with secondary data from annual reports and financial statements of the companies studied was collected and analyzed. The period considered was 2006-2012. Based on regression analysis, the findings revealed a significant negative effect of investment in bonds on performance. The research however covered only non-financial firms and the period covered may not reflect the true state of performance in recent years.

Musau (2016) conducted a study assessing how bond investment decisions affect SACCOs' performance in Kitui County. The research covered 12 SACCOs in the County where empirical study design was used with 10-year period time series data for the period 2006-2015 was analyzed. Simple multivariate analysis and correlation analysis were applied where the findings indicated that bond investment decisions significantly affected performance. However, this study focused on SACCOs in Kitui County which is not a sufficient representation of Kenyan mutual funds for the findings to be generalized to the later.

2.3.3 Money Market Investment and Financial Performance

Okoyan and Peter (2021) did a research on effects of investing in money market instruments on capital market performance over the period 1981 to 2018 in Nigeria. Analysis of the data was through descriptive statistics, covariance analysis, Johansen co-integration as well as vector error correction model. The focus was specifically to

investigate the effect of commercial paper, treasury bills and bankers' acceptance on the capital market performance. The study found that commercial paper, treasury bills had a negative effect while bankers' acceptance had a positive effect. The study however mostly emphasized on the impact on capital market performance as opposed to the impact on the financial performance of the institutions purchasing the money market instruments.

A study by Kiboi and Bosire (2021) determined the effect of money market securities on insurance firms' performance in Kenya between 2013 and 2019. The sample consisted of 37 general insurance companies. Data was analyzed through correlation and simple regression analysis. The proxy for measuring financial performance was Return on Equity. The results showed that money market securities investment significantly affected the financial performance positively. The research however was based on general insurance companies whose choice of money market instruments investments may not be the same as in the mutual funds.

Michael, Anthony and Josephine (2016) investigated the relationship between money market instruments and Nigerian banks' performance. They conducted the research using secondary data covering a 25-years period between 1990 and 2014. They analyzed data using descriptive and inferential statistics analysis. Results revealed most of the money market investments significantly affected banks' performance positively. However, the researchers only considered performing loans and advances as the only proxy for performance. .

Abdulsalam and Edison (2022) did a research on how money market investment impacted commercial banks' performance in Sierra Leone. The study focused on 9

commercial banks where their operations and performance over the period 2014-2020 were assessed. Primary data was collected from 32 respondents in the banks using a questionnaire. The data was analyzed based on descriptive statistics which revealed that money market operations and commercial banks' performance are strongly correlated. The study was however based on descriptive statistics analysis only without estimating the relationship or determining the significance of the relationship. Therefore, the findings do not provide comprehensive insights on money market investments and performance.

2.4 Summary of Literature Review and Research Gaps

Reviewed literature makes it apparent there have been several studies investigating relationship between various aspects of portfolio diversification and financial performance. These studies provide considerable insights in understanding the mode of operation of various investment firms and financial performance of the organizations. However, in most of the empirical studies conducted, there are conceptual, contextual and methodological gaps that undermine the ability of the study findings been extrapolated to explain the relationship between portfolio composition and mutual funds in Kenya. Table 2.1 recaps the review of literature and highlights the gaps.

Table 2.1: Summarized literature review highlighting research gaps

Author	**Research title**	**Research Methodology**	**Research Gap(s)**	**Address to the gap(s)**
Ilo, Yinusa and Elumah (2018)	Performance of mutual funds in Nigeria	Secondary data from six categories of portfolios was analyzed from 37 mutual funds	Findings not applicable because portfolio composition and management in	Current study specifically investigated the Kenyan mutual funds

			the two countries differs.	
Kioko and Ochieng (2020)	Portfolio diversification and financial performance of investment firms listed in NSE	Six-year data (2014-2019) analyzed through multiple linear regression model	Period studied (2014-2019) may not accurately reflect current state in the mutual funds due to changes in portfolio composition and fund management over time	The current study focused on relatively recent five year period from 2018 to 2022
Hanin, Noriza and Mohamad (2017)	Impact of bond securities on financial profitability of public listed insurance companies in Turkey	Secondary data for 12 listed insurance companies for the period 2012 – 2016 was analyzed	Study focused on insurance companies whose modus operandi differs from that of mutual funds	Current study was limited to the mutual funds in Kenya
Kamwaro (2013)	Portfolio choice and financial performance of investment companies	Secondary data of four investment companies listed in NSE during the period 2007 – 2011 was studied	The sample size of only 4 investment companies is too small for the findings to be reliably generalized to the current state of mutual funds	The current study expanded the sample studied since seven mutual funds were covered

Source: Researcher (2024)

2.5 Conceptual Framework

According to Adom, Hussein and Agyem (2018), the conceptual framework illustrates researcher's explanation of how the research problem will be explored in a study (Adom, Hussein & Agyem, 2018). In this study, the research problem was explored through an

investigation on the association between portfolio composition and mutual funds' performance. Portfolio composition in this case was assessed in terms of equity investment, bond investment and money market investment. The researcher investigated how each of the investments affects mutual funds' performance. Therefore, conceptual framework for this research comprises of equity investment, bond investment and money market investment as the independent variables while the dependent variable is financial performance as illustrated in Figure 2.1.

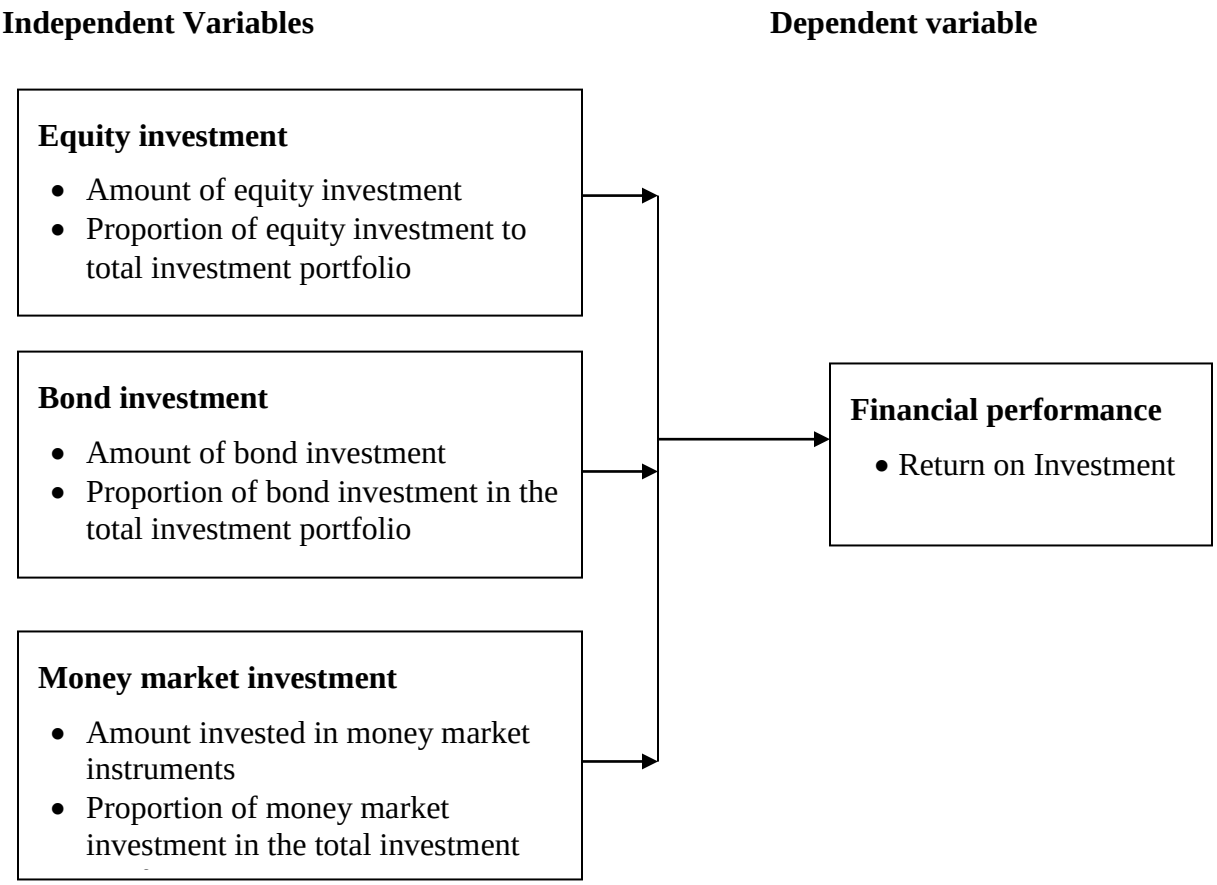

Figure 2.1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section provides details on how the research was conducted. Thus, it articulates the research design used, the population targeted, sampling design, procedures used for collecting data as well as its validity and reliability. It goes further to explain how data was analyzed and the considerations that were taken into account with regard to research ethics.

3.2 Research Design

The research used explanatory research design. Explanatory design uses statistical data to explain the degree of association between two or more variables. This research design focuses on identifying and interpreting relationships and patterns among various facts. While this type of research recognizes trends and patterns in data, it does not aim to establish causal relationships between the variables. Cause and effect are not the primary focus of this observational research; instead, the research analyzes data, relationships, and distributions of variables without manipulating them. Variables are identified and studied as they occur naturally without any manipulation (Robson, 2012). Since this research sought to assess how portfolio composition affects mutual funds' performance, explanatory design was deemed appropriate.

3.3 Target Population

This refers to collective objects, events or people which make up the subjects that are been studied in a research (Asiamah, Mensah & Oteng-Abayie, 2017). Therefore, in this research, the target population was the 35 mutual funds in Kenya registered by the CMA (see appendix I).

3.4 Sampling Design

Purposive sampling was applied whereby only mutual funds recognized as active by CMA as at June 2023 were covered. This is because although CMA lists all the approved or registered mutual funds, it only publishes financial statements and records of the active mutual funds. In June 2023, CMA released the Collective Investment Schemes quarterly report highlighting that out of the registered 35 mutual funds, 27 were active in the market while 8 were not (Capital Markets Authority, 2023). In this regard therefore, the sample size comprised of the 27 mutual funds recognized by CMA as at June 2023. Research data for the funds was collected for all the four years studied (2019-2022). The sample size was approximately 77.1% of the population which was considered adequate because Mugenda and Mugenda (2003) asserted that in research, the sample size should be more than 10% of the population.

3.5 Data Collection Procedure

The research used secondary data obtained from sources such as Capital Markets Authority of Kenya, the Nairobi Securities Exchange, and mutual funds official website published financial reports. The first step was to search for the data on portfolio composition as well as performance data for the mutual funds from the different sources

identified and compile the data. The data included information on the composition of the portfolios of each mutual fund, including equity investment, bonds investment, money market investments and the total investment portfolio for every year included as indicated in the data collection guide (Appendix II).

The financial performance data included the following data for the investment portfolio: opening/initial value and the end/closing value of the investment portfolio for every year. These were used to determine the Return on Investment (ROI) for the portfolio as indicated in the data collection guide (Appendix II).

3.6 Validity and Reliability

Prior to data collection and its subsequent analysis, the researcher ensured that the research data that would be used had acceptable validity and reliability as elaborated in 3.6.1 and 3.6.2 respectively.

3.6.1 Validity of the Study

According to Heale and Twycross (2015), validity of data in research is the extent that research data used correctly measures the constructs or concepts it is intended to measure. To ensure data validity, the researcher had the project supervisor review the data to be collected in the study and provide input on any change that was necessary before the actual data collection. This helped to ensure that the researcher collects relevant data that correctly measures the key constructs assessed in this study.

3.6.2 Reliability of the Study

Reliability is the extent of completeness and accuracy of the data and its ability to consistently meet the purpose it was collected for without having to be altered

inappropriately (Oluwaseun, Ibrahim & Abayomi, 2019). Completeness in this case is the extent that data records used are relevant and the content in each field required is populated appropriately. Accuracy is the extent that the data recorded is a true reflection of the actual underlying information while consistency is the ability of the data to yield similar results when used in similar analyses (Adefioye, 2016).

To ensure reliability of the data, it was mainly collected from the statements published by CMA. This is because CMA been the regulator of mutual funds is likely to have more accurate and complete data on the mutual funds, hence more reliable. Moreover, before analyzing the data for the study, the data was checked for any missing or incorrect values and other anomalies. In addition, Cronbach's alpha test was done on the data. Cronbach's alpha test according is the most widely used approach to test reliability (Taherdoost, 2016). The alpha shows internal consistency in the data and it ranges between 0 and 1 whereby, if the data is reliable, the alpha is 0.7 or more (Haradhan, 2017).

3.7 Empirical Model

The empirical model that was used in the study was a multiple linear regression model. The model was chosen because of its relative ease and reliability in application to explain linear relationships between variables. The model was estimated in the following format:

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon$$

The variables are:

X1= Equity investment,

X2= Bonds investment,

X3= Money market investment,

ε = Error term.

Y = Financial performance;

β0 = constant;

β1, β2 and β3 = Beta coefficients for variables X1, X2 and X3 respectively.

3.8 Operationalization and Measurement of Study Variables

The study had three constructs as the independent variables for the study and one construct as the dependent variable. In line with the study objectives, the independent variables were: equity investment, bonds investment and money market investments. The dependent variable on the other hand entailed the financial performance. Each of these variables was measured or calculated based on various distinct indicators as presented in Table 3.1

Table 3.1: Operationalization and measurement of the variables

Construct	**Variable**	**Operationalization**	**Measurement**
Equity investment	Independent variable	Funds in equity investments	Equity investment/Total portfolio
Bonds investment	Independent variable	Funds in bond investments	Bonds investment/Total portfolio
Money market investment	Independent variable	Funds in money market investments	Money market investment/Total portfolio
Financial performance	Dependent variable	Returns from the portfolio	$ROI = \frac{End\ value\ of\ Investment - Initial\ value\ of\ the\ Inves}{Initial\ value\ of\ the\ investment}$

Source: Researcher (2023)

3.9 Data Analysis

To analyze the data, the first step involved entering the collected data into SPSS version 25. After entering the data, it was analyzed by computing descriptive statistics first for the data sets pertaining to various study variables in line with the objectives. Descriptive statistics included frequencies, percentages, mean and standard deviations. Descriptive statistics helped to describe the distribution of the variables. Inferential statistics were then used to help in assessing how the variables are related. Inferential statistics involved subjecting the data to the empirical model explained in 3.7. The correlation coefficients analysis was also done. The results were presented in tables, graphs and charts.

3.10 Diagnostic Tests

For the purpose of estimating the regression model, the average for each mutual fund for all years was determined for each variable and used to estimate the model. The estimated regression equation was validated to ensure that it meets the assumptions of the OLS method. In this regard, diagnostic tests were done including multicolinearity tests and tests for normality and heteroscedasticity. Multicolinearity test is to check and ensure there is no multicollinearity among the variables. This was done based on Variance Inflation Factor (VIF) check whereby the VIF must be lesser than 5 to ensure absence of multicollinearity (Dhakal, 2018).

Test for normality is to ensure a normal distribution in the data used. The normality test was based on Shapiro-Wilk test in which case, the Shapiro-Wilk coefficient for the variables must have a p-value (significance) higher than 0.05 to indicate a normal distribution (Field, 2009). Lastly, tests for heteroscedasticity which is basically a check

whether there are significantly different error variances (heteroscedaticity) or the error variances are not significantly different (homoscedasticity). Multiple linear regression requires that there should be homoscedasticity in the independent variables which is confirmed by p-values higher than 0.05 (Weirs, 2008).

3.11 Ethical Considerations

According to Fleming (2018), ethical research considerations involve measures that a researcher takes to ensure that there is informed consent from those engaged to participate in the study, their identity is kept confidential or anonymous, they are protected from physical and psychological harm. In this study, the researcher used secondary data and therefore, informed consent and anonymity guarantee was not necessary because the data is available in the public domain. However, ensure confidentiality in reporting some of the analyzed data that may not be openly available in the public, the names of the mutual funds will be coded and their codes used for reporting purposes. In addition, since no human participants were directly engaged, there was no risk of any physical harm. However, to ensure that there was no infringement of copyright issues and plagiarism, all the information collected from different sources was appropriately cited and referenced using the APA referencing style.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter contains the research findings obtained from the analysis of the data collected. In addition, it also provides a discussion of the very findings in the light of the objectives that the study sought to accomplish. The findings are broadly categorized into two: those derived from descriptive statistics analysis and those derived from inferential statistics analysis. Prior to the findings, a section on the response rate achieved is first presented.

4.2 Response Rate

In carrying out the study, the researcher targeted to collect data for a 4-year period (2019-2022) from a sample of 27 mutual funds. However, 11 of the mutual funds had incomplete data for some of the years hence were excluded from analysis. Consequently, the data analyzed and used in the research was from 16 mutual funds out of the targeted 27 which is equivalent to approximately 59.3% response rate. The response rate was sufficient for the research because according to Sataloff and Vontella (2021), the minimum recommended response rate threshold is within the range of 40% – 75%.

4.3 Descriptive Statistics

Descriptive statistics were computed for equity investment, bonds investment and money market investment for the mutual funds over the 4-year period covered from 2019 to 2022. The descriptive statistics computed entailed the total investments, average

investment for each year as well as the overall average investment for the entire 4-year period cumulatively. In addition, the maximum and minimum investments for the period were computed for the period.

4.3.1 Equity Investment

The total equity investment was determined as the sum of the equity investments by the different mutual funds for every year. On the other hand, the average equity investment for each year was determined by dividing the total equity investments for the year by the total number of the mutual funds. Figure 4.1 shows the trend in equity investment by the mutual funds over the 4-year period studied based on the total equity investments and average equity investments by the mutual funds.

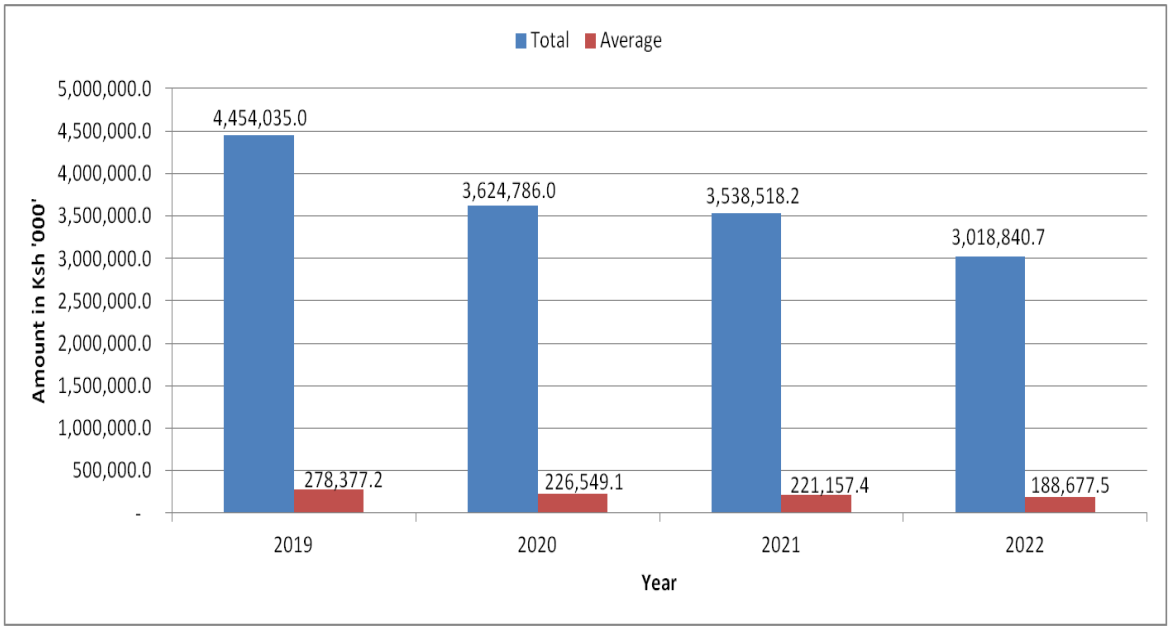

Figure 4.1: Trend in equity investments by mutual funds from 2019 to 2022

Source: Research Data (2024)

The total equity investment was highest in 2019 at 4.45 billion shillings and lowest in 2022 at 3.02 billion shillings in 2022. The mutual funds had total equity investments of 3.62 billion shillings and 3.54 billion shillings in 2020 and 2021 respectively. Similarly, average equity investment was highest in 2019 at 278.38 million shillings and lowest in 2022 at 188.68 million shillings. In 2020 and 2021, the average equity investment by the mutual funds was 226.55 million shillings and 221.16 million shillings respectively. The findings indicate that over the 4-year period analyzed (2019-2022), mutual funds' investment in equity showed a decreasing trajectory as reflected by the values of both the total equity investment and average equity investment. This implies that mutual funds' investment in equity had been declining over the period. The findings concur with Kioko and Ochieng (2020) which revealed that investment companies were not putting much of equity investment in their portfolio composition.

4.3.2 Bonds Investment

The total bonds investment was determined as the sum of the investments in bonds by the different mutual funds for every year. The average bonds investment for each year on the other hand was determined by dividing the total bonds investments for the year by the total number of the mutual funds. Figure 4.2 shows the trend in bonds investment by the mutual funds over the 4-year period studied based on the total investments and average investments in bonds by the mutual funds.

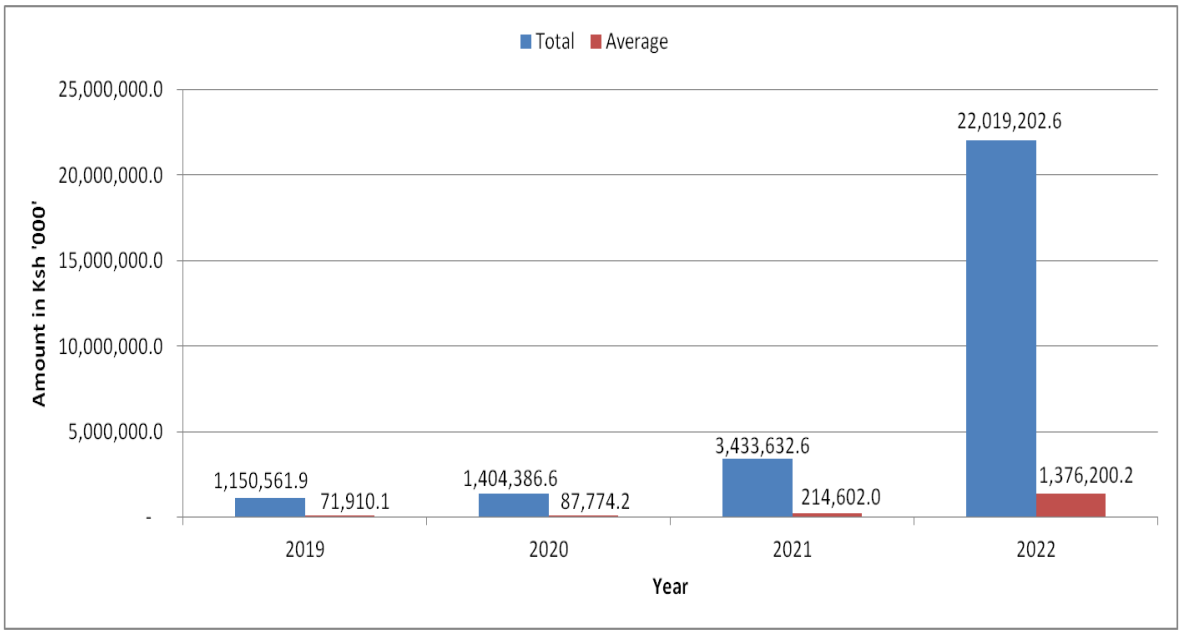

Figure 4.2: Trend in bonds investments by mutual funds from 2019 to 2022

Source: Research Data (2024)

The total bonds investment was highest in 2022 at 22.02 billion shillings and lowest in 2019 at 1.15 billion shillings in 2019. In 2020 and 2021, the mutual funds had total bonds investments of 1.40 billion and 3.4 billion shillings respectively. Similarly, average bonds investment was highest in 2022 at 1.38 billion shillings in 2022 and lowest in 2019 at 71.91 million shillings. In 2020 and 2021, the average bonds investment by the mutual funds was 87.77 million shillings and 214.6 million shillings respectively. The findings indicate that mutual funds' investment in bonds increased progressively over the period 2019-2022. Similar trend was reported in the study by Obiero (2019) where bonds investment among insurance companies was found to increase progressively over the period 2013-2017.

4.3.3 Money Market Investment

The total money market investment was determined as the sum of the investments in money markets by the different mutual funds for every year. On the other hand, the average investment in money market for each year was determined by dividing the total money market investments for the year by the total number of the mutual funds. Figure 4.3 shows the trend in money market investment by the mutual funds over the 4-year period studied based on their total investments in money markets and average investments in money markets by the mutual funds per year.

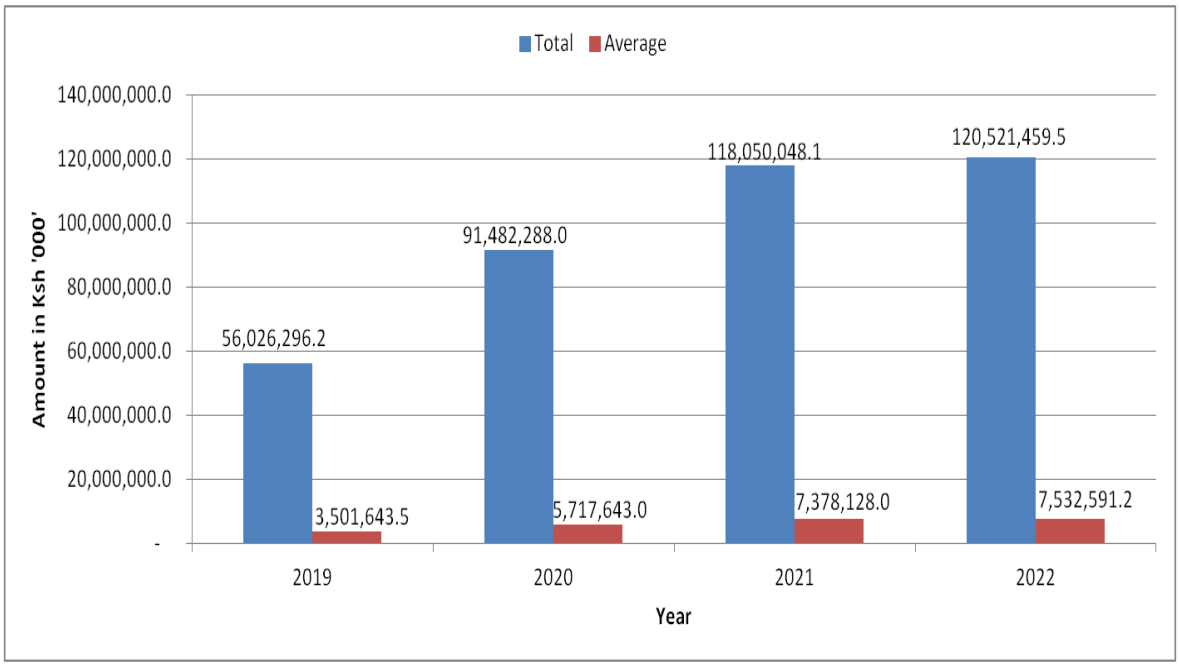

Figure 4.3: Trend in money market investments by mutual funds from 2019 to 2022

Source: Research Data (2024)

The total investment in money markets was highest in 2022 at 120.52 billion shillings and lowest in 2019 at 56.03 billion shillings in 2019. The total investment in money markets by the mutual funds in 2020 was 91.48 billion shillings, while in 2021 it was

118.05 billion shillings. Similarly, average money market investment was highest in 2022 at 7.53 million shillings and lowest in 2019 at 3.5 million shillings. In 2020 and 2021, the average investment by the mutual funds was 5.72 million shillings and 7.38 million shillings respectively. The findings indicate that over the 4-year period analyzed (2019-2022), mutual funds' investment in money markets showed a progressive increase over the period 2019-2022. The findings agree with assertions by Cytonn (2024) that money markets have become major investment vehicles in the country mainly due to their high returns to investors.

4.3.4 Performance

The researcher assessed the performance of the mutual funds based on Return on Investment (ROI) reported by the mutual funds every year. Table 3.2 contains the results. For the purpose of confidentiality, the names of the 16 mutual funds covered were represented by codes MF1 to MF16.

Table 4.1: Performance of the mutual funds in Kenya between 2019 and 2022

	Return on Investment (ROI)				
Mutual Fund	**2019**	**2020**	**2021**	**2022**	**Average**
MF1	2.74	1.70	1.33	1.00	1.69
MF2	0.78	0.10	0.02	0.01	0.23
MF3	0.69	0.60	0.53	0.50	0.58
MF4	12.85	11.80	10.82	8.30	10.94
MF5	39.05	41.10	41.79	38.10	40.01
MF6	0.01	1.00	2.08	2.20	1.32
MF7	0.94	0.80	0.52	0.50	0.69
MF8	2.18	2.30	2.27	2.40	2.29
MF9	0.56	0.30	0.18	0.10	0.29
MF10	0.61	0.70	0.41	0.40	0.53
MF11	10.54	11.00	9.91	9.20	10.16
MF12	1.52	1.60	1.78	2.00	1.73
MF13	9.45	12.00	13.37	15.70	12.63
MF14	8.21	5.90	4.94	4.70	5.94
MF15	3.59	6.00	6.39	9.80	6.45
MF16	1.44	1.40	1.48	1.60	1.48
Average	**5.95**	**6.14**	**6.11**	**6.03**	

Overall, the performance of the mutual funds was highest in 2020 where the overall ROI on average was 6.14% compared to the other years considered while 2019 had the least performance with an average ROI of 5.95%. However, considering the performance of individual mutual funds per year, there were high variations in the individual mutual funds' performance in all the years considered. In 2019, the ROI ranged between 0.01% and 39.05% while in 2020 it was in the range 0.1% - 41.1%. In 2021, the range was from 0.02% to 41.79% and in 2022, it was between 0.01% and 38.1%. The variation in performance of the individual mutual funds implies that the different portfolio composition in different mutual funds may have resulted into different levels of returns. However, since the mutual funds' data on performance was not reported on individual

investments' returns but as consolidated report of the returns from the entire portfolio, inferential statistics analysis was done to estimate the influence or contribution of the different investments considered in this study on the performance. That is, equity investment, bonds investment and money market investments. Section 4.4 presents the findings from the inferential statistics analysis.

4.4 Inferential Statistics

Inferential analysis mainly entailed correlation analysis, regression analysis and hypothesis testing which were all done in SPSS software. The diagnostic tests for checking the suitability of using multiple linear regression model in analyzing the data were also done using the SPSS software. The results are discussed in sections 4.4.1 through 4.4.3.

4.4.1 Correlation Analysis

The primary focus in the correlation analysis was on the correlation between performance and each of the independent variables (equity investment, bonds investment and money market investment). The Spearman's correlation coefficient (Spearman's rho) was computed in analyzing the correlations between the variables. Table 4.4 presents the correlation coefficients.

Table 4.2: Correlation coefficients

			Equity investment(X1)	Bonds investment(X2)	Money market investment(X3)	Performance
Spearman's rho	Equity investment(X1)	Correlation Coefficient	1.000	.641**	.552**	.670**
		Sig. (2-tailed)	.	.000	.000	.000
		N	64	64	64	64
	Bonds investment(X2)	Correlation Coefficient	.641**	1.000	.237	.426**
		Sig. (2-tailed)	.000	.	.059	.000
		N	64	64	64	64
	Money market investment(X3)	Correlation Coefficient	.552**	.237	1.000	.831**
		Sig. (2-tailed)	.000	.059	.	.000
		N	64	64	64	64
	Performance	Correlation Coefficient	.670**	.426**	.831**	1.000
		Sig. (2-tailed)	.000	.000	.000	.
		N	64	64	64	64

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

Source: Research Data (2024)

The correlation between equity investment and performance of the mutual funds was 0.670. This is an indication that equity investment is positively correlated with performance of the mutual funds. This means that when a mutual fund increases the proportion of equity investment in its portfolio, the performance is also likely to increases. The correlation is also significant at 95% confidence level because the p-value of the coefficient was less than 0.05 (i.e Sig.= 0.000) which means that adjusting equity investment in a mutual fund's portfolio is likely to cause a significant change in the mutual fund's performance. The findings concur with Ilo, Yinusa and Elumah (2018) who revealed that equity investment had a significant positive correlation with performance.

The correlation between bonds investment and performance of was lesser at 0.426. However, the findings show that the correlation was also positive and significant. This is because the coefficient's p-value was less than 0.05 too (i.e Sig.= 0.000). The findings indicate that bonds investment changing the amount of bonds investment in a mutual fund's portfolio is also likely to cause a significant change in the mutual fund's performance. The findings differ with the findings by Mwangi, Makau and Kosimbei (2014) that revealed a significant negative correlation between investment in bonds and performance.

Correlation between money market investment and performance was the highest at 0.831. The correlation was significant too since its p-value was lesser than 0.05 too (Sig.= 0.000). The findings indicate that there is a strong positive correlation between money market investment and performance of a mutual fund. This means that when a mutual fund adjusts the size of its investment in money market, this will have a significant impact on its performance. The findings concur with Abdulsalam and Edison (2022) whose study found that money market investments and commercial banks' performance are strongly correlated.

4.4.2 Diagnostic Tests

The first diagnostic tests that was done was multicollinearity test. This was based on the variance inflation factor (VIF). Table 4.5 presents the results.

Table 4.3: Multicolinearity test results

Model		Collinearity Statistics	
		Tolerance	VIF
1	Equity investment(X1)	.962	1.040
	Bonds investment(X2)	.995	1.005
	Money market investment(X3)	.963	1.039

a. Dependent Variable: Performance

Source: Research Data (2024)

Multicolinearity test was based on the variance inflation factor (VIF). From the VIF test results, each of the variables had a VIF of less than 5. That is, equity investment (VIF= 1.04), bonds investment (VIF= 1.005), and money market investment (VIF= 1.039). The low VIF values of below 5 means there is no multicolinearity between the independent variables (Dhakal, 2018).

The second diagnostic test done was the test for normality distribution in the data. Shapiro-Wilk test was applied to test for normality. The results are presented in Table 4.6.

Table 4.4: Normality test results

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Equity investment(X1)	.328	64	.153	.663	64	.185
Bonds investment(X2)	.420	64	.200	.788	64	.271
Money market investment(X3)	.305	64	.080	.535	64	.162

a. Lilliefors Significance Correction

Source: Research Data (2024)

The normality test results indicated that for each variable, the Shapiro-Wilk statistic had a p-value higher than 0.05. That is equity investment (Sig. = 0.185), bonds investment (Sig.

= 0.271), and money market investment (Sig. = 0.162). The high p-values greater than 0.05 indicates there was a normal distribution (Field, 2009).

The third diagnostic test done was the test for heteroscedasticity. The test was based on Levene's statistic test and the results are presented in Table 4.7.

Table 4.5: Heteroscedasticity test results

Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Equity investment(X1)	20.418	4	57	.091
Bonds investment(X2)	34.135	4	57	.063
Money market investment(X3)	19.754	4	57	.080

Dependent variable: Performance
Sig. = 0.05

Source: Research Data (2024)

From the heteroscedasticity test results, the Levene statistic for each of the variables had a p-value greater than 0.05. That is, equity investment (Sig. = 0.091), bonds investment (Sig. = 0.063), and money market investment (Sig. = 0.080). The high p-values of above 0.05 imply that there are no significant differences in the variance of the dependent variable for each of the independent variables (Weirs, 2008). That is, there was homogeneity of variances in the data. This means there is no heteroscedasticity in the dataset.

4.4.3 Multiple Regression Analysis

Linear regression analysis was used to assess the relationship between the dependent variable. The Ordinary Least Squares (OLS) method was used. In this regard, a regression of performance on equity investment, bonds investment and money market

investment was done. For every variable, the values for every year were used. Hence, for the 4-year period (2019-2022), since 16 mutual funds were included as explained in section 4.2, total of 64 entries were done in SPSS for every each of the variable. That is, for every variable, there were 4 entries for every mutual fund (for years 2019, 2020, 2021 and 2022). For the purpose of regression analysis, the values for the amount of investment for each year (that is, entries for the independent variables) were expressed in hundreds of millions.

The model summary results were analyzed to determine the proportion of change in mutual fund's performance determined by the portfolio composition in terms of equity investment, bonds investment and money market investment. In this regard, the coefficient of determination (R Squared change) was analyzed. Table 4.8 presents the results.

Table 4.6: Model summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.952[a]	.907	.902	3.06319	.907	194.266	3	60	.000

a. Predictors: (Constant), Money market investment(X3), Bonds investment(X2), Equity investment(X1)

Source: Research Data (2024)

From the model summary, the R-Square value was 0.907. This means that portfolio composition of a mutual fund, particularly equity investment, bonds investment and money market investment explain 90.7% of the changes in the mutual fund's performance.

The ANOVA results were also analyzed in order to check and determine the significance of the estimated regression model. Of particular emphasis in this case was the F-value to help determine the fitness of the model in estimating and explaining the relationship between the independent variables (predictors) and the dependent variable. Table 4.9 presents the ANOVA results.

Table 4.7: Anova

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5468.492	3	1822.831	194.266	.000[b]
	Residual	562.989	60	9.383		
	Total	6031.481	63			

a. Dependent Variable: Performance

b. Predictors: (Constant), Money market investment(X3), Bonds investment(X2), Equity investment(X1)

Source: Research Data (2024)

The results showed that the F-value was 194.266. The significance of the F-change was 0.000 which is lesser than the significance test level of 0.05. This indicates that the regression model estimated had the significant goodness of fit for application in explaining how the independent variables influence the dependent variable.

Table 4.8: Regression coefficients and t-test statistics

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.615	.486		1.266	.210
	Equity investment(X1)	2.295	.000	.088	2.180	.033
	Bonds investment(X2)	6.965	.000	.153	3.881	.000
	Money market investment(X3)	7.650	.000	.927	23.063	.000

a. Dependent Variable: Performance

Source: Research Data (2024)

The regression model was derived and estimated by analyzing the coefficients of the independent variables after a linear regression of the dependent variable (performance = Y) on the independent variables (X_1= Equity investment, X_2= Bonds investment, X_3= Money market). In this regard, the estimated model was:

$$Y = 0.615 + 2.295X_1 + 6.965X_2 + 7.650X_3$$

The coefficient for equity investment (X1) was 2.295. The coefficient indicates that increasing equity investment in the portfolio of mutual funds by 1% results to an increase of approximately 2.3% in performance of the mutual fund. The findings are congruent with the findings by Kioko and Ochieng (2020) where regression analysis revealed that equity investment has a positive influence on performance.

For bonds investment (X2), the coefficient was 6.965, sig.= 0.000. The coefficient implies that when a mutual fund increase bonds investment in their portfolio by 1%, its performance could increase by 6.97%. The findings differ from the study by Mwangi, Makau and Kosimbei (2014) where regression analysis revealed a negative effect of investment in bonds on performance.

The coefficient for money market investment was 7.650, sig.= 0.000. The coefficient means that if a mutual fund enhances their portfolio composition by increasing their money market investment by 1%, it is likely to increase the mutual fund's performance by 7.65%. The findings concur with Kiboi and Bosire (2021) whose findings from regression analysis showed that money market securities investment significantly affected financial performance positively.

4.5 Hypotheses Testing

The three research hypotheses set out at the onset of this study were tested based on t-test whose results are contained in table 4.10.

4.5.1 Ho: Equity investment does not significantly affect mutual funds' performance

From the t-test statistics for equity investment (t= 2.180, sig.= 0.033), the coefficient for the influence of equity investment is significant as indicated by the p-value (sig.= 0.033) been lesser than 0.05. Therefore, the first hypothesis Ho: Equity investment does not significantly affect mutual funds' performance, is rejected. This means that increasing equity investment in the portfolio of mutual funds significantly increase the funds' performance. The findings disagree with the findings of Shukrani et al. (2022) which indicated insignificant effect of investment in equity on performance.

4.5.2 Ho: Bonds investment does not significantly affect mutual funds' performance

The t-test statistics for bonds investment (t= 3.881, sig.= 0.000) indicated that the coefficient for bonds investment is significant since the p-value (sig.= 0.000) is lesser than 0.05. Therefore, the second hypothesis Ho: Bonds investment does not significantly affect mutual funds' performance is also rejected. This means that bonds investment

significantly influence performance of the mutual funds. The findings agree with Hanin, Noriza and Mohamad (2017) and Musau (2016) whose studies found that bonds investment significantly affected performance.

4.5.3 Ho: Money market investment has no significant effect on mutual funds' performance

From the t-statistics (t= 23.063, sig.= 0.000), the coefficient for money market is significant since the p-value (sig.= 0.000) is lesser than 0.05. Therefore, the third hypothesis Ho: Money market investment has no significant effect on mutual funds' performance is rejected too. This is an indication that money market investment significantly influences performance of the mutual funds. The findings are in agreement with the findings by Michael, Anthony and Josephine (2016) which indicated that money market investments significantly affected performance positively.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the study is summarized and conclusions derived are presented. Recommendations are also provided based on the research findings and the areas/issues that need further research highlighted.

5.2 Summary

This study was aimed at assessing how portfolio composition affects performance of Kenyan mutual funds. Specifically, the research sought to investigate the effect of equity investment, bonds investment and money market investment on performance of the mutual funds for a 4-year period from 2019 to 2022.

5.2.1 Equity Investment and Performance of Mutual Funds

Total equity investment decreased from a high of 4.4 billion shillings in 2019 to a low of 3.0 billion shillings in 2022. During the period, there was a decline in average equity investment from 278.4 million to 188.7 million. There was a significant positive correlation (r= 0.670, Sig.= 0.000) between equity investment and mutual funds' performance. Regression coefficient for equity investment was X1= 2.295, sig.= 0.033; indicating that increasing equity investment in the portfolio of mutual funds by 1% results to an increase of approximately 2.3% in the mutual fund's performance.

5.2.2 Bonds Investment and Performance of Mutual Funds

Bonds investment increased progressively over the period from 1.15 billion shillings in 2019 to 22.02 billion shillings in 2022. Similarly, average bonds investment increased from 1.91 million shillings to 1.3 billion shillings. Correlation between bonds investment and performance was 0.426 and significant too (Sig.= 0.000). Regression coefficient for bonds investment was X2= 6.965, sig.= 0.000 implying that increasing bonds investment in the portfolio by 1% enhances the mutual fund's performance by 6.97%.

5.2.3 Money Market Investment and Performance of Mutual Funds

Money market investment was highest in 2022 at 120.52 billion shillings and lowest in 2019 at 56.03 billion shillings. The average money markets investment increased from 3.50 billion shillings in 2019 to 7.53 billion shillings in 2022. Money market investment and performance had the highest significant correlation at 0.831 (Sig.= 0.000). Regression coefficient for money market investment was 7.650, sig.= 0.000. This means that enhancing the mutual fund's money market investment by 1% is likely to increase its performance by 7.65%.

5.3 Conclusions

Conclusions are made from the findings in line with the research objectives. First, the study concludes that equity investment has a significant positive effect on mutual funds' performance. In other words, equity investment and mutual funds' performance have direct positive relationship.

Similarly, bonds investment and money market investment significantly affect mutual funds' performance positively. Each of them has stronger effect on performance than

equity investment. However, money market investment has the highest effect on mutual funds' performance.

Generally, it is concluded that mutual funds' tend to prefer enhancing their portfolio composition by increasing their money market investments and bonds investment. At the same time, they also tend to decrease their equity investments. Nonetheless, all the investments (money market investments, bonds investment, and equity investments) significantly influence the mutual funds' performance.

5.4 Recommendations

The findings revealed that although equity investments had a significant positive impact on mutual fund's performance, its impact was relatively weaker compared to bonds investment and money market investment. The study therefore recommends that rather than decreasing equity investments in their portfolio, the fund managers should consider careful analysis of equity investment options available before investing to ensure that they are able to identify equity investment alternative(s) that can offer better returns. They should also not limit their portfolios to the domestic market only but should also consider options in other developing countries with a highly growing and attractive capital market. This will help to reduce the mutual funds' exposure to volatility in the domestic market while exploiting diverse market opportunities for better and optimized performance.

The fund managers should also consider introducing more robust diversification policies that can help strengthen their money market investment choices. With the findings having revealed a strong positive effect of money market investment on performance, it is

important that fund managers develop policies that are in harmony with the CMA regulations, to strengthen their market investment choices. The policies should enable the funds to easily venture into other investment classes in the market. This will not only help to improve their financial performance but also reduce systemic risk through diversifying their portfolios to different types of investments.

The research findings further revealed that bonds investment have a significant positive impact on the fund's performance. In this regard, the study recommends that mutual funds through their respective fund managers should always review their bonds investment to ensure that they invest in bonds that offer good returns in the medium and long term. Apart from the local government bonds, the funds should also consider bonds investment opportunities in other international markets as well provided there are viable opportunities for the same especially in the emerging markets.

5.5 Suggestions for Further Research

Although this study has provided substantial empirical knowledge on the influence of portfolio composition on financial performance, it is necessary to carry out further similar research in diverse organizations apart from mutual funds. This will help to enrich the empirical knowledge in this study through comparison of the findings and hence provide a more comprehensive understanding on how portfolio composition impacts performance.

Further research is also required on other types of investments in businesses' investment portfolios and performance. Since this study focused on equity investment, bonds investment and money market investments; future studies can consider investigating the

influence of other investments like real estate investment, treasury bills, options trading among others on performance.

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APPENDICES

Appendix I: Registered Mutual Funds in Kenya

1) CIC Unit Trust Scheme	2) KCB Unit Trust Scheme
3) NCBA Unit Trust Funds	4) Orient Umbrella Collective Investment Scheme
5) Sanlam Unit Trust Scheme	6) Equity Investment Bank Collective Investment Scheme
7) ICEA Unit Trust Scheme	8) Kuza Asset Management Unit Trust Scheme
9) Britam Unit Trust Scheme	10) GenAfrica Unit Trust Scheme
11) Old Mutual Unit Trust Scheme	12) Etica Unit Trust Fund
13) Madison Unit Trust Funds	14) Amana Unit Trust Funds Scheme
15) Co-op Trust Fund	16) Enwealth Capital Unit Trust Scheme
17) Dry Associates Unit Trust Scheme	18) Wanafunzi Investment Unit Trust Fund
19) Nabo Capital Unit Trust Funds	20) Dyer and Blaire Unit Trust Scheme
21) ABSA Unit Trust Funds	22) Diaspora Unit Trust Scheme
23) Zimele Unit Trust Scheme	24) First Ethical Opportunities Fund
25) African Alliance Kenya Unit Trust Scheme	26) Genghis Specialized Funds
27) Mali Money Market Fund	28) Jaza Unit Trust Fund
29) Apollo Unit Trust Scheme	30) Masaru Unit Trust Scheme
31) Cytonn Unit Trust Scheme	32) ADAM Unit Trust Scheme
33) Genghis Unit Trust Funds	34) Amaka Unit Trust (Umbrella) Scheme
35) Jubilee Unit Trust Scheme	

Source: CMA Website (2023)

Appendix II: Data Collection Guide

Year	Firm	Equity investment	Bonds investment	Money market investment	**Performance** $ROI = \frac{End\ value\ of\ Investment - Initial\ value\ of\ the\ Inves}{Initial\ value\ of\ the\ investment}$
2019					
2020					
2021					
2022					

Appendix III: Approval of Research Proposal

KENYATTA UNIVERSITY
GRADUATE SCHOOL

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Internal Memo

FROM: Executive Dean, Graduate School

DATE: 19th April, 2024

TO: Stephen Waithanji Mwangi
C/o Accounting and Finance Dept.

REF: D53/CTY/PT/38817/2017

SUBJECT: APPROVAL OF RESEARCH PROPOSAL

We acknowledge receipt of your revised Research Proposal as per our recommendations raised by the Graduate School Board of 13th March, 2024 entitled "Portfolio Composition and Financial Performance of Mutual Funds in Kenya."

You may now proceed with your Data Collection, Subject to Clearance with the Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School Completed Supervision Tracking and Progress Report Forms per semester. The forms are available at the university's website under Graduate School webpage downloads.

Also, please ensure that you publish article(s) from your project before submitting it to Graduate School for examination as per the Commission for University Education and Kenyatta University guidelines.

Thank you.

ANNBELL MWANIKI
FOR: EXECUTIVE DEAN, GRADUATE SCHOOL

C.c. Chairman, Department of Accounting and Finance

Supervisors:

1. Dr. Charity Njoka
C/o Department of Accounting and Finance
Kenyatta University

AM/lm

Appendix IV: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 798397

Date of Issue: 16/August/2024

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