

**EFFECT OF PORTFOLIO DIVERSIFICATION ON
FINANCIAL PERFORMANCE OF INVESTMENT FIRMS IN
KENYA**

**BY
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REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE FINANCE
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DECLARATION

I hereby declare that this research project is my original work and has not been submitted for a degree or examination in any other University.

Signature



Date 25 November 2022

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This Research Project has been submitted for examination with my approval as the University Supervisor

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DEDICATION

I wish to dedicate this project to this project to all the people who made it possible for me to achieve my academic dreams and especially to my parents for their immense contribution towards my education.

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LIST OF ABBREVIATIONS AND ACRONYMS

CIS	Collective Investment Schemes
CMA	Capital Market Authority
HHI	Herfindhal-Hirschman Index
MPT	Modern Portfolio Theory
NIM	Net Interest Margin
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equity

ABSTRACT

Portfolio diversification has been found to be a strategy that once well adopted, would ensure that investment firms maximize profit. This comes from the fact that investments involve risk taking ventures, that if the total exposure by an investor is not well calculated and determined, then it would have a negative impact on the returns. This study therefore sought to determine the effect of portfolio diversification on the financial performance of investment firms in Kenya. To achieve this objective the study collected secondary data from 29 relevant financial publications which summed up to a 64.4% response rate of the population of 45 investment firms. The study used Spearman's correlation to determine the correlation between the study variables. This was driven by the fact that Spearman's Correlation is a non-parametric measure that was desired in this study. Portfolio diversification index together with size had significant correlation, though HHI (index) had a positive of 0.684 while size had negative correlation of -0.327. It showed that increasing diversification index had a positive impact on performance, while increasing the size of the firms led to diseconomies of scales. Capital structure and liquidity on the other hand had insignificant and weak correlation (were almost equal to zero). This indicated that these factors did not have significant impact on financial performance. The analysis was undertaken further where regression analysis was adopted by the study. A Hausman test that was carried out indicated, that a random effect model was appropriate for the study. The model uses chi-square test to determine the significance of the effect between portfolio diversification and financial performance. The p value was less than 0.05 indicating that there was a statistically significant effect. The coefficients were all significant apart from Liquidity that was insignificant as p value was greater than 0.05 at 0.064. This indicates that if all factors were held constant and portfolio diversification index increased by one unit, performance would increase by 2.52%. Similarly, increasing debt over equity by one unit for investment firms in Kenya, their performance would increase by 7.07%. Increasing liquidity on the other hand, while holding all other factors constant would lead to a decrease in financial performance. A similar effect would be obtained if the study increased the size of firms, by increasing the amount available for investments would lead to a decrease in financial performance of 2.34%.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Risk aversion being a common characteristic among investors, where they prefer implementing investments with reduced risk with a given rate of return compared to higher rate of return investment projects with unknown risks. Investment firms use portfolio diversification as one of the strategies of minimizing risks by spreading the unsystematic risk over a number of assets which include shares, bills, bonds, mutual funds, real estate among others (Osewe, 2020). The main aim of the investment companies is to maximize shareholders wealth through risk return trade off in the due to the fear of shortage of cash in the future. Investment firms commit resources to investment for a given period aiming for returns in future as a compensation for committing their resources equivalent to the risk taken and prevailing inflation rate (Musembi & Jagongo, 2017). Investment firms therefore connect people with surplus funds and organizations in need of money.

This study was anchored to three theories which include: The capital asset pricing theory, the arbitrage pricing theory and the modern portfolio theory. The capital asset pricing theory was first introduced by Sharpe (1964). According to this school of thought, the predicted expected return on an investment is the risk-free rate plus the equity risk premium approximated for the asset's risk. The asset can therefore be described to have two types of risk: Systemic risk, which is non-diversifiable and unsystematic risk which is diversifiable (Sharpe, 1964). The arbitrage pricing theory was developed in the 1970's by Ross (1976). It offered a model in which the expected return of an asset or portfolio in equilibrium was modelled as a linear function of the risk of the asset or portfolio with regard to a group of variables that accounted for systemic risk. This has allowed the examination of various factors such as macro-economic and market factors. Lastly, the modern portfolio theory introduced by Markowitz (1952) provided a methodology for building security portfolios that takes each investment into account in the context of the whole portfolio rather than just individually. MPT's key takeaway is that any relationship between assets of less than one offers the potential for risk reduction by hedging through diversification.

Excessive risk and competition are among the challenges that are currently facing investment firms in Kenya leading to financial crisis which forces crippling closures of these firms. Several strategies and approaches have therefore been adopted by these firms to effective risk management to increase financial performance. Portfolio diversification has been used as a centre stage of investment firms as a tool of reducing risk and enhancing financial performance. A well-diversified equity portfolio has continuously effected investment decisions in portfolio management resulting to substantial benefits to investment companies that take high risk by investing fully in stock (Chepkorir, 2018).

1.1.1 Portfolio Diversification

Badertscher, Shroff and White (2013) defined diversification as the reduction of risk or increase of return on a portfolio by investing in a variety of assets. It presents an opportunity for investors to expand from their modest business into other market products by means of minimizing risk or maximizing returns. Bennett and Sias (2010) suggested a portfolio are well-diversified if portfolio's firm-specific returns differ negligibly from zero. This study contends that there is no evidence that investors can easily form portfolios with negligible exposure to unsystematic returns and this lack of easily formed well-diversified portfolios help perpetuate the existence of pricing anomalies. Even at its most basic level, portfolio diversification may be achieved by simply spreading an investment among a variety of assets to reduce unsystematic risk.

Portfolio diversification as explained by Musembi and Jagongo (2017) improves liquidity position, reduces distress expenses, results in increased asset rollout, and increases a firm's profit margin. The main objective of portfolio diversification is to reduce risk without reducing returns. Risks are classified in to two categories which include the systematic risk and the unsystematic risk. Systematic risk affects all securities in the overall market, and it is unpredictable and cannot be diversified while unsystematic risk is specifically associated with a sector or a company hence can be diversified and is only inherent to a specific stock or industry. This risk can be mitigated using asset diversification method.

Different empirical studies have applied different measures of portfolio diversification. Kimeu, Anyango and Rotich (2016) used the amount of investment in equity, bonds, mutual funds and real estate to measure portfolio diversification. Herfindhal-Hirschman Index (HHI) which measures income and geographical diversification among firms was used by

Osewe (2020). This study will adopt the measure used by Kimeu, Anyango and Rotich (2016) where portfolio diversification will be measured by the amount of investment in portfolio within the firm.

1.1.2 Financial Performance

Financial performance is elaborated upon by Njeru (2016) as the monetary outcome of strategies implemented in a firm within a given period. Kimeu, Anyango and Rotich (2016) as well define financial performance as the monetary outcome of the effort of the employees of a firm. Common phrases used to describe a company's financial success include profitability, sales volumes, and earnings per share, dividend growth, and turnover, among others.

Financial performance in investment firms will result in each share's earnings and dividends per share being improved which motivates the shareholders to increase their investment for more returns in future of the firm. Financial performance therefore indicates the effort of the management of a firm in implementing various strategies which lead to improvement of efficiency and competitiveness of a firm in the market industry (Kimeu, 2015). Customer perspective and firm perspective are two aspects that determine financial performance of investment firm. Customer perspective is mainly concerned with the rates of returns that customers gets from principal investment while firm perspective is concerned with the customers getting returns and the remaining balance is used to meet administrative cost, depreciation and salaries, taxes and interest expenses as well as profit after taxes (Musembi and Jagongo, 2017).

Return on Asset (ROA), Net Interest Margin (NIM), and Return on Equity (ROE) are only a few examples of financial performance indicators for a company. Kamwaro (2018) consider return on asset as the most accurate measure by indicating how a firm effectively uses its resources to generate profitability as it is the ratio of net profit to total assets. Net interest margin which will be used in this study was as well applied by Rop, Kibet and Bokongo (2016) to measure financial performance. Net interest margin will be derived from the ratio of net profit and net sales of the firm.

1.1.3 Portfolio Diversification and Financial Performance

The investment firms in Kenya therefore achieve performance by combining several stocks in a portfolio, thereby eliminating the unsystematic risk. A diversified portfolio assigns to various asset classes, goods, and markets in order to spread risk that is retained when some if not all other risks have been identified and worked on to be eliminated (Chepkorir, 2018). This strategy gives a firm an opportunity to improve efficiency and enjoy economies of scale, as well as invest in optimal portfolio which ensures that those assets that are poorly performing are compensated by performing assets. The investment firm will still receive returns from some stocks that are unaffected since portfolio diversification ensures that an economic event does not hit all industries at the same time in the same manner (Osewe, 2020).

Over the years, various investors and financial analysts have had a marked concern about the link between portfolio diversification and financial performance. Increasing the number of assets that are less perfectly correlated effectively decreases diversifiable risk however, over diversification can lead to unnecessary costs since staff resources required will increase as well as transactional costs incurred from portfolio rebalancing leading to inefficiency

which will have a negative impact on financial performance. A rational investor must, therefore, find an optimal level where portfolio diversification will yield optimum financial performance (Obiero, 2019).

1.1.4 Investment Firms in Kenya

An investment firm is a company that is formed to offer financial services to other companies through trading in their securities. Investment firms in Kenya, are regulated and licensed by Capital Market Authority. They are composed of investment banks, stock brokerage firms, fund managers and investment advisers and are registered under collective investment schemes (CIS) (Obiero, 2019). These investment firms operate within the conditions and guidelines set in the licenses given as required by the Act (Kioko and Ochieng, 2020).

Performance of investment firms in Kenya is commonly affected by portfolio risk and competition leaving no other option for these firms but to only invest in a diversified portfolio of assets to minimize risk, increase returns which attract more investors which in turn lead to economies of scale that enhances competitiveness of a firm and financial performance (Kioko and Ochieng, 2020). Investment firms employ professional fund managers who make rational decisions on investing in a wide range of assets and are held responsible for the management of the value addition and cost of these assets on behalf of investors which is not possible if the investors were to invest themselves. Investment firms invest in assets such as shares, securities and properties thus diversifying investors fund on a wide range of stocks (Obiero, 2019).

1.2 Research Problem

Investment firms in Kenya struggle to establish the optimum level where a firm only invests in the necessary number of assets without under-diversifying or over-diversifying to attain financial performance efficiency. This study predicts that portfolio diversification and financial performance will be positively correlated since diversifying assets suggests an increase in the variety of investment tools, which lowers residual risk and increases returns, which boosts the firm's competitive advantage (Rotich, 2016).

The investment firms in Kenya increases their profitability by investing in diversified portfolio of assets. Some of the assets they invest in include shares, bonds, bills, mutual funds and real-estates properties. The analysis of business daily (2022) on the different assets classes from January to June indicated that highest returns for investment firms came from offering loans to government. Returns from bond auctioned this year was averaging to 13.06 % beating real estate, land and equity market. Equity markets had the second-best returns in 2021 (11.91%), but share devaluation in 2022 caused investors' wealth at the NSE to decline by 26% in the first half, wiping off Sh. The fortune of shareholders is 653.7 billion (Mwaniki, 2022). According to the research, Nairobi's rent returns increased by 1%, while gains from property and land sales increased by 0.1% and 2.17 per cent, respectively. Bank fixed deposits had the second-best returns over the course of the six-month period, averaging 6.56% in the first quarter of 2022. One of the industries most severely impacted by the pandemic's economic effects was real estate. As they weathered the economic unpredictability, it compelled investors to reroute their investments elsewhere. The majority of investors now own near-cash assets like Treasury Bills and Bonds that they retain till

maturity. Although the bulk of investors in the fixed income market continue to be local, a small number of investors are now moving overseas (Mwaniki, 2022).

The impact of portfolio diversification on financial performance has been the subject of numerous studies. Osewe (2020); Musembi and Jagongo (2017); Kioko & Ochieng (2020); Obiero, (2018) carried similar studies on the effect of portfolio diversification on financial performance of investment firms listed in the NSE in Kenya. Chepkorir (2018) investigated the influence of portfolio diversification on financial performance of commercial banks that are listed in the NSE in Kenya while Kimuma (2021) carried a similar conceptual study but covered all the commercial banks in Kenya. Although several studies have been carried under the same topic a research gap still exists where different methods of analysis will be applied as well as different study area and time. The current study will be addressing the following research question: What is the effect of portfolio diversification on financial performance of investment firms in Kenya?

1.3 Research Objective

The research objective of this study is to determine the effect of portfolio diversification on financial performance of investment firms in Kenya

1.4 Value of the Study

The study will be significant to policy makers. The policy makers in the top management for investment firms in Kenya would find the study important as it would provide crucial information in regard to portfolio hedging through diversification and also how it impact financial performance and of their companies by reducing diversifiable risk. This study would therefore provide important insight onto the portfolio diversification strategy that

would improve the financial performance leading to efficiency of the company and would therefore enhance value creation to the shareholders and investors.

The study will also be significant to government and the regulator such as the Capital Markets Authority (CMA) who may come up with regulation on the maximum acceptable stocks that a firm is required to invest in that should be maintained by licensed and listed companies. The study will also provide insight on the optimum level that may give investment firms the ideal number of portfolio stock that each company should invest in, in order to realize maximum returns which will enhance their performance.

The study will also be of significance to academicians and future researchers. Future researchers and academicians will use the findings of this study to develop their literature review and will also be significant in identifying knowledge gaps that would help them advance and improve the findings of the study. The study will therefore be important in creating new knowledge, developing theories, or providing necessary critiques for existing theories and ideologies that would therefore be vital in generating new knowledge.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

Literature review is composed of the relevant theories in the study. The theories are explained and discussed on their relevance to the study. The findings of this study would seek to either support the proposition of these theories or would seek to critique them. The chapter will also contain other factors affecting financial performance of investment firms in Kenya that will be described appropriately. The empirical review will also enhance the literature review and the pictorial relationship of the variables in the study will be represented in the conceptual framework.

2.2 Theoretical Review

This section will discuss the following theories that relate to this study: The capital asset pricing theory, the arbitrage pricing theory and the modern portfolio theory. Their relevance to this study will be discussed below.

2.2.1 The Capital Asset Pricing Theory

The capital asset pricing theory was first posited by Sharpe (1964). This hypothesis outlines a model that can be used to theoretically determine a suitable rate of return on an asset,

which can assist an investor in making good asset diversification decisions in order to have a well-diversified portfolio. This theory postulates the association risk and returns of asset portfolio. These risks can either be market risk or diversifiable risk. According to Lintner (1965), systemic risks are brought on by shifting market variables, which have an impact on all financial assets on the market. There are unsystematic hazards connected to certain financial assets that have no correlation with general market conditions and in most cases are affected by factors that are specific to the firm. For example, a change in market offering or senior management of a firm may affect shares leading to a risk in the shares.

This study was underpinned to this theory due to the fact that the theory explains how residual risk can be diversified away to smaller levels through portfolio diversification in order for an investment firm to derive increased return from the assets which will as well increase financial performance. Investment firms are encouraged to diversify their investment across a collection of assets so that in case of unfavourable condition affecting one stock leading to a loss in that stock will be offset by another stock that will be performing yielding positive overall result. Markowitz (1952) asserts that in developing countries a larger number of portfolio assets should be used due to higher asset volatilities than in developed countries where risk exposure is only limited to market risk.

Capital asset pricing theory has various assumptions which have been used to criticize it. To begin with, the theory assumes that asset level factors which are market risk and idiosyncratic risk determine the performance of financial assets (Elton & Gruber, 1997). Given that asset quantities are predetermined and fixed, it is assumed that all investors seek to maximize economic utilities. It as well assumes that all investors are rational and risk averse. The theory assumes that there are no taxes and transactional costs thus investors can

offload or purchase new stock any time (Roll, 1977). The theory as well assumes that all investors deal with securities that are all highly divisible into small parcels.

2.2.2 Arbitrage Pricing Theory

Ross introduced a framework for the arbitrage pricing theory in 1976, describing the expected return of an item or portfolio in equilibrium as a linear function of the risk of the product or portfolio with regard to a group of characteristics that capture systemic risk. This has allowed the examination of various factors such as macro-economic and market factors. The theory argues that in an equilibrium market, in order to realise the equilibrium price, a rational investor will introduce an arbitrage (Rose 1986). The theory posits that the expected turnover of an asset is the linear fraction of various variables or theoretical market indices when the fortuity for arbitrage is diminished. The structure of the linear factor model of this theory is basically used to evaluate asset allocation, performance of managed funds and the calculation of cost capital Jorion (1991).

The arbitrage theory is relevant to this study on the basis that it segregates variables that affect performance of financial assets such as bonds and stocks into several variables. Arbitrage pricing theory captures the macroeconomic factors that affect assets' returns which in turn affect the financial performance of the investment firms. The theory suggests ways in which these factors can be addressed to derive optimal returns from the assets which will lead to the improvement of financial performance.

The assumptions behind the arbitrage pricing theory have prompted a number of critiques. The hypothesis makes the supposition that all investors share the same expectations and are naturally risk averse also assuming that the market is efficient with scarce arbitrage

opportunities. It as well assumes that the capital market is perfect and the number of assets is limitless. Last but not least, the theory presupposes that risk factors are signs of systematic risks that cannot be diversified and affect all financial assets. As a result, these considerations must be random variables that are not unique to any one sector or company and are reimbursed by the market via risk premium (Basu and Chawla, 2012).

2.2.3 Modern Portfolio Theory

The modern portfolio concept proposed by Markowitz (1952) offers a framework for designing security portfolios by taking each investment into account in the context of the portfolio as a whole as opposed to separately. The main finding of MPT is that any correlation between assets that is less than one gives the possibility of risk mitigation through diversification. By using a variety of financial assets with different revenue streams and characteristics, diversification helps to reduce portfolio risk, which is quantified by calculating the variance of returns in the portfolio. According to Hughes (2002), the expected return of a portfolio equals the total return on all of the individual assets times the weight of each item in the portfolio. The goal of MPT is to create a portfolio with a portfolio risk that is lower than a particular asset's individual risk.

This conjecture is found relevant to this study as it explains a strategy in which financial performance of investment firms can be enhanced through reduction of portfolio risk which leads to an increase in portfolio revenue. The theory argues that risk aversion characteristics cause investors to evaluate trade-off differently. If a second portfolio is available with a return profile that has a more favourable expected risk, a rational investor would reasonably refrain from investing in the first. In order to decrease the exposure of individual asset risk,

portfolio risk can be reduced by investing in combinations of components that are not fully connected (Markowitz, 1952).

Despite MPT's theoretical importance, critics question whether it is an ideal investment tool because its financial market model doesn't quite complement the real world in numerous aspects (Damghani, 2013). As anticipated value fails to reflect the underlying statistical characteristics of risk and return, the return, risk, and correlation metrics cannot be empirically tested and presented. The risk measurements in this theory are probabilistic and not structural hence their cause is not explained in the theory. MPT assumes that the market is efficient thus fluctuations in share price are substituted with risk. The theory assumes that all investors are risk-averse thus limits the contrarian and value investors (Klarman, 1991).

2.3 Determinants of Financial Performance

The independent variables that the study seeks to apply include portfolio diversification, asset quality, money weighted rate of return and market capitalization. This section will expound their theoretical relationship with the financial performance of investment firms in Kenya.

2.3.1 Portfolio Diversification

Badertscher, Shroff and White (2013) defined diversification as the reduction of risk or increase of return on a portfolio by investing in a variety of assets. It presents an opportunity for investors to expand from their modest business into other market products by means of minimizing risk or maximizing returns. Bennett and Sias (2010) suggested that a portfolio is well diversified, if portfolio's firm-specific returns differ negligibly from zero. This study contends that there is no evidence that investors can easily form portfolios with negligible

exposure to unsystematic returns and this lack of easily formed well-diversified portfolios help perpetuate the existence of pricing anomalies. Even at its most basic level, portfolio diversification may be achieved by simply spreading an investment among a variety of assets to reduce unsystematic risk.

According to Musembi and Jagongo (2017), portfolio diversity increases liquidity position in the context of debt level, reduces distress costs, and leads to an increase in asset mobilization as well as increased company profitability. The main objective of portfolio diversification is to reduce risk without reducing returns. Risks are classified in to two categories which include the systematic risk and the unsystematic risk. Systematic risk affects all securities in the overall market, and it is unpredictable and cannot be diversified while unsystematic risk is specifically associated with a sector or a company hence can be diversified and is only inherent to a specific stock or industry. This risk can be mitigated using asset diversification method.

2.3.2 Ownership Structure

Ownership structure basically refers to the legal structure of the business entity. This may include the type of business entity such as sole proprietorship, partnership, limited company among others. The type of business entity is a crucial factor that may have impact on performance of investment firms as institutional investors would rarely consider undertaking investments in sole-proprietorship investment firms (Mirza, Rahat & Reddy, 2015). In the context of this study, however, ownership structure is particularly identified by the ratio of foreign ownership to local ownership (Mwangi, 2014). It follows that foreign owned firms are more trusted than locally owned firms that may be considered as more likely to be infiltrated with misappropriation of investors' funds.

2.3.3 Liquidity

Liquidity is a term used to refer free cash flow or liquid cash that a firm can use to meet its current and future debts and other obligations such as paying for goods and services. Liquidity management, therefore, aims at ensuring that a business has enough cash available to meet daily obligations which can be achieved by managing the liquidity as effective and efficiently as possible (Lazaridis and Tryfonidis, 2006). Given that it has an impact on the firm's creditworthiness, which is one of the factors that determines whether a business will succeed or fail, effective liquidity management calls for a corporation to only have enough financial resources to cover its regular and unforeseen needs of an acceptable amount (Waswa, Mukras & Oima, 2018). Thus, liquidity management demonstrates the state of a firm's finances and gives an accurate indication of a firm's capacity to afford current and future debts, relatively brief investments, and commitments.

However, high liquidity in a firm indicates that management is not responsive enough to available opportunities and it is very risk averse. It becomes an indicator that the performance of such a firm is likely to be below expectations as they are not willing to risk its free cash flows to available opportunities that would generate more returns for the shareholders (Waswa, Mukras & Oima, 2018).

2.3.4 Size of the Firm

Doğan (2013) brought out that the size of the company is directly proportional to the total assets of the company which may have a positive or negative effect on the performance of the company. Larger firms take advantage of this to draw some financial benefits. They have a wide access of production factors such as land, capital, entrepreneurship, and human

resource which is both skilled and unskilled. Large firms also enjoy cheaper funding compared to small firm which suffer from low capital, human resource especially skilled labour and shortage of land (Doğan, 2013).

It is cheaper for large firms to outsource finances when external funds are required. They tend to have a wide diversification of financial sources compared to small firms and investors like to be associated with big firm since they enjoy economies of scale. Given that it is frequently said that larger businesses are harder to shut down and liquidate, size may serve as a measure for the likelihood of default or, in the event of a distress, the likelihood that a company will recover. Since tiny businesses are more likely to be growing at a quick rate and hence operating in innately volatile industries, size may also serve as a proxy for the volatility of company assets (Lee, 2009).

2.4 Empirical Studies

Using a descriptive research design, Osewe (2020) conducted a local study on five NSE-listed investment firms with a goal to determine how portfolio diversification affected financial performance. Secondary data was obtained from the detailed financial reports. In the analysis, diagnostic tests were done prior to ensure that regression model applied was robust. Descriptive and inferential analyses were carried out using STATA version 14. According to the data, portfolio diversification, liquidity, firm size, and financial performance are all positively correlated. Portfolio diversity and the financial success of Kenyan investment enterprises that are publicly traded were found to have a favourable and significant relationship. This study depicts a contextual difference with the current study which targets all investment firms in Kenya.

A descriptive and correlational research design was used to study how portfolio diversification impacts financial performance. Data collection forms were used to collect primary and secondary data from the 43 commercial banks in Kenya that were the subject of the study. Both descriptive and inferential statistics were used in the data analysis. The study established a positive relationship between insurance and bond investments and financial performance and a negative correlation between real estate investment and financial performance. Regression analysis results indicated a positive insignificant and significant effect of insurance and bond investment on financial performance and a negative significant impact of real estate investment on financial performance (Kimuma, 2021). This study fails to consider investment firms in Kenya which are targeted by the current study. Obiero (2018) conducted a study that included all investment companies listed on the NSE. The purpose of the study was to determine the impact of asset allocation on the financial performance of those companies. The study adopted a descriptive research design and secondary data retrieve from annual financial reports of these companies was used. The study used descriptive and inferential statistics to analyse the data and results were presented in graphs. The results indicated significant influences between real estate, bond investment, equity securities and financial performance. Real-estates bond investment and equity securities influence a change of 85.3% of financial performance. This study depicts a contextual difference with the current study which targets all investment firms in Kenya.

Chepkorir (2018) as well undertook a study on eleven commercial banks that are listed on NSE in Kenya. A descriptive research methodology was employed in the study to determine how asset allocation affects financial performance. From interviewees and yearly reports, respectively, primary and secondary data were obtained. Study analysed the data using SPSS in form of descriptive and inferential statistics. The finding of the study indicated a

strong positive correlation between real estate finance while mobile banking and bank assurance had positive but weak correlation with financial performance. This study fails to consider investment firms in Kenya which are targeted by the current study.

An international study taken by Kumar (2017) sought to investigate the effect of varying asset allocation on financial performance in Nepal. The study adopted descriptive research design and secondary data which was obtained from yearly reports. The study targeted 19 Nepalese commercial banks. A regression model was utilized to establish the association in an inferential assessment. Real-estate investment was found to have a negative association with ROA as well as with NIM. Loan had a positive correlation financial performance. Government securities, foreign ownership, CAR and corporate shares had a positive effect on ROA and NIM. The study indicates contextual gap where the study was done in another country which had a different economic growth.

Hailu and Tassew (2018) carried a study in Ethiopia targeting seventeen commercial banks. The purpose of the study was to determine how investment diversity affected financial performance. The study used a quantitative research methodology, and data were analysed using a panel random effect regression model. The conclusions showed that financial assets including government securities, loan portfolio insurance, and investment magnitude have a considerable favourable impact on financial performance. Financial performance was found to be significantly negatively impacted by interest and exchange rate volatility. A contextual gap exists where the study was done in another different country and failed to consider investment firms which are targeted by the current study.

Yildirim and Masih (2018) looked into potential for Asian Islamic stock market investors to diversify their portfolios internationally. Multivariate generalized autoregressive conditional

heteroscedastic-dynamic conditional correlation is the method used in the study. Continuous wavelets transform and maximum overlap discrete wavelet transform in data analyses. The findings of the study show that investors especially those in Asia have good opportunities for portfolio diversification with the US markets. Portfolio diversification benefited short run investors following investment horizons in US and European markets. This study reveals a conceptual and contextual gap that will be addressed by the current study which seek to ascertain the implication of asset allocation through portfolio diversification on the economic scope of performance of investment firms in Kenya.

Another study was done on selected European countries, to determine whether it was possible for investors to diversify their investment to reduce the risk of investing (Islam & Faisal, 2011). The study adopted a quantitative approach. The study selected six European countries which were studied for ten years. An econometric model of multivariate cointegration approach was used. The results revealed that investors could an opportunity to diversify their investment despite the existence of cointegration. This study reveals a study gap where consideration of financial performance of the investment was not addressed.

2.5 Summary of Literature Review

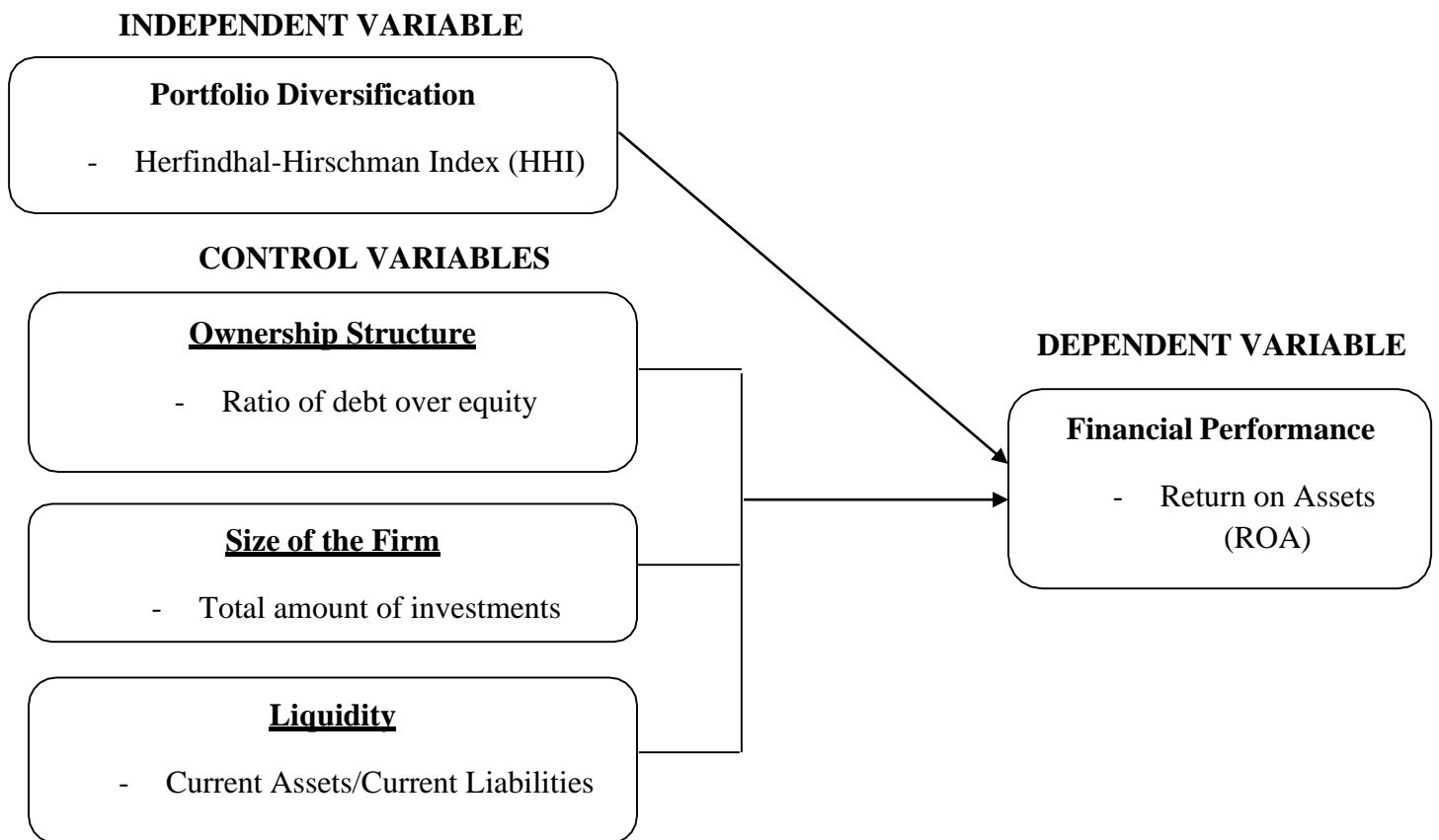
The chapter discusses the theoretical review that is relevant to this study providing a theoretical relationship between portfolio diversification and financial performance. All the theories pinning this study indicate that portfolio diversification has a positive influence on financial performance since it is a strategy of reducing unsystematic risk thus increases returns of an asset which improves performance. The chapter as well reviews other variables that have an impact on financial performance which include asset quality, market capital and size of the firm.

The chapter then reviews the empirical studies that have been done under this study's topic. From the studies implication of asset allocation through portfolio diversification on the economic scope of performance of investment firms remains unclear due to the mixed results gotten from different studies. Most of the researchers establish a positive impact, few establish a negative effect while others do not find any similarity between the two variables. Most of the studies that have been done narrow down the study area to only five listed firms in Nairobi Securities Exchange in Kenya leaving other investment firms behind which can alter the finding of a study.

2.6 Conceptual Framework

Conceptual Framework is the pictorial representation of the variables. It indicates how independent variables in the study relate to the dependent variable among the other study variables. In this study, the independent variables that comprise portfolio diversification, asset quality are deduced to have an impact on financial performance, which is the dependent variable. On the other hand, size of the firm and governance structure would be control variables that influence financial performance in investment banks, as indicated in the figure 2.1.

Figure 2. 1: Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter outlines the research design, population targeted, sampling techniques used, data collection method and procedure, procedure of data analysis and presentation of the study's findings.

3.2 Research Design

The arrangement of conditions for data collection and analysis in a way that focuses to combine relevance to the study's purpose with economy in the process is referred to as research design.

A descriptive survey design was adopted to aid in achieving the aim of the study which is to be investigate the relationship between independent and dependent variables so as to achieve the intended objective in undertaking the study. According to Creswell (2003) this descriptive design is applied when one wants to describe people, organisations, setting or phenomenon based on data. This design maximizes reliability and reduces biasness (Kothari, 2008). In the study, inferential statistics and measure of central tendency, distribution and dispersion was applied.

3.3 Population

As we want to apply the findings of our research to a real or fictitious group of individuals, occasions, or items, we are referring to that group as the population. All investment companies with license in Kenya by the year 2021 was the target which includes investment banks, Stockbrokers, and fund managers as indicated in Appendix 1. A census study was therefore undertaken for a period of 5 years (2017-2021).

3.4 Data Collection.

Secondary data was used to collect data on the study variables used for the study from the published annual reports, respective investment firms' websites, CMA website and CMA publications, published manuals and any other relevant reliable source of data. A data collection form as indicated in Appendix II was used in data collection.

3.5 Data Analysis

This research used statistical software to analyse the data collected to give descriptive and inferential statistics. The correlation between independent and dependent variables was given by multiple linear regression (MLR) analysis and correlation analysis. The link between a dependent variable and a number of independent factors is examined using the MLR analysis technique. Prior diagnostic tests were performed to guarantee that the selected regression model is reliable.

3.6 Diagnostic Tests

The test included the linearity test, normality test, multicollinearity test, autocorrelation test, and heteroskedasticity test.

3.6.1 Linearity Test

Linearity test was determined by use of linear plots that should indicate a linear pattern to indicate that the data is linear in nature, while non-linear data indicates that the data is not in a linear format (Field, 2009).

3.6.2 Normality Test

OLS regression model that impacts the validity of all tests assumes that residuals behave normal. In this study, a non-graphical test by Shapiro Wilk was used to determine whether the residual's behaviour is normal. The null hypothesis states that there is a normal distribution of the residue. The study accepts the null hypothesis at 95% significant level if the p-value is found greater than 0.05 ($p > 0.05$). The study in this case concludes that there exists a normal distribution of the residual (Oscar, 2007).

3.6.3 Test of Autocorrelation

In a time series data, disturbances can either display serial correlation or autocorrelation across the period. Serial correlation causes a problem of biasness of the standard errors and also inefficiency of consistent estimated regression coefficients when present in a linear panel data model. This study applied Durbin-Watson test to identify whether the problem of autocorrelation is present. This is a statistical test used for testing First Order autocorrelation between the error and its immediate previous value to find out whether there is correlation among the errors in different observations. There is no serial correlation is the null hypothesis. The study failed to reject the null hypothesis at 95% significant levels if d-statistic is more than 0.05 ($d > 0.05$). The conclusion is that there is no correlation among the errors in different observations.

3.6.4 Heteroscedasticity Test

Observations may have regression disturbances which do not have constant variances. This problem is referred to as heteroskedasticity. It may arise in cross-section data as well as time series data. Its presence causes a problem of inefficiency of the estimation results. Trevor Breusch and Adrian Pagan (1979) came up with modified Wald test for heteroskedasticity. This study will use Breusch-Pagan test in undertaking heteroscedasticity test.

3.6.5 Multicollinearity Test

This is a test that determines whether or not the independent variables remain independent. Regression analysis makes the assumption that independent variables stay independent and don't affect one another. Variation inflation factors (VIF) or tolerance levels are used in the multi-collinearity test to ascertain the degree to which there is multi-collinearity between the variables. Multi-collinearity is present when the VIF values are more than 10. In this instance, the multi-collinear variable is omitted from the model.

3.7 Analytical Model

A descriptive analysis was undertaken and presented in form of tables. The data was analysed by the use of multiple regression analysis and correlation analysis using the Statistical Package for Social Sciences (SPSS) version 20.

The regression model that was applied for the analysis took the form of

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y is the financial performance given by return on assets

X_1 is the portfolio diversification given by Herfindahl-Hirschman index – Sum squared of assets namely (investment in government bonds, Real Estate investment, investment in shares)

X_2 is Capital structure given by the ratio of Debt/ Equity.

X_3 is liquidity given by current ratio (current assets/ current liability)

X_4 is the size of the firm given by amount of total assets.

ε represents the error term in the model

$\beta_0, \beta_1, \beta_2, \beta_3$ and β_4 are the various intercepts

The F test was used to test the significance of the model, F-tests at 95% confidence level, where a significance of below 0.05 is an indication that the relationship between the variable is statically significant.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATION OF STUDY FINDINGS

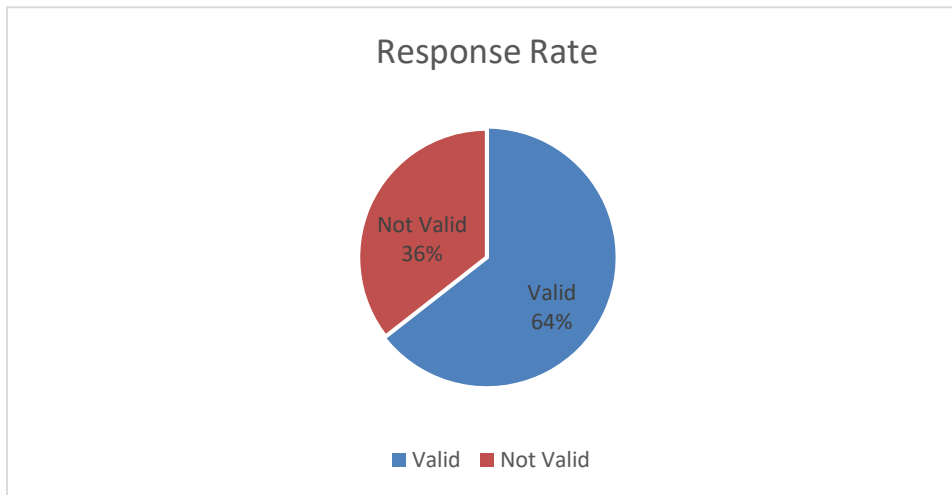
4.1 Introduction

Data analysis section was undertaken by identifying the response rate, undertaking descriptive analysis to describe the study variables. Diagnostic tests were also carried out to determine the kind of analysis that was appropriate for the study. Correlational analysis was also carried out, while significance of the relationship between the study variables was affected. The study then interpreted the study findings to determine studies that had similar findings, while also identifying studies with contrary findings.

4.2 Response Rate

There was a total of 45 firms made up of investment banks, stockbrokerage firms and investment advisors. However, after cleaning up all the panel data collected for these firms, a total of 29 firms had complete data for the study period. This represented a total of 64.44% response rate that was considered adequate for analysis (Mugenda and Mugenda, 2003).

Figure 4. 1: Response Rate



4.3 Data Description

Data was described to indicate each study variable and the manner of distribution determined by kurtosis (flatness or sharpness) and skewness that determined whether data is leaning towards the positive or the negative side. The mean, standard deviation, the minimum and the maximum of each variable was determined.

Table 4. 1: Descriptive Table

	Descriptive Statistics								
	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Y-ROA	145	-51.02	61.15	3.45	15.65	1.090	.201	6.07	.400
X1-HHI Index	145	12.88	28.98	21.67	2.88	-.257	.201	.133	.400
X2-Debt/Equity	145	.00	1.00	.36	.28	.638	.201	-.730	.400
X3-Liquidity	145	-9.53	60.88	4.60	10.16	3.769	.201	16.28	.400
X4-Size	145	3.87	15.39	10.31	2.31	-.013	.201	-.036	.400
Valid N (listwise)	145								

Researcher, (2022)

Financial performance was the dependent variable, and it was determined by the extent in which a firm was able to utilize its assets in generating returns through the ROA ratio. The

study therefore indicated that the higher the ROA of a firm, the higher the financial performance and the higher the firm was able to use its total assets in generating returns. The firm that recorded the highest ROA had 61.15% while the lowest was -51.02%. The mean was 3.45% with a high standard deviation of 15.65%. The skewness of the data was only 1.09 and a high kurtosis of 6.07. This indicates that the performance of investment firms in Kenya varies significantly from one firm to the other, there are firm specific factors that influence financial performance of these firms.

The study also collected data in regard to HHI index that was determined by the sum of squared for assets namely (investment in government bonds, Real estate investment, investment in shares). It measures the extent of diversification with higher figures indicating higher level of diversification and lower figures indicating low level of diversification. The absolute figures could not be used in the analysis and therefore natural log of sum of squared of these assets was used by the study. The mean for diversification was therefore found to be 21.67 with a small standard deviation of 2.88. The maximum value of diversification among investment firms in Kenya was 28.98 while the minimum was 12.88. Both skewness and kurtosis had values close to zero although the skewness was negative at -0.257 and positive kurtosis of 0.133. This would indicate that the level of diversification among the investment firms was varied but not to a large extent, and the distribution was normally distributed with almost zero skewness and almost zero Kurtosis.

The other independent variable that was considered in the study was capital structure that was determined by the ratio of debt/assets. It indicates the extent to which a firm's assets are financed by debt relative to equity. The mean was 0.36 with a standard deviation of 0.28. This indicates that the investment firms in Kenya are financed by debt to an average of 36%

while the rest of the investment is undertaken through equity. This is not a bad gearing level for financial firms and points towards rules that control on capital requirements, that is mostly brought out by the regulator (CMA). The minimum value was 0 and the maximum value was 1 which indicates that there were some firms that had no debt while others had financed entirely through debt. The skewness and kurtosis is also close to zero with kurtosis being negative at -0.73 and skewness of 0.64.

Liquidity was the other independent variable of the study. It was used to identify the amount of cash or cash equivalents that the firms maintained as a way of dealing with liquidity issues as they also used their cash amount to undertake investments to enhance performance. This means that liquidity is crucial in every firm as it may influence performance by increasing liquidity risks if poorly managed, or reduce investments undertaken by the firm when poor liquidity policies are adopted. It was measured by the ratio of current assets to current liabilities. The mean for liquidity was 4.6 with a high standard deviation of 10.16. This indicates that the level of liquidity maintained among investment firms was not similar and they varied, may be according to their different policies they adopt, or perhaps depending on their risk tolerance levels. The firm that indicated the highest liquidity had 60.88 while the least liquidity indicated -9.53. High positive skewness and kurtosis indicated that the distribution of this variable would unlikely be normally distributed at levels of 3.77 and 16.28 respectively.

The size variable was also determined in the study. It indicates the extent to which a firm is larger than the counterparts or smaller. Larger firms are indicated to have advantages that emanate from economies of scale which is not enjoyed by smaller firms. The theoretical relationship between firm size and financial performance is that larger firms are expected to

have better performance than their smaller counterparts. Size was determined by the amount of money a firm allocated to undertake investments. The reasoning behind this was that the more a firm was able to set aside for investments, the larger it would be expected to be. The mean for size was 10.31 with a low standard deviation of 2.31. It indicates that despite the fact the firms were not of the same size, there was no large variations between the size of these firms. The firm with the highest value indicated 15.39 while the least was indicated as 3.87. Despite the skewness and kurtosis being negative at -0.013 and -0.036, they were close to zero and therefore probably indicating a normally distributed variable.

4.4 Diagnostic Tests

Diagnostic tests are important to be undertaken before carrying out data analysis in a study. It helps to check whether the data collected in the study adheres to assumptions which are made by the type of analysis envisioned to be undertaken. This study therefore seeks to determine normality of the study, carry out a linearity test, autocorrelation test, multicollinearity test, heteroscedasticity test as well as Hausman Test.

4.4.1 Normality Test

Normality test is crucial to determine whether the study adopts parametric tests or non-parametric tests. Parametric tests assumes that data forms a normally distributed (bell-shaped curve) while data that is not normally distributed has no such assumptions. The test is undertaken by Shapiro-wilk Test where a significance of greater than 0.05 indicates that the variable is normally distributed and the vice versa applies.

Table 4. 2: Normality Test

Tests of Normality	
Kolmogorov-Smirnov ^a	Shapiro-Wilk

	Statistic	df	Sig.	Statistic	df	Sig.
Y-ROA	.192	145	<.001	.795	145	<.001
X1-HHI Index	.139	145	<.001	.952	145	<.001
X2-Debt/Equity	.132	145	<.001	.911	145	<.001
X3-Liquidity	.334	145	<.001	.506	145	<.001
X4-Size	.063	145	.200*	.987	145	.196

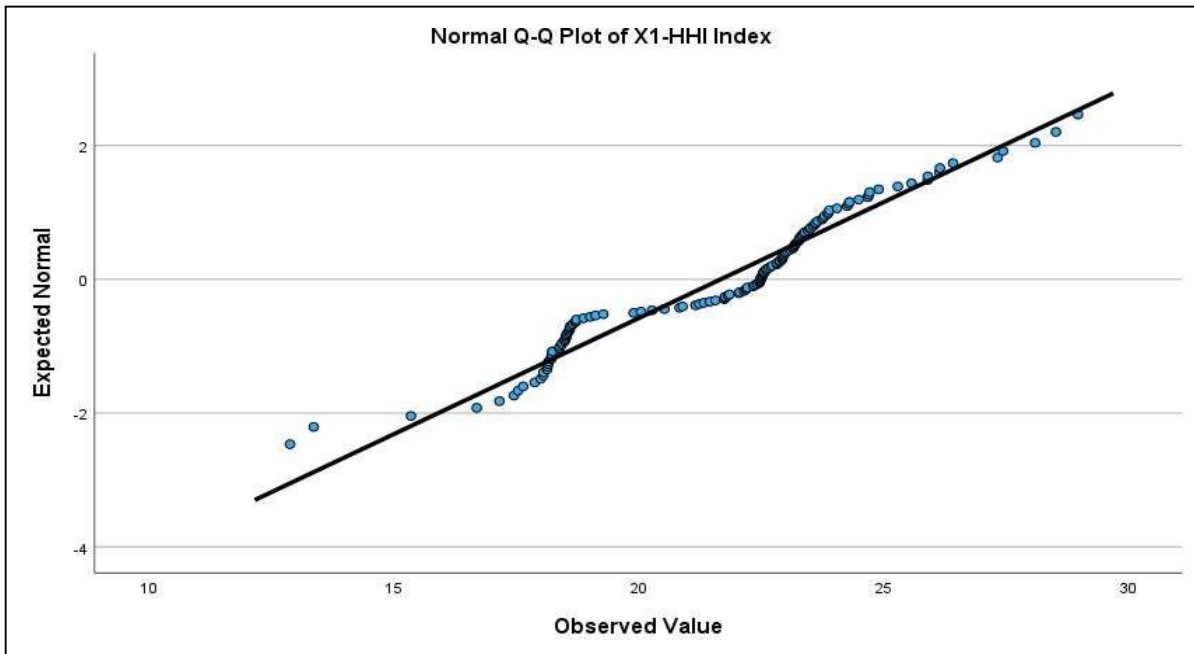
Researcher (2022)

The study indicates that all the variables have a significance of less than 0.05 apart from size which has a significance of greater than 0.05. It follows that these variables are not normally distributed apart from size that is normally distributed. It therefore follows that the study will adopt non-parametric tests for these variables or more data transformations could be carried out to ensure that data is normally distributed.

4.4.2 Linearity Test

The study seeks to determine the relationship between study variables and adopts regression analysis that assumes that data is linear in nature. It expects that data from a variable is related in a linear nature such that increases and decreases in values of the variable are linearly connected. The study used linear plots to determine whether data is linear or not.

Figure 4. 2: Normal Q-Q Plot



The normal Q-Q plot for independent variables indicate that the values follow the diagonal line and therefore linear tendencies is expressed as indicated in figure 4.2.

4.4.3 Autocorrelation Tests

The test for autocorrelations is undertaken to determine the level of autocorrelations in the regression. The measure used to determine autocorrelations was determined by Durbin Watson, and therefore the test that ensues is also known as Durbin-Watson Test. In practice Durbin Watson scores from the range of 1.5 – 2.5 indicates that there are no significant auto correlations that would lead to spurious correlations. The values below the minimum indicate there are negative autocorrelations while positive correlations if the value is above 2.5.

Table 4. 3: Test for Autocorrelations

Model	Durbin-Watson
1	.768

Table 4.3 indicates that the Durbin-Watson score is 0.768 that is far below the lower limit of 1.5. This indicates presence of negative autocorrelations that would be considered significant to cause spurious regressions if they were not addressed. The study advocated for use of standardized values to address presence of autocorrelations in the model.

4.4.4 Heteroskedasticity Test

The test for heteroskedasticity is undertaken to ensure that data is homogeneous and as such there is no presence of heteroskedasticity in the data. This is undertaken by the use of chi-square tests that were designed by Breusch and Pagan and are therefore known as Breusch-Pagan Test. The significance below 0.05 leads to rejecting the null hypothesis and therefore agreeing with the alternative hypothesis of the test.

Table 4. 4: Breusch-Pagan Test

Chi-Square	df	Sig.
19.936	1	<.001

a. Y-ROA

b. Ho – Data is homoscedastic

c. Model: Intercept + X1-HHIIndex + X2-DebtEquity + X3-Liquidity + X4-Size

Source: Researcher, (2022)

The table 4.4 indicates that the significance is below 0.05 that leads to reject the null hypothesis and therefore accept the alternative hypothesis that data is heteroskedastic. This is also treated by transformation of the data or by use of standardized data that was applied in this study.

4.4.5 Multicollinearity Test

The test seeks to determine whether there exists significant correlation between the independent variables and therefore reducing the impact or the predicting ability of the

independent variable on the dependent variable. VIF (Variation Inflation Factors) are used in measuring multicollinearity test. Rule of thumb is VIF of 10 and above indicates presence of multicollinearity and the vice versa.

Table 4. 5: Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
1	(Constant)	
	X1-HHI Index	.933
	X2-Debt/Equity	.977
	X3-Liquidity	.977
	X4-Size	.953

Source: Researcher, (2022)

The VIF values as indicated in table 4.5 are all below 10 indicating absence of multicollinearity.

4.5 Correlation Analysis

The study also undertook a correlation test to determine the correlation that exist between independent and dependent variable. The study adopted Spearman’s correlation in the place of Pearson’s correlation since some variables were not normally distributed and therefore advocated for the use of non-parametric analysis.

Table 4. 6: Correlations Table

		Y-ROA	X1-HHI Index	X2-Debt/Equity	X3-Liquidity	X4-Size
Spearman's rho	Correlation Coefficient	--				
	Sig. (2-tailed)	.				
	N	145				

X1-HHI Index	Correlation Coefficient	.684**	--			
	Sig. (2-tailed)	<.001	.			
	N	145	145			
X2-Debt/Equity	Correlation Coefficient	.035	-.138	--		
	Sig. (2-tailed)	.673	.098	.		
	N	145	145	145		
X3-Liquidity	Correlation Coefficient	-.011	.065	.094	--	
	Sig. (2-tailed)	.897	.440	.260	.	
	N	145	145	145	145	
X4-Size	Correlation Coefficient	-.327**	-.164*	.039	-.019	--
	Sig. (2-tailed)	<.001	.049	.643	.821	.
	N	145	145	145	145	145

Source: Researcher, (2022)

The correlations table 4.6 indicates that diversification index of HHI as well as size had significant correlations with p values of less than 0.05. However, while the diversification index had significant positive correlation of 0.684, size on the other hand indicated a negative and significant correlation of -0.327. It indicated that increasing diversification, significantly increased performance of investment firms and the vice versa. However, increasing the size of the firm led to a significant decrease in performance. This could be explained that increasing in amount of money available for investments of the firms led to diseconomies of scale, where decisions were not optimized in regard to investments decisions. The more the resources were available to undertake investments, the firms tended to make poor investment decisions that led to decreased performance, than their counterpart who had little amount of resources available for investments.

Both capital structure as well as liquidity had insignificant effect on performance, with p values greater than 0.05. Similarly, the correlations were very weak at close to zero at 0.035 and -0.011 respectively. The correlation values therefore indicate almost zero correlations between the study variables.

4.6 Model Determination

The study sought to determine the model that would be adopted in the study. This means the determination of whether the study would adopt fixed effect or random effect model in the study analysis. Hausman Test was therefore undertaken where the null hypothesis indicates that Random effect model is appropriate, while the alternative hypothesis indicates that fixed office would be adopted in the study.

The study therefore followed the process where the fixed effect was run and stored in the system, the random effect was also run and stored, after which a Hausman test of fixed effect and random effect was conducted in the study.

The Hausman test hypotheses is given by:

Null Hypothesis: Random effect model is appropriate

Alternative Hypothesis: Fixed effect model is an appropriate model

The Hausman test that is undertaken in Stata indicates as follows

Prob>Chi² = 0.7293

This indicates that the study fails to reject the null hypothesis.

The result of the Hausman test therefore leads us to use the Random effect model in the analysis and determination of the significance of the relationship between the study variables.

Figure 4. 3: Random Effects Variables

Random-effects GLS regression	Number of obs	=	145
Group variable: Company1	Number of groups	=	29
R-sq: within = 0.4192	Obs per group: min =		5
between = 0.2301	avg =		5.0
overall = 0.2940	max =		5
	Wald chi2(4)	=	88.84
corr(u_i, X) = 0 (assumed)	Prob > chi2	=	0.0000

The random effects variables indicated in figure 4.3 shows that the random effects adopted by the study undertakes a Wald chi-square test with a score of 88.94. The p value is 0.00 that indicates that it is less than 0.05. The study therefore concludes that there is a significant effect of portfolio diversification on performance of investment firms in Kenya.

Table 4. 7: Model Coefficients

ROA	Coef.	Std. Err	t	P> t	[95% Conf.	Interval]
HHI	2.52	.30	8.26	0.000	1.92	3.11
Capstr	7.07	3.22	2.20	0.028	.76	13.38
Liquidity	-.16	.09	-1.85	0.064	-.34	.01
Size	-2.34	.66	-3.54	0.000	-3.63	-1.04
_Cons	-28.77	10.17	-2.83	0.005	-48.69	-8.84
Sigma_u	11.09					
Sigma_e	8.30					
Rho	.64 (fraction of variance due to u_i)					

Source: Researcher, (2022)

The model coefficients undertaken by the study indicates that they have a significant effect on the dependent variable since the significance of the t-test is less than 0.05 apart from

Liquidity variable that is slightly higher than 0.05 at $P = 0.064$. It shows that the effect of liquidity in the analytical model is insignificant.

The analytical model $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon$ is therefore expressed as follows:

$$Y = -28.77 + 2.52 X_1 + 7.07 X_2 - .16 X_3 - 2.34 X_4 + 10.17$$

This indicates that if all factors were held constant and portfolio diversification index increased by one unit, performance would increase by 2.52%. Similarly, increasing debt over equity by one unit for investment firms in Kenya, their performance would increase by 7.07%. Increasing liquidity on the other hand, while holding all other factors constant would lead to a decrease in financial performance. A similar effect would be obtained if the study increased the size of firms, by increasing the amount available for investments would lead to a decrease in financial performance of 2.34%.

4.7 Summary and Interpretation of Study Findings

The study sought to determine the effect of portfolio diversification on financial performance of investment firms in Kenya. The study collected secondary data from published financial statements for each study variable. Complete data was collected from 29 companies from a total of 45 companies and that created a response rate of 64.4%. Descriptive statistics was undertaken on each variable that determined the mean, standard deviation as well as the distribution of the study variable. The descriptive statistics indicated that each investment firm in Kenya, made its own unique decisions as far as the study variables were concerned, that impacted on their financial performance differently.

The study used Spearman's correlation to determine the correlation between the study variables. This was driven by the fact that Spearman's Correlation is a non-parametric measure that was desired in this study. Portfolio diversification index together with size had significant correlation, though HHI (index) had a positive of 0.684 while size had negative correlation of -0.327. It showed that increasing diversification index had a positive impact on performance, while increasing the size of the firms led to diseconomies of scales. Capital structure and liquidity on the other hand had insignificant and weak correlation (were almost equal to zero). This indicated that these factors did not have significant impact on financial performance.

The analysis was undertaken further where regression analysis was adopted by the study. A Hausman test that was carried out indicated, that a random effect model was appropriate for the study. The model uses chi-square test to determine the significance of the effect between portfolio diversification and financial performance. The p value was less than 0.05 indicating that there was a statistically significant effect. The coefficients were all significant apart from Liquidity that was insignificant as p value was greater than 0.05 at 0.064.

This indicates that if all factors were held constant and portfolio diversification index increased by one unit, performance would increase by 2.52%. Similarly, increasing debt over equity by one unit for investment firms in Kenya, their performance would increase by 7.07%. Increasing liquidity on the other hand, while holding all other factors constant would lead to a decrease in financial performance. A similar effect would be obtained if the study increased the size of firms, by increasing the amount available for investments would lead to a decrease in financial performance of 2.34%.

The findings of the study were consistent with findings from the study undertaken by Osewe (2020) who found positive effect of portfolio diversification on performance. Kimuma (2021) found positive relationship between insurance bonds investments and FP. Similar findings were also replicated by a study that was undertaken by Obiero (2018). Kumar (2017) found positive correlation between both diversification and loan on financial performance. Similar findings were also indicated by Hailu and Tassew (2018) as it was the case for Yildirim and Masih (2018) who found positive effect of portfolio diversification among Asian Islamic Stock and performance.

Osewe (2020) on the other hand had contrary findings that showed that liquidity and firm size had positive effect on performance which is contrary to findings in this study. Kimuma (2021) also indicated that real estate investment had negative effect on financial performance. Similar findings were reflected by Kumar (2017) on real estate investment and financial performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter goes about discussing how the objective of the study which was to determine the effect of portfolio diversification on the financial performance of investment firms in Kenya. The chapter thus encompasses an in-depth summary of the study findings, conclusions and recommendations based on the study findings. The chapter also divulges the various limitations that were met by the study as well as other fields that may require further research.

5.2 Summary of the Study

Portfolio diversification has been found to be a strategy that once well adopted, would ensure that investment firms maximize profit. This comes from the fact that investments involve risk taking ventures, that if the total exposure by an investor is not well calculated and determined, then it would have a negative impact on the returns. This study therefore sought to determine the effect of portfolio diversification on the financial performance of investment firms in Kenya. To achieve this objective the study collected secondary data from relevant financial publications which summed up to a 64.4% response rate.

The study used Spearman's correlation to determine the correlation between the study variables. This was driven by the fact that Spearman's Correlation is a non-parametric

measure that was desired in this study. Portfolio diversification index together with size had significant correlation, though HHI (index) had a positive of 0.684 while size had negative correlation of -0.327. It showed that increasing diversification index had a positive impact on performance, while increasing the size of the firms led to diseconomies of scales. Capital structure and liquidity on the other hand had insignificant and weak correlation (were almost equal to zero). This indicated that these factors did not have significant impact on financial performance.

The analysis was undertaken further where regression analysis was adopted by the study. A Hausman test that was carried out indicated, that a random effect model was appropriate for the study. The model uses chi-square test to determine the significance of the effect between portfolio diversification and financial performance. The p value was less than 0.05 indicating that there was a statistically significant effect. The coefficients were all significant apart from Liquidity that was insignificant as p value was greater than 0.05 at 0.064.

This indicates that if all factors were held constant and portfolio diversification index increased by one unit, performance would increase by 2.52%. Similarly, increasing debt over equity by one unit for investment firms in Kenya, their performance would increase by 7.07%. Increasing liquidity on the other hand, while holding all other factors constant would lead to a decrease in financial performance. A similar effect would be obtained if the study increased the size of firms, by increasing the amount available for investments would lead to a decrease in financial performance of 2.34%.

5.3 Conclusion of the Study

The study findings therefore led to make different conclusions in regard to study variables. The fact that portfolio diversification had significant positive effect on financial performance, indicates that investment firms should undertake portfolio diversification by investing in real estates, government bonds as well as in equity shares to diversify the risk. The conclusion of the study in regard to capital structure indicates that the firms would be better off undertaking more debt in their capital structure as it would enhance their financial performance. However, liquidity did not have significant impact, though it had negative effect on performance, that indicates that increasing the liquidity would have an adverse effect on performance of these firms. Similarly, the study also indicated that increasing the size of the firms would lead to a diseconomy of scale. This would mean that increasing the total amount available for undertaking investments in firms led the firms to make poor decisions that led to decreasing their performance. The study concludes that larger firms were less profitable as compared to smaller firms. The conclusion on these variables

5.3.1 Portfolio Diversification

Portfolio diversification aids firms and organisations to spread out their chances of risk or conversely broaden their scope for making profit. The correlation analysis determined that portfolio diversification had a significant positive correlation to the financial performance of investment firms in Kenya. The study indicated that diversification had a significant relationship with financial performance. The study concludes that investment firms should increasingly adopt portfolio diversification since it leads to better performance.

5.3.2 Liquidity

Liquidity refers to a firm's or organisation's ability to shoulder the occurrence of loss within the company or financial shocks as a result of an economic downturn. The study determined the liquidity of firms by using the ratio of current assets divided by current liabilities. The study findings indicated that liquidity had insignificant effect on financial performance. This was observed when correlation analysis was undertaken and similarly when the regression analysis was undertaken, similar results were observed. The findings thus conclude that liquidity has little to no bearing on the financial performance of investment firms in Kenya.

5.3.4 Capital Structure

Capital structure refers to the amount of leverage in terms of debt and equity that a firm has in order to finance its operations. The study determined that investment firms invested 34% of their funds from equity and 36% from the funding through debt. The study also found that some firms lacked debt while some financed all of their operations with debt. The correlation tests determined that capital structure had a positive significant relationship with financial performance. The regression analysis also found that capital structure had a significant relationship with the financial performance of investment firms. From these findings the study concludes that capital structure affects the financial performance positively. A good balance of equity and debt can thus aid investment firms in enhancing their operations and financial performance.

5.3.5 Size

The size of a firm can be an indicator of its financial success as it depicts a sustainable enterprise that can use the proceeds from its day-to-day operations to finance its expansion.

Correlation analysis indicated that firm size had a significant negative relationship with financial performance while regression analysis also indicated a significant negative relationship with financial performance. The findings thus conclude that increasing the size of investment firms in Kenya, the firms would suffer from diseconomies of scale, thereby reduce their performance.

5.4 Study Recommendations

The study through the review of its findings recommends that investment firms in Kenya should adopt policies that are geared toward portfolio diversification since it can effectively and positively change the fortune of firms regarding financial performance. The diversification of assets and operations can open up new avenues of economic output for firms, before which if employed correctly and efficiently will translate to improved financial performance.

The study found the liquidity of a firm to have no bearing on the financial success of the firm, however the continuity of a firm after significant losses is dependent on their ability to bounce back which is mainly dependent on their liquidity ratio. Diversification can aid in this aspect as it presents the opportunity to diversify and in theory increase the amount of assets available to the firm in case of a financial crisis. The study therefore recommends investment banks to reduce the amount of cash and cash equivalents that the company maintains as it negatively impacts performance.

The study found capital structure to have a positive bearing on the financial performance of investment firms in Kenya. With the help of the findings the study concludes that investment firms should increase debt financing as it helps them improve performance. This

could be explained as a result of tax shields that firms benefit as a result of gearing. This is in tandem to capital structure theory by Modigliani and Miller.

The study found that the size of the firm to have an antagonistic effect on the financial performance of investment firms in Kenya. The study recommends that firms gauge the diseconomies of scale that would likely accrue from expansion. This means that increasing the investments by a firm makes the firm to lose concentration or undertake investment decisions that are not likely to enhance performance. The study recommends that firms that are increasing in size to ensure they follow their traditional investment practices that guarantees returns.

5.5 Limitations of the Study

The study was undertaken with caution and high precision that ensured that the findings were as accurate as possible. However, there were several limitations that the researcher couldn't be able to address adequately. The study adopted secondary data, which may be prone to errors of omission or commission. The annual reports may be prone to errors despite the fact that the researcher confined to audited reports, it was possible that in the instances where the management exercises earning management, then in such a scenario, the study would rely on inaccurate data.

The study was conducted for the period 2017-2021. This is a period where Covid-19 affected operations and investments of financial markets as well as other markets across the world. It was a disruption that would mean that relying on data from such a period, mostly in the year 2020 and 2021, the period was marred by Covid-19 disruptions that would have significant impact on all the variables. The findings of this study is therefore limited by this fact.

The study was not able to gather data from all the investment firms in Kenya, despite the fact that the study was able to guarantee a response rate of 64.4% which was considered adequate for analysis, the firms that had incomplete data would perhaps have influence on the study findings, despite the marginal difference such findings would indicate considerable change to the study conclusion. This is mainly influenced by the fact that study findings such as on liquidity of the firms, required a slight change in the results to have complete different conclusion from the one undertaken by the study.

5.6 Areas for Further Study

The study therefore advocates that future study should be undertaken where primary data is collected and determined. The findings of the study should be compared with the findings of this study and conclusions made accordingly.

A similar study would also be beneficial, if such a study would avoid a period with international disruption such as the one caused by Covid-19. The study findings would be compared to the findings in the study to determine whether the disruption had a significant effect on the conclusion made by the study.

A similar study should ensure that data is collected from all the investment firms. The use of both primary data and secondary data, would perhaps ensure that the firms that did not have their reports on public forums and websites were well catered in the study.

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APPENDICES

Appendix 1: List of 45 Licensed Investment Banks, Fund Managers, and Stockbrokerage Firms in Kenya

INVESTMENT BANKS

1. African Alliance Kenya Investment Bank
2. ABSA Securities Limited
3. CBA Capital Limited
4. Dyer and Blair Investment Bank Limited
5. Equity Investment Bank Limited
6. Faida Investment Bank
7. Genghis Capital Limited
8. KCB Capital Limited
9. NCBA Investment Bank Limited
10. Renaissance Capital (Kenya) Limited
11. SBG Securities
12. Standard Investment Bank Limited
13. Sterling Capital Limited

STOCKBROKERS

1. ABC Capital Limited
2. AIB-AXYS Africa Limited
3. Francis Drummond & Company Limited
4. Kingdom Securities Limited
5. Old Mutual Securities ...Limited
6. Suntra Investments ...Limited
7. Securities Africa KenyaLimited
8. EFG Hermes Kenya Limited

FUND MANAGERS

1. Orient Asset Managers Limited
2. Amana Capital Limited
3. Apollo Asset Management Company Limited
4. Britam Asset Managers(Kenya) Limited
5. Metropolitan Cannon Asset Managers Limited
6. Nabo Capital Limited
7. CIC Asset Management Limited
8. Co-op Trust InvestmentServices Limited
9. FCB Capital Limited
10. FusionInvestment Management Limited
11. GenAfrica Asset Managers Limited
12. ICEA Lion Asset Management Limited
13. Madison Investment Managers Limited
14. Old Mutual InvestmentGroup Limited
15. Sanlam Investments EastAfrica Limited

16. Standard Chartered Investment Services Limited
17. Zimele Asset Management Company Limited
18. Natbank Trustee and Investment Services Limited
19. Cytonn Asset ManagersLimited
20. Jubilee Financial Services Limited
21. ABSA Asset Management Limited
22. African Diaspora Asset Managers Limited
23. CFS Asset ManagementLimited
24. I&M Capital Limited

Appendix 2: Data Collection Form

Name	Year	Total Assets	Total amount held for investment	Current Assets	Current Liabilities	Profit/Loss	Book value of bonds	Book value of Real Estate	Book value of shares
	2021								
	2020								
	2019								
	2018								
	2017								

Appendix 3: Data Used

Company	Year	Y-ROA	X1-HHI Index	X2-Debt/Equity	X3-Liquidity	X4-Size
Orient	2021	13.10	22.94	0.38	0.94	10.76
Orient	2020	10.16	23.52	0.50	0.34	11.11
Orient	2019	-23.64	18.52	0.41	2.67	11.31
Orient	2018	-16.29	18.72	0.46	1.56	11.30
Orient	2017	13.82	23.15	0.82	1.50	11.01
Amana C	2021	-0.84	18.38	0.41	0.93	9.11
Amana C	2020	-0.05	19.01	0.20	0.08	9.11
Amana C	2019	-18.90	18.15	0.01	0.16	12.13

Amana C	2018	0.19	23.90	0.03	0.09	10.89
Amana C	2017	6.89	23.87	0.04	1.48	10.45
Apollo	2021	3.58	26.15	0.57	56.37	12.14
Apollo	2020	3.05	24.26	0.67	60.88	12.70
Apollo	2019	5.05	23.17	0.16	6.31	12.67
Apollo	2018	3.35	23.46	0.25	7.17	11.44
Apollo	2017	4.05	25.30	0.01	8.18	12.79
Britam	2021	11.05	23.10	0.62	6.10	8.70
Britam	2020	10.15	24.70	0.06	4.43	8.39
Britam	2019	16.67	25.91	0.05	0.07	8.72
Britam	2018	19.62	23.18	0.61	0.05	8.90
Britam	2017	16.66	22.88	0.44	8.20	9.04
Metropolitan	2021	-0.73	19.28	0.33	0.59	11.12
Metropolitan	2020	12.44	23.22	0.92	7.45	9.52
Metropolitan	2019	0.11	23.61	0.14	7.76	11.53
Metropolitan	2018	1.07	24.69	0.04	11.72	11.74
Metropolitan	2017	0.99	23.78	0.03	5.40	11.85
ICEA	2021	3.31	22.49	0.10	0.69	6.51
ICEA	2020	3.81	21.83	0.10	1.07	6.57
ICEA	2019	4.40	20.53	0.43	0.06	8.15
ICEA	2018	3.50	22.61	0.37	0.07	8.12
ICEA	2017	4.55	24.50	0.09	0.28	7.45
Madison	2021	-51.02	18.88	0.42	1.03	6.69
Madison	2020	-48.46	18.60	0.06	1.24	7.34
Madison	2019	9.09	23.00	0.47	0.13	6.69
Madison	2018	4.97	22.73	0.58	0.15	6.41
Madison	2017	29.78	26.16	0.09	0.73	6.65
Old Mutual	2021	-1.13	18.49	0.63	0.11	10.71
Old Mutual	2020	-1.38	18.50	0.77	0.39	10.68
Old Mutual	2019	1.49	15.35	0.43	0.10	8.78
Old Mutual	2018	0.99	20.84	0.14	1.23	10.77
Old Mutual	2017	0.45	21.46	0.85	21.70	13.24
Sanlaam	2021	1.22	22.95	0.36	0.06	6.52
Sanlaam	2020	1.61	22.06	0.87	0.13	8.15
Sanlaam	2019	10.67	22.47	0.51	10.49	7.48
Sanlaam	2018	-3.78	18.06	0.91	5.40	8.36
Sanlaam	2017	5.84	22.54	0.48	0.95	7.76
CIC	2021	5.85	23.57	0.09	0.19	10.69
CIC	2020	54.80	25.91	0.06	0.54	8.26
CIC	2019	-0.21	18.39	0.07	59.31	10.91

CIC	2018	0.23	22.22	0.06	0.87	10.45
CIC	2017	16.98	22.34	0.35	12.91	10.73
FCB Capital	2021	29.64	23.28	0.87	0.05	11.46
FCB Capital	2020	-16.21	18.58	0.10	0.10	11.35
FCB Capital	2019	22.81	22.52	0.49	0.13	11.35
FCB Capital	2018	16.92	25.58	0.16	0.13	11.22
FCB Capital	2017	15.74	24.29	0.15	1.35	10.93
Zimele A	2021	15.04	22.56	0.43	0.43	7.08
Zimele A	2020	-11.24	18.73	0.74	0.36	9.19
Zimele A	2019	14.37	22.55	0.60	0.33	8.49
Zimele A	2018	14.63	24.05	0.11	0.29	8.95
Zimele A	2017	7.96	23.19	0.92	0.27	10.38
Cytonn Bank	2021	13.51	22.66	0.54	7.06	10.66
Cytonn Bank	2020	8.80	21.57	0.86	17.12	9.85
Cytonn Bank	2019	16.43	22.62	0.66	16.38	8.82
Cytonn Bank	2018	1.90	21.16	0.55	7.19	10.95
Cytonn Bank	2017	2.43	24.72	0.50	8.60	11.09
Jubilee	2021	4.45	23.87	0.07	14.00	8.83
Jubilee	2020	2.95	22.38	0.09	8.52	4.63
Jubilee	2019	-1.96	18.44	0.09	6.01	6.34
Jubilee	2018	2.46	22.20	0.14	7.56	6.07
Jubilee	2017	2.57	22.19	0.01	19.69	8.15
African Alliance	2021	2.36	22.71	0.63	0.04	8.06
African Alliance	2020	-5.96	18.13	0.31	0.02	7.89
African Alliance	2019	0.55	21.24	0.27	0.02	8.58
African Alliance	2018	1.96	21.77	0.37	0.02	8.60
African Alliance	2017	0.15	26.42	0.06	0.03	8.66
CPF	2021	0.01	22.15	0.27	0.31	13.19
CPF	2020	0.02	23.03	0.10	0.28	12.21
CPF	2019	0.01	21.86	0.11	0.18	12.61
CPF	2018	0.04	22.93	0.11	0.18	13.31
CPF	2017	0.05	22.49	0.21	0.06	13.13
D & B	2021	0.67	22.83	0.03	1.52	9.90
D & B	2020	0.02	21.75	0.03	1.62	8.94
D & B	2019	0.67	22.83	0.03	1.52	9.90
D & B	2018	0.02	23.75	0.03	1.62	9.78
D & B	2017	0.02	22.55	0.03	0.84	9.83
Equity	2021	3.07	24.91	0.14	0.02	11.96
Equity	2020	1.98	20.05	0.12	0.02	11.96
Equity	2019	3.35	21.76	0.06	0.02	12.06

Equity	2018	3.46	23.61	0.12	0.03	11.99
Equity	2017	4.02	20.90	0.03	0.19	11.66
Gegnghis	2021	5.69	23.66	0.97	21.68	9.36
Gegnghis	2020	7.18	28.53	0.38	35.34	9.44
Gegnghis	2019	-8.82	13.37	0.42	1.65	12.22
Gegnghis	2018	7.18	22.43	0.38	35.34	9.44
Gegnghis	2017	-8.82	12.88	0.56	1.65	12.22
NCBA	2021	0.87	18.55	0.48	1.21	10.57
NCBA	2020	1.58	18.43	0.51	1.41	10.49
NCBA	2019	1.05	19.90	0.39	0.51	10.95
NCBA	2018	0.86	18.22	0.32	0.10	10.45
NCBA	2017	1.00	18.66	0.11	0.63	10.45
SBG	2021	-0.07	17.88	0.25	1.66	10.05
SBG	2020	7.89	28.98	0.12	2.14	12.75
SBG	2019	4.52	28.10	0.24	2.32	12.98
SBG	2018	0.55	27.33	0.44	1.58	10.68
SBG	2017	2.92	27.45	0.35	2.26	12.98
Sterling Capital	2021	-9.42	17.64	0.29	0.60	15.35
Sterling Capital	2020	3.17	23.50	0.30	0.34	15.17
Sterling Capital	2019	-0.80	17.45	0.68	1.08	15.08
Sterling Capital	2018	-12.70	17.16	0.42	0.72	15.39
Sterling Capital	2017	-5.37	17.54	0.84	0.56	15.35
Renaissance Capital	2021	61.15	24.31	0.87	1.02	7.18
Renaissance Capital	2020	60.32	23.37	0.10	1.95	7.02
Renaissance Capital	2019	60.82	23.00	0.12	1.93	6.75
Renaissance Capital	2018	57.83	22.96	0.12	2.04	3.87
Renaissance Capital	2017	52.96	22.94	0.11	1.98	6.20
Sterling Cap	2021	-5.75	18.00	0.13	0.72	14.63
Sterling Cap	2020	2.78	22.05	0.90	0.91	14.80
Sterling Cap	2019	-8.88	18.06	0.93	0.60	14.85
Sterling Cap	2018	-7.44	16.69	0.01	0.51	14.83
Sterling Cap	2017	-1.68	18.60	0.08	0.46	14.86
Dre associates	2021	6.47	23.25	0.76	0.08	10.95
Dre associates	2020	3.18	22.48	0.24	0.09	10.75
Dre associates	2019	2.76	22.52	0.24	0.09	10.48
Dre associates	2018	3.08	22.49	0.25	0.08	10.98
Dre associates	2017	2.91	20.28	0.25	0.08	10.55
ABC Capital	2021	5.11	22.88	0.43	1.51	11.08
ABC Capital	2020	-35.18	18.16	0.52	1.73	10.96
ABC Capital	2019	-12.36	18.24	0.63	1.90	10.68

ABC Capital	2018	-21.58	18.14	0.32	8.01	12.13
ABC Capital	2017	-4.36	19.12	0.04	2.48	8.08
AIB AXYS	2021	2.60	21.33	0.40	1.39	12.28
AIB AXYS	2020	-11.05	18.22	0.23	1.33	12.22
AIB AXYS	2019	-2.55	18.24	0.76	1.46	12.69
AIB AXYS	2018	-11.05	18.23	0.23	1.33	12.22
AIB AXYS	2017	-2.55	18.59	0.76	1.46	12.69
Suntra Investments	2021	0.25	23.40	0.97	1.72	9.23
Suntra Investments	2020	1.53	23.29	0.84	1.72	9.23
Suntra Investments	2019	0.19	23.32	1.00	1.82	9.23
Suntra Investments	2018	0.25	23.34	0.91	1.72	9.23
Suntra Investments	2017	1.53	23.29	0.84	1.72	9.23
SAKE	2021	6.72	23.80	0.00	-9.53	10.01
SAKE	2020	-8.04	18.64	0.31	15.87	10.25
SAKE	2019	-9.56	18.52	0.23	21.94	10.31
SAKE	2018	-8.04	18.53	0.31	15.87	10.25
SAKE	2017	-9.56	18.71	0.23	21.94	10.31