INVESTOR SENTIMENTS, PROPERTY DIVERSIFICATION, INVESTOR AWARENESS AND THEIR INFLUENCE ON PERFORMANCE OF REAL ESTATE INVESTMENT TRUSTS IN KENYA

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A Thesis Submitted to the Graduate School in Partial Fulfilment of the Requirements for the Conferment of the Degree of Doctor of Philosophy in Business Administration of Laikipia University

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DECLARATION AND RECOMMENDATION

Declaration

I, the undersigned, declare that the material contained in this dissertation is entirely my original work and has not previously been submitted for the conferment of a degree in any other institution of higher learning.

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Recommendation

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DEDICATION

This thesis is dedicated to my family members, who have always been a source of inspiration and support. Their unwavering prayers and support made it possible for me to finish this dissertation. I dedicate this thesis to my father Patrick Ndung'u Thuo (posthumously). Special thanks to my mother Rebecca Ndung'u, my sisters Faith, Ann, Beth, my nephew Ryan and my nieces Ciru and Shaline.

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ABSTRACT

The introduction of REITs in the securities market was intended to broaden capital markets, allowing them to be used to raise funds for affordable housing while also serving as an alternative investment choice. However, since its introduction, Kenya's REITs market has experienced slow development. The performance of the listed REITs has not been as expected since listing in the year 2015. Additionally, efforts by REIT managers to issue more real estate securities have been slow. There is a lack of information as to why this current situation exists. In addition, information is scant on how investor sentiments, property diversification, and investor awareness may influence the performance of REITs. Moreover, it is not clear how the market regulatory framework may moderate the relationship between investor sentiments, property diversification, investor awareness, and the performance of REITs in Kenya. Thus, the main objective of this study was to examine how investor sentiments, property diversification, and investor awareness influence the performance of REITs in Kenya. Specifically, the study sought; to assess the influence of investor sentiments on the performance of REITs, examine the influence of property diversification on the performance of REITs, evaluate the influence of investor awareness on the performance of REITs, and analyse the moderating effect of market regulatory framework on the influence of predictor variables on the performance of REITs in Kenya. A predictive correlational research design was employed. The target population comprised 202 respondents consisting of Fund Managers, Stock Brokers, Investment Banks and Property Developers. A structured questionnaire was used to collect primary data, while audited financial records for the years 2016-2020 provided secondary data. The reliability and validity of the research instrument were ascertained through pre-testing, Cronbach alpha, and factor analysis. To summarize the findings, descriptive statistics were employed. Inferential statistics such as Structural Equation Modelling were used to test the hypothesized relationships at a 5% significance level. SPSS and DEA software was used for data analysis. The results are presented using tables and discussions. Results show that there exists a positive significant influence of investor sentiments on the performance of REITs. There exists a positive significant influence of property diversification on the performance of REITs. Further, the influence of investor awareness on the performance of REITs is positive but statistically insignificant. The findings also revealed that the market regulatory framework does not significantly moderate the influence of investor sentiments, property diversification investor awareness, and performance of REITs in Kenya. The study concludes risk and return sentiments have made REITs issuers shy away from issuing new such securities in the market. Further, continued property-type location diversification will enhance the uptake of REITs by investors. The study recommends that continuous engagement sessions between the securities market regulatory authority, the REITs Association of Kenya, and investors will enhance market confidence, thus lowering the risk-return sentiments. In addition, REITs issuing firms should also ensure that there is clarity over the returns of the underlying properties since this is likely to improve REITs' share returns by creating certainty among investors.

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LIST OF ABBREVIATIONS

AMOS	Analysis of Moments Structure
APAC	Asia Pacific
BIS	Buy-Sell Imbalance
BPT	Behavioural Portfolio Theory
CAPM	Capital Asset Pricing Model
CBD	Central Business Division
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CLF	Common Latent Factor
CMA	Capital Markets Authority
CMB	Common Method Bias
CMIN	Model Chi-Square
CMV	Common Method Variance
DEA	Data Envelopment Analysis
DMU	Decision Making Units
D-REIT	Development Real Estate Investment Trusts
EFA	Exploratory Factor Analysis
EPRA	European Public Real Estate Association
EY	Ernst & Young
FAHR	Fahari Real Estate Investment Trust
GARCH-DCC	Generalized Autoregressive Conditional Heteroscedasticity Dynamic Control Correlation
GEMS	Growth Enterprise Market Segment
GFC	Global Financial Crisis
GFI	Goodness of Fit Index
GICS	Global Industry Classification Standards
HFC	Housing Finance Company
IPO	Initial Public Offer
IREBS	International Real Estate Business School
I-REIT	Income Real Estate Investment Trust
KMO	Kaiser Meyer Olkin
MPT	Modern Portfolio Theory

M-REITs	Malaysian Real Estate Investment Trusts
NACOSTI	National Commission for Science, Technology and Innovation
NAREIT	National Association of Real Estate Investment Trusts
NFI	Normed Fit Index
N-REIT	Nigerian Real Estate Investment Trust
PLS-SEM	Partial Least Squares Structural Equation Modelling
PWC	PricewaterhouseCoopers
RAK	REITs Association of Kenya
REITs	Real Estate Investment Trusts
RES	Real Estate Syndication
RMSEA	Root Mean Square Error
S&P 500	Standard and Poor 500 indexes
SA-REITs	South African Real Estate Investment Trusts
SEM	Structural Equation Modelling
SPSS	Statistical Packages for Social Sciences
STATA	Statistics and Data
TRACE	Trade Reporting and Compliance Engine
VAR	Vector Autoregresion
VIF	Variance Inflation Factor
WHC REIT	Watumishi Housing Company Real Estate Investment Trust
WRDS	Wharton Research Data Service

OPERATIONAL DEFINITIONS OF TERMS

Investor Awareness	Investors' knowledge of the REITs securities market.
Investor Sentiments	Opinions, views and perception of retail and institutional investors on the REIT market.
Operational Efficiency	The operational success of the REIT issuer based on the operating inputs. The inputs include total assets and equity capital while the outputs include operating income and total revenue.
Property Diversification	Diversification of properties such as residential or commercial and geographic or economic location.
Real Estate Investment Trust	An investment vehicle that is duly registered and regulated and which enables investors to pool funds together to invest in large scale income-generating commercial, residential and industrial real estate properties.
Market Regulatory Framework	Capital Markets Authority regulations guiding the requirements for distribution of dividends, net asset value, percentage of ownership by principal sponsors, and listing requirements.
REIT Performance	Operating success of the REIT which reflects investors uptake and the operational efficiency of the REITs issuer

CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Property investments have grown in popularity over the previous two decades, making them an essential asset class in the investment realm. According to Pham (2013), since the 2000s, the property market has emerged as the second-largest investment option after fixed-income securities but bigger than the money market and shares. Property firms, property securities funds, and Real Estate Investment Funds are the most popular types of listed property products (Jakpar, 2018). Among the property products listed, Real Estate Investment Trusts (REITs) have emerged as the major investment vehicle for individual and institutional investors. Thus, REITs have become a significant asset class of investment options for investors who may be searching for alternative investment hence the focus on Real Estate Investment Securities in this study.

According to Olanrele (2014), Real Estate Investment Trust is a registered company similar to a mutual fund, which enables investors to pool funds together to invest in a diversified real estate asset portfolio (Olanrele, 2014). It is a corporation that owns or operates revenue-generating real estate assets, and whose shares are traded publicly like any other stock (Oreagbe, 2010). According to the European Public Real Estate Association (2012), a REIT qualifies for special tax status where profits are taxed at the level of the investor and not at the level of the entity. Like stocks on stock exchanges, REITs sell and invest directly in real estate, via mortgage or property. Investors who do not have large amounts of money to purchase property are allowed to invest in the real estate sector through REITs (Cytonn Investments, 2018). REITs allow investors an opportunity to have a stake in already existing properties, or properties, which are being developed hence the focus of the current study.

REITs make their money much as any property owner does by collecting rent. A significant chunk of this rent is routinely distributed as dividends to investors. Investors' interest in REITs shares is informed by various reasons. First, REITs trade like stocks thus giving investors exposure to real estate without having to buy and sell actual buildings. Second, property developers can sell units or shares in a commercial or residential building to investors through the capital market. Third, through REITs,

individual investors can own the property market (Africa Business Communities, 2015; Cytonn Investments, 2019).

Fourth, income from REITs in terms of dividends is predictable since most rents paid by occupants are agreed upon before a lease agreement. Income REITs allow investors to invest in diversified properties such as shopping malls, warehouses, office blocks and hostels among others. REITs offer competitive returns to investors for the risks they assume. Fifth, since REITs are listed on the Stock Exchange, they can easily be converted into cash and hence enjoy a feature of high liquidity just as other financial securities traded in the bourse. Through REITs, small and medium investors are accorded an opportunity to own real estate properties. This could not have been possible if they were to purchase properties directly since they would require huge sums of money (CAHF, 2017). According to Chang, Chen and Leung (2011), the growth of the REIT market is critical for investors and the real estate market. The authors opine that, since the underlying assets of REITs such as office buildings, commercial buildings, shopping malls, residential buildings, warehouses and tourism hotels, are diverse and widespread, enhancing the growth of the REITs market can spur economic growth. The current study sought to examine the benefits accruing from the performance of REITs in terms of uptake by individual and institutional investors in Kenya.

Globally, REITs have proved to be a profitable asset class (Jackson, 2008). This can be evidenced by the performance of REITs in developed markets (NAREIT, 2018). On the other hand, in developing economies, especially in Africa, REITs are still newly characterized by an immature real estate market (Dabara, Omotehinshe, Chiwuzie, Asa, & Soladoye, 2018). Historically, the development of REITs markets began in the 1960s, when the United States of America Congress initiated the process of creating Real Estate Investment Trusts meant to provide access to affordable investments in commercial real estate properties (Oranlee, 2014). The introduction of REITs was based on the desire to help prospective investors who did not have huge amounts of money required to purchase real estate property but were willing and could buy REITs shares (Naidoo, 2014). Before the REIT regime was introduced in the US, individuals who have a high net worth, as well as institutional investors, dominated the commercial property market. Retail investors were able to buy partial ownership of large income-generating real estate assets through REITs, while also receiving tax benefits (Pham, 2013). REITs have

become significant investment vehicles among investors in many economies around the globe. This can be attested by a huge amount of investments in REITs sectors across many economies (Drew, 2016).

Ernst and Young Global (2019) reported that the concept of REIT across the globe was still gathering pace, with over 37 economies having an active REITs market with an approximate market value of over 1.7 trillion US dollars. By the year 2018, the US had a REITs market value of 1.05 trillion US dollars while the number of REITs that were operating in the US stood at 226 by the end of 2018. The number of REITs operating in the US had fallen from 233 by the end of 2015. Furthermore, with a market capitalization of over US$ 29.5 billion at the end of 2019, Welltower was the largest housing REIT on the US market. According to Statista (2019), by the year 2019, the top ten REITs in the world were all based in the United States. With a total market capitalization of US$19.11 billion at the end of 2019, Boston-based American Tower was the world's largest REIT (Macro trends, 2020).

The key players in the Asia-Pacific REITs industry include; Japan, Hong Kong, Australia, and Singapore, as well as smaller economies like Taiwan, Malaysia, and Thailand. The launch of REITs in Japan in 2001 sparked the growth of the REIT industry, which was quickly followed by Singapore, Hong Kong, South Korea, Taiwan, and Malaysia. Despite global economic uncertainty, Asian REITs became the most popular among investors. After the Global Financial Crisis, Asian REIT markets have delivered higher returns, lower risk, and better-adjusted performance than their respective securities markets (Price Waterhouse Coopers, 2019). With 63 reported REITs and a market capitalization of 147.2 billion dollars, Japan's REIT market is the largest in Asia Pacific (Savills Research, 2019).

By the year 2019, Asia- Pacific (APAC) REITs had grown to over 250 and combined market capitalization has swelled to reach over 330 billion US dollars (Vreeker, 2020). While new REIT markets were also expected to lead to further growth following approved legislation in India, the Philippines and Thailand, China is still in progress. PWC (2019) observed that the eventuation of REITs in China would be relatively unique in having a strong showing of residential REIT products in addition to the usual office building and shopping mall themed ones. In late April 2020, China launched a REIT trial, which would initially concentrate on pooling capital to finance infrastructure

projects such as highways and airports. According to Bloomberg (2020), the success of the program exposed individual investors to a market potentially worth as much as $3 trillion in the future. Such successes provide positive lessons for other economies such as Kenya.

In the Gulf region, the first economy to allow the introduction of REITs was Dubai. When REITs law came into place in the year 2006, the REITs were allowed by the law to manage and own real estate property portfolios. Abu Dhabi, Saudi Arabia, Oman and Bahrain followed suit in the introduction of REITs markets from the year 2015. Overall, the United Arab Emirates has a REIT market capitalization of more than 800 million dollars, which represents only 3% of the total value of the listed real estate firms. On other hand, the equivalent figure in economies such as the United States and the United Kingdom is around 80% (Global Ethical Banking, 2019).

In recent years, the African REIT market has emerged. Several countries (South Africa, Ghana, Nigeria, Kenya and Tanzania) have adapted to global REIT regimes. The REIT regime in South Africa was enacted in May 2013. The legislation established two distinct types of REITs: Trust REITs and Company REITs. The specifications and rules for the Johannesburg Stock Exchange listings govern the SA-REITs in line with global standards. In their REITs structure, rental income must account for at least 75 percent of the annual

earnings. Shareholders receive at least 75 percent of non-taxable income at the end of the year. At the company level, other income is taxed at a rate of 28 percent. South Africa's real estate market is considered mature in comparison to other African countries (EPRA, 2013). There are about 23 active REITs in South Africa, with a total market capitalization of around 26.1 billion US dollars (Cytonn Investments, 2019).

The Nigerian Securities Exchange Commission adopted the Investment and Securities Act in 2007, which regulates the REIT scheme. Nigerian REITs are asset-backed securities that are structured as closed-end or open-end trusts. To qualify for tax-exempt status, N-REITs must have at least 100 unit holders and a minimum share capital of US$ 6.18 million at the time of the initial public offering (Nigerian Stock Exchange, 2014). 70 percent of open-end REITs must be made up of real estate asset groups. Closed-end REITs' real estate properties, on the other hand, must account for at least 75 percent of

the total asset value. Both are limited to holding domestic real estate asset groups. At least 75 percent of annual revenue must come from mortgage rent and property sales. Only three REITs are listed in Nigeria, with a total market capitalization of about 151 million US dollars (Press Reader, 2019).

The REIT law was adopted in 1994 by the Ghanaian Stock Exchange Commission. The first company to implement the REIT system was Housing Finance Company Bank in 1995. Since then, Ghana's REIT market has remained relatively undeveloped. HFC-REIT is an open-end fund that invests in both residential and commercial real estate. The REITs' main operation is to invest pooled funds in the growth of the real estate and real estate firm capital markets. The initial investment is limited to $15 US dollars (Bunten, 2015). According to the Oxford Business Group (2019), Ghana, the oldest REIT market in the region has one listed REIT with a market capitalization of an estimated 11 million US dollars.

In 2011, Tanzania enacted regulations on collective investment schemes and REITs. According to the Collective Investment Schemes, only close-ended structured funds are authorized by the CMA. Under Rule 51 of the Tanzania Collective Investment Schemes, REIT investments in real estate must surpass the value of the total assets (CMSA, 2011). Watumishi Housing Company (WHC-REIT) established in the year 2014, is the only residential REIT in Tanzania. As a property developer, WHC-REIT is the major implementer of the Tanzanian Public Scheme which is tasked with ensuring over 50,000 affordable housing units are built in phases. Once the houses are complete they are sold to civil servants, private sector employees and members of pension funds in Tanzania. The houses are sold under hire purchases cum rent to own or mortgage arrangements (Watumishi Housing Company, 2019). According to Oxford Business Group (2019), WHC-REIT had an industry value of approximately 40 million US dollars. Despite the introduction of REITs regulation in the Republic of Rwanda, no REIT has been registered in that jurisdiction to date. Similarly in Uganda, the establishment of REITs regulations was done in 2017 but to date, no REIT has been registered (NAREIT, 2019).

In Kenya, the property market has experienced massive growth. However, the cost of financing for the growth of the property industry has remained high due to the undersupply of houses for the lowest segment of the economy. The significant costs linked with the development or financing of housing units for the lower segment of the

market have made the attainment of this goal extremely difficult. To find a solution to this problem, the Kenyan government used REITs to encourage investment in the real estate sector (CMA, 2019). REITs can enhance liquidity in the capital markets and also create a market that can be tapped to raise capital for housing projects. Further, REITs can enhance stability in property markets by making mechanisms for price discovery available (Ndung'u & Onyuma, 2020).

The Nairobi Securities Exchange has introduced innovative products to boost its market capitalization and grow its number of listed securities. Among the products that have been introduced include an SMEs listing segment known as Growth Enterprise Market Segment (GEMS). An incubation and acceleration program for firms with growth prospects known as Ibuka has also been established. Further, derivatives, financial instruments which derive value from underlying assets have been introduced as well as REITs. The introduction of REITs was one of the initiatives which were meant to grow the NSE listings (Onyuma, 2020). The Capital Markets Authority established the REITs regulations in the year 2013. The first REIT to be issued in Kenya happened in the year 2015 when Stanlib Fahari Income-REIT (FAHR) was listed in the Nairobi Securities Exchange through a public offering. The launching of REIT structures was meant to bolster financial inclusion in the capital market. The platform was meant to offer prospective investors an opportunity to invest in residential and commercial real estate without the requirement of huge capital. In return, the investors would enjoy distributable income or dividends from the issuing firm. The objective of establishing a REIT market was to ensure that the investors benefited from income and capital appreciation of the diversified portfolio invested with the pooled funds. The REITs market was also to create a liquid of immovable properties. In, Kenya the REITs are structured as trusts as opposed to companies. On ownership of the real estate property, the real estate property is held in the name of the appointed trustee who becomes the custodian of the REITs assets. However, the properties are managed by the REIT manager (CMA, 2019).

To date, Kenya's Capital Markets Authority has licensed and approved numerous REIT managers and REIT trustees. The REITs legislation further provides that a REIT can be established either as a Development REIT (D-REIT) or as an Income REIT (I-REIT). I-REIT is aimed at running income-generating estates. I-REIT investors gain mainly from appreciation in the capital of the real estate property and incomes in the form of rents

paid by occupants of their real estate investments (Cytonn Investments, 2019). According to Capital Markets Authority-collective investment schemes regulation (2013), Income REITs can either be restricted or unrestricted. Restricted I –REITs are offered to members of the public through restricted offers. Restricted REITs are only offered for subscription by professional investors only through restricted offers. Such investors include insurance firms, pension funds, commercial banks, fund managers and cooperatives among others.

Restricted REITs are divided into open-ended and close-ended funds. In open-ended funds investors can invest in the fund by buying REITs securities after which they can dispose of them by allowing REIT trustees to redeem the units or shares. In close-ended funds, investors subscribe to REITs securities issues or through the secondary market. Unlike restricted I-REITs, unrestricted I-REITs have to be listed in the securities exchange. These I-REITs are structured as close-ended funds. Investors who wish to invest in such REITs are given unrestricted offers. A Development REIT is aimed at the construction of real estate projects. Unlike I-REITs which are either restricted or unrestricted, D-REITs are strictly restricted. This means that restricted offers are made to professional investors who wish to subscribe to the REIT Issuance of a D-REIT (CMA, 2013).

Stanlib-Fahari I-REIT is listed on the Nairobi Stock Exchange as an Income-REIT. Stanlib Fahari I-REIT was issued to members of the public in October 2015. The least subscription amount was 20,000 Ksh for 10,000 units as well as a nominal value of 20 Ksh each. Investors were required to buy the I-REIT in the Initial Public Offer since the I-REIT was close-ended (Stanlib Fahari, 2015). This REIT owns and also operates real estate assets that produce income for the benefit of shareholders. Kenya became the fourth African country to have a listed REIT with the listing of FAHR on the Nairobi Securities Exchange, after South Africa, Ghana and Nigeria (Oxford Business Group, 2019). I-REITs are obligated to a mandatory distribution of 80 percent

of revenue as dividends. Other primary regulatory considerations for I-REITs include a provision that for the first two years of listing, 75 percent of their net asset value should be held in income-generating assets and that no more than 50 percent of the ownership is to be held by the principal sponsor.

Stanlib Limited manages assets worth over Ksh 3.8 billion. Among the properties that Stanlib Income-Real Estate Investments Trust owns are Greenspan Mall in Nairobi's Eastlands, Bay Holdings (a warehouse in an industrial area), Highway House (an office block in Nairobi's industrial area), Starling Park properties in upmarket Lavington and 67 Gitanga Road building (Stanlib Fahari, 2019). The clients of Stanlib I-REITs are corporate and institutional investors who have cash management needs that are short, medium, or longer-term in nature. Such investors include pension and fund managers who seek to invest at systematic intervals or even in a one-off lump sum investment. Stanlib seeks to position itself as a strategic partner of pension schemes and fund managers that seek to rebalance their portfolios by investing thirty percent of their funds in real estate asset classes in line with the pension and insurance regulations in Kenya (NSE, 2019). By the year 2019, Stanlib had a market capitalization of approximately 0.015 billion US dollars (Cytonn Investments, 2019).

REIT performance analysis has become significant since investors are getting attracted to these asset classes and are examining REITs' performance. The performance of REITs can be explained in terms of operational success which is evidenced by its profitability outcome. According to Gruppe and DiRocco (1999), the performance of REITs depends on the form of investments the REIT issuing company makes, such investments could be in various types of REITs namely mortgage and Equity REITs. Since Stanlib Fahari Income REIT was issued, its performance upon registration was very low (29 percent) uptake of Ksh. 3.6 billion, as opposed to the Ksh 2.6 billion to Ksh 12.5 billion that was anticipated. The I-REIT shed almost 50 percent of its value since the listing while the share price remained in the range of Ksh 9 and Sh14 (Rich, 2020). In the year 2016, Fusion Capital, a property developer, attempted to list a Ksh 2.3 billion Development REIT, however, the listing was unsuccessful. Fusion Capital only achieved a 38 percent subscription collecting Ksh 873 million with only four investors against the requirements of seven. The company had hoped to use the proceeds of the listing to finance the development of Greenwood City, which was a mixed-use real estate project in Meru County (Crested Capital, 2016). Fusion Capital quit the D-REIT and opted to raise the money privately. The failure by the Stalinb I-REIT and Fusion Capital D-REIT to meet 50 percent subscription and seven investor requirements is a clear indication that there is low performance and uptake of REITs. This was a focal aspect that the current study sought to examine.

Further, Acorn Holdings, a student hostels developer, raised Sh2.1 billion from investors in its Real Estate Investment Trust (REIT) issuance in February 2021, falling short of its goal of Ksh 7.5 billion. Acorn provided investors with the option of investing in one of two REITs: one focused on the development of student hostels, and the other provided income from completed units (Khusoko, 2020). The I-REIT made a Ksh 1.4 billion profit, while the D-REIT made a Ksh 641.5 million profit (Accorn Holdings, 2021). Acorn Holdings REIT is the most recent REIT to be undersubscribed, suggesting a lukewarm interest in the new investment vehicles, a significant matter of interest in the current study

According to Chan, Erickson and Wang (2003), individual investors might not have a significant influence on REIT return but institutional investors have a more significant effect on the performance of REITs. In addition, investors' sentiments such as opinions, views, behaviour and perception affect the performance of REITs. Daud, Ali, Sipan and Wilson (2012) assert that there exists a significant correlation between property location attributes and REIT return. This relationship could be supported by the fact that the return of REIT is determined strongly by the income derived from the properties (Alias & Soi Tho, 2011; Hwa & Rahman, 2007). In addition, REITs' diversification across economic locations reduces risks and improves the performance of the REITs portfolio. Furthermore, investors' extent of exposure and knowledge of the investment industry is measured by their level of awareness. With awareness, individual investors can learn about financial assets from asset suppliers who might be financial institutions or peers (Guiso & Jappelli, 2005).

Investor awareness can be attributed to low subscription rates and consequent poor performance of REITs. Consequently, investor sentiments regarding the performance of REITs can also aggravate a downward trend of REITs stocks leading to a low appetite for such securities among investors. Additionally, for REITs issuers, underlying asset diversification creates the opportunity for a blended portfolio to earn higher returns while reducing the potential for low negative returns among investors. Further, the market regulatory framework on REITs restructure can also enhance or abate the growth or performance of REITs. According to Bienert and Brunauer (2007), the existing market regulatory framework has a significant impact on the real estate asset classes. Such regulations as tax credits, deductions and subsidies can be used by governments to boost demand and uptake of real estate which automatically would affect the return of REITs

in any economy. This study used REITs market regulatory framework as a moderating variable because REITs regulations are factors that could be held constant as the REIT market cannot operate without guiding regulations. Thus, the regulations could influence the direction of the relationship among variables. Studies have attempted to dissect the REITs phenomenon in Kenya (Mburu, 2017; Ngige, 2017). These studies focused on macroeconomic variables and overlooked external factors such as property diversification, investor awareness and investor sentiments which influence the performance of REITs. Hence this formed a fundamental basis of the current study.

1.2 Statement of the Problem

The performance of the listed Income REIT has not been as expected since the first listing in the year 2015 as evidenced by the problem in its share price valuation. In addition, efforts by other property developers to issue more Income and Development REITs have been unsuccessful as evidenced by failure to meet set subscription targets and minimum listing requirements. As a result of falling short of their subscription targets, these REITs issuers have not been able to finance their development projects fully. Moreover, not many new REITs have joined the REITs listing segment in the capital market. This reluctance by REITs issuers to join the REITs market has affected the development of the capital market in Kenya. There is a lack of information as to why this current situation exists. Also, information is scant on how investor sentiments, property diversification, and investor awareness may influence the performance of REITs. This prompted the question as to whether the failure of REITs issuers to meet their set subscription target has been influenced by external factors, outside investment market control. Investor awareness, investor sentiments and property diversification are factors, not under the direct control of the investment market, but could majorly have a positive or negative influence on the performance of investments. Thus, this study sought to evaluate how these external operating factors influence the performance of REITs in Kenya.

1.3 General Objective of the Study

The main objective of the study was to analyse investor sentiments, property diversification and investor awareness influence on the performance of Real Estate Investment Trusts in Kenya.

1.3.1 Specific Objectives of the Study

To achieve the general objective, the study aimed to;

i. Assess the influence of investor sentiments on the performance of Real Estate Investment Trusts in Kenya.
ii. Examine the influence of property diversification on the performance of Real Estate Investment Trusts in Kenya.
iii. Evaluate the influence of investor awareness on the performance of Real Estate Investment Trusts in Kenya.
iv. Analyse the moderating effect of market regulatory framework on the influence of predictor variables on performance of Real Estate Investment Trusts in Kenya.

1.4 Research Hypotheses

The following null hypotheses were tested;

H_{01}: Investor sentiments has no statistically significant influence on the performance of Real Estate Investment Trusts in Kenya.

H_{02}: Property diversification has no statistically significant influence on the performance of Real Estate Investment Trusts in Kenya.

H_{03}: Investor awareness has no statistically significant influence on the performance of Real Estate Investment Trusts in Kenya.

H_{04}: Market regulatory framework has no statistically significant moderating effect on the influence of predictor variables on performance of Real Estate Investment Trusts in Kenya.

1.5 Significance of the Study

The results will help policymakers in the Ministry of Housing in understanding the dynamics that determine the performance of REITs thus helping the government in structuring an issuance of a government-backed REIT to raise capital and support the affordable housing agenda. Further, the National Treasury will also benefit from the research findings and can use the findings to formulate funding strategies for government-backed REITs in supporting the affordable housing agenda. This study is also necessary because it will contribute to the existing global body of knowledge on REITs, by adding the Kenyan REIT market to the global REIT performance analysis platform. Further, the study will contribute to the existing literature on portfolio management since it will provide first-hand insights into investors' opinions on dynamics

that they consider in choosing an asset mix to ensure a diversified portfolio, and whether REITs are good vehicles of portfolio diversification.

Through the research findings, the study hopes to offer information that will serve as a guide to prospective domestic and foreign investors who might have a plan on making investment options in the real estate market through the REIT market. The study will also shed light on current and potential investors on how investment in REITs enables one to diversify their portfolio into real estate, and the strong prospects of capital gains and high dividend income that result from such an investment. The findings will be beneficial to the Real estate industry players and the Capital Markets Authority. They will be able to get insights into how the variables under study which are variables outside the control of the investment market influence REITs' performance. Through the findings, they will be able to formulate strategies that can be used to enhance the uptake of REITs by investors thus boosting REITs' performance.

The research findings will be helpful since they will shed light on the moderating effect of the existing market regulatory framework on the influence of investor sentiments, property diversification, and investor awareness on the performance of REITs. Through the findings, the market regulator together with the stakeholders can review the REITs 2013 regulations if need be to enhance REITs operations. REITs as emerging investment vehicles have started to gain popularity among scholars who have an interest in real estate finance. The study will benefit academicians, in that it will provide findings on a relatively new phenomenon in the Kenyan REIT market. With very scanty empirical literature existing, this will form a basis for academicians who might wish to engage in further research on the topic.

1.6 Scope of the Study

The study analysed the performance of REITs in Kenya in general. The study restricted itself to analysing how investor sentiments, property diversification, and investor awareness influence the performance of REITs. The study also evaluated the moderating effect of the market regulatory framework on the influence of predictor variables on the performance of Real Estate Investment Trusts in Kenya. The target population comprised fund managers, property developers, and stockbrokers. The target population was key stakeholders in the REITs industry and members of the REITs association of Kenya formed in 2017. Primary data used was collected using a structured questionnaire from

the drawn sample size. In addition, secondary data (2016-2020) audited financial statements used regarding the Kenyan listed REIT operational efficiency were obtained from the Capital Markets Authority. Adquith and Weiss (2019) assert that a three to five a year period allows one to not only look for consistency in performance but also trends in the firm's operations. The study assessed the listed REIT operational efficiency since the operational efficiency of a firm affects its performance. This is because prospective investors make investment decisions by carefully assessing the firm's operational efficiency and financial performance.

1.7 Limitations of the Study

Some respondents were reluctant in answering the questions in the research instrument. To mitigate this, the researcher assured the respondents that the information they were to provide was only to be used for the study at hand but not for any other purpose. The responses given on the questionnaires were based on the non-emotional mind set of the respondents and might have kept changing by the time of finalizing data collection activity from the specific respondents. Thus, this could have had a negative effect on the responses in the research instrument leading to subjective responses. To mitigate this, the researcher ensured the research questions were structured and framed skilfully in a bid to create confidence and thus enhance the response rate among the respondents. Further, systematic response bias generated by Common Method Bias was tested. The presence of CMB was statistically treated to mitigate this limitation as presented in Figure 4.5.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The literature review begins with an empirical literature review and discussion of the theories related to the study which provides useful context for the study. The section concludes with a conceptual framework that shows the hypothetical relationship between predictor variables and the dependent variable.

2.2 Theoretical Review of Literature

The study was guided by Behavioural Portfolio Theory, Modern Portfolio Theory and Market Timing Theory.

2.2.1 Behavioural Portfolio Theory

According to Kahneman and Riepe (1998), investors' psychological aspects, beliefs, and preferences change their portfolio choice decisions. While Markowitz's Mean-Variance theory is silent about the utility of portfolio consumption goals, these goals are central to the Behavioural Portfolio Theory. Behavioural Portfolio Theory was developed by Shefrin and Statman in 2000. The theory offers an alternative to the assumption that the highest motivation for any investor is portfolio value maximization. According to this theory investors have diverse objectives and therefore, tend to create portfolios that meet those varied objectives. The theory does not have similar principles as CAPM, Modern Portfolio Theory, or even the Arbitrage Pricing Theory.

The key tenet of Behavioural Portfolio Theory is that it introduces behavioural aspects of investors which are key in decision making on portfolio construction and selection (Sinha & Biswas, 2018). According to the theory, in portfolio formation, investors are inclined toward various psychological behaviours. These behaviours lead them to cognitive errors in portfolio formation. In difficult and uncertain decision-making situations, people make heuristic simplifications and commit behavioural biases in their investments (Chen, Kim, Nofsinger, & Rui, 2007). In the BPT, investors do not consider their investments in a portfolio rather they consider the same as a collection of mental account sub-portfolios. (Das, Markowitz, Scheid, & Statman, 2010). Mental accounting postulates that investors based on their behavioral aspects may classify funds differently becoming prone to irrational decision-making in their portfolio formation.

On theoretical advancements, Statman, Thorley and Vorkink (2006) found that self-attribution bias, investors' overconfidence, and trading volume varies with past returns. Fisher, Statman, and Anginer (2008) show that behavioural effect plays an overt role in the pricing of stocks while their high subjective risks come with negative effects. Statman (2004) observed that the level of diversification in the U.S. investors' equity portfolios presents a puzzle. The author explains that average investors hold only 3 to 4 stocks while the optimal MPT portfolio size exceeds 300 stocks. The puzzle can be resolved with the behavioural assumption that investors view their portfolios as layered pyramids as in the Behaviour Portfolio Theory.

In an experimental study, Ehm, Kaufmann and Weber (2014) examined whether private investors relate risk attitude with an investment in risky assets. They found that investors' risk attitudes, risk perceptions, and the investment horizon are strong predictors of risk-taking. Investors mostly choose similar risky assets independent of their volatility. This can be attributed to the Behaviour Portfolio Theory which asserts that people apply two mental accounts for risk-free investment and risky investment, while risk attitude influences the weightage of the risky asset.

This theory is important to this study because investors' sentiments and level of awareness are behavioural aspects, which play a significant role in portfolio formation or selection among investors. Portfolios constructed by investors could contain financial securities such as bonds, shares, T-bills, commercial papers and Real estate securities (REITs). Behavioral aspects such as psychological biases, risk attitude and level of awareness may lead to cognitive errors. This can affect investor decisions on their portfolio value maximization. Thus, the theory aided in understanding how behavioural aspects such as investors' sentiments and level of awareness, can influence the performance of REITs in constructing optimal portfolios comprising real estate securities. The theory was linked to investors' sentiments and investors' level of awareness variables.

2.2.2 Modern Portfolio Theory

Modern Portfolio Theory was championed by Markowitz in 1952. According to this theory, the rate of return variance is a very important element in portfolio risk measurement under some assumptions related to the behaviour of the investor. Markowitz asserted that in a bid to minimize portfolio risks investors must effectively

practice diversification as a strategy for reducing total portfolio risk. One of the major tenets of MPT is that investors aim is to maximize their portfolio return by assuming a certain level of portfolio risk. This risk is measured using standard deviation. The theory argues that since most investors are not willing to assume risks, given two sets of assets, they tend to invest in the set of assets that has a minimal level of risks. Thus, they are said to be risk-averse. In addition, Markowitz indicated that since most investors are risk-averse, they must combine a set of assets into an efficiently diversified portfolio. Further, MPT assumes that in a bid to reduce portfolio risks, investors should focus on the variability of the expected returns and by choosing a set of assets that have similar price movements (Zuckerman, 1995).

According to Reilly and Brown (2005), two types of decisions are made by investors' while doing portfolio construction. The first decision relates to asset allocation decisions from the wide-raging classes of assets. The second decision is security selection which relates to the best security the investor is willing to hold in every class of assets. This theory seeks to maximize returns from the portfolio through a careful choice of the ratios of assets. This is a quantitative expression of the concept of portfolio diversification, in the selection of a class of assets that has a minimal level of risks than a single asset. The likelihood of this concept can be viewed intuitively because various kinds of assets ordinarily vary in terms of variation in value. Investment initiatives are a risk-return trade-off. Generally, riskier assets tend to have higher returns. For any given level of risk, MPT prescribes how to select an efficient portfolio. Alternatively, the theory gives an explanation of the selection of a portfolio with the minimal possible risk which is through efficient diversification. Guided by some underlying assumptions, and under specific conceptions of risk and return, the theory explains how to strike an efficient asset portfolio.

Markowitz's model was extended by Tobin (1958) when he added a risk-free rate of return to the model. Through the addition of the risk-free rate, Tobin discovered that the efficient frontier turned to be a straight life where investors could now short sell their risk-free rate of return and buy more stocks in the market portfolio. Moreover, the investors could also sell some of the stocks in the market portfolio and invest in risk-free securities. Thus, portfolio selection was made simple by Tobin's extension of MPT as a result of the discovery he made which indicated that each investor should hold a similar portfolio of risky assets. O' Neil (2000) supports MPT theory by asserting that the use of

historical data of securities is very important as assumed by the theory. According to O'Neil, MPT possesses a significant practical application since it minimizes volatility in a portfolio of single stocks.

Further, MPT has received some criticism from investors and academicians. For instance, regarding the liquidity assumption of MPT, it has been argued that the 2008 financial crisis proved that some markets are illiquid. Further, the theory has been criticized for the assumption that there are no transaction costs and taxes paid by investors in capital market transactions, yet in real-life situations, investors pay taxes and also incur transaction costs on their investments which affects their investments (Morien, 2011). These arguments are supported by Mantegna and Stanley (2000) who argue that investors incur transaction costs when buying and selling financial securities since they have brokerage fees and taxes. This criticism did not affect the current study since it was assumed that the capital market in Kenya was efficient, liquid and transaction costs and taxes were incurred in daily transactions involving buying and selling of financial securities.

The theory's estimation of returns while using historical data has also received criticism. According to Fabozzi, Gupta and Markowitz (2002), although MPT is not concerned with the procedure of estimating these variables, in real practice, they are typically estimated by analysing historical data quantitatively. Choosing a representative subset of the historical data which should represent the period being predicted is the main issue when computing the estimates. This flaw did not affect the current study since the study did not use historical data in computing the estimates. Data was corrected primarily from the respondents. The assumption that returns follow a normal distribution has also been criticized.

Jensen (2007), opines that, if this assumption was true, then the actual return would drop two standard deviations or further below the expected, once every several years. Jensen asserts that the assumption may not hold, since, in real world scenarios, actual returns have fallen above seven standard deviations below the expected. This is something that could be nearly impossible if the returns were normally distributed. The current study supports Jensen's work that in real-world scenarios, the returns of securities sometimes fall below the expected mark, depending on prevailing market conditions and also forces of demand and supply.

In addition, the assumption that investors are rational and risk-averse has received criticism. Maehl (2008), disputes the assumption by arguing that, investors are driven by psychological aspects, and in most cases, this can influence their investment decisions. Further, emotions lead investors to make decisions based on intuitions and rumors (Morien, 2005). REITs offer investors an efficient avenue to invest in real estate and also diversify their portfolios without committing huge sums of money (Levy & Post, 2005). Brucggcman and Fisher (2008) point out that returns from real estate concerning other investments have a possible advantage of portfolio diversification. Due to the enhanced returns and reduced risks in REITs, they tend to offer diversification advantages to mixed-asset portfolios (Lee & Stevenson, 2005).

Although this theory has been used to inform portfolio formation and diversification decisions mostly in other classes of investments such as equity and fixed income securities, little has been done on its application in informing portfolio formation on REITs investments. This theory was important to this study because it formed a fundamental base for understanding how investors consider adding diversified real estate investment trusts in terms of property type and location to an existing portfolio. This is because this may increase expected portfolio returns while maintaining or lowering portfolio risk. Besides, the theory also provided a theoretical justification for property diversification and the selection of an optimal investment portfolio comprising real estate securities. Thus, the theory was linked to the property type-location diversification variable in this study.

2.2.3 Market Timing Theory

This theory was pioneered by Baker and Wurgler in the year 2002. According to this theory, companies time equity issuance, in times of high market efficiency. The key tenet of market timing theory is that firms tend to finance their operations using debt when the stock price is undervalued. According to the theory, when considered to be overvalued, companies issue new shares, on the other hand, companies repurchase their shares when deemed to be undervalued (Baker & Wurgler, 2002). In addition, when prices are low and the cost of equity is high, investors are optimistic about earning and repurchasing equity.

Market timing issuing behaviour has already been well-founded empirically by others, but Baker and Wurgler (2002) found evidence that, in the US, there is a highly persistent

effect of market timing on capital structure. This finding initiated studies measuring the effect on the capital structure of changes in the valuation of the equity market. Kayhan and Titman (2007); Hovakimian, Hovakimian, & Tehranian (2004) expand on the market timing measurement of Baker and Wurgler (2002) and affirm that market-timing induces changes in leverage. However, they do not affirm the long-term persistence of market timing impact, as posited by Baker and Wurgler (2002). Hovakimian, Hovakimian and Tehranian (2004) further investigated whether companies' issuance decisions are consistent with market timing behaviour or conventional theories, especially theories of trade-off and pecking order, and concluded that, issuance decisions were consistent with both market timing and axioms of the pecking order.

In the number of new issues per month, studies in finance literature such as Ibbotson, Sindelar and Ritter (1994) indicate pronounced cycles. Many businesses go public at the same time, resulting in the clustering of IPOs both in aggregate and in specific industries. Further, because of higher/stronger investor sentiments, firms could be timing the market to take advantage of comparatively weaker industry screening conditions.

Buttimer, Hyland and Sanders (2005), in their study that covered the period 1980 to 2001, explain that the interpretation of REIT IPO clusters is unique to real estate. The authors concluded that, unlike other IPOs, REITs that go public in clusters do not show adverse abnormal output as determined by investor returns. As observed with other non-REIT stocks, the authors did not find proof of long-run negative abnormal results. In estimating long-term returns, the analysis used the calendar-time portfolio method. Their analysis, however, did not consider indicators of operating performance. The REIT industry is subject to the same over-investment impact as observed in Jain and Kini (2006). This study expects that, the post-IPO inferior operating performance of REITs issuing firms, that go public in clusters due to too much capital chasing, experience a small range of market opportunities.

If the REIT industry is more open, however, the capital allocated to REIT public offerings would be done effectively and in amounts matched to the anticipated rise in demand for real estate. Consequently, there would be no decline in operating performance in REITs that go public in clusters. Jain and Kini (1994) argue that, because of the possible changes in agency costs as companies move from private to public ownership, and the existence of information asymmetry and/or a conflict of interest

between the original shareholders and the new shareholders, operating performance is a significant measure of IPO performance.

Real Estate Investment Trusts are an important vehicle for real estate investment among institutional and small investors because of the illiquid nature and high capital requirements of direct real estate investment. Investors are either purchasing REIT securities on the secondary market or subscribing to initial public offerings (IPOs) of REITs, which allow investors to buy shares of real estate companies, that are new to the public markets and are likely to expand through new capital infusion. Although the market timing concept has been studied by researchers, many of these studies have concentrated on the timing behaviour of general stocks. In addition, REITs are always excluded in general corporate research on IPO market timing behaviour. Furthermore, REITs IPO issuance performance in Kenya has not been as projected. The unexpected performance could have been a result of failure by REIT managers in market timing. Lack of market timing could have resulted in unexpected operating performance coupled with low subscription or appetite by investors in Kenya. This theory was helpful in the analysis of the operating performance of REITs.

2.3 Empirical Review of Literature

Empirical literature relating to the variables under study was reviewed in line with the objectives of the study. This subsection includes literature on investor sentiments, property diversification, investor awareness, moderating effects of market regulatory frameworks and performance of Real Estate Investment Trusts.

2.3.1 Investors' Sentiments and Performance of REITs

Investors' sentiments have a bearing on REIT performance. Hiriyapp (2008) found that investors' moods, as well as the information available to them, can have an impact on the performance of stocks. While individual investors may not have a statistically significant effect on REITs' performance, institutional investors, on the other hand, have a significant effect on the performance of REITs(Chan, Erickson, & Wang, 2003). Investor sentiments influence the co-movement of assets that have been invested in a particular investor (Barberis, Schleifer, & Wurgler, 2005). This study sought to examine if investors' sentiments significantly influence the co-movement of real estate securities.

Chen, Chou and Lin (2019) assessed the relationship between investor sentiments and the performance of stock prices in the USA. Data period from 1970 to 2010 was used.

Firms included in the sample size were selected from the Centre for Research on Security Prices. The findings indicated that there was a significant link between investor sentiments and the performance of stock prices. The study was inclined toward those firms which were conducting Seasoned Equity Offerings (SEO) and thus this could have limited the generalisation of the results. Whereas the study focused on SEO the current study focused on REITs.

Freybote and Seagraves (2016) assessed heterogeneous investor sentiments and institutional real estate investments in the USA. The study examined whether real estate investors' sentiments influence investment decision-making among investors with a multi-asset focus. The study focused on pension funds and used bivariate vector auto regression (VAR) in the analysis of data. To measure investor sentiments, Buy-Sell Imbalance Measure (BSI) was constructed. Real Capital Analytics data (commercial real estate database) on quarterly investments by institutional investors over the first quarter of 2001 to the fourth quarter of 2014 was used to calculate BSI. Their study found that institutional investors tend to rely on their peers in terms of trading decisions thus displaying herd behaviour. These investors hope and believe that their peers hold significant information which might be important in guiding their investment in the securities market. The findings indicated that institutional investors rely on institutional and REIT sentiments in the office market as a source of information for office REIT investments. The study concluded that institutional investors tend to switch capital between commercial real estate and the REIT market based on sentiments. The study only considered the sentiments of those institutional investors who held real estate securities as a source of information. Further, only institutional investors such as pension funds holding multi-asset investments were given focus. This study focused on retail and institutional investors and deviates from their study which focused on investors holding multi assets investments. This study extended their work by evaluating whether retail and investors' sentiments rely on peer trading as capital allocation signals under the perception that peers may hold superior information.

Das, Freybote and Marcato (2014) investigated sentiment-induced institutional trading behaviour and asset pricing in the REIT market in the USA. The survey-based measure was employed in measuring the sentiments of institutional investors in the unsecuritized commercial real estate market. The measure was based on data obtained from Real Estate Research Corporation over the period first quarter of 2002 to the second quarter of

2012. The RERC surveyed institutional investors such as insurance firms, pension funds, and investment managers involved in the real estate market quarterly. The findings indicate that institutional investors' sentiment in the unsecuritized commercial real estate market affects their trading behaviour in the securitized market.

Further, the findings indicate that institution investors style-invest in real estate based on sentiments. The study assumed that institutional investors are rational which may not always be the case. The study did not take into account individual investor sentiments. Further, the study overlooked the time-variant aspect of risk perception and investment behaviour which tends to change over time. This study took into account individual investors' sentiments while examining their investment and risk perception of REITs shares and other financial securities.

Huerta, Jackson and Ngo (2015) examined the impact of investor sentiments on real estate investment trusts returns in the USA. The study used a direct survey-based measure to categorize sentiments from individual and institutional investors. The study covered the period from the first quarter of 1992 to the third quarter of 2013 and employed Panel Regression Analysis. Daily REITs returns data were obtained and then compounded into quarterly returns. The findings indicate that individual and institutional investors' sentiments are significantly and positively related to REITs returns. The study used panel regression which divided the sample of REITs into size and performance portfolios. The focus was too inclined on the REITs sample in terms of size while the current study focused more on the operational performance of the REITs. Further, the study constructed an investors sentiments index or proxy which might not be able to make a distinction between individual and institutional investors' expectations. The current study used investor sentiment indicators on an attitudinal scale, which evaluated institutional and individual investors' expectations on different parameters such as a change in preferences and risk expectations.

Ciochetti, Craft and Shilling (2002) investigated the influence of institutional investor preferences on portfolio construction among institutional investors in the USA. The study used the Multivariate Tobit Regression approach. REIT level data was collected from SNL REIT quarterly for the second quarter of the period 1993 to 1998. The findings indicate that institutional investors tend to invest more in REITs shares and less in private real estate due to the liquidity constraint. Thus, institutional investors' liquidity

enhances REIT shares uptake. The findings indicate that institutional investors hold varying preferences for REIT stocks than retail investors. The study focused more on the liquidity constraint aspect of REITs shares in attracting institutional investors. Less focus was given to the expected return of REITs in the long term. Further, the study targeted mutual funds, insurance companies, pension plans, and endowment funds only. Property developers were not included in the study yet they are key investors in real estate investments. The current study evaluated investor preference concerning investment in competing securities like equities and fixed income securities. The study also evaluated whether investors prefer competing securities based on their potential to offer more attractive returns than REITs.

A study by Cao, Wang and Zhang (2005) examined the link between market participation and asset price uncertainty in the USA. The study examined whether uncertainty dispersion in stock pay-offs affects market participation among investors. The study used the Knightian approach. The study found that the returns of stocks in the future can be predicted by measuring investors' sentiments. The findings indicate that there was a significant relationship between investor sentiments and stock performance. The study also found that in the presence of model uncertainty, there can be a rise in limited participation. The study focused more on uncertainty dispersion, market participation of stocks in general and individual investors. Further, the study assumed that investment decisions are made at the beginning of the investment period, which may not be common in all cases. The current study sought to focus on REITs by assessing whether investor sentiments on avoidance of uncertainty are relevant in determining the REIT portfolio allocation decision.

Chi, Zhuang and Song (2012) evaluated the relationship between investors' sentiments and stock performance in the Chinese securities exchange for the period 2004-to 2008. The study conducted an empirical analysis at a quarterly frequency on individual listed stocks. The study found that investor sentiments have a positive relationship with stock returns. Further, they found that higher investors' sentiments lead to more returns as compared to lower investors' sentiments which lead to low returns. Their study admitted in their findings that some of the results were inconsistent with previous findings. While their study concentrated on equity stocks, the current study focused on REITs stocks. Further, the current study examined investors' sentiments on the clarity of the exact

returns from the REITs underlying assets and scrutinize whether this influences REITs' performance.

Chan et al. (2003) observed that institutional investors and their sentiments have an impact on REIT performance. The study reported that REIT stocks that are dominated by institutional investors tend to outperform those that are dominated by individual investors. Further, the study found that REIT's stock price setting is influenced by institutional investors because of their superior market knowledge. The study focused on investors' sentiments by constructing a sentiment index on the floor of the exchange. Constructing a sentiment index might not reflect the opinion of all investors since sentiment indexes require a long period to observe trading behaviour. Thus, this study used the attitudinal scale in measuring investor sentiments in terms of opinions and perceptions in the REITs' nascent industry in Kenya. This study examined investor sentiments relating to REITs trading and whether the real estate securities were correctly valued or whether prices could be influenced by either of the two classes of investors.

In their study, Lin, Rahman and Yung (2009) examined the relationship between investor sentiments and the performance of REITs in the USA The study used univariate and multivariate regressions. The study found that investor sentiments are positively related to the performance of REITs and concluded that, when investor sentiments depict optimistic returns for REITs or stock, REITs tend to be higher. Further, the study concluded that REITs' performances are influenced by individual investors' sentiments rather than institutional investors' sentiments. While their study inclined more toward sizes of REITs that is, small, medium-sized, and large REITs, the current study did not look at REITs sizes since there was only one listed REIT in Kenya. In addition, their study majorly measured the performance of REITs in terms of dividend yield while this study measured the performance of REITs more in terms of uptake rather than financial performance. Further, this study examined the potential effects of both institutional and individual sentiments on the performance of REITs by looking at investors' opinions rather than focusing more on the price of REITs stocks in measuring performance.

Johnk and Soydermir (2015) examined the relationship between investors' sentiments and stock performance in the USA. The study which used Capital Asset Pricing established that investor sentiments were a significant determinant of stock performance. The study focused on the Global Industry Classification Standards (GICS) sector for S &

P 500 but did not look at the REIT sector which was the focus of the current study. The study assumed that investor sentiments are not completely irrational a notion that may not be correct always. This is because sentiments are behavioural aspects whose judgment varies from one investor to the other, a phenomenon that has the potential to affect asset pricing models or parameters.

Devos, Ong, Spieler and Tsang (2012) carried out a study to examine the link between REIT institutional ownership dynamics and the financial crisis from 2004 to 2010 using multiple regression analysis. The study found that the 2008 global financial crisis made institutional investors move towards REITs which had lower risks and this led to an increase in shareholding in older and large REITs in post-GFC. Their study was based on numerous REIT companies in terms of population with risk control being a key aspect. The current study assessed investors' opinions on their perception of REITs as a risky investment option with economic conditions in the property market constant.

Freybote (2016) investigated the relationship between real estate investor sentiments and pricing decisions of US REIT bonds. The study was restricted to REITs that traded in the stock and the bonds market. Secondary data relating to REIT bond yields and trades were obtained from the TRACE enhanced database - Wharton Research Data Services (WRDS). The data covered the period between 2010 and 2013 while Prais Winstern regression was used to correct serial correlation. The study found that investor sentiments were a significant factor in predicting bond yields of REITs issuing firms, irrespective of their inclusion in the S&P index or even credit rating. Freybote (2016) study used secondary data and focused on a developed REIT market. The present study covered a nascent REIT market and primary data was used. Further, the study's dependent variable was bond yields while a sentiment index was constructed based on the trading behaviour of investors, which differed from the present study. This study majorly used an attitudinal scale to measure investor sentiments and the performance of REITs.

Ong, The and Chong (2011) evaluated performance of Malaysian REITs from 2005-to 2010 using the Net Asset Value approach. It was found that poor perception among institutional investors was the cause of the slow growth of Malaysian REITs. The study found that institutional investors have a great influence on the performance of REITs due to their voting power, ability to monitor their investments and knowledge of the market

happenings. In addition, Clayton and Mackinnon (2001) found that REIT stocks that are dominated by institutional investors have superior performance than those REIT stocks which are dominated by individual investors. These studies were conducted in REITs markets that were mature and developed with multiple registered REITs compared to the current study scope. This study examined whether investors' decisions in the uptake of REITs, relied on their perception of the assessment of the REITs' stock price with ownership structure dynamics at a constant.

Empirical studies reviewed showed a relationship between investors' sentiments and the performance of REITs in the context of developed REITs markets. A more empirical investigation was required to assess what effect investors' opinions and perceptions have on real estate securities in this emerging industry in Kenya. Further, the studies reviewed measured investors' sentiments by constructing sentiment indexes by observing the trading behaviour or trends of investors in the stock exchanges. The current study examined investors' sentiments opinions and attitudes rather than constructing an investors index which might not have been appropriate for this study. This is because it would not have been possible to observe the live trading behaviour of investors in the securities exchange However, even without constructing the investors' sentiments index the variable of sentiments was still measurable through likert scale constructed statements.

In addition, from the reviewed literature, mutual fund flows had been used as a substitute for sentiments. The argument from the studies was that, since individual investors re-allocate their funds across various mutual funds, individual sentiments can be measured by observing which mutual funds have inflows and outflows and relate these sentiments to different securities by observing the holding of mutual funds. Although individual customer CDS accounts are a reliable source for investors' sentiments, it would have been possible to observe the customers' accounts in the context of this study. In measuring investors' sentiments, the current study used an attitudinal scale in analysing how investors' opinions, views, and perceptions influence the performance of REITs.

2.3.2 Property Diversification and Performance of REITs

REITs are classified either as diversified into many sectors of property or as concentrated only in a single sector of property. This is inclusive of commercial, retail, hospitality, healthcare, manufacturing, and other examples of property sectors. Chong et al. (2012)

reported that the arguments for a focused strategy are that REIT managers should have a better understanding and knowledge of specialist markets and sectors and that it could be possible to achieve lower costs in tracking and analysing more markets. Hence, although the idea of focus can appear inconsistent with portfolio theory and diversification, economically, it might make sense and thus, this study sought to exhaustively examine this.

Ooi and Liow (2004) examined the performance of real estate stocks in emerging markets in Asia namely Indonesia, Malaysia, South Korea, Singapore, Hong Kong, Thailand and Taiwan using panel regression. According to the study, the risk-adjusted returns of real estate stocks varied across different markets over time. Market diversification had a significant effect on the performance of real estate stocks. The study asserts that the geographic locations of properties, as well as the property types, were important determinants in explaining residential REITs' performance. In this study, the diversification analysis targeted the product market dimension of REITs. In this sense, property-type diversification means that a REIT can target multiple types of properties to comprise its portfolio, or can focus on only one type of property.

Chong, Krystalogianni and Stevenson (2012) evaluated dynamic correlations between REIT sub-sectors and diversification in the USA for the period 1990 to 2008. The study employed the GARCH-DCC framework. The study found that less than 10% of equity REITs were classified as diversified, and there was a predominance of specializing REITs in a single property type. While their study used the GARCH model, the current study employed SEM in examining these correlations. Further, their study was conducted in mature REITs markets while the current study focused on a nascent REITs market. In addition, their study emphasized Equity REITs rather than Development REITs. Apart from Equity REITs, the current study also focused on D-REITs which were significant real estate security in spurring the development of projects. Furthermore, their study was inclined towards correlation dynamics between REIT sub-sectors and their effect on diversification while this current study assessed the correlations between property diversification and performance of REITs with a minimal inclination towards testing correlations across property types and locations.

Ro and Ziobrowski (2009) examined how property focus or diversification influenced the value of U.S equity REITs from 1997 to 2006. The study used CAPM and the Fama

French three-factor model with momentum. According to their study, REITs present a strong tendency to seek one particular property type. Through their analysis, by adopting CAPM and the Fama-French three-factor model with momentum, they concluded that there was no evidence of superior performance associated with specialized REITs. Their study concluded that specialized REITs presented higher market risk than diversified REITs. Their study used different methodologies from what this current study employed.

Similarly, the current study evaluated whether specialized REITs in a single property type outperform diversified REITs by using Structural Equation Modelling to effectively tests the hypothesized relationships. Further, the study concluded that specialized REITs outperform diversified REITs associating superior performance with superior management expertise. However, diversified REITs could have been failing to perform as expected due to other factors other than management expertise such as the quality and type of the underlying assets which their study overlooked. The current study examined investors' opinions on the correct valuation of the underlying properties. Further, the study assessed investors' opinions on the diversification aspect of the diversified property whether in commercial or residential REITs.

In their study, Benefield, Anderson and Zumpano (2009) did a comparison where they evaluated whether those REITs that were diversified by property type differed in performance from those REITs that were specialized in a particular property in the USA. Data collected covered the period 1995 to 2006 while the sample size comprised 75 equity REITs, Further, Jensen Alpha, Treynor Index, and Sharpe ratio were used to measure performance. The results showed that property type diversified REITs had superior performance compared to property type diversified REITs. The diversified property type REITs were more in office properties than retail properties limiting the generalization of the results. The current study also examined whether diversified REITs outperformed single specialized REITs in the context of commercial and retail properties.

Jalil, Mohammad and Chai (2018) examined the effect of location attributes on the performance of REITs in Malaysia using data from ten years (2006-2015). In their analysis, they employed the Pearson correlation and trend analysis. The study found that diversification by economic location is more effective compared to the usual traditional geographical diversification. The study was inclined to the effect of location attributes on

the financial performance of REITs as opposed to the operational performance or uptake by investors. In addition, Anderson, Liang and Shain (2001) imputed that the diversification of REITs across economic locations had a strong relationship with the performance of REITs based on the results of the correlation coefficients. According to their findings, property location is a significant factor that determines the rent levels of real estate signifying that the performance of REITs is positively correlated to the location of properties invested in by the REIT issuing firm. Similarly, this study extended their works using a different methodological approach in a bid to make inferences on the relationship between location attributes and REITs' performance.

Rohaya and Hishamuddin (2015) examined the relationship between property location and the performance of REITs in various Malaysian REITs, The study found that there was deferring unattractiveness among Malaysian REITs as a result of the difference in property locations. Similarly, Newell and Osmadi (2009) indicated found that property location was a significant determinant of the performance of REITs since the difference in REITs' property type may lead to a difference in performance. Further, the study concluded that the type of the underlying asset is a significant determinant of REITs' performance. For instance, REITs that focus on a single type of property in their portfolio tend to have much more liquidity than those REITs which focus on multiple types of properties in their portfolio (Danielsen & Harrison, 2007). These studies focused more on geographic locations as opposed to economic locations. The current study examined the influence of economic locations on the performance of REITs. The study also extended their work by examining whether REITs which are specialized in a single type of property performed well than those that targeted multiple property types in the Kenyan market.

Anderson, Randy, Liang and Shain (2001) pointed out that compared to geographical locations; the economic location is the alternative effective approach to constructing the property portfolio. Tiong and Jalil (2015) in their study pointed out that property location attributes in Malaysian REITs which included property rental revenue, property occupancy rates and accessibility of the property from the Central Business District did not have statistically significant effects on the financial performance of Malaysian REITs. The results revealed that most Malaysian REITs companies had their underlying properties in those areas which were crucial in adding value to their business majorly, including the CBD in Kuala Lumpur. Likewise, In Kenya, the underlying properties of

the Kenyan REIT company (Stanlib Fahari) were mainly located in Nairobi. Other REITs finance properties such as the students' hostel by Arcon holdings- a property developer were on the outskirts of Nairobi. The choice of the location by the property developer could be value-oriented in terms of the target clientele. These REIT issuing companies could have chosen such locations for their underlying properties since those areas are crucial in adding value to their business. The current study assessed whether the economic and geographic location of such properties enhanced the uptake of REITs among investors.

Thus, the property location was a significant factor that could enhance the performance of REITs in Kenya. From the reviewed literature, it was important to consider diversification in property influence on REITs' performance. This study, therefore, established a similarity in the findings of these studies with Kenyan REITs. Further, although most of the studies concerning the effect of diversification related to diversification by REITs across developed economies, there was scanty literature on investors' concerns in real estate securities, about the diversification of REITs, in developing economies such as Kenya. This was the gap that this study sought to address.

2.3.3 Investors Awareness and Performance of REITs

The process by which investors improve their understanding of financial products and the risks associated with investing in such products is referred to as investors' awareness. Investors, in general, can be categorized as aware and unaware investors. Aware investors are those who know the characteristics of a risky stock and have the same information on the probability distribution of the stock returns. Further, Prabakaran (2018) examined the stock market awareness and performance of stocks invested in India. The study used Partial Least Squares Structural Equation Modelling (PLS-SEM) to test the hypothesized relationships. The findings showed there exists a relationship between investor awareness and the performance of stocks invested. The study concluded that without prior knowledge or information, investors can lose heavily. This study focused on equities as opposed to REITs, which this study intended to address. Likewise, the current study employed SEM in examining the hypothesized relationship between investor awareness and REIT performance to make inferences.

Rana (2019) analyzed investor perception factors and the perceived risk attitude of investors and their link with investor conduct. The study showed that two factors, namely

financial knowledge and social learning are highly loaded investor awareness factors. In addition, two factors, namely 'affection' and 'cognition' are highly loaded factors of investors' perceived risk attitude in the stock market of Nepal.

This is based on a sample of 204 individual investors from the stock market in Nepal. The study also concludes that the relationship between investor awareness and perceived risk attitude, perceived risk attitude and investment behaviour, and investor awareness and investment behaviour is significantly positive. In addition, in evaluating investor behavior in Nepal, the study documented a major predictive power of investor knowledge and perceived risk attitude variables. The key focus of the study was investor awareness and uptake of listed stocks with an inclination towards the risk attitude variable only. Apart from the risk perception of investors, other investor awareness factors such as the ability to access firms' reports, and knowledge of the market are also critical in enhancing the uptake of any financial security. This was the focus of the current study.

Ricciardi (2008) asserts that the perception of investors is influenced by how they select information to process. He further stressed that investors are not able to absorb all information, thus they become selective as to which information can consciously receive their attention, and thus determine their awareness level. Similarly, Shefrin and Statman (2000) reported that investors' attitudes toward stock market-associated risks depend on the behaviour of the stock market. Their arguments looked at the processing of information among investors in the context of the behaviour of the stock market while negating the property market. This is a knowledge gap that the current study wanted to address.

Saini, Anjum and Saini (2011) examined the relationship between investor awareness and risk perceptions in the context of mutual funds investment in India. Primary and secondary data were used while Chi-square was used to examine the nature of the association. The study concluded that most investors have a positive approach to investing in mutual funds and emphasized the need to maintain their confidence in mutual funds by providing timely information relating to different trends in the mutual fund industry. The results documented in this study revealed that, as investors become more aware and informed about market trends, they perceive lower risk. Further, Bobade, Nakhate, Malkar and Bhayani (2020) carried out an empirical study on the

awareness and acceptability of mutual funds in Pune City using a descriptive research design. The study found that there was a positive association between awareness and the acceptability of mutual funds. These studies looked at mutual funds while the current study focused on REITs. Thus, the current study assessed the investors' awareness level and uptake of REITs which are structured as mutual trusts.

Majid, Kholim, Rahim, Said and Mustafa (2015) examined the level of awareness among property investors on Real Estate Syndication (RES) in Malaysia. Data was collected from distributed questionnaires to the likely investors concerning RES criteria. Data was analysed through Pearson correlation within a significant value < 0.05 and reliability test with Cronbach alpha > 0.6. The results showed that the level of awareness among property investors on the RES implementation was still at a low level with an indication of less than 50%. The study concluded that investor awareness was crucial in enhancing the implementation performance of Real Estate Syndication. The current study focused on the performance of REITs as opposed to syndication using a different methodology.

Malathy and Saranya (2017) carried out a study that examined the relationship between investor awareness and investment decisions in Chennai India using a descriptive research design. The study found that investor awareness is a significant factor that influences investors' decisions leading to better performance for the stocks they have invested in. The study found that investors' knowledge of policies and economic conditions aids their investment decisions which automatically enhances the performance of stocks. The current study sought to examine the investors' awareness of various aspects and whether there exists any correlation between investors' awareness and performance of REIT stocks, a missing gap in the above study. Further, the current study used a correlational research design in examining the relationship between investor awareness and the performance of REITs.

The reviewed empirical studies did not focus on REITs in terms of investors' level of awareness. The market performance of REITs showed poor results in the past few years. As far as the REITs market in Kenya, being a relatively new market segment, there was inadequate investor knowledge or education of REITs hence low investment in the market. It was, however, unclear if any relevant stakeholders saw this as an investment in this developing economy. This study, therefore, determined the level of awareness of REITs among relevant stakeholders.

2.3.4 Moderating Effect of Market Regulatory Framework on Performance of Real Estate Investment Trusts in Kenya

Centre for Affordable Housing Finance in Africa (2017) reports that legislative and regulatory context has been highlighted as being key factors in enhancing the growth of REITs in Africa. Those laws that the state has put in place to govern and regulate the financial services sector are market regulatory frameworks. The market regulatory framework is meant to bring sanity to the market by prosecuting those market players who do contrary to the set regulations, protecting the rights of the consumers and investors, and also ensuring the promotion of stability in the industry (Agborndakaw, 2010).

The viability of REITs can be affected by government policies since they affect prices and also the demand for REITs (Bienert & Brunauer, 2007). Governments can boost demand for real estate through tax credits and the provision of subsidies. For instance, in 2009, the US government introduced a tax credit to first-time homeowners in a bid to boost home sales in an economy that was then sluggish, after the global financial crisis (Avlonitis & Indounas, 2005). The introduction of this tax incentive boosted the sale of homes with over 900,000 new homebuyers purchasing homes. The current study examined the tax aspect of REITs as a moderating item that incentivizes or acts as a disincentive to REITs uptake.

In a study conducted by Newell, Ting, and Acheampong (2002) who examined the performance of four listed property trusts in Malaysia, The study found that existing regulations and policies were the reason there was low penetration or uptake of REITs. Similarly, Njenga (2017) undertook a study on the effects of real estate investment trust characteristics on the uptake by real estate developers. The study adopted a descriptive research design. Data was collected from property developers while multiple regression analysis was used to examine the relationship between variables. The study found that there exists a positive non-causal relationship or correlation between market regulatory framework, operational structure, income structure, and uptake of REITs by real estate developers in Kenya. However, these studies failed to examine the moderating market regulatory framework on the performance of Real Estate Investment Trusts, a gap that this study sought to address.

In Kenya, REITs are regulated under the Capital Markets (Real Estate Investment Trusts) (Collective Investment Schemes) Regulations, 2013, by the Capital Markets Authority (CMA). In addition, section 20 of the Income Tax Act was amended by the Government through the Finance Bill 2019 to exclude REITs' investment companies from corporate tax. Investee firms are businesses/entities from which REITs own properties. In the past, only a licensed REIT was exempt from taxation, but the underlying investment firm holding the investment asset was not exempt from taxation.

According to the REITs regulations (2013) in Kenya, certain obligatory requirements must be met to be allowed to offer real estate investment trusts for both Income REITs and Development REITs. Some of the stipulated regulations are: the minimum percentage to be invested with issuers of equities and fixed income securities which is 5 percent, the minimum borrowing capacity by REITs which is 35% for I-REITs and 60percent for D-REITs and the minimum float to maintain for REIT security which is 25percent. Further, the regulations set the minimum amount required to invest in REITs which is Kshs. 5 million. There is also a requirement that obligates I-REITs to distribute at least 80 percent of their rental income as dividends. Further, I-REITs are required to ensure that at least 75 percent of their Net Asset Value is invested in properties that are income-generating in the first two years of listing. Further, the regulations allow only a minimum of 7 investors for both I-REITs and D-REITs.

Since REITs cut across both the property and the stock market, the prevailing laws can influence the level of integration of REITs into the Market. This study examined the interaction effect of existing legislation in enhancing or even hindering the growth and development of the REITs markets in Kenya. The existing regulations of 2013 and the amended Finance Act of 2019 in Kenya could either positively or negatively moderate the influence of investor sentiments, property diversification, and investor awareness on the performance of Real Estate Investment Trusts in Kenya. The existence of a significant or insignificant moderating effect of the existing market regulatory framework was also examined in this study.

2.3.5 Performance of Real Estate Investment Trusts

According to Yu (2009), the performance of REITs analysis has become significant since investors are getting attracted to these asset classes. Examining the performance of REITs is a key element that investors would consider when considering allocating capital

for their investment needs. Brounen and De Koning (2012) assert that the performance of REITs' stock is influenced by factors such as the size of the firm, the economic location of the properties, and property type diversification. The determining factors relating to REIT performance were investigated by Mohamad and Zolkifli (2012) by drawing attention to five listed REIT markets in Asia, namely Taiwan, Thailand, Malaysia, Hong Kong, Japan, and Singapore. Their findings showed a correlation between REIT performance, net asset value proxy and risk-return, dividend yield, net revenue, and REIT size. These studies looked at firm level-specific factors and REITs issuing firm performance as opposed to informal factors and performance on REITs.

Newell, Ting, and Acheampong (2002) examined the return and risk performance of listed real estate trusts over the 1991-2000 period and found that for the period under review, real estate trusts were underperforming in the Kuala Lumpur stock market and real estate companies. Because of the local structure and regulatory system, poor performance was inevitable.

Their study concentrated on property trusts and their financial performance while the current study majorly looked at performance in terms of REITs uptake.

The study by Ibrahim and Ong (2008) examined the performance of Islamic REITs for both restricted and non-restricted schemes. The results indicated that those REITs which were non-compliant performed better than compliant REITs. Their results were not consistent with those of Alhenawi and Hassan (2011) who also evaluated the performance of REITs for the restricted and also non-restricted scheme. The study found that those REITs which were compliant had superior performance than non-compliant REITs. According to Chan et al (2003), equity REITs have been reported to over-perform Mortgage REITs. The performance has been revealed in Equity REITs' operational success which has also been witnessed in the profitability margin as well as the dividend yield. The current study focused on D- REITs, and I-REITs to determine their variation in performance in terms of uptake among investors.

Mburu (2017) examined the determinants of the financial performance of real estate investment trusts in Kenya. The study found that external factors such as government policies, the economy, interest rates, and demographic structure influence the financial performance of REITs. The current study looked at different external factors such as investor behaviour, type of property, and location of the property. Ngige (2017) carried

out a study on the effects of the introduction of real estate investment trusts on the stock returns in the Nairobi Securities Exchange. The study found that introduction of REITs had a positive, though the insignificant effect on the performance of stocks. This study failed to examine the factors which have influenced REITs' performance since their introduction in the securities exchange, a focal aspect of the current study.

Harun, Tahir and Zaharudin (2012) define efficiency as how well a firm or system functions to produce a certain level of output with a certain level of input coupled with technological advancement. A firm is said to be more efficient if that firm can produce more output, given the same or less amount of inputs with the availability of technology. Anderson and Springer (2003) examined the criteria used in the selection of REITs and the construction of portfolios based on the operating efficiency of REITs. The study found that operating efficiency is a significant aspect in the selection of the portfolio. Using a stochastic frontier technique, Nguyen and Swanson (2009) assessed the efficiency of the firm and its relationship with stock performance. The study found that the level of firm efficiency is an important factor that influences stock return. The study concluded that the level of firm efficiency should be reflected in asset pricing models. These studies in examining efficiency focused on stocks as opposed to REITs which this study sought to examine.

Anderson, Fok, Springer and Webb (2002) evaluated REITs' technical efficiency and economies of scale for the period 1992-1996 using data from NAREITs. The results indicated that REITs were inefficient technically and this was due to poor utilization of inputs. Further the results indicated that the inefficiencies could have been a result of failure to operate at constant returns to scale. Similar studies were conducted by Chiang, Tsaih and Hsiao (2016) who evaluated the efficiency of REITs in Singapore using the Data Envelopment Approach. The study found that none of the firms analysed performed efficiently based on the average efficiency scores. Another study by Chuweni and Eves (2017) revealed inefficient value for technical efficiency for REITs in Malaysia. These studies used DEA similar to what this study used. However, they covered the developed REITs market compared to the current study which focused on a nascent industry.

Ahmed and Mohammed (2017) measured the technical efficiency and performance of REITs for the period between 2009-2013 in Singapore. They used the Malmquist Productivity Index to determine the productivity shift of REITs over time. The findings

of the study revealed that the efficiency of REITs had improved and there was also marginal productivity and growth. In a study that was carried out in Malaysia by Harun, Tahir and Zaharudin (2012), the REITs efficiency of thirteen firms was measured. The study used four inputs comprising management fees, administrative expenses, interest, and operating expenses. The output variables considered in the study were the total assets, net assets, and total revenue. From the outcome of the analysis, the study revealed that out of 13 Malaysian REITs in their sample, the average efficiency of REITs in Malaysia in 2007 was 66.5 percent. However, in 2008 and 2009 the efficiency scores were 67 percent and 74 percent respectively. The study concluded that the efficiency of REITs in Malaysia had skyrocketed to economic recovery. These studies' target population was huge compared to the current study's small population of 1 listed REIT firm. Similarly, the current study used total assets and equity capital as inputs and operating income and total revenue as outputs as suggested by Ogieva (2017).

According to Harris (2012) who examined pure technical and scale efficiency, REITs functioned at a decreasing return to scale over a substantive period covered by the study. Similarly, Douglas (2006) evaluated 435 firms based on technical efficiency within the period, 1998 to 2003. The findings of the study revealed a conceivable average of 67 percent technical efficiency (showing 33 percent inefficiency). The study concluded that reductions in the inefficiencies in REITs could spur substantial enhancements in productivity and thus improve viability since technical efficiency is observed to correlate with firm value. These studies had a large target population compared to the current study which had only a single listed REIT.

A study by Beracha, Feng and Hardin (2018) which used a sample of US REITs during the modern REIT era (1995-2016), identified that REITs that were efficient were associated with greater performance measured by return on equity and return on assets. The findings also showed that higher efficiency REITs performed well in terms of risk-adjusted, cross-sectional stock return, and cumulative stock return in the medium term, relative to lower efficiency REITs. Their study focused more on the comparison of different REITs' technical and scale efficiency, which is quite different from the current study whose main concern was operational efficiency.

In Singapore and Malaysia, Ramachandran, Chen, Subramanian, Yeoh, and Khong (2018) examined the relationship between corporate governance and the performance of

REITs in Singapore and Malaysia. The target population comprised 27 listed S-REITs and 15 listed M-REITs. Secondary data was used while SEM was conducted to assess the impact of corporate governance on REIT performance. The research findings indicate that corporate governance has a significant impact on the performance of REITs. The performance of REITs was measured using ROA and profitability. The findings indicate that when controlled for firm size and growth the firm, the corporate mechanism reduces the impact of losses. Further, it was established that highly leveraged firms may be perceived as riskier by investors despite their strong corporate governance mechanisms. The study was carried out in markets with mature REITs as compared to the REIT market in Kenya with only a single listed REIT. The key focus was the financial performance of the REITs while the current study mainly focused on the operational performance or uptake of REITs. Similarly, the current study employed SEM in investigating the influence of external operating factors outside investment markets' control and their influence on the performance of REITs.

Cooper Seiford and Zhu (2004) assert that DEA, a new data-oriented method for assessing performance efficiency, is evaluated in a set of entities which are called Decision Making Units, where inputs are converted into outputs. According to Elkins (2003), DMU which gives a score of 1 is said to be efficient while a score of less than 1 indicates inefficiency. This has also been supported by Miencha, Murugesan, Vasanth, Lingaraja and Raja (2015) who assert that DMUs that obtain scores of 1 indicate 100% efficiency while less than 1 show inefficiency in the DMUs.

Advancements have been made to the initial technical efficiency model which includes a platform to factor in non-discretionary inputs and inputs in the model as well as leeway to permit the examination of performance efficiency variations over time. Further, the model has been enhanced to permit judgments or preceding knowledge since the management in every firm may have a diverse level of preferences regarding different factors used as inputs or outputs (Cooper, Seiford, & Zhu, 2004).

Few empirical studies have argued the disadvantages of DEA. One disadvantage of DEA is its deterministic nature where the model fails to account for stochastic noise in data, which could lead to potential bias in the estimated efficiency score. Another disadvantage is that it is less robust to outliers and extreme values (Chepng'etich, Bett, Nyamwaro, & Kizito, 2014). According to Kao (2014), the most probable research

direction on DEA models could be its application in solving real-world problems. These real-world problems could include emerging issues in the real estate market such as REITs.

Employing the technical efficiency model aided in understanding the operational efficiency and economies of scale for the listed Kenyan REIT. From the reviewed literature most of the studies carried out on the performance efficiency of REITs were undertaken in mature and developed REITs markets with numerous active registered REITs. The current study examined REITs operation efficiency in a nascent sector like Kenya to allow the making of conclusions as to whether the performance of the listed REIT was efficient or not. Thus, the insights from the DEA model helped in strategic decision-making for the listed REIT. The non-parametric DEA technique was used in the study primarily due to the small number of Kenyan listed REITs as DEA caters to a small sample size (Neves & Lourenc, 2008).

From the reviewed literature the performance of REITs was examined using different methodologies with the key focus on financial performance inclination using the adjusted return approach. The current study mainly examined the performance of REITs in Kenya in terms of uptake as opposed to financial performance as most studies reviewed had done. The studies reviewed had overlooked the aspect of the performance of REITs in the angle the current study adopted.

Table 2.1: Summary of Knowledge Gap

Author	Study	Methodology	Key findings	Knowledge gap	Focus of current study
Freybote and Seagraves (2016)	Heterogeneous investor sentiments and institutional real estate investments in USA	Bivariate vector auto regression (VAR) in the analysis of data Real Capital Analytics data (commercial real estate database) on quarterly investments	Their study found that institutional investors tend to rely on their peers in terms of trading decisions thus displaying herd behaviour	The study only considered the sentiments of those institutional investors who were only holding real estate securities as a source of information	This study focused on retail and institutional investors and deviates from their study which focused on investors holding multi assets investments
Das, Freybote and Marcato (2014)	Sentiment induced institutional trading behaviour and asset pricing in the REIT market in USA	Survey based measure with Data obtained from Real Estate Research Corporation	The findings indicate that institutional investors' sentiment in the un-securitized commercial real estate market affects their trading behaviour in the securitized market	The study overlooked that aspect of investor sentiments being time variant as risk perception and investment behaviour change over time	This study took into account individual investors sentiments while examining their investment and risk perception over REITs shares and other financial securities
Huerta, Jackson and Ngo (2015)	Impact of investor sentiment on real estate investment trusts return in USA	Direct survey based measure used Panel regression analysis employed Daily REITs returns data	The findings indicate that individual and institutional investors sentiments are significantly and positively related to REITs returns	The study constructed an investors sentiments index or proxy which might not be able to make a distinction between individual and institutional investors expectations	The current study used investment sentiments indicators on an attitudinal scale, which will evaluate institutional and individual investors expectations on different parameters such as change in preferences and risk expectations
Chong, Krystalogianni and Stevenson (2012)	Dynamic correlations between REIT sub sectors and diversification in USA	GARCH-DCC framework	The study found that less than 10% of equity REITs were classified as diversified, and there is a predominance of specializing REITs in a single property type	The study was inclined towards correlation dynamics between REIT sub-sectors and their effect on diversification	The current study assessed the correlations between property diversification and performance of REITs with minimal inclination towards testing correlations across property types and locations
Ro and Ziobrowski (2009)	How property focus or	CAPM and Fama French three factor	The found that specialized REITs presented higher	Diversified REITs could be failing to	The current study examined investors opinions on the

	diversificati on influence the value of U.S equity REITs	model with momentum	market risk than diversified REITs	perform as expected due to other factors other than management expertise such as the quality and type of the underlying assets which the study overlooked	correctness valuation of the underlying properties
Jalil, Mohammad and Chai (2018)	Effect of location attributes on performance of REITs in Malaysia	Correlation analysis and trend analysis	The study found that diversification by economic location is more effective compared to the usual traditional geographical diversification	The study was inclined to the effect of location attributes on the financial performance of REITs as opposed to the operational performance or uptake by investors	This study extended their works using a different methodological approach in a bid to make inferences on the relationship between location attributes and REITs performance
Prabakaran (2018)	Stock market awareness and performance of stocks invested in India	Partial Least Squares Structural Equation Modelling	The findings showed that there exists a relationship between investor awareness and performance of stocks invested in	This study focused on equities stocks as opposed to REITs which this study intends to address	The study extended his work by also employing SEM in examining the hypothesized relationship between investor awareness and REIT performance in a bid to make inferences
Saini, Anjum and Saini (2011)	Relationship between investor awareness and risk perceptions in the context of mutual funds investment in India	Chi-square was used to examine the nature of association	The study found that as the investors become more aware and informed about the market trends they perceive lower risk	The study inclined on mutual funds as opposed to REITs	The current study assessed the investor awareness level and uptake of REITs which are also structured as mutual trusts

Source: Author's synthesis of literature

2.4 Conceptual Framework

Figure 2.1 indicates that REITs' performance was the dependent variable while investors' sentiments, property diversification, and investors' awareness were the predictor variables. The market regulatory framework moderated the relationship between the effect of independent variables on performance. The influence of each of the independent variables on the dependent variable without a moderator was determined. In addition, the influence of each of the independent variables on the dependent variable with a moderating variable was examined while the intervening variable was economic conditions. Path diagrams-which take the form of flowcharts were used to test causal flow allowing investigation of patterns of effect within a system of the variables under study.

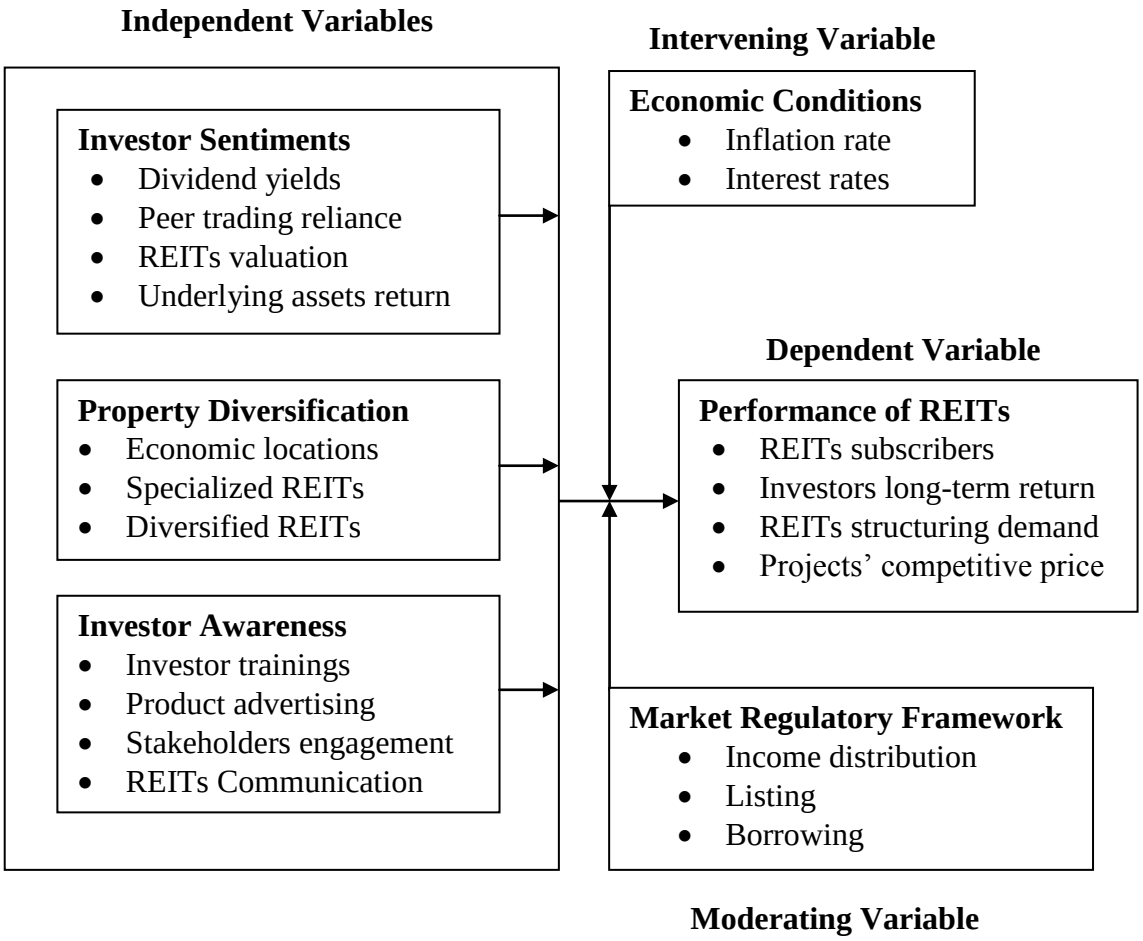


Figure 2.1: Conceptual Framework

Source: Author's synthesis of literature

Investor sentiment measurement statements included evaluating investors' opinions on REITs' dividends yields, investors' reliance on peer trading in the REITs market, REITs

underlying assets' correct valuation and also returns from underlying assets. Property diversification measurement statements included assessing economic locations of REITs' underlying assets, concentration on a particular property type among REITs and variation performance among different property types based on the property nature. Investor awareness was measured by assessing respondents' attendance to pieces training on REITs, presence of promotion campaigns such as advertisements to the public on REITs, level of engagement among various stakeholders in the REITs market and communication from the REITs issuing firm or investee.

Performance of REITs measurement statements entailed assessing the number of prospective investors willing to invest or subscribe to REITs, REITs' long-term returns offer to investors, the level of demand among REITs issuers or investees to structure new REITs for the market and the competitive price discovery for REITs backed real estate projects. Market regulatory framework measurement statements included evaluating requirements relating to income distribution for REITs, listing requirements by the regulator for any prospective REITs issuer, tax treatment for REITs investees and investors as well as borrowing requirements for the REITs investee. This study used REITs market regulatory framework as a moderating variable because REITs regulations are factors that could be held constant as the REIT market cannot operate without guiding regulations. Thus the regulations could influence the direction of the relationship among variables.

Further, economic conditions such as prevailing inflation rates and interest rates are likely to intervene in the relationship between investor sentiments, property diversification, investor awareness and performance of Real Estate Investment Trusts in Kenya. However, this study had no intention of measuring the intervening effect of economic conditions. After the analysis, a revised conceptual framework was obtained as shown in figure 4.15.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the study's research methods, which comprised the study's research design, target population, sample and sampling techniques, research instruments, and data collection procedures. It also goes through how the instrument's reliability and validity were determined, data analysis and presentation methodologies, and ethical considerations during the research process.

3.2 Research Design

A research design is a general plan in which answers to the questions being examined are obtained (Polit & Beck, 2003). It is the basis for the gathering of data and analysis processes depending on the research questions or research objectives guiding the study (Orodho, 2003). A research design is a plan that directs the study process from the formulation of objectives and measurement of variables to data collecting and analysis. There are various types of research designs used in the social sciences. They include descriptive, explanatory, experimental, and correlational designs. The study employed a correlational research design of predictive nature to determine if there existed predictive relationships between the predictor variables and the dependent variable.

Predictive correlational studies, according to Sousa, Driessnack, and Mendes (2007), predict the variance of one or more variables based on the variation of another variable. Gall, Gall and Borg (2007) assert that predictive correlational designs are appropriate for studies that seek to use two quantitative variables in the prediction of relationships. As a result, the research design was acceptable for determining if the predictor factors and the dependent variable had a predictive relationship. Olanrele, Said, Daud and Majid (2018) used a predictive correlational research design in evaluating the performance and acceptability of REITs in Nigeria. In examining the level of awareness among property investors on real estate syndication, Majid et al (2015) also employed a predictive correlational research design.

A research philosophy entails the attitudes and beliefs, of an individual or a group, about how data concerning a certain phenomenon should be collected and analysed (Mertens, 2010; Wang, 2012). Ancient philosophers devised two types of reasoning to assess the validity of their findings and construct rational arguments. Positivism and

phenomenology or constructivism philosophy are two of those reasoning types (Cooper & Schindler, 2008).

Constructivism philosophy is based on the principle that scientific knowledge is built through real life experience or experiential learning. This philosophy is built on the premise of how individuals construct knowledge based on information collected from past experiences (Bryman, 2012). This philosophy implies that any knowledge which is generated cannot be measured to allow the making of inferences. This makes constructivism philosophy subjective as it lacks natural science objectivism.

The philosophy of positivism is based on the idea that only factual knowledge gathered via observation and measurement can be trusted (Collins, 2010). The philosophy of positivism is built on four basic tenets. The first principle is phenomenalism, which states that knowledge is defined as a thing that can be observed and quantified. The second principle is deductivism, which asserts that the goal of a theory is to provide a hypothesis that can be verified and evaluated. Inductivism, the third principle, states that knowledge is obtained by fact gathering. This is the foundation on which laws are created. The fourth principle is objectivism, which asserts that knowledge must be founded on positive information gathered from observable experience and that only analytical statements that are known to be valid reasons are acceptable (Cooper & Schindler, 2011). This study adopted a positivist philosophy based on these four principles. The justification is that positivism research philosophy entails objectivity and predictability (Cohen, Manion & Morrison, 2007). Furthermore, the researcher's responsibility in positivist philosophy is confined to data collecting and objective interpretation. This is to ensure that the resultant findings of a study are quantifiable and observable (Collins, 2010). This assured objectivism made positivism philosophy suitable for this study.

3.3 Target Population

A population is the whole number of items in an area under investigation (Zikmund, Babin, Carr, & Griffin, 2010). It is the entire group of people or things that conform to a certain set of requirements. The target population is a greater collection of items, people, or objects from which a sample is drawn (Oso & Onen, 2008). The target population, according to Orodho (2003), consists of individuals, entities and institutions that are examined.

The study's units of observation included 135 entities that are members of Kenya's REITs Association and one REIT listed on the Nairobi Securities Exchange. REITs Association of Kenya was formed in November 2017 by players in the Real Estate and Capital Markets industries to act as the representative body for REITs in Kenya. From these 136 entities unit of analysis or target population 202 was obtained. of Table 3.1 presents the target population distribution.

Table 3.1: Target Population for Units of Observation

Category	Target Population
Fund Managers	27
Stock Brokers and Investment Banks	25
Property Developers	79
MMC Africa	1
Viva Africa Consulting	1
Mboya Wangong'u & Waiyaki Advocates	1
Novare Equity Partners	1
Listed Income-REIT (Stanlib Fahari)	1
Total	**136**

Source: (REITs Association of Kenya 2020; Capital Markets Authority, 2020)

3.4 Sample and Sampling Procedure

A sample means the number of items chosen for observation from the target population by the researcher (Oso & Onen, 2008). It is a subset or a set of items that have been chosen or selected from the universe (Kombo & Tromp, 2006). It is important to determine a representative sample to ensure the credibility of the results (Orodho & Kombo, 2002). A sampling procedure or technique is the process of choosing appropriate units from a target population to determine their characteristics to generalize the findings of the population (Sekeran, 2003).

Probability sampling and non-probability sampling are the two types of sampling procedures. Simple random sampling, stratified random sampling, systematic random sampling, cluster sampling, and multi-stage sampling are all examples of probability sampling procedures. Each sample has an equal probability of being included in the sample size using probabilistic sampling methods. Convenience sampling, purposive sampling, quota sampling, and snowball sampling are examples of non-probability approaches. The odds of any unit or element are included in the sample size in non-

probabilistic sampling methods and cannot be estimated. Instead of randomization, the technique relies on the researcher's judgment (Chaudhuri & Stenger, 2005).

Both probability and non-probability sampling techniques were utilized in this study. Stratified random was used to sample Fund Managers, Property Developers Stock Brokers and Investment Banks. Random sampling was used to determine the entities that formed the final sample size. Those entities which were very active members of the REITs Association of Kenya in terms of the membership got a high chance of being included in the sample size under the units of observation category. Purposive sampling a non-probability approach was also used in sampling 5 units of observation namely; MMC Africa, Viva Africa Consulting, Mboya Wangong'u & Waiyaki Advocates, Novare Equity Partners and listed Income-REIT (Stanlib Fahari). The justification for employing purposive sampling on these units of observation was necessitated by the fact that the units of observation were single in number and it was not possible to use stratified random sampling.

In determining the sample size for the units of observation, the Israel formula was used. In using this formula, the study took into account the variances of the subpopulation and strata before the estimate of the variability in the units of observation as a whole was made. Further, the formula is the most ideal to use when the only thing you know about the underlying population you are sampling from is its size.

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the target population, and e is the margin error (0.05 for 95 percent confidence level). By substituting these values into the equation, the sample size was calculated a

$$n = \frac{136}{1 + 136(0.05)^2} = 101$$

The sample size for units of observation was allocated according to the size of the strata using stratified proportional sampling as follows: $n_h = \left(\frac{n}{N}\right) N_h$

Where:

- n is the strata sample size for units of observation

- N is the target population for units of observation
- N_h is the optimum sample size

Representative samples for units of observation from each stratum are shown in Table 3.2.

Table 3.2: Sample Size Distribution for Units of Observation

Category	Strata Population	Sample Size
Fund Managers	27	20
Stock Brokers and Investment Banks	25	18
Property Developers	79	58
MMC Africa	1	1
Viva Africa Consulting	1	1
Mboya Wangong'u & Waiyaki Advocates	1	1
Novare Equity Partners	1	1
Listed Income-REIT (Stanlib Fahari)	1	1
Total	**136**	**101**

Source: (REITs Association of Kenya 2020; Capital Markets Authority, 2020)

Further, purposive sampling was used to select two respondents from each of the 101 entities who were interviewed. This made the final number of respondents (units of analysis) which made the sample size to be 202. According to Hair et al (2010), factor analysis is suitable when the sample size is over 200. This study also employed factor analysis as shown in the data analysis section. Tang and Mori (2016) used stratified sampling while examining the relationship between sponsor ownership and the performance of REITs in Asia. Similarly, Kahindi (2016) examined the introduction and development of REITs in Kenya using purposive sampling. Table 3.3 shows the sample size distribution for units of analysis.

Table 3.3: Sample Size Distribution for Units of Analysis

Category	Sample Size
Fund Managers	40
Stock Brokers and Investment Banks	36
Property Developers	116
MMC Africa	2
Viva Africa Consulting	2
Mboya Wangong'u & Waiyaki Advocates	2
Novare Equity Partners	2
Listed Income-REIT (Stanlib Fahari)	2
Total	**202**

Source: (REITs Association of Kenya 2020; Capital Markets Authority, 2020)

3.5 Research Instruments

In the social sciences, there are two sorts of data that can be collected. They consist of both primary and secondary data. Primary data is information gathered by the researcher from a primary source. Primary data can be collected using questionnaires, interviews, observations, and focused group discussions (Kothari, 2004; Orodho & Kombo, 2002). In this study, primary data was collected using the questionnaire (Appendix II). In the collecting of original data that describes a population, a questionnaire is the ideal data collection technique. A questionnaire is a set of questions designed to assist a researcher in acquiring information about a group (Dawson, 2009). When a researcher has to get information from a large group of people, such as in this study, the questionnaire was the best tool (Kombo & Tromp, 2006).

The research instrument contained closed-ended questions. Close-ended questions are advantageous because help the researcher to get specific information that the researcher wants to gather (Mugenda & Mugenda, 2008). The questions relating to the variables under study were on the 5-likert psychometric scale. The respondents were asked to indicate whether they agreed, were neutral, or disagreed. According to Norman (2010), the best measurement scale for capturing the intensity of respondents' attitudes and feelings toward a given item under investigation is the likert scale. Olanree, Said, Daud and Majid (2018) used questionnaires as a data instrument in studying the impact of operating factors on the performance of REITs in Nigeria. Similarly, Nyoro (2017) used a questionnaire to collect data while researching the factors that influence REIT financial performance in Kenya.

Secondary data is a kind of data that has already been collected previously and is readily available (Kothari, 2004). It refers to information that is gathered from sources that are already in existence. Such sources include company records, magazines, publications, journals, the internet, and websites (Sekeran & 2003). In this study, secondary data was obtained from the company audited financial statements (2016-2020) as publicly published. The data obtained related to the listed REIT's total assets, equity capital, total revenue, and operating income. The data was recorded in the record survey sheet (Appendix III). Secondary data collected was used to measure the operational efficiency of the listed REIT. A three to five-year period is enough to assess consistency in firm

performance and also trends in the firm's operations (Adquith &Weiss, 2019). The five-year period in which the secondary data was collected coincided with the period the listed REIT at Nairobi Securities Exchange has been in operation.

Pilot testing of the research instrument was carried out on primary data. A pilot study is a trial run that is conducted before or in preparation for the actual study (Polit & Beck, 2003). A pre-test is a rehearsal and replica of the main study to be conducted (Kombo & Tromp, 2006). The pilot test aims to detect weaknesses in the research instruments. This includes research instrument design, questions format and wording (Cooper & Schindler, 2011). Pilot testing is also done to ensure that the research design and data instruments are accurate and precise (Saunders, Lewis, & Thornhill, 2007). Pilot testing should be between 1 percent and 10 percent of the total sample size, according to Mugenda and Mugenda (2008).

The research instrument was pre-tested before being used to collect the data. The purpose of pretesting was to assess the accuracy and completeness of the research instruments. That is, capturing the information it was intended for. The pretesting was conducted on twenty respondents or 10 percent of the target population. In pilot research, Mugenda and Mugenda (2008) suggest that a sample of at least 10 percent of the population is adequate for pilot testing. The research instrument was pre-tested by giving it to 20 key members of staff from nine REIT managers that are licensed by Kenya's Capital Markets Authority (Appendix V). REIT managers were chosen because they play a key role in providing real estate and fund management services for REIT schemes on behalf of investors. The results of the pilot study were used to improve the precision of the research instrument. This was ensured by restricting the statements for a smooth flow and also deleting statements that were repetitive and which could lead to duplication of responses for similar items.

3.5.1 Validity of the Research Instrument

The ability of a research instrument to achieve its intended aim is referred to as validity (Zikmund, Babin, Carr, & Griffin, 2010). Validities of various types were determined. The degree to which research instruments give enough coverage in terms of guiding questions on the variable under study is referred to as content validity (Hair, Black, Babin, & Anderson, 2010). To ascertain content validity, the researcher engaged the supervisors who had expertise on the topic under study, and their input was taken into

consideration. According to Zikmund et al. (2010), construct validity refers to how well a set of items measures the specified hypothetical constructs. In ensuring construct validity, the research instrument was segmented per variable or construct with measurement items indicated per construct. The input of the supervisors was also taken into account in formulating a precise set of items to measure the constructs. When the covariance among the variables looks to be measuring the same thing, it is said to have convergent validity. Discriminant validity assesses the relationship between variables and how well they contribute to the study on their own (Zikmund et al., 2010). Convergence and discriminant validity were ascertained through confirmatory factor analysis as discussed in Tables 4,34 and 4,35 ahead.

3.5.2 Reliability of the Research Instrument

The internal consistency of the research instrument is regarded as reliability (McMillan & Schumacher, 2010). Through pre-testing, a reliability test was carried out to ascertain whether the research instrument would give similar outcomes or repeated attempts or trials. Cronbach alpha (α) which is a statistical test was run to ascertain internal reliability. According to Sekeran (2003), a Cronbach value of 0.8 is favourable, 0.7 is adequate, and 0.6 is weak. In the current study, Cronbach alpha (α) of 0.7 was the designated limit in ascertaining internal consistency or reliability, and any construct which returned a value of 0.7 or higher was deemed to have internal reliability or internal consistency. All the variables had Cronbach alpha values greater than 0.8, indicating that the instrument had good internal consistency. Where a variable returns alpha values of less than 0.7, indicators that were poorly correlated with each other were eliminated through item factor analysis. Table 3.4 presents the results.

Table 3.4: Research Instrument Reliability Results

Latent constructs	Cronbach Alpha
Investor Sentiments	0.892
Property Diversification	0.893
Market Regulatory Framework	0.896
Investor Awareness	0.911
REITs Performance	0.823

Source: (Field Survey, 2022)

3.6 Data Collection Procedure

Before going out into the field to collect data, the researcher got permission. The Graduate School of Laikipia University, the National Commission for Science, Technology, and Innovation (NACOSTI), and the management of the institutions under investigation all granted permission. Before the actual data collection activity, the researcher paid pre-visits to the areas of the study. The purpose of the visits was to familiarize, seek permission, and brief the management of the entities and institutions understudy on the intended data collection exercise and its use.

The researcher, in conjunction with the research assistants, administered the research instrument to the respondents. The research assistants were taken through the instrument before actual data collection for familiarization. Once permission was granted, the data collection exercise began with the administration of the research instrument to the respondents. Any clarifications sought by the respondents were addressed promptly.

Email questionnaires were also used in data collection where in person administration of the research instrument was not possible. This is especially so at present when regulations on social distancing are in place to avoid the spreading of COVID-19 infections. Email questionnaires are efficient as a medium of the survey compared to telephone and mail or post surveys (Coderre, Mathieu, & St-Laurent, 2004). In addition, email surveys have low collection and transmission costs, immediate transmission and response as well as ease of use (Ilieva, Bacon, & Healeay, 2002; Roy & Berger, 2005). Thus, electronic mail questionnaires were preferred because of their cost efficiency, speedy transmission, and reply turnaround (Dibb, Rushmer, & Stern, 2001; Kent & Brandal, 2003). A major disadvantage of email questionnaires is the low response rate compared with traditional mail surveys (Ranchhod & Zhou, 2001; Dommeyer & Moriarty, 2000). To enhance the response rate, assurance of anonymity of respondents and good design of email questionnaires was made.

During pre-visits, the researcher requested key respondents' contacts including their e-mail addresses. Using the email deployment method, a unique email invitation link for each potential respondent was generated. By clicking on the URL or the hyperlink, respondents were able to access the research instrument. Then the researcher tracked the potential respondents' responses by their email addresses using the email deployment method. The email deployment method allowed for the development of unique email

invites for each invitee as well as the monitoring of responses (Michaelidou & Dibb, 2006). Reminders were sent to potential respondents who had partially responded or not responded at all. Sixty questionnaires were emailed to the respondents while one hundred and forty-two were physically administered.

3.7 Data Analysis and Presentation

Primary data was analysed using SPSS while secondary data relating to operational efficiency was analysed using DEA. Confirmatory Factor Analysis and Structural Equation Modelling were also performed using SPSS AMOS (Analysis of Moments Structure). Results are presented using charts, tables and discussions. Descriptive and inferential statistics were used to analyse the data. Data was summarized using descriptive statistics such as percentages, frequencies and likert mean. To examine predictive interactions, inferential statistics such as regression analysis, factor analysis, and path diagrams were used. Data was first tested for reliability and validity using exploratory factor analysis to determine how the constructs were loading.

3.7.1 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) was used to check if the constructs were converging and how independent they were in their contribution to the study. To ensure that the quantity of variance is maximized, EFA was utilized. The Kaiser Meyer Olkin (KMO) and Bartlett's Test of Sphericity were used to determine the variance proportion in the variables (Tabachnick & Fidel, 2007). A commonality test was performed on the data, in which values measuring the variability of every observable variable that could be explained were evaluated (Field, 2009). Indicators with a commonality value of less than 0.3 are incompatible with other indicators, are thus undesirable, and should be eliminated from the study (Pallant, 2011).

3.7.2 Principal Component Analysis

Furthermore, Principal Component Analysis was used to extract the most variation from the data set with each component (Tabachnick & Fidell, 2007). Composite variables with factor loadings of less than 0.4 should be discarded from further study (David, Patrick, & Philip, 2010). Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were used to determine whether factor analysis was appropriate before proceeding. Factor analysis should be performed when the KMO value is larger than 0.5 and the value of Bartlett's test is less than 0.05, according to Paton (2002).

3.7.3 Confirmatory Factor Analysis

Moreover, Confirmatory Factor Analysis (CFA) was also employed to see if the hypothesized association between the observable and underlying latent variables was true. Using path analysis diagrams, CFA was employed to confirm the hypothesis while also denoting variables and components (Young & Pierce, 2013). It was also employed as a method for evaluating or testing whether the measurement items accurately measured the specified constructs, with indicators that contributed successfully to the study being retained for further Structural Equation Modelling. To evaluate for data model fit, the study utilized the adjusted Chi-Square (CMIN), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Normed Fit Index (NFI) and Root Mean Square Error (RMSEA) following Bayram (2012).

3.7.4 Structural Equation Modelling

The structural models were fitted and the hypothesized relationships were tested using structural equation modelling (SEM). This technique is more effective when a researcher wants to test hypotheses concerning relations between observed variables and latent variables. Hair, Tatham, Anderson and Black (2006) assert that SEM allows the analysis of numerous structural relationships concurrently while ensuring statistical efficiency. For evaluating measurement and structural features of hypothetical models, SEM combines features of factor analysis, regression analysis, and path diagrams. Furthermore, SEM presupposes that indicators and latent variables have unidirectional or linear relationships (Bryne, 2006). Path diagrams were used to specify the patterns of directional relationships among the observed variables.

Furthermore, because all of the variables were assessed on the same scales, regression weights were employed to explain the nature of the relationship between them. Path coefficients were utilized to determine the strength and direction of the factors. The t-calculated was used to determine the significance of the connection between the predictor factors and the dependent variable. At a 5% significance level, the calculated t value was compared with the critical t value of -1.96 or +1.96. There was a significant positive connection between the predictor variables and the dependent if the t-calculated was greater than the standard critical value at the 5 percent significance level. The results of the comparison between (t-calculated) and (critical value) at a 5% significant level either made the formulated null hypotheses to be either accepted or rejected.

In Singapore and Malaysia, Ramachandran, Chen, Subramanian, Yeoh, and Khong (2018) used Structural Equation Modelling to assess corporate governance and performance of REITs. Furthermore, Prabakaran (2018) also used Partial Least Squares Structural Equation Modelling while examining stock market awareness and the performance of stocks in India.

3.7.5 Regression Analysis

Model equations for the Ordinary Least Square (OLS) and the Moderated Multiple Regression (MMR) were developed. The OLS model, which was the equation model before the interaction effect was compared with the MMR model which was the equation model after the interaction effect. The intention of comparing these models was to examine if the market regulatory framework moderated the relationship between the predictor factors and the dependent variable. OLS and MMR models were used to confirm the results of Structural Equation Modelling. Njenga (2017), for example, utilized regression analysis while examining the influence of real estate investment trust characteristics on real estate developer uptake in Kenya. The regression analysis was run in four steps. Every predictor variable was regressed on the dependent variable without a moderator in the first phase. The OLS model 3.1 was used to fit the data.

$$Y= \beta_0 + \beta_1 X_i + \varepsilon \quad \ldots\ldots 3.1$$

Where;

Y= Performance of REITs.

X_i= Independent variables (Investor Sentiments, Property Diversification And Investor Awareness).

β_0= Regression constant.

β_1= Coefficients to be estimated.

ε = Residual in the equation.

Every predictor variable was regressed on the dependent variable with a moderator in the second phase. The MMR model 3.2 was used to fit the data.

$$Y= \beta_0 + \beta_1 X_i + \beta_2 X_i Z + \varepsilon \quad \ldots\ldots 3.2$$

Where;

Y= Performance of REITs.

X_i= Independent variable.

Z= Market Regulatory Framework (moderator).

X_iZ= Interaction term between independent variables and the moderator.

β_0= Regression constant.

β_1= Coefficients to be estimated.

β_2= Effect of XZ on Y.

ε = Residual in the equation.

The predictor variables were regressed on the dependent variable without a moderator in the third step. The OLS model 3.3 was used to fit the data.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon \quad \text{.....3.3}$$

Where;

Y= Performance of REITs.

X_1= Investors Sentiments.

X_2= Property Diversification.

X_3 =Investors Awareness.

β_0= Regression constant.

β_1, β_2, β_3= coefficient to be estimated.

ε = Residual in the equation.

Predictor variables were regressed on the dependent variable with a moderator in the fourth step. The MMR model 3.4 was used to fit the data.

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_1Z + \beta_5X_2Z + \beta_6X_3Z + \varepsilon \quad \text{.....3.4}$$

Where;

Y= Performance of REITs.

X_1= Investors Sentiments.

X_2= Property Diversification.

X_3 =Investors Awareness.

Z= Market Regulatory Framework (moderator).

X_1Z, X_2Z, X_3Z= interaction term between each of the independent variables and the moderator.

β_0= Regression constant.

β_1, β_2, β_3= Coefficient to be estimated.

β_4, β_5, β_6=Effect of X_1Z, X_2Z and X_3Z respectively on Y.

ε = Stochastic error term assumed to be normally distributed.

3.7.6 Data Envelopment Approach

Data Envelopment Approach (DEA) was used to assess and evaluate the listed REIT's operational efficiency. To evaluate and examine the operational or technical efficiency of the listed REIT, the study used two input factors and two output factors. Total assets and equity capital were used as inputs, with operating income and total revenue as outputs. Other studies have utilized DEA to evaluate performance or operational efficiency (Ogieva, 2017; Osifo & Sibanda, 2018; Harun, Tahir, & Zarahudin, 2012).

Elkins (2003) describes efficiency as the number of weighted inputs divided by the total of the outputs. The DEA model formulation for the k^{th} Decision-Making Units can be outlined as follows:

$$\text{Max } E_k = \frac{\sum_{r=1}^{t} U_r Y_{rj}}{M}$$

$$\sum_{i=1} V_i X_{ij}$$

$$\text{s.t.} \quad \frac{\sum_{r=1}^{t} U_r Y_{rj}}{M} \leq 1 \quad j=1,\ldots\ldots n$$

$$\sum_{i=1} V_i X_{ij}$$

$$U_r \geq 0 \qquad r=1,\ldots\ldots t$$

$$V_i \geq 0 \qquad i=1,\ldots\ldots..m$$

Where;

Objective function

E_k= the efficiency index of the k^{th} DMU

Parameters

Y_{rj} = the amount of r^{th} output utilized by j^{th} DMU

X_{ij} = the amount of input i^{th} utilized by the j^{th} DMU

t= the amount of outputs

m= the amount of inputs

n=the number of DMUs

Decision variables

U_r= the weight assigned to to r^{th} output

V_i = the weight assigned to i^{th} input

In the identification of the efficiency scores of the entire DMUs, the above linear programming model is run. A DMU is only said to be efficient if it gives a score of one (1) which indicates 100 percent efficiency while a score less than one (1) implies non-efficiency (Miencha, Murugesan, Vasanth, Lingaraja, & Raja, 2015).

3.7.7 Data Diagnostic Tests

Diagnostic tests such as test for linearity, normality, heteroscedasticity, multi-collinearity, outliers' detection and independence of the residuals. Additionally, Common Method Bias in the responses was assessed. According to Saunders, Lewis and Thornhill (2007), any violation of the post estimation tests leads to biases in the estimation of parameters. The results of the diagnostic tests and their implications to the study are shown in chapter four.

3.7.7.1 Linearity Test

In ensuring that the data showed linearity, Mahalanobis distance was used to detect outliers. After detecting the outliers, these extreme values were dropped and the results of the dropped outliers were shown using box plots. The results are presented in Figure 4.1.

3.7.7.2 Normality Test

To test whether the underlying variables deviate from normality, a normality test was performed. Normality tests were tested using graphical and non-graphical methods. The graphical method entailed the use of a normal probability plot and a histogram while the non-graphical method comprised Kolmogorov-Smirnov and Shapiro-Wilk tests. If the coefficients are not statistically significant then the data is said to be normal (Warner, 2013). The null hypothesis suggests that the residuals are normally distributed, as opposed to the alternative hypothesis that they are not. Data that was not normally distributed, was normalized using log or square root transformation methods. Table 4.11, and Figure 4.2 and 4.3 shows the results.

3.7.7.3 Test for Heteroscedasticity

The term heteroscedasticity refers to the fact that the dependent variable's variance varies depending on the groups formed by the predictor variables (Gujarati, 2003). Homoscedasticity is the exact opposite of heteroscedasticity, meaning that the outcome or dependent variable's variance is identical across groups described by the predictor variables. Thus, Heteroscedasticity is a violation of homoscedasticity (Cousineau & Chartier, 2010). According to Field (2001), the assumption of heteroscedasticity should be checked since it affects the R coefficient's accuracy. A scatter plot was used and a fit line was added to check the presence of heteroscedasticity. If the plot did not have a standard flow, then it meant there was no heteroscedasticity and the null hypothesis was to be accepted. The null hypothesis holds that all error variances are equal (homoscedastic), whereas the alternative hypothesis holds that they are not (heteroscedastic). Further, the Levene test was also used where the computed probability value was compared with the conventional probability value of 0.05. The null hypothesis was dismissed if the computed p-value was less than 0.05, suggesting the existence of heteroscedasticity. Where heteroscedasticity was observed, the OLS estimator was used to estimate the model's parameters. The variance and covariance estimates of the OLS estimates were corrected to ensure accuracy. Table 4.12 and Figure 4.4 shows the results.

3.7.7.4 Multicollinearity Test

In multiple regression, multicollinearity occurs when the predictor variables are strongly correlated. The standard errors of the coefficients might increase as a result of multicollinearity problems, affecting the regression results (Gujarat & Porter, 2009). The Variance Inflation Factor (VIF) and tolerance were employed to test for multicollinearity. According to Field (2009), multicollinearity is present when the VIF value is greater than 10 and the Tolerance is less than 0.2. Where multicollinearity issues were found, logarithmic transformation was used to handle that. The results are shown in Table 4.13.

$$VIF=1/(1-R2)$$

3.7.7.5 Autocorrelation Test

The presence of serial correlation in the residuals may affect the regression's performance (Yupitun, 2008). Autocorrelation in the residuals of regression was detected using the Durbin–Watson statistic. When autocorrelation is present, predictors appear to

be significant, even if they aren't. According to Verbeek (2012), the Durbin-Watson statistic ranges from zero to four. The sample has no autocorrelation if the score is 2. In treating detected serial correlation, Autoregressive Order One process AR (1) model was included to reduce the effects of autocorrelation. Table 4.14 presents the results.

3.7.7.6 Stationarity Test

A stationarity test was conducted. The mean, variance, and covariance of time series data are said to be stationary if they do not change over time. If the data is time-variant, it is called non-stationary and therefore contains a unit root. A random walk is a time series that includes a unit root. A random walk is a state where the present value is made of a past value plus an error term (Gujarati, 2003). Unit root tests are carried out to ensure the results of that spurious regression are not obtained by the use of non-stationarity series. When two unrelated series have a significant relationship when they are regressed, a spurious regression is said to occur. The ADF test (Augmented Dickey-Fuller) was used to test for unit roots. For the ADF root test, the null hypothesis is that the time series is not stationary (there is a unit root), whereas the alternative hypothesis is that the time series is stationary (there is no unit root). The null hypothesis of a unit root in time series was dismissed in favour of the alternative that the time series is stationary if the ADF statistic value is statistically significant ($p<0.05$). The presence of unit root was treated by the differencing method which helped in stabilizing the mean of the time series by reducing seasonality and trend. The results are shown in Table 4.10.

3.7.7.7 Common Method Bias Test

Common Method Bias is systematic response bias in a dataset as a result of the influence of something which is external and which could have prejudiced the responses. When data is collected using a common method or instrument, some systematic bias in responses might occur. For instance, a long questionnaire can be used to collect data on all scale items from a sample. The respondents might feel fatigued toward the end of answering the questionnaire. This can make them less eager to answer the questions wilfully and thoroughly within scale measures. This systematic response bias might inflate the responses and might lead to incorrect considerations of the scale's validity and reliability (Steenkamp, De-Jong, & Baumgartner, 2010). CMB should not surpass 0.2 or 20 percent, (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The most common variance across all variables observed in the model was captured using a common latent factor approach after CMB was discovered. The latent factor was included in the

confirmatory factor analysis model and linked to all of the items observed in the model. The Common Method Bias was determined using the standardized regression weights from the model. The results are presented in Figure 4.5.

Table 3.5: Operationalization of Variables

Objective	Variable	Type	Measurement Scale	Data analysis statistics	Indicators
Assess the influence of investor sentiments on the performance of Real Estate Investment Trusts in Kenya	Investor Sentiments	Independent variable	Ordinal	Descriptive Regression Path analysis SEM	▪ Dividend yields on REITs ▪ Investor reliance on peer trading ▪ Sound valuation of REITs ▪ Returns from underlying assets
Examine the influence of property diversification on the performance of Real Estate Investment Trusts in Kenya	Property Diversification	Independent variable	Ordinal	Descriptive Regression Path analysis SEM	▪ Economic locations ▪ Specialized REITs ▪ Diversified REITs
Evaluate the influence of investor awareness on the performance of Real Estate Investment Trusts in Kenya	Investor Awareness	Independent variable	Ordinal	Descriptive Regression Path analysis SEM	▪ Investors trainings ▪ Product advertising campaigns ▪ Stakeholders engagement ▪ REITs Communication
Analyse the moderating effect of the market regulatory framework on the influence of predictor variables on performance of Real Estate Investment Trusts in Kenya	Market Regulatory Framework	Moderating variable	Ordinal	Descriptive Regression Path analysis SEM	▪ Income distribution requirements ▪ Listing requirements ▪ Borrowing requirements
Objectives 1, 2,3	Performance of Real Estate Investment Trusts in Kenya	Dependent variable	Ordinal	Descriptive Regression Path analysis SEM	▪ REITs subscribers ▪ Investor long-term returns ▪ REITs structuring demand ▪ REITs projects price discovery

3.8 Ethical Considerations

According to Waweru, Onyuma and Murumba (2021), ethics is concerned with beliefs about what is correct or incorrect, proper or improper, and good or terrible. Ethics refers to the rules that regulate human behavior that has a substantial impact on human well-being. The purpose of research ethics is to ensure that no one is hurt or suffers negative repercussions as a result of the study. Throughout the research process, the researcher ensured research ethics were adhered to as recommended by Borgatti and Molina (2005). Firstly, in ensuring informed consent, participants were made aware that they were taking part in research and all that was required from them. The researcher encouraged and ensured the voluntary participation of the respondents in the data collection exercise. Respondents had the option to withdraw at any point during the data collection activity if they so wished. In ensuring the confidentiality of the information provided, the researcher explained to the respondents how the data collected was to be used. In this case, solely for academic purposes, to increase participation in the exercise. The research instrument was structured carefully with the help of supervisors and was free from any offensive or discriminatory language. The respondents' identity was not disclosed throughout the research process. That is, the respondents were not required to indicate their names or any other personal information for anonymity.

In ensuring honesty and objectivity, data collected from the respondents was reported as obtained without any manipulation or coercion. Further, secondary data (audited financial statements 2016-2020) was obtained from an authentic source (listed REIT registered office) to ensure clarity and correctness. The researcher also ensured that all works by other authors who were reviewed in this study are acknowledged accurately and correctly through citation.

Further, the researcher received clearance from the Graduate School of Laikipia University, Institutional Ethics Review Committee (IERC) and the National Commission for Science, Technology and Innovation (NACOSTI) to continue to the field for data collection. In addition, permission was sought and granted from the management of the entities under study.

CHAPTER FOUR
RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

Based on the data collected from the respondents, this chapter presents the findings and discussions. Inferential statistics are used to examine the relationship between variables, whereas descriptive statistics are used to summarize the data.

4.2 Response Rate

Sixty questionnaires were emailed to the respondents while one hundred and forty two were physically administered. Only 166 out of 202 questionnaires administered were filled out and returned. This equated to a response rate of 82 percent. This response rate was enhanced by following up on emailed research instruments and booked appointments, via phone calls. Also, the physical administration of the research instruments contributed to the high response rate. According to Zikmund, Babin, Carr, and Griffin (2010), a response rate of more than 70 percent is favourable for further analysis. Furthermore, according to Bryman (2012), a response rate of 70 percent is very good for further analysis, while a response rate of more than 80 percent is deemed excellent. Hence, the response rate in the current study was deemed adequate for further analysis.

4.3 Demographic Results

This section presents the demographic results of the respondents. The demographic characteristics analysed are gender, age educational background and work experience of the respondents.

4.3.1 Respondents' Gender

The study assessed the gender aspect of the respondents. Table 4.1 presents the results.

Table 4.1: Respondents' Gender

		Frequency	**Percent**
Valid	Male	108	65.1
	Female	58	34.9
	Total	**166**	**100.0**

Source: (Field Survey, 2022)

According to Table 4.1, the majority of respondents (65.1%) were male, while 34.9% were female. In terms of gender, it may be implied that the responses were fairly balanced.

4.3.2 Respondents' Educational Background

The educational background of each of the respondents was examined in the study. Table 4.2 shows the results

Table 4.2: Respondents' Educational Background

		Frequency	Percent
Valid	Certificate/Diploma	38	22.9
	Bachelors	72	43.4
	Masters	34	20.5
	PhD	7	4.2
	Other	15	9.0
	Total	**166**	**100.0**

Source: (Field Survey, 2022)

Table 4.2 shows that 43.4% of the respondents had a bachelor's degree. Additionally, 22.9% of the respondents had diploma or certificate level qualifications, 20.5% had a master's degree, 9% held other qualifications professional qualifications and 4.2% were doctorate holders. It can be implied that responses were balanced across education categories.

4.3.3 Work Experience of the Respondents

The study determined the working experience of the respondents as shown in Table 4.3.

Table 4.3: Work Experience of the Respondents

		Frequency	Percent
Valid	1 year or less	10	6.0
	1 to 5 years	46	27.7
	5 to 10 years	73	44.0
	More than 10 years	37	22.3
	Total	**166**	**100.0**

Source: (Field Survey, 2022)

Most respondents (44.0 %) had worked for five to ten years, according to Table 4.3, whereas 27.7% of respondents have worked for one to five years, 22.3 % have worked for more than ten years and 6% have worked for one year or less. It can be implied that

most respondents have adequate work experience in real estate securities to understand the subject under investigation.

4.4 Descriptive Results

This section contains a descriptive analysis of the study variables. The opinions of the respondents on statements relating to the variables under study were analysed using percentages and mean values. The variables include investor sentiments, property diversification, investor awareness, market regulatory framework and performance of REITs.

4.4.1 Investor Sentiments

Respondents were asked to indicate their level of agreement on statements relating to investor sentiment. Table 4.4 shows the results.

Table 4.4: Investor Sentiments Descriptive Results

Statements N=166	Strongly Agree-5 %	Agree-4 %	Moderate-3 %	Disagree-2 %	Strongly Disagree-1 %	Mean
There has been REITs volatility which has been as result of investors negative sentiments about the market	28.9	33.7	21.1	8.4	7.8	3.674
Avoidance of uncertainty is relevant in determining REIT portfolio allocation decision	24.1	34.7	32.7	3.6	4.8	3.686
REITs are perceived as risky investment options by investors	30.1	30.7	21.7	10.2	7.2	3.662
REITs stocks are trading at a sound value (that's they are correctly valued)	29.5	39.8	21.7	6.6	2.4	3.873
There is clarity on the exact returns from the underlying assets	28.3	39.2	24.7	6.0	1.8	3.861
Uptake of REITs have remained low over poor dividend yields	28.3	38.0	19.3	10.2	4.2	3.759
Prices of REITs have remained low over poor dividend yields	23.5	28.3	25.3	14.5	8.4	3.439
REITs has a promising durable stream of growing dividends which will reward investors overtime	22.5	29.5	25.9	16.3	5.4	3.481
Government securities (Treasury bills and bonds) are preferred because they offer relatively attractive returns than REITs	15.7	25.9	34.3	13.9	10.2	3.228

Investing in companies equities (stocks) offer relatively attractive returns than REITs	20.5	33.1	29.5	12.7	4.2	3.530
As capital allocation signals, investors rely on peer trading under the perception that peers may hold superior knowledge	33.1	40.4	15.7	7.8	3	3.927
REITs underlying assets (Residential and commercial real properties) are correctly valued	8.4	19.3	44.0	12.7	15.7	2.921
REITs Investors require an understanding on the operations of the Stock Market to trade in REITs	9.0	18.7	41.0	12.0	19.3	2.861
Despite the rise in property prices, people's personal income has not kept pace. As a result, there is a good chance that property prices in Kenya will fall as potential investors find it difficult to engage in the market	6.0	19.3	33.7	10.8	30.1	2.602
Investors have sufficient confidence in the capital markets which has boosted the capital markets products uptake	7.8	9.0	34.3	20.5	28.3	2.475
Average mean score						3.59

Source: (Field Survey, 2022)

Table 4.4 shows that the majority of respondents (62.6%) were in agreement that REIT volatility has been caused by investors' negative market views. Further, 21.1% of the respondents held a neutral opinion regarding this statement (mean=3.67). The results are in agreement with those of Chakraborty and Subramanian (2020) who examined the link between market volatility and investor sentiments in India. There was agreement among respondents (58.8%) that avoidance of uncertainty is relevant in determining REIT portfolio allocation decisions while 32.7% of the respondents had a neutral opinion on this statement (mean=3.68). The results are in agreement with those of Lin, Yung, Marsh and Chen (2018) who examined the link between securities return and market uncertainty in the USA and found that uncertainty in stock markets influences investors' assets portfolio formation.

Most respondents (60.8%) agreed that REITs are perceived as risky investment options by investors while 21.7% held a neutral opinion (mean=3.66). Most respondents (69.3%) agreed that REITs stocks are correctly valued while 21.7% held a neutral opinion on this statement (mean=3.87). The findings are consistent with those of Amiri,

Ravanpaknodezh and Jelodari (2016) who examined the relationship between valuation methods and the intrinsic value of listed firms in Iran. The study found that stock valuation models employed have a significant influence on the prices of the listed stocks. Most respondents (67.5%) agreed that there was clarity on the exact returns from the underlying assets while 24.7% had a moderate opinion (mean=3.86). Additionally, 66.3% of the respondents agreed that uptake of REITs has remained low over poor dividend yields while 19.3% showed neutrality (mean=3.75). The results are consistent with those of Kulab (2017) who found that there is a positive relationship between expected returns from REITs and the actual returns from the underlying property in Thailand.

Moreover, a fair majority of respondents (51.8%) agreed that prices of REITs have remained low over poor dividend yields while 25.3% showed neutrality (mean=3.43). The results are consistent with those of Rohaya, Low, Maimunah, Siti and Tiong (2017) who examined property-type allocation in Malaysia and found that REITs have the potential for significant growth and a trend of decreasing dividend yields. Most respondents (52%) agreed that REITs have a promising durable stream of growing dividends that will reward investors' time while 25.9% showed neutrality on this statement (mean=3.48). The results agree with those of Clayton and Mackinnon (2001) who found that REIT stocks that are dominated by institutional investors have superior performance than those dominated by individual investors in the USA.

The majority of the respondents (41.6%) were in agreement that treasury bills and treasury bonds are preferred because they offer relatively more attractive returns than REITs, while 34.3% held a neutral opinion on this statement (mean=3.22). Most respondents (53.6%) agreed that investing in companies' equities offers relatively more attractive returns than REITs, with 29.5% holding a neutral opinion (mean=3.53). Similarly, Ntuli and Omokolade (2017) examined the performance of REITs in South Africa vis a vis other securities. The results indicated that treasury bills and bonds offered more attractive returns that REITs and were therefore preferred by investors. Further, Freybote (2016) found that investor sentiments were a significant factor in predicting bond yields of REITs issuing firms in the USA. Most respondents (73.6%) agreed that investors rely on peer trading as capital allocation signals, under the perception that peers may hold superior information (mean=3.92). The results are consistent with those of Freybote and Seagraves (2016) who reported that in the USA,

investors tend to rely on their peers in making trading decisions thus displaying herd behaviour. These investors hope and believe that their peers hold significant information which might be important in guiding their choice of investment in the securities market.

Most responders (44%) were undecided about the statement that REITs' underlying assets are correctly valued (mean=2.92). There was neutrality in opinion among most respondents (41%) on the statement that REITs investors require an understanding of the operations of the stock market to trade in REITs, 31.3% of the respondents disagreed while 27.7% were in agreement (mean=2.86). There was disagreement among most respondents (40.9%) that despite the rise in property prices, people's income has not kept pace. As a result, there is a good chance that property prices in Kenya will fall as potential investors find it difficult to engage in the market. Additionally, 33.7% of the respondents showed a neutral opinion on this statement while 25.3% were in agreement (mean=2.60). Moreover, there was disagreement among 48% of the respondents on the statement that investors have sufficient confidence in the capital markets which has boosted the capital markets products uptake. Further, 34.3% of the respondents showed neutrality on this statement (mean=2.47). The findings are in agreement with those of Nurick, Boyle, Morris, Potgieter and Allen (2018) who examined the uptake of residential stocks with South African REITs and found that there was low uptake of residential stocks due to inadequate confidence by investors in the financial markets. On average, most respondents agreed with the investor sentiment statements (mean=3.59).

4.4.2 Property Diversification

The respondents were asked to rate how much they agreed with statements relating to property diversification on a scale of one to five as shown in Table 4.5.

Table 4.5: Property Diversification Descriptive Results

Statements N=166	Strongly Agree-5 %	Agree-4 %	Moderate-3 %	Disagree-2 %	Strongly Disagree-1 %	Mean
Location of properties is a very important consideration for REIT investors	29.5	33.7	25.9	9.0	1.8	3.798
The nature of the location of the property depends on the economic activities at these locations	18.7	36.7	25.3	14.5	4.8	3.5
Diversification of REITs portfolios on locations enhance REIT return	21.7	38.0	22.9	10.2	7.2	3.568
Diversifying REITs across location attributes reduces market risks	12.7	36.1	23.5	17.5	10.2	3.236
Current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centres	16.3	27.7	25.3	14.5	16.3	3.135
REIT that target multiple types of properties to compose its portfolio perform better	15.7	22.9	28.9	21.7	10.8	3.11
REIT that focus on only one type or one property perform better	31.3	30.1	21.7	13.3	3.6	3.722
Different property types have varying performance which depends on property nature	24.7	29.5	26.5	12.7	6.6	3.53
Those REITs which are specialized in a single type of property performs better than those that target multiple property types	28.9	33.7	22.9	6.6	7.8	3.69
As the level of diversification increases, the return on assets do	32.5	30.1	21.7	13.9	1.8	3.776
Commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouse) perform better than Industrial REITs (REITs specializing in warehouses and industrial properties)	25.3	33.1	24.1	12.7	4.8	3.614
Residential REITs (REITs specializing in apartment buildings, students hostels) perform better than commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouse)	27.1	24.7	30.7	9.6	7.8	3.534
REITs' systematic risk is influenced by the property types they invest in	21.7	31.3	29.5	10.8	6.6	3.504

One of the most appealing investment characteristics for REIT investors is the quality of the underlying properties	21.7	34.9	26.5	12.0	4.8	3.564
Average Mean Score						3.57

Source: (Field Survey, 2022)

According to Table 4.5, most respondents (63.2%) agreed that the location of properties is a very important aspect for REIT investors when it comes to property diversification. Additionally, 29.5% of the respondents were in strong agreement with this statement (mean=3.79). The results are consistent with those of Rohaya and Hishamuddin (2015) who examined the relationship between property location and the performance of REITs in various Malaysian REITs and found that there was deferring unattractiveness among Malaysian REITs as a result of the difference in property locations. Additionally, Tiong and Jalil (2015) found out that most Malaysian REITs companies had their underlying properties in locations that were crucial in adding value to their business majorly, including the CBD in Kuala Lumpur. There was agreement among most respondents (55.4%) that the nature of the location of the property depends on the economic activities in those locations with 25.3% of the respondents holding a moderate opinion (mean=3.50). The findings are consistent with those of Wang and Zhou (2021) who found that there is a significant relationship between the economic-geographic location of underlying assets and the choice of investment among investors in China. This implies that investors put into consideration the economic and geographic location of underlying assets while investing in real estate financial securities such as REITs. Most respondents (59.7%) agreed that diversification of REITs portfolios on locations enhances REITs return while 22.9% showed neutrality in opinion (mean=3.56). The results agree with those of Zhu and Lizieri (2020) who reported that maintaining REITs' location risks can be used by investors in the construction of portfolios. This implies that portfolio construction and asset allocation can be enhanced by spreading location risks.

There was agreement among most respondents (48.8%) that diversifying REITs across location attributes reduces market risks with 23.5% indicating moderate opinion on this statement (mean=3.23). Anderson, Randy, Liang and Shain (2001) maintain that compared to geographical locations, the economic location is the alternative effective approach to constructing the property portfolio.

A fair majority (44%) agreed that current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centers. Additionally, 25.3% held a moderate opinion while 30.8% disagreed (mean=3.13). Most respondents (38.6%) agreed that REITs that target multiple types of properties in their portfolio formation perform better. Moreover, 32.5% disagreed with this statement while 28.9 % showed neutrality (mean=3.11). According to the majority of respondents (61.4%), there was agreement that REITs that focus on only one type or one property perform better with 21.7% holding a neutral opinion (mean=3.72). A fair majority of respondents (54.2%) agreed that different property types have varying performances which depend on the property nature while 26.5% held a neutral opinion on the statement (mean=3.53). The results are consistent with those of Chong, Krystalogianni and Stevenson (2012) who evaluated dynamic correlations between REIT sub-sectors and diversification in the USA and found that less than 10% of equity REITs were classified as diversified, and there was a predominance of specializing REITs in a single property type.

There was agreement among most respondents (62.6%) that REITs which are specialized in a single type of property perform better than those that target multiple property types (mean=3.69). Further, 62.6% of the respondents were in agreement that as the level of diversification increases, the return on assets does while 21.7% held a neutral opinion regarding this statement (mean=3.77). There was agreement from most respondents (58.1%) that REITs specializing in malls, offices, retail stores, and hotels perform better than REITs specializing in warehouses and industrial properties (mean=3.61). The majority of respondents (51.8%) were in agreement with the statement that REITs specializing in apartment buildings and student hostels perform better than REITs specializing in malls, offices, retail stores, hotels, and warehouses. Additionally, 30.7% of the respondents held a neutral opinion on this (mean=3.53).

Further, 53% of the respondents agreed that REITs' systematic risk is influenced by the property types invested in with 29.5% holding a neutral opinion (mean=3.50). The results show consistency with those of Mariya, Corbitt, Stacy and Emily (2019) who found that idiosyncratic risk was greater in those REITs which had the lowest previous returns than those with superior previous returns in the USA. In this scenario, investors require compensation for assuming firm-specific risks in form of lower premium risk. Most respondents (56.6%) agreed that one of the most appealing investment

characteristics for REIT investors is the quality of the underlying properties. However, 26.5% held a neutral opinion on this statement (mean=3.56). The results are in agreement with those of David and Bing (2019) found that underlying assets' liquidity and characteristics were associated with REITs' return in the USA. Such characteristics include the physical layout of the underlying asset and ease of liquidity. similarly, Block (2012) reported that unique attributes in property types enhance the profitability of the properties depending on occupancy rates and tenants' quality. On average, most respondents agreed with the property diversification statements (mean=3.57).

4.4.3 Market Regulatory Framework

Respondents were asked to rate how much they agreed with statements relating to the REITs market regulatory framework on a scale of one to five as presented in Table 4.6.

Table 4.6: Market Regulatory Framework Descriptive Results

Statements N=166	Strongly Agree-5 %	Agree-4 %	Moderate-3 %	Disagree-2 %	Strongly Disagree-1 %	Mean
Legislation prohibits REITs from investing more than 5% of their net asset value in other financial instruments, which makes their operations difficult	38.6	38.0	18.1	3.0	2.4	4.077
The stipulation that REITs invest no more than 10% of their net asset value in a company owned solely by the REIT manager boosts their operations	24.7	24.7	30.1	15.7	4.8	3.488
Income REITs (I-REITs) can only borrow between 35% and 40% of their total asset value, limiting their operations	18.1	30.5	28.5	16.9	6.0	3.663
Development REITs (D-REITs) are only allowed to borrow between 60% and 75% of their total asset value, which has limited their operations	19.3	26.5	25.3	18.1	10.8	3.254
The Ksh 5 million minimum investment required to be considered as a professional investor for purposes of investing in a D-REIT or restricted I-REIT attracts investors	15.1	25.3	34.9	15.7	9.0	3.218
The lack of a regulatory minimum investment amount for investors in unrestricted I-REITs has improved REIT operations	20.5	13.9	31.9	21.7	1.2	2.984
The minimum listing requirements of a 50% subscription in both D-REIT and I-REIT have had an impact on REIT issuance	26.5	42.8	17.5	9.0	4.2	3.784
REITs' operations are limited by the law's requirement that persons not affiliated with the promoter or REIT manager maintain at least 25% float of the REIT security, unless funding is required for unplanned cost overruns	17.5	24.7	30.1	20.5	7.2	3.248

The Ksh 100 million minimum share capital requirement has limited other suitable players (a large pool of potential trustees) from applying for REIT trustee licenses	16.9	22.9	31.3	19.3	9.6	3.182
Laws mandating income REITs to distribute at least 80% of their taxable income to unit holders in the form of dividends help them operate more efficiently	20.5	45.2	19.3	13.3	1.8	3.696
Regulations governing the distribution of realized capital gains based on scheme documents improve REIT operations (typically, realized capital gains must be dispersed within two years or re-invested to maintain tax status)	27.1	38.0	23.5	9	2.4	3.784
REITs are limited in their operations by laws that prevent them from selling more than half of their overall assets worth unless they are to be wound up	27.7	36.7	25.9	7.8	1.8	3.804
The REIT market has benefited from the income tax exemption for investors	24.7	28.3	25.9	13.9	7.2	3.494
The REIT managers' approval processes for issuing REITs have time limits that are favourable	24.1	30.1	24.7	15.7	5.4	3.518
The requirement for a minimum of seven investors to participate in D-REIT and I-REIT has had an impact on REIT issuance	15.1	31.3	31.9	12.7	9.0	3.308
Average Mean Score						3.26

Source: (Field Survey, 2022)

Table 4.6 indicates that most respondents (76.6%) agreed that legislation that prohibits REITs from investing more than 5% of their net asset value in other financial instruments makes REITs' operations difficult (mean=4.07). The results are consistent with those of Njenga (2017), who found that there exists a positive correlation between market regulatory framework and the uptake of REITs by real estate developers in Kenya. A fair majority of the respondents (49.4%) agreed that the stipulation that REITs

invest no more than 10% of their net asset value in a company owned solely by the REIT manager boosts REITs' operations (mean=3.48). There was agreement among most respondents (48.6%) that the requirement that Income REITs borrow between 35% and 40% of their total asset value has limited their operations, while 28.5% of the respondents held a neutral opinion (mean=3.66).

A simple majority (48.5%) agreed that the requirement that Development REITs borrow between 60% and 75% of their total asset value has limited their operations (mean=3.25). Most respondents (40.4%) agreed with the statement that the Ksh 5 million minimum investment required to be considered as a professional investor for purposes of investing in a D-REIT or restricted I-REIT attracts investors, while 34.9% showed neutrality in opinion (mean=3.21). According to 34.4% of the respondents, lack of a regulatory minimum investment amount for investors in unrestricted I-REITs had enhanced REIT operations. In contrast, 31.9 % of respondents held a neutral opinion on this premise (mean=2.98). Additionally, the majority of those surveyed (69.3%) agreed that the minimum listing requirements of a 50% subscription in both D-REIT and I-REIT have an impact on REITs issuance (mean=3.78). There was agreement among respondents (42.2%) that REITs' operations are limited by the law's requirement that persons not affiliated with the promoter or REIT manager maintain at least 25% float of the REIT security unless funding is required for unplanned cost overruns (mean=3.24).

A sizeable majority (39.8%), agreed that the Kshs 100 million minimum share capital requirement has limited potential trustees from applying for REIT trustee licenses, while 31.3% held a neutral opinion (mean=3.18). Respondents (65.7%) agreed that income REITs' operations are enhanced by laws requiring them to transfer at least 80% of their taxable income to unit holders in the form of dividends (mean=3.69). The findings agree with those of Ghosh and Petrova (2020) who reported that most international REITs market require REITs to distribute 70 percent to 95 percent of their taxable income to unit holders. Specifically, the authors reported that Dutch REITs were required by law to distribute 100 percent of their taxable income to unit holders. There was agreement among most respondents (65.1%) that regulations governing the distribution of realized capital gains based on scheme documents improve REITs operations (mean=3.78). Further, 64.4% agreed that REITs are limited in their operations by laws that prevent them from selling more than half of their overall assets worth unless they are to be wound up (mean=3.80).

Most respondents (54.2%), agreed that the REIT managers' approval processes for the issuance of real estate securities have time limits that are favourable (mean=3.49). Moreover, a slight majority of respondents (46.4%) indicated a moderate opinion on the statement that the requirement for a minimum of seven investors to participate in D-REIT and I-REIT has an impact on REIT issuance (mean=3.30). Most respondents (53%) agreed that the REIT market has benefited from the income tax exemption for investors (mean=3.49). The results are consistent with those of Machira (2014) who reported that enhancement of the tax regimes in Kenyan REITs, could attract investors, especially those interested in mortgage REITs. similarly, Acheampong (2002) found that existing regulations and policies were the reason there was low uptake of REITs in Malaysia. On average, most respondents held neutral opinions on statements relating to REITs market regulatory framework (mean=3.26).

4.4.4 Investor Awareness

The respondents were asked to score their level of agreement on statements relating to investor awareness on a scale of one to five. Table 4.7 presents the results.

Table 4.8: Investor Awareness Descriptive Results

Statements N=166	Strongly Agree-5 %	Agree-4 %	Moderate-3 %	Disagree-2 %	Strongly Disagree-1 %	Mean
I am knowledgeable about Kenya's real estate market	49.4	21.1	18.7	8.4	2.4	4.067
My membership to REITs Association of Kenya (RAK) has provided insightful market research and databases that that can be practically used by members	45.8	18.1	24.7	9.6	1.8	3.965
I am able to access with ease reports of the REITs issuing firm	45.8	18.1	23.5	10.8	1.8	3.953
I usually follow and update myself on the REITs markets through the online platform which provides information regarding REITs	46.4	14.5	23.5	13.3	2.4	3.895
I have benefited from exchange of opinions regarding REITs from peers and friends	39.2	9.6	35.5	8.4	7.2	3.649
Engagement with various stakeholders has provided insights into investors' appetite for the REITs product	34.9	16.9	34.3	9.0	4.8	3.678
Regular communications received from the REITs issuing firms is clear and understandable	32.5	14.5	36.1	11.4	5.4	3.57
REITs Investor's require general knowledge and trends of real estate market	44.6	14.5	30.7	4.2	6.0	3.875
Investors REITs market monitoring enhances REITs uptake	27.7	13.3	35.5	13.3	10.2	3.35
RAK organizes investor education webinars and conferences which are beneficial	27.7	27.1	18.7	18.7	7.8	3.482
I have received training on REITs	15.7	27.7	28.9	18.1	9.6	3.218
There are publicity campaigns carried on by the Capital Markets Authority to sensitize potential investors on REITs	13.9	21.1	38.6	19.9	6.6	3.161
There are publicity campaigns carried on by the Nairobi Securities Exchange to sensitize potential investors on REITs	21.1	21.1	34.3	17.5	6.0	3.338

‘//The conference (s) I have attended has provided a highly interactive platform through plenary, breakout, deal making and networking sessions	36.7	36.1	19.6	5.4	2.4	3.999
Property developers have undergone training on how to use the capital markets as a source of funds for commercial and residential property development	27.1	42.2	21.1	6.0	3.6	3.832
Average Mean Score						3.96

Source: (Field Survey, 2022)

On investor awareness, Table 4.7 presents the findings, which reveal that most respondents (70.5%) agreed that they were knowledgeable about Kenya's real estate market (mean=4.07). The findings are in agreement with those of Sarkar and Sahu (2018) who analysed individual investors' behaviour in West Bengal and found that knowledge of stock market operations was significant in influencing investors' behaviour. Most respondents (63.9%) agreed that their membership with the REITs Association of Kenya has provided insightful market research and databases that can be practically used by members (mean=3.96). According to 63.9% of the respondent, they were able to access with ease the reports of the REITs issuing firms (mean=3.95). The results agree with those of Jiang, Cai, Wang and Zhu (2018) who reported that access to information was a key aspect in influencing corporate investment among shareholders in China.

There was agreement among respondents (60.9%) that they usually follow and update themselves on the REITs markets through the online platform, which provides information regarding REITs (mean=3.89). The results are in agreement with those of Sofyan, Putra and Aprayuda (2018) who found that electronic media information influences investment decisions among investors in Indonesia.

Most respondents (48.8%) agreed that they have benefited from the exchange of opinions regarding REITs from peers while 35.5% of the respondents held moderate opinions (mean=3.64). Most respondents (51.8%) agreed that engagement with various stakeholders has provided insights into investors’ appetite for real estate securities (mean=3.67). A simple majority of respondents (47%) agreed that regular communications received from the REITs issuing firms are clear and understandable while 36.1% of the respondents held a neutral opinion (mean=3.57). Further, most

respondents (59.1%) agreed that REITs investors require general knowledge and trends of the real estate market (mean=3.87). The results are consistent with those of Saini, Anjum and Saini (2011) who found that most investors have a positive approach toward investing in mutual funds when they are aware of information relating to different trends in the mutual fund industry in India.

A fair majority of the respondents (41%) agreed that REITs market monitoring by investors enhances REITs uptake. However, 35.5% showed a neutral opinion on this premise (mean=3.35). A simple majority of respondents (43.4%) agreed that they had received training on REITs (mean=3.21). Respondents (38.6%) showed a neutral opinion that there were publicity campaigns carried on by the Capital Markets Authority to sensitize potential investors on REITs (mean=3.16). Additionally, a sizeable majority (42.2%) agreed that there were publicity campaigns carried on by the Nairobi Securities Exchange to sensitize potential investors on REITs (mean=3.33). The findings are in agreement with those of Majid, Kholim, Rahim, Said and Mustafa (2015) who examined the level of awareness among property investors on Real Estate Syndication (RES) in Malaysia. The results showed that the level of awareness through publicity among property investors on the RES implementation was still at a low level with an indication of less than 50%. The study found that investor awareness campaigns were crucial in enhancing the implementation performance of Real Estate Syndication.

There was agreement among most respondents (72.8%) that the conferences they have attended have provided a highly interactive platform through plenary, breakout, deal-making, and networking sessions (mean=3.99). Further, the findings indicate that most respondents (69.3%) agreed that property developers had undergone training on how to use the capital markets as a source of funds for commercial and residential property development (mean=3.83). A fair majority (54.8%) agreed that the REITs Association of Kenya organizes investor education webinars and conferences which are beneficial (mean=3.48). The results agree with those of Rana (2019) who analysed two factors, namely financial knowledge and social learning, and found that they are highly loaded investor awareness factors, and influence investment behaviour significantly. On average, most respondents agreed with the investor awareness statements (mean=3.96).

4.4.5 Performance of REITs

Respondents were asked to indicate their level of agreement on statements relating to the performance of REITs as shown in Table 4.8.

Table 4.8: Performance of REITs Descriptive Results

Statements N=166	Strongly Agree-5 %	Agree-4 %	Moderate-3 %	Disagree-2 %	Strongly Disagree-1 %	Mean
There has been an increases in the number of investors subscribing to REITs due to adequate investor awareness	26.5	39.2	25.3	7.2	1.8	3.814
REITs have continually offered easy access to the real estate property market at relatively low transaction costs	25.9	47.6	22.3	3.0	1.2	3.94
There is growth in residential projects (students hostels) being funded through REITs	28.3	36.7	30.1	4.2	0.6	3.876
There is a growing demand among property developers investment managers (Promoters of REITs) to issue Development REITs meant to diversify real estate funding	22.3	34.3	26.5	13.3	3.6	4.192
appetite for REITs has grown since the value of real estate properties keeps on appreciating thus minimizing the risks of capital loss	33.1	37.3	20.5	7.2	1.8	3.924
REITs uptake have attained a critical mass necessary to create liquidity in the capital market	25.9	22.3	31.3	15.7	4.8	3.488
Real estate indices in Kenya are quite high	15.1	26.5	35.5	13.9	9.0	3.248
Investment in REITs have delivered strong long-term total returns to investors	25.9	37.3	22.9	10.8	3.0	3.72
There has been increased competitive price discovery for residential properties (apartments) occasioned by REITs backed real estate projects	24.1	39.2	27.1	9.0	0.6	3.772
There has been increased competitive price discovery for commercial properties (warehouses, offices, malls, shops) occasioned by REITs backed real estate projects	28.3	33.7	28.3	9.6	0	3.804
Due to rental defaults and low occupancy rates, REIT returns have declined, resulting in low earnings	20.5	44.6	25.3	8.4	1.2	3.748
REITs have delivered competitive returns thus attracting more institutional investors	17.5	28.9	31.9	15.7	6.0	3.362

REITs have delivered competitive returns thus attracting more retail investors	19.3	27.7	24.1	19.3	9.6	3.278
REITs have provided the investors with portfolio diversification since investors can now invest in diverse portfolio containing residential buildings, office blocks, industrial facilities and shopping malls	14.5	25.9	33.1	19.3	7.2	3.212
REITs have been recording increased dividend yields	16.9	19.3	36.1	18.1	9.6	3.158
Average Mean Score						3.82

Source (Field Survey, 2022)

The findings in Table 4.8 show that most respondents (65.7%) agreed that there has been an increase in the number of investors subscribing to REITs due to adequate investor awareness (mean=3.81). Most respondents (73.5%) agreed that REITs have continually offered easy access to the real estate property market at relatively low transaction costs (mean=3.94). Most respondents (65%) agreed, that there was growth in residential projects (students' hostels) being funded through REITs (mean=3.87). The majority (56.6%) of respondents agreed that there was a growing demand among property developers and investment managers (promoters of REITs) to issue Development REITs meant to diversify real estate funding (mean=4.19). Most respondents (70.4%) agreed that the appetite for REITs has grown since the value of real estate properties keeps on appreciating thus minimizing the risks of capital loss (mean=3.92).

A fair majority of the respondents (48.2%) agreed that REITs uptake had attained a critical mass necessary to create liquidity in the capital market (mean=3.48). Most respondents (41.6%) agreed that real estate indices in Kenya were quite high (mean=3.24). There was agreement among most respondents (63.2%) that investment in REITs has delivered strong long-term total returns to investors (mean=3.72). Additionally, 63.3% of the respondents agreed that there has been increasingly competitive price discovery for residential properties occasioned by REITs-backed real estate projects (mean=3.77). A majority of respondents (62%) agreed that there has been increasingly competitive price discovery for commercial properties occasioned by REITs-backed real estate projects (mean=3.80). The majority of the respondents (65.1%) agreed that due to rental defaults and low occupancy rates, REIT returns have declined, resulting in low earnings (mean=3.74).

Further, respondents (46.4%) agreed that REITs have delivered competitive returns thus attracting more institutional investors (mean=3.36), while 47% agreed that REITs have delivered competitive returns thus attracting more retail investors (mean=3.27). Additionally, most respondents (40.4%) agreed that REITs have provided investors with portfolio diversification since investors can now invest in a diverse portfolio containing residential buildings, office blocks, industrial facilities, and shopping malls (mean=3.21). Further, 36.2% of the respondents agreed that REITs have been recording increased dividend yields while 36.% of the respondents held a neutral opinion (mean=3.15). On average, most respondents agreed with the performance of REITs statements (mean=3.82).

Further, the study examined the operational efficiency of the listed REIT in the Nairobi Securities Exchange. Examining the technical efficiency aided in understanding the economies of scale for the listed Kenyan REIT. Data Envelopment Approach was used. The study used 2 input and 2 output variables obtained from audited financial statements of the listed REITs for the period 2016-2020. A five-year period allows one not only to look for consistency in performance but also for trends in the firm's operations (Adquith &Weiss, 2019). The inputs were total assets and equity capital while the outputs were operating income and total revenue (Appendix III). A DMU is only said to be efficient if it gives a score of one (1) which indicates 100 percent efficiency while a score less than one (1) implies non-efficiency (Miencha, Murugesan, Vasanth, Lingaraja, & Raja, 2015). The study assessed the listed REIT operational efficiency over five years since the operational efficiency of a firm affects its performance. According to Adquith and Weiss (2019), prospective investors make investment decisions by carefully assessing the firm’s operational efficiency and performance financially. Table 4.10 shows the findings.

Table 4.9: Operational Efficiency of the Listed REIT at Nairobi Securities Exchange

Year	Efficiency score	Decision
2016	1	Efficient
2017	1	Efficient
2018	1	Efficient
2019	1	Efficient
2020	1	Efficient

Source: Author’s own computation based on the financial statements (2022)

As illustrated in Table 4.9, the listed REIT has demonstrated operational efficiency across the five periods since the efficiency scores were 1 (100 percent efficiency). Osifo and Sibanda (2018) examined the performance efficiency of listed REITs in sub-Saharan Africa for the 2014-2016 period. The study employed DEA in the analysis of efficiency as was the case in the current study. Their study found that most listed REITs in Sub-Saharan Africa were operationally inefficient. According to the findings, the inefficiency could have resulted since REITs are new investment assets unpopular to the investors. Additionally, Ogieva (2017) examined the operational efficiency of listed insurance companies in Nigeria in 2016. The study used DEA as the analysis tool. The findings indicated that out of the 34 listed insurance firms, only seven showed technical efficiency. Further, the majority of the firms were relatively inefficient. The inefficiency was blamed on high management expenses. It can be implied that since the findings of the current study indicate that the listed REIT is operationally efficient, the management of the listed REIT observed the market dynamics, that is they timed the market before listing. Thus, the findings bring out the relevance of the Market Timing Theory. The theory was helpful in the analysis of the operating performance of REITs in Kenya.

4.5 Diagnostic Tests of Variables

Diagnostic tests such as tests for unit root, normality, heteroscedasticity, multi-collinearity, outliers' detection, independence of the residuals and common method bias were ascertained.

4.5.1 Stationarity Test

The mean, variance, and covariance of time series data are said to be stationary if they do not change over time. The time series data used covered five year period (2016-2020). Unit root tests are carried out to ensure the results of spurious regression are not obtained by the use of non-stationarity series. The ADF test (Augmented Dickey-Fuller) was used to test for unit roots. For the ADF root test, the null hypothesis states that the time series is not stationary (there is a unit root), whereas the alternative hypothesis states that the time series is stationary (there is no unit root). The null hypothesis of a unit root in time series is dismissed in favour of the alternative that the time series is stationary if the ADF statistic value is statistically significant (Gujarati, 2003). Table 4.10 presents the results.

Table 4.10: Unit Root Test for Secondary Data

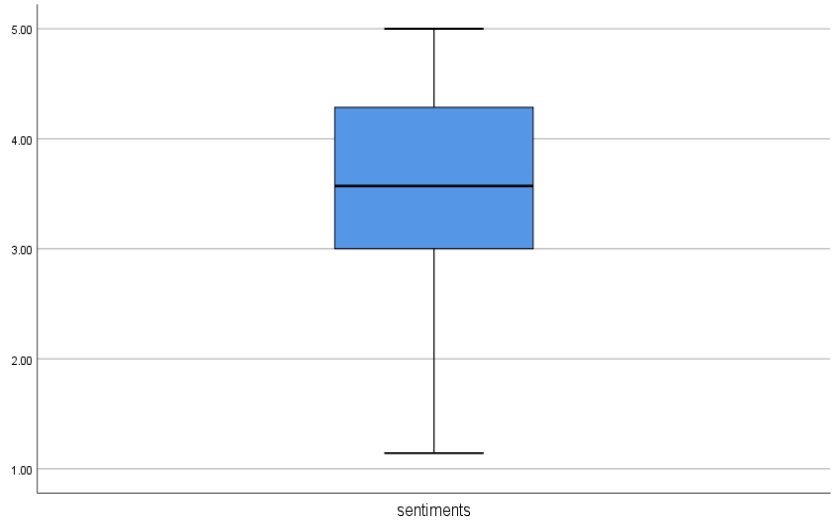
Variable	ADF statistic	P value	Decision
Total Assets	-3.750	0.000	Stationary
Equity Capital	-7.009	0.0000	Stationary
Operating Income	-3.943	0.0017	Stationary
Total Revenue	-5.345	0.0000	Stationary

Source: Author's own computation based on the financial statements (2022)

As shown in Table 4.10, the time series data was stationary. This is because the ADF statistic for all the variables had corresponding probability values which were less than 0.05. Hence the null hypothesis that there is a unit root was dismissed in favour of the alternative hypothesis that there is no unit root. This implies that the mean and covariance of total assets, equity capital, operating income, and total revenue data was not changing over time and hence did not contain unit roots to affect the findings in the analysis of operational efficiency of the listed REIT at the Nairobi Securities Exchange.

4.5.2 Linearity Test

Linearity is the consistency of the amount of change between two sets of scores across the whole range of the variables' values (Bai & Perron, 2008). The linearity of data violations affects the model predictions making the model likely to be significantly inaccurate. Outliers are removed to solve the linearity issue (Hansen, 2009). The study ensured that all the variables were free from possible outliers for further analysis.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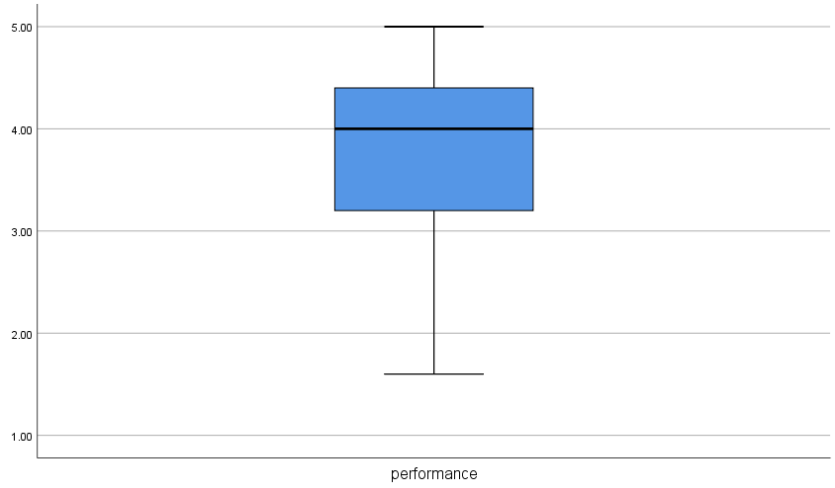
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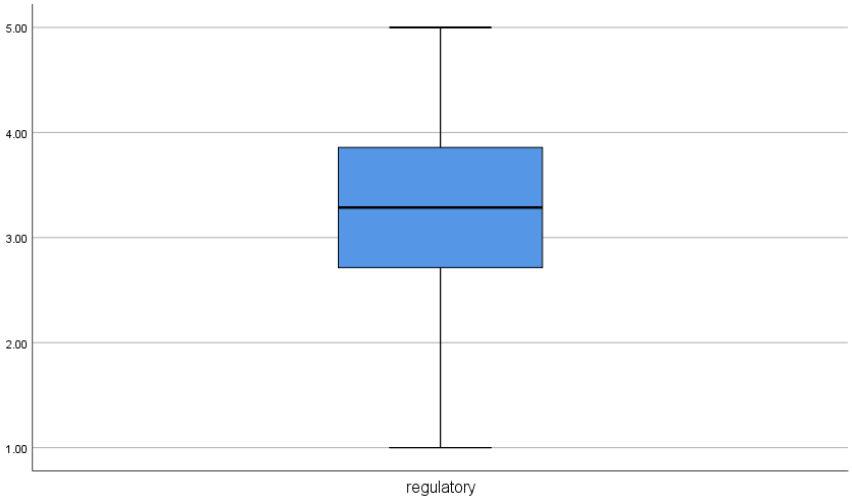
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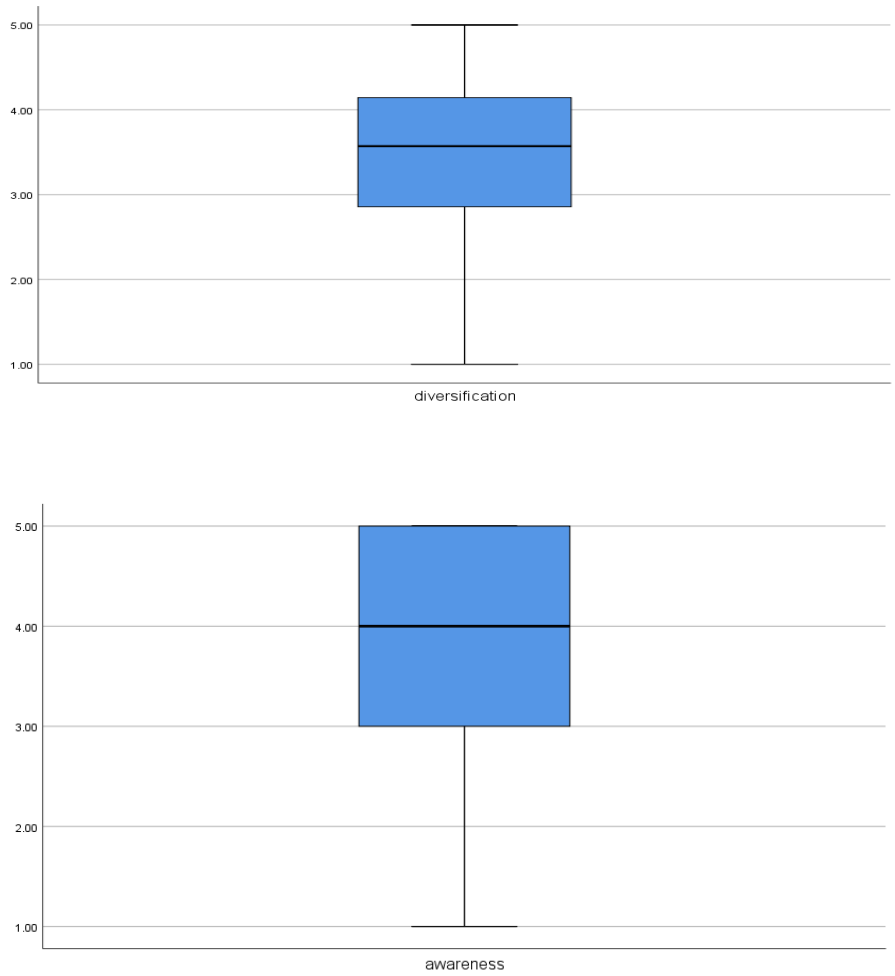


Source: (Field Survey, 2022)

Figure 4.1: Box Plots after Outliers were Dropped

As shown in Figure 4.1, outliers were removed from all the variables as evidenced by the box plots. The outliers were removed by replacing them with the mean. Their removal ensured that the data was not skewed for all the variables under study. Skewness would have made it difficult in predicting a trend in the data set in the current study.

4.5.3 The Dependent Variable's Normality Test

In testing whether the underlying variables deviate from normality, a normality test was performed. Normality tests were conducted using graphical and non-graphical methods. The graphical method involved the use of a normal probability plot and a histogram while the non-graphical method comprised of Kolmogorov-Smirnov and Shapiro-Wilk tests. According to Hansen (2009), when the corresponding probability value is less than or equal to 0.05, the Kolmogorov-Smirnov and Shapiro-Wilk tests reject the normality hypothesis. The results are presented in Table 4.11.

Table 4.11: Normality Test for Dependent Variable

Factor	Kolmogorov-Smirnov Statistic	Sig.	Shapiro-Wilk Statistic	Sig.
Performance of REITs	0.046	0.203	0.844	0.467

Source (Field Survey, 2022)

In Table 4.11, the Kolmogorov-Smirnov and Shapiro-Wilk statistics were 0.046 and 0.844 respectively. These statistical values had corresponding probability values of 0.203 and 0.467 respectively. The dependent variable was presumed to be normally distributed because the corresponding p-values were greater than 0.05. Further, the diagrammatical random variables distribution between the observed and predicted performance of REIT is shown.

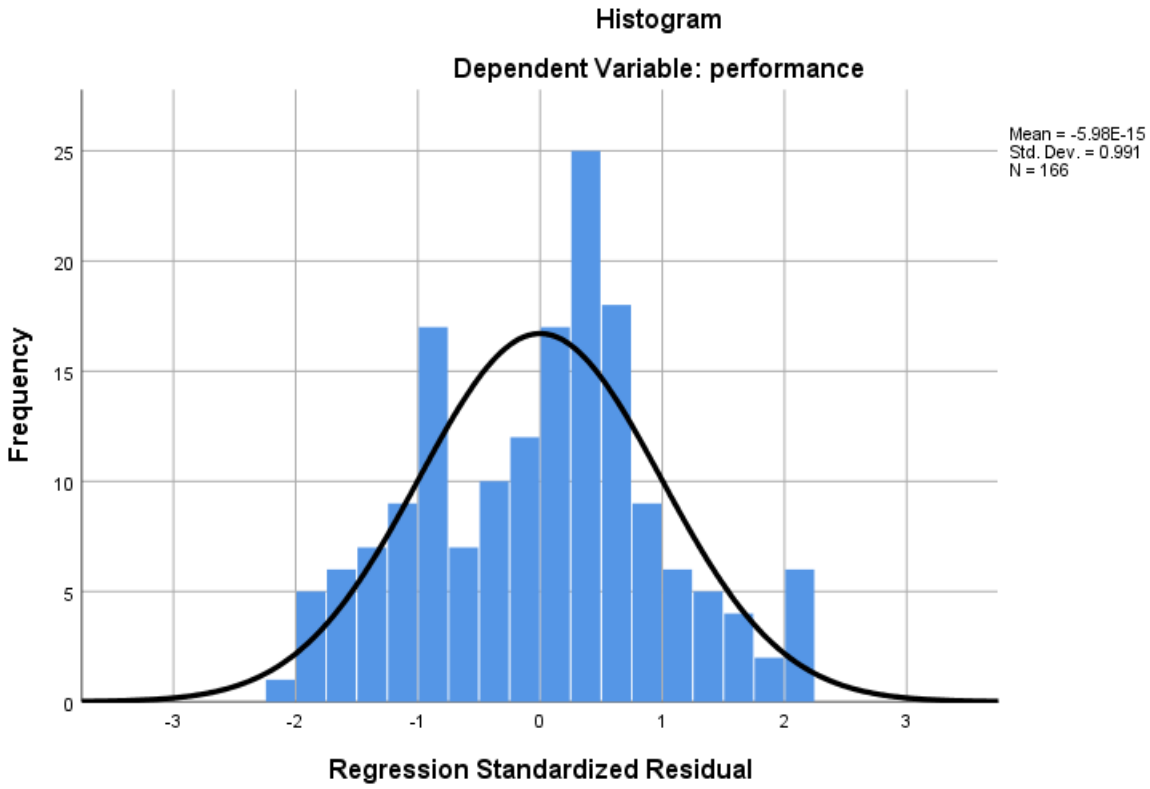
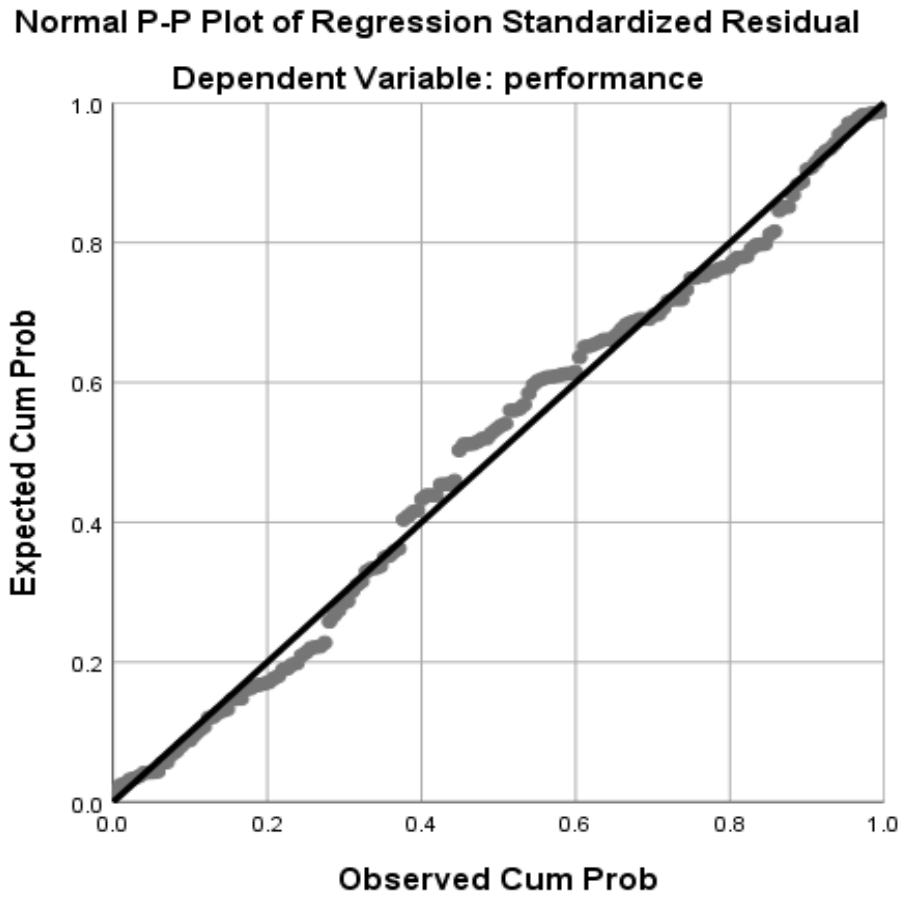


Figure 4.2: Histogram for Performance of REITs



Source (Field Survey, 2022)

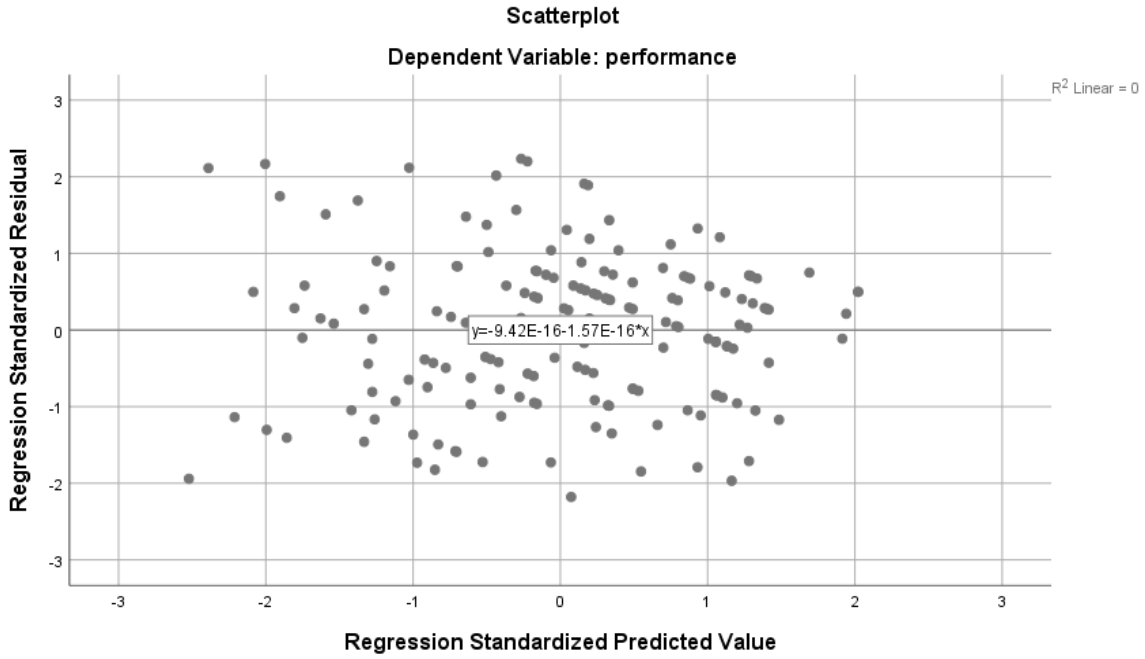
Figure 4.3: Normal P-P Plot for Performance of REITs

As shown in Figures 4.2 and 4.3, generally, the residuals looked normally distributed. A histogram was used to examine whether the dependent variable was bell-shaped. The results show that there was no major deviation. Additionally, the normal P-P plot was used to confirm the results of the histogram for the test of normality. The results show that there were no major data deviations from the straight line. This suggested that the normality assumption was ascertained. According to Hansen (2009), a normal P-P plot picks up subtle deviations as compared to a histogram which cannot. Hence it is more precise in measuring normality assumptions which was the case in the study. The results imply that REITs performance which was the dependent variable demonstrated an aspect of normal distribution where its residuals were normally distributed.

4.5.4 Test for Heteroscedasticity

The term heteroscedasticity refers to the fact that the dependent variable's variance varies depending on the groups formed by the predictor variables (Gujarati, 2003). According

to Field (2001), the assumption of heteroscedasticity should be checked since it affects the R coefficient's accuracy.



Source (Field Survey, 2022)

Figure 4.4: Scatter Plot for Heteroscedasticity

According to Figure 4.4, a scatter plot was used and a fit line was added to check the presence of heteroscedasticity. The plot did not have standard flow, indicating that there was no heteroscedasticity. In testing the hypothesis of variance homogeneity, levene statistic was used. The hypothesis states that all error variances are equal or homoscedastic. The Levene statistic's p-value was compared to 0.05, which is the standard probability value. Table 4.12 presents the results.

Table 4.12: Homogeneity of Variances Test

Levene Statistic	**Sig.**
4.742	.000

Source (Field Survey, 2022)

The Levene statistic for this study was 4.742 with a corresponding probability value of 0.000, as shown in Table 4.12. The results show that the dependent variable's variance was homogeneous because the Levene Statistic probability value was less than 0.05. The results imply that REITs' performance variance varies depending on the groups formed

by the predictor variables. The assumption of heteroscedasticity was statistically treated since it could have affected the R coefficient's accuracy in the current study.

4.5.5 Test for Multicolliearity

Multicollinearity occurs when the predictor variables are strongly correlated. The standard errors of the coefficients might increase as a result of multicollinearity problems, affecting the regression results (Gujarat & Porter, 2009). To determine whether or not there was multicollinearity, the Variance Inflation Factor (VIF) and tolerance were used. Multicollinearity, according to Field (2009), occurs when the VIF value is greater than 10 and the Tolerance is less than 0.2.

Table 4.13: Multicollinearity Test

Model		Tolerance	VIF
1	Sentiments	.809	1.236
	Diversification	.810	1.235
	Awareness	.947	1.056
	Regulatory	.953	1.049

Source (Field Survey, 2022)

The results in Table 4.13 indicates that the VIF values were less than 10 and the tolerance values were greater than 0.2. This implies that multicollinearity was not present, indicating that the predictor variables were not strongly correlated to make standard errors of the beta coefficient increase.

4.5.6 Test for Autocorrelation

The presence of serial correlation in the residuals may affect the regression's performance (Young, 2009). The Durbin–Watson statistic was used to detect the independence of residuals. When autocorrelation is present, predictor variables appear to be significant, even if they aren't. According to Verbeek (2012), the Durbin-Watson statistic ranges from zero to four with a value of two indicating that there is no autocorrelation.

Table 4.14: Independent of Residuals Results

Model	R	R^2	Adjusted R^2	Std. of error of estimate	Durbin-Watson
1	.608[a]	.370	.358	.57757	2.051

a. Predictors: (Constant), awareness, diversification, sentiments
b. Dependent Variable: performance

Source (Field Survey, 2022)

Table 4.14 shows that the DW statistic of 2.051 was within the recommended range. This means the residuals were error-free, and the sample did not have autocorrelations to affect the results in the current study.

4.5.7 Common Method Bias

This is bias in a dataset induced by outside influences on the responses. When data is collected using a standard instrument, there is a chance that replies will be skewed. For instance where a long questionnaire is used to collect data, like was the case in the current study, respondents might feel fatigued towards the end of answering the questionnaire. This can make them less eager to answer the questions wilfully and thoroughly within scale measures. This systematic response bias might inflate the responses and might lead to incorrect considerations on the scale's validity and reliability (Steenkamp, De-Jong, & Baumgartner, 2010). The Common Method Bias was determined using the standardized regression weights.

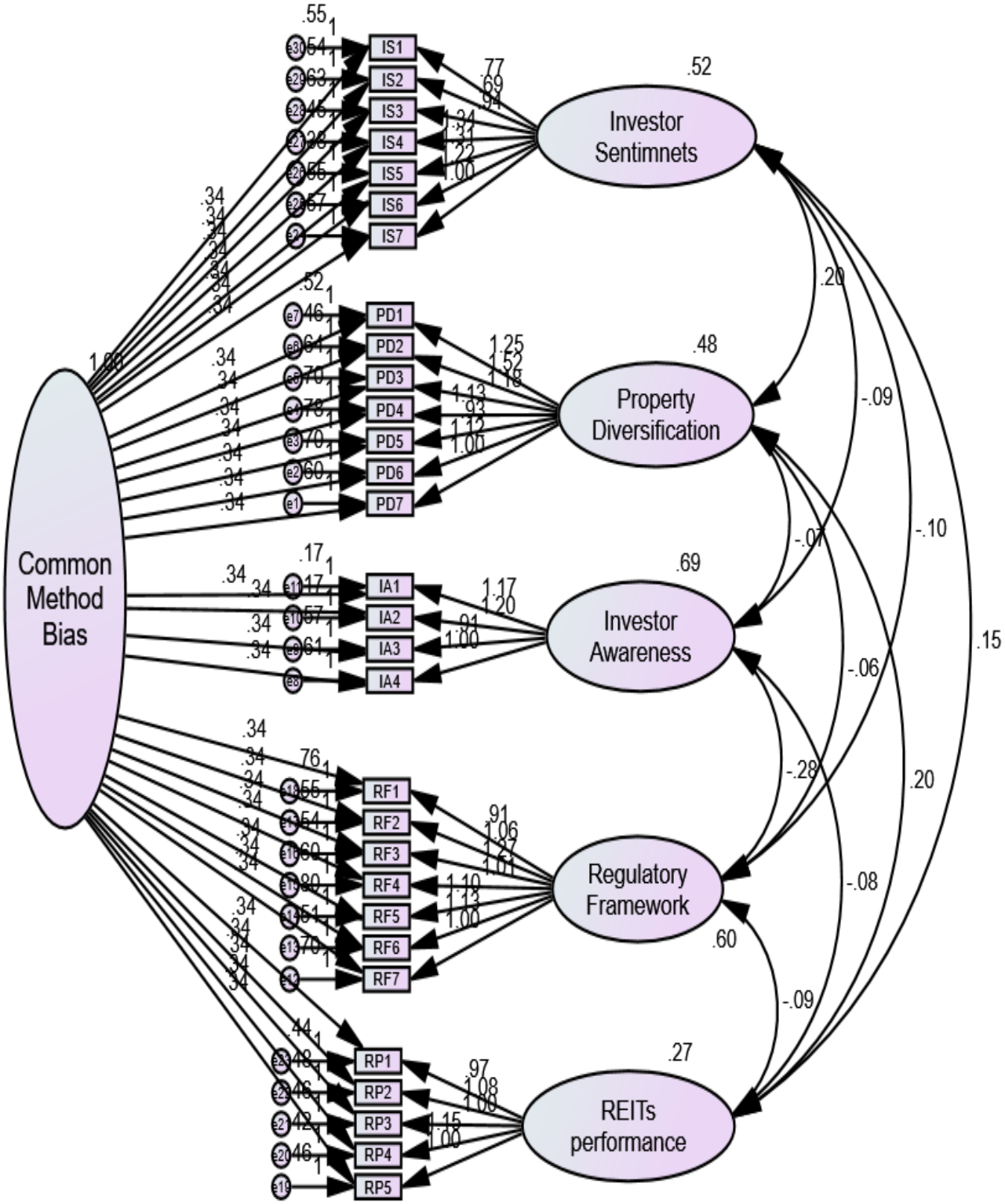


Figure 4.5: Common Method Bias

Source (Field Survey, 2022)

Figure 4.5 depicts the results of the AMOS software. Podsakoff, MacKenzie, Lee and Podsakoff (2003) assert that CMB should not be higher than 0.2 or 20 percent. The Common Method Bias in this study was 0.342 = 0.1156. This means that CMB was 11.56 percent, which is much less than 20% percent. This indicates that the recommended level was met, implying that no systemic response bias existed. Additionally, this revealed that there were no significant disparities in responses at a 5% significance level.

4.6 Factor Analysis

An Exploratory Factor Analysis was used to examine if the indicators were linked to certain factors. Following EFA, a Confirmatory Factor Analysis was performed, which included a multi-criteria evaluation of the measurement model.

4.6.1 Exploratory Factor Analysis

Factor loading matrix computation, communality, and principal component analysis were all used in the Exploratory Factor Analysis. Factor analysis is a technique for identifying factors among observable variables to extract a small number of factors from a large number of variables that can explain the variance observed in the larger number of variables (Hair, Black, Babin, Anderson & Tatham, 2006). Various tests were employed to check if the respondents data was adequate for factor analysis before extracting the few significant factors. The Kaiser-Meyer-Olkin (KMO) sampling adequacy measure and Bartlett's Test of Sphericity were two of the tests used.

(i) Kaiser Meyer-Olkin and Bartlett Test of Sphericity

Two types of sample adequacy tests should be employed to validate the case-to-variable ratio for the analysis to take place in the study Kaiser-Meyer-Oklin and Bartlett's Test of Sphericity (Hair, Black, Babin, Anderson & Tatham, 2006). A value of 0.5 is recommended as the main basis for factor analysis. In the current study, the adequacy of the sample from the population was determined using the KMO and Bartletts tests. Only factors having an Eigenvalue of 1 or higher were considered significant, according to the standard criteria of factor analysis (Abbot & Mckinney, 2013).

(ii) Communalities

To figure out every observable variable values that might be described by extracted elements, the values of communality were used. A communality score of less than 0.3 indicates that the component's variables do not integrate well with the others, making

them unsatisfactory (Pallant, 2010). Variables with small values should be removed because they do not fit the factor model satisfactorily. The threshold for obtaining communality values in this study was 0.5, and any item that did not meet this requirement was removed. Appendix VI shows the communalities for all the retained indicators.

4.6.1.1 Sample Adequacy Results for Investor sentiments

The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was used to determine whether the data was eligible for factor analysis. The KMO index varies from 0 to 1, with 0.5 and above being acceptable for factor analysis (Ali et al., 2016). Further, factor analysis is only appropriate when Bartlett's Test of Sphericity is significant at 95%. confidence level. KMO for investor sentiments was 0.882 while Bartlett's test of sphericity was statistically significant ($p<0.05$). This implied that factor analysis was appropriate. The study, therefore, proceeded with factor analysis. Table 4.15 presents the results.

Table 4.15: KMO and Bartlett's Test for Investor Sentiments

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.882
Bartlett's Test of Sphericity	Approx. Chi-Square	610.351
	Df	21
	Sig.	.000

Source (Field Survey, 2022)

4.6.1.2 Total Variance Explained for Investor Sentiments

As indicated in Table 4.16, the number of factors that needed to be extracted was limited to one. The extracted component explained 60.727 percent of the variation in the construct. From the findings, other components, sums of squared loadings ranged from 4.251 to 0.260. Their contribution to the explanation of the variance was also considered significant.

Table 4.16: Total Variance Explained for Investor Sentiments

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.251	60.727	60.727	4.251	60.727	60.727
2	.875	12.500	73.227			
3	.530	7.579	80.806			
4	.442	6.319	87.125			
5	.358	5.108	92.233			
6	.284	4.058	96.291			
7	.260	3.709	100.000			

Extraction Method: Principal Component Analysis.

Source (Field Survey, 2022)

The coefficients or loadings used to express the item in terms of the components are found in the matrix in Table 4.17. Pattern matrix loading indices range from 0 to 1, with 0 indicating no relationship between variables and 1 showing a perfect relationship between variables and a factor pattern. According to Byrne (2006), the average factor loading should be more than 0.7. From the findings, the factor loadings range from 0.709 to 0.858. According to the results, only seven elements met the loading threshold of 0.7 and were thus retained for further analysis.

Table 4.17: Component Matrix for Investor Sentiments

	Component 1
IS1-REITs stocks are trading at a sound value (that's they are correctly valued)	.724
IS2-There is clarity on the exact returns from the underlying assets	.709
IS3-Uptake of REITs have remained low over poor dividend yields	.762
IS4-Prices of REITs have remained low over poor dividend yields	.845
IS5-REITs has a promising durable stream of growing dividends which will reward investors overtime	.858
IS6-Government securities (Treasury bills and bonds) are preferred because they offer relatively attractive returns than REITs	.789
IS7-Investing in companies equities (stocks) offer relatively attractive returns than REITs	.755

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Source (Field Survey, 2022)

4.6.1.3 Sample Adequacy Results for Property Diversification

According to Table 4.18, the Kaiser-Mayer-Olkin sample adequacy measure had a value of 0.858. The value was greater than 0.5 and close to 1. This suggested that the sample was adequate. Bartlet's test of sphericity produced a chi-square of 601.347, which was statistically significant at 5%. This proved that factor analysis was suitable.

Table 4.18: KMO and Bartlett's Test for Property Diversification

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.858
Bartlett's Test of Sphericity	Approx. Chi-Square	601.347
	Df	21
	Sig.	.000

Source (Field Survey, 2022)

4.6.1.4 Total Variance Explained for Property Diversification

As indicated in Table 4.19, the factor loadings were evaluated using the principal component analysis extraction method. The fixed number of factors was selected to be 1 (factors to be extracted). The extracted component accounted for 59.579 percent of the variation in the construct. From the findings, other factors' extraction sums of squared loadings ranged from 4.171 to 0.202. The contribution of these other factors to the explanation of variation was considered significant.

Table 4.19: Total Variance Explained for Property Diversification

	Initial Eigen values			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.171	59.579	59.579	4.171	59.579	59.579
2	.884	12.634	72.213			
3	.577	8.240	80.453			
4	.463	6.610	87.062			
5	.390	5.574	92.637			
6	.313	4.472	9``7.108			
7	.202	2.892	100.000			
Extraction Method: Principal Component Analysis.						

Source (Field Survey, 2022)

The component matrix factor loadings for property diversification are shown in Table 4.20. The loadings of the factors range from 0.707 to 0.836. The results show that seven items met the 0.7 loading threshold and were thus retained for the study.

Table 4.20: Component Matrix for Property Diversification

	Component 1
PD1-Diversification of REITs portfolios on locations enhance REIT return	.707
PD2-Diversifying REITs across location attributes reduces market risks	.774
PD3-Current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centres	.836
PD4-Different property types have varying performance which depends on property nature	.753
PD5-Commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouse) perform better than Industrial REITs (REITs specializing in warehouses and industrial properties)	.731
PD6-Residential REITs (REITs specializing in apartment buildings, students hostels) perform better than commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouse)	.796
PD7-One of the most appealing investment characteristics for REIT investors is the quality of the underlying properties	.799

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Source (Field Survey, 2022)

4.6.1.5 Sample Adequacy Results for Market Regulatory Framework

As presented in Table 4.21, the Kaiser-Mayer-Olkin sample adequacy measure yielded a value of 0.871, which was greater than 0.5 and close to 1. This indicated an appropriate sample. Furthermore, a chi-square of 621.362 was statistically significant ($p<0.05$) in Bartlet's test of sphericity. This indicated that factor analysis was appropriate.

Table 4.21: KMO and Bartlett's Test for Market Regulatory Framework

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.871
Bartlett's Test of Sphericity	Approx. Chi-Square	621.362
	Df	21
	Sig.	.000

Source (Field Survey, 2022)

4.6.1.6 Total Variance Explained for Market Regulatory Framework

As indicated in table 4.22, the principal component analysis extraction method was used to verify if the scale items loaded heavily on the construct. The number of factors to be extracted was fixed at one. The extracted component explained 61.731 percent of the variation in the construct. With extraction sums of squared loadings ranging from 4.321 to 0.221, the other factors' ability to explain the variance was also considered significant.

Table 4.22: Total Variance Explained for Market Regulatory Framework

	Initial Eigen values			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.321	61.731	61.731	4.321	61.731	61.731
2	.722	10.310	72.042			
3	.588	8.394	80.436			
4	.479	6.841	87.277			
5	.370	5.283	92.560			
6	.300	4.281	96.842			
7	.221	3.158	100.000			

Extraction Method: Principal Component Analysis.

Source (Field Survey, 2022)

As shown in Table 4.23, the component matrix factor loadings for the market regulatory framework ranged from 0.719 to 0.829. Seven items met the loading threshold of 0.7 and were thus retained for the study.

Table 4.23: Component Matrix for Market Regulatory Framework

	Component 1
RF1-REITs' operations are boosted by the requirement that they invest no more than 10% of their net asset value in a company owned entirely by the REIT manager	.719
RF2-Income REITs (I-REITs) can only borrow between 35 and 40% of their total asset value, limiting their operations	.787
RF3-Development REITs (D-REITs) are only allowed to borrow between 60% and 75% of their total asset value, which has limited their operations	.829
RF4-Investors are attracted by Ksh 5 million minimum investment needed to be classified as a professional investor for the purposes of investing in a D-REIT or restricted I-REIT	.788
RF5-Lack of a minimum investment amount for investors in unrestricted I-REITs has improved REIT operations	.771
RF6-REITs' operations are limited by the law's requirement that persons not affiliated with the promoter or REIT manager maintain at least 25% float of the REIT security, unless funding is required for unplanned cost overruns	.827
RF7-The Ksh 100 million minimum share capital requirement has limited other suitable players (a large pool of potential trustees) from applying for REIT trustee licenses	.774

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Source (Field Survey, 2022)

4.6.1.7 Sample Adequacy Results for Investor Awareness

As presented in table 4.24, the KMO value of 0.769 was greater than 0.5, indicating that the sample was adequate. Additionally, Bartlet's test of sphericity was statistically significant ($p<0.05$), indicating that factor analysis was necessary.

Table 4.24: KMO and Bartlett's Test for Investor Awareness

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.769
Bartlett's Test of Sphericity	Approx. Chi-Square	510.029
	Df	6
	Sig.	.000

Source (Field Survey, 2022)

4.6.1.8 Total Variance Explained for Investor Awareness

As shown in Table 4.25, the principal component analysis extraction method was used to verify if the scale items loaded heavily on the construct. The number of factors that needed to be extracted was limited to one. Additionally, 79.056 percent of the variance in the construct was explained by the extracted component. The other factors' extraction sums of squared loadings ranged from 3.162 to 0.123. Their ability to explain the variance was also deemed very significant.

Table 4.25: Total Variance Explained for Investor Awareness

	Initial Eigen values			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.162	79.056	79.056	3.162	79.056	79.056
2	.482	12.038	91.095			
3	.234	5.839	96.934			
4	.123	3.066	100.000			

Extraction Method: Principal Component Analysis.

Source (Field Survey, 2022)

According to the results in Table 4.26, the component matrix factor loadings for investor awareness ranged from 0.867 to 0.908. The results show that four items met the 0.7 loading threshold and were thus retained for further study.

Table 4.26: Component Matrix for Investor Awareness

	Component 1
IA1-I am knowledgeable about Kenya's real estate market	.906
IA2-My membership to REITs Association of Kenya (RAK) has Provided insightful market research and databases that that can be practically used by members	.908
IA3-I am able to access with ease reports of the REITs issuing firm	.867
IA4-I usually follow and update myself on the REITs markets through the online platform which provides information regarding REITs	.875

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Source (Field Survey, 2022)

4.6.1.9 Sample Adequacy Results for Performance of REITs

As shown in Table 4.27, the KMO value of 0.818 and Bartlett's Test of Sphericity significance level, revealed that the sample from the population was appropriate and that factor analysis was acceptable.

Table 4.27: KMO and Bartlett's Test for Performance of REITs

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.818
Bartlett's Test of Sphericity	Approx. Chi-Square	273.056
	Df	10
	Sig.	.000

Source (Field Survey, 2022)

4.6.1.10 Total Variance Explained for Performance of REITs

Table 4.28 demonstrates that the factor loadings were evaluated using the principal component analysis extraction method. The fixed number of factors extracted was selected to be 1. With an eigenvalue of more than 1 and extraction sums of squared loadings greater than 1, a maximum of one component was extracted. For this factor, the extraction sum of squared loadings was 2.932. The factor explained 58.649 percent of the variance in the construct. The other components' sums of squared loadings ranged

from 2.932 to 0.356. The ability of these other variables to explain the variance was rated as highly significant.

Table 4.28: Total Variance Explained for Performance of REITs

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.932	58.649	58.649	2.932	58.649	58.649
2	.690	13.793	72.442			
3	.559	11.173	83.615			
4	.463	9.266	92.882			
5	.356	7.118	100.000			

Extraction Method: Principal Component Analysis.

Source (Field Survey, 2022)

As presented in Table 4.29, the component matrix factor loadings for the performance of REITs range from 0.728 to 0.817. The results show that only five items passed the 0.7 loading threshold and were thus retained for the study.

Table 4.29: Component Matrix for Performance of REITs

	Component 1
RP1-There is growth in residential projects (students hostels) being funded through REITs	.728
RP2-Appetite for REITs has grown since the value of real estate properties keeps on appreciating thus minimizing the risks of capital loss	.798
RP3-There has been increased competitive price discovery for residential properties (apartments) occasioned by REITs backed real estate projects	.746
RP4-There has been increased competitive price discovery for commercial properties (warehouses, offices, malls, shops) occasioned by REITs backed real estate projects	.817
RP5-REITs returns have decreased due rental defaults and low occupancy rates which have yielded low income	.737

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

Source (Field Survey, 2022)

4.6.1.11 Cross Loadings for the Measurement Model

The pattern matrix's constructs were re-specified to check if the items had maintained their convergence and contributed to the construct's variance.

4.6.1.12 Sample Adequacy Results for all the Retained Indicators

As shown in Table 4.30, the KMO value was 0.833 which was greater than 0.5 while Bartlett's Test of Sphericity chi-square value of 3105.224 was significant ($p<0.05$). This implies that factor analysis was appropriate in determining the scale's construct validity.

Table 4.30: KMO and Bartlett's Test for all Retained Indicators

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.833
Bartlett's Test of Sphericity	Approx. Chi-Square	3105.224
	Df	435
	Sig.	.000

Source (Field Survey, 2022)

As presented in Table 4.31, a maximum of five factors were obtained. The first five factors had eigenvalues more than 1 and extraction sums of squared loadings greater than 1. The highest extraction sums of squared loadings were found in factor 1, which accounted for 25.097 percent of the variance. The extraction sums of squared loadings for factor 5 were the lowest, at 1.716, accounting for 5.719 percent of the variance. These five factors accounted for 65.328 percent of the variation in the constructs and explained 65.328 percent of the variance. Furthermore, with extraction sums of squared loadings ranging from 7.529 to 0.091, the contribution of these other factors to the explanation of variance in the variables was considered very significant.

Table 4.31: Total Variance Explained for all Retained Indicators

	Initial Eigen values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.529	25.097	25.097	7.529	25.097	25.097	4.450	14.834	14.834
2	4.847	16.158	41.255	4.847	16.158	41.255	4.450	14.833	29.667
3	2.978	9.925	51.180	2.978	9.925	51.180	4.384	14.612	44.279
4	2.528	8.428	59.608	2.528	8.428	59.608	3.228	10.761	55.040
5	1.716	5.719	65.328	1.716	5.719	65.328	3.086	10.288	65.328
6	.978	3.259	68.587						
7	.908	3.026	71.613						
8	.781	2.603	74.216						
9	.699	2.329	76.545						
10	.645	2.150	78.695						
11	.584	1.947	80.641						
12	.514	1.714	82.355						
13	.507	1.691	84.046						
14	.470	1.567	85.613						
15	.439	1.464	87.077						
16	.422	1.407	88.484						
17	.397	1.322	89.806						
18	.384	1.279	91.085						
19	.364	1.214	92.300						
20	.337	1.124	93.424						
21	.279	.931	94.355						
22	.272	.907	95.262						
23	.250	.833	96.095						
24	.238	.795	96.890						
25	.207	.689	97.579						
26	.201	.671	98.250						
27	.186	.619	98.869						
28	.131	.437	99.306						
29	.117	.391	99.697						
30	.091	.303	100.000						

Extraction Method: Principal Component Analysis.

Source (Field Survey, 2022)

The results in Table 4.32 show that most coefficients were perfectly related since they had values greater than 0.7 and thus related to the factor pattern as recommended by Carten and Russel (2003). The items loading in Component 1 are Market Regulatory Framework, Component 2 Investor Sentiments, Component 3 Property Diversification,

Component 4 Investor Awareness while component 5 was the Performance of REITs. Further, Confirmatory Factor Analysis was used to examine if the observed indicators were representative of the underlying latent constructs.

Table 4.32:Pattern Loadings Rotated Component Matrix for all Retained Indicators

	Component/ Construct				
Items	**1**	**2**	**3**	**4**	**5**
RF6	.825				
RF3	.820				
RF4	.792				
RF2	.781				
RF5	.771				
RF7	.766				
RF1	.707				
IS5		.829			
IS4		.792			
IS3		.748			
IS6		.734			
IS7		.730			
IS1		.705			
IS2		.674			
PD1			.787		
PD2			.776		
PD4			.775		
PD3			.759		
PD7			.714		
PD6			.703		
PD5			.604		
IA2				.893	
IA1				.886	
IA3				.870	
IA4				.868	
RP2					.785
RP4					.776
RP3					.635
RP1					.597
RP5					.578

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

Source (Field Survey, 2022)

4.6.2 Confirmatory Factor Analysis

The covariance and causal modeling of variables were tested using Confirmatory Factor Analysis using Analysis of Moment Structures (AMOS). The degree to which the indicators represent latent constructs is determined through CFA. Indicators that make a significant contribution to the study should be retained for Structural Equation Modelling (Hair et al., 2010). Further, according to Hooper et al. (2010), the factor loadings for all hypothesized indicators measuring a particular underlying latent construct should be more than 0.4. Further, according to Bayram (2013), the loadings should be more than 0.5 to be acceptable in extracting structural models. This was the case in the current study.

Table 4.33: Standard Regression Weights for the Measurement Model

Indicator variable	<---	Latent Variable	Estimate	S.E.	C.R.	P	Label
IA4	<---	Investor_Awareness	.722				
IA3	<---	Investor_Awareness	.707	.071	12.982	***	par_1
IA2	<---	Investor_Awareness	.937	.102	11.853	***	par_2
IA1	<---	Investor_Awareness	.934	.103	11.649	***	par_3
RF7	<---	Regulatory_Framework	.769				
RF6	<---	Regulatory_Framework	.811	.096	10.733	***	par_4
RF5	<---	Regulatory_Framework	.724	.109	9.201	***	par_5
RF4	<---	Regulatory_Framework	.765	.096	9.909	***	par_6
RF3	<---	Regulatory_Framework	.755	.108	9.499	***	par_7
RF2	<---	Regulatory_Framework	.702	.107	8.032	***	par_8
RF1	<---	Regulatory_Framework	.632	.098	8.070	***	par_9
RP5	<---	REITs_Performance	.707				
RP4	<---	REITs_Performance	.699	.134	7.677	***	par_10
RP3	<---	REITs_Performance	.676	.145	6.724	***	par_11
RP2	<---	REITs_Performance	.717	.141	7.782	***	par_12
RP1	<---	REITs_Performance	.666	.126	7.294	***	par_13
PD7	<---	Property_Diversification	.733				
PD6	<---	Property_Diversification	.727	.122	8.936	***	par_14
PD5	<---	Property_Diversification	.617	.094	9.156	***	par_15
PD4	<---	Property_Diversification	.715	.123	8.534	***	par_16
PD3	<---	Property_Diversification	.733	.123	8.708	***	par_17
PD2	<---	Property_Diversification	.802	.137	9.483	***	par_18
PD1	<---	Property_Diversification	.699	.127	8.047	***	par_19
IS7	<---	Investor_Sentiments	.687				
IS6	<---	Investor_Sentiments	.761	.114	10.596	***	par_20
IS5	<---	Investor_Sentiments	.846	.139	9.583	***	par_21
IS4	<---	Investor_Sentiments	.853	.146	9.657	***	par_22
IS3	<---	Investor_Sentiments	.676	.128	7.831	***	par_23
IS2	<---	Investor_Sentiments	.591	.110	6.897	***	par_24
IS1	<---	Investor_Sentiments	.641	.115	7.432	***	par_25

P*** indicates significance level at 0.05

Source (Field Survey, 2022)

As shown in Table 4.33, the retained indicators accurately measured the latent variables or constructs. According to the regression weights, all of the factor loadings by standardized beta estimates were statistically significant ($p<0.05$). This demonstrates that the indicators grouped effectively to measure the various constructs, confirming the study's findings. Furthermore, at a 0.05 significance level ($p<0.05$), all the indicators' regression weights had calculated t-values greater than the critical t-value of + or -1.96. This implies that the indicators had a statistically significant relationship with the underlying constructs and hence their convergent validity was ascertained. Based on these findings, all retained indicators were reserved for further analysis using Structural Equation Modelling.

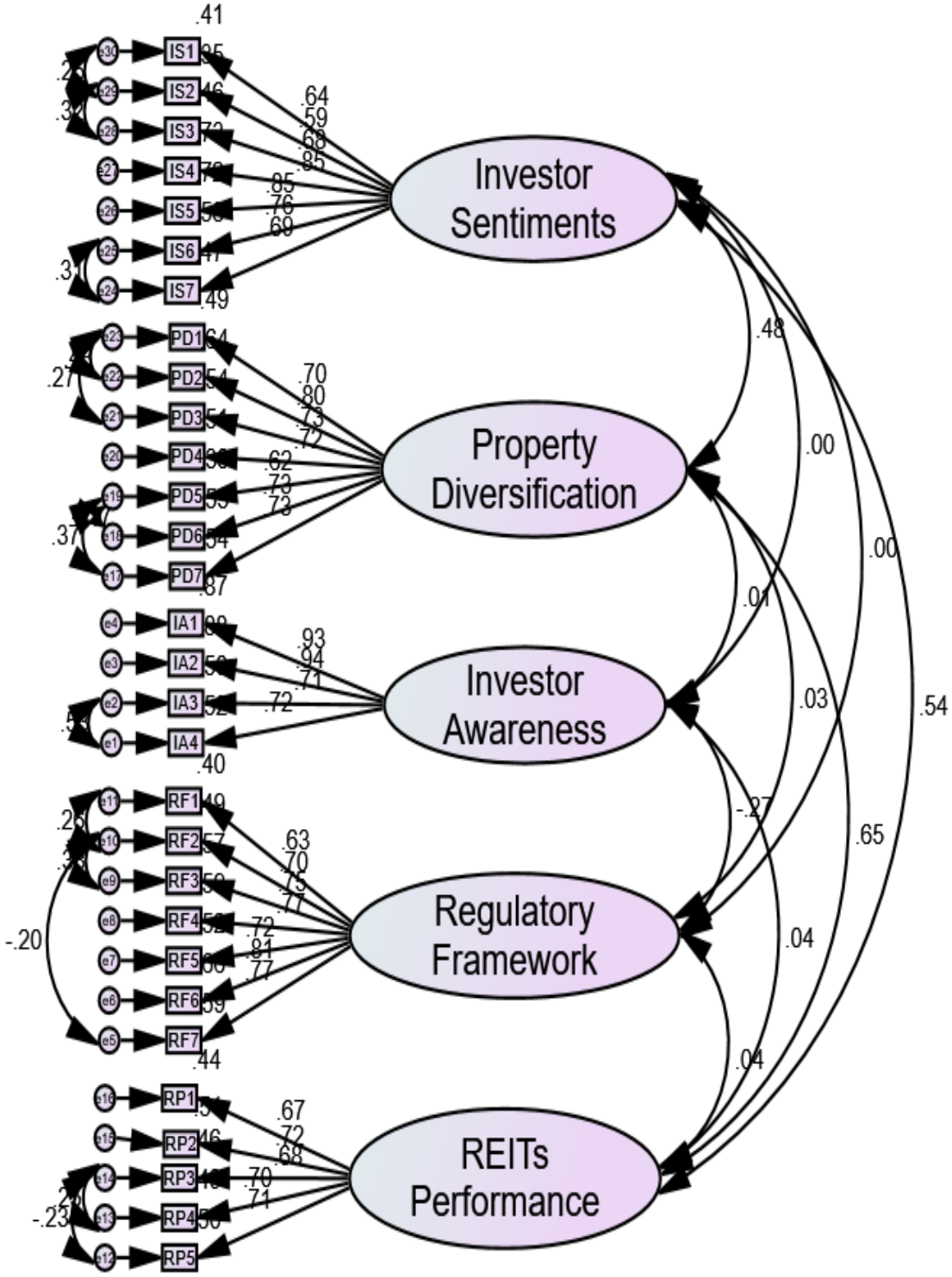


Figure 4.6: 1st Order Confirmatory Factor Analysis Model

Source (Field Survey, 2022)

As presented in Figure 4.6, indicators that made a significant contribution to the study were retained for Structural Equation Modelling. All of the retained indicators had

factor loadings greater than 0.5. This indicated that they were acceptable in extracting structural models. Convergent and discriminant validity which are significant tests as well as model fitness tests were evaluated using CFA. This was before confirmatory structural models were developed. These tests were used to confirm the accuracy of the measurement model.

4.6.2.1 Convergent Validity

Convergence validity is used to measure how near the indicators are close to a particular latent variable or construct. In other words, convergent validity is between indicators. It measures how much the indicators are coming together to determine the latent variable. It assesses whether the indicators or items that were supposed to be related, actually do and whether they are measuring the construct they were supposed to measure (Byrne, 2006). According to Hair et al (2010), convergent validity must be evaluated. Standard items or factor loadings of the indicators were used to calculate the Average Variance Extracted (AVEs) for each latent construct. Measurement scales exhibit convergent validity if the AVE loadings are above 0.5 (Hop, 2003; Hair et al, 2010). Almost all of the constructs in the model had AVEs above 0.5, indicating convergent validity, as shown in Table 4.34..

Table 4.34: Average Variance Extracts

Construct	Average Variance Extracted
Investor Sentiments	0.530
Property Diversification	0.518
Investor Awareness	0.693
Market Regulatory Framework	0.545
performance of REITs	0.481

Source (Field Survey, 2022)

4.6.2.2 Discriminant Validity

Discriminant validity measures how far a latent variable or construct is discriminating or is different from the other construct. In other words, discriminant validity is between latent variables. Discriminant validity assesses the uniqueness of one component to the other in the model. Indicators measuring a construct that is unrelated to the other construct should be able to distinguish between them. The square root of AVEs was compared with the correlation between two constructs to determine discriminant validity.

The square root of AVE, according to Hair et al (2010), should be greater than the correlation between two latent constructs. Table 4.35 presents the results.

Table 4.35: Latent Variables Correlations against Discriminant Validity

Variable	Investor Sentiments	Property Diversification	Investor Awareness	Market Regulatory Framework	REITs Performance
Investor Sentiments	**0.728**				
Property Diversification	0.476	**0.719**			
Investor Awareness	-0.004	0.007	**0.832**		
Market Regulatory Framework	-0.003	0.03	-0.266	**0.738**	
REITs Performance	0.537	0.651	0.037	0.037	**0.693**

Source (Field Survey, 2022)

From the results contained in Table 4.35, all the discriminant values (Investor Sentiments= 0.728, Property Diversification=0.719, Investor Awareness=0.832, Market Regulatory Framework=0.738 and REITs Performance=0.693 respectively) were greater than the correlation of a pair of latent constructs. This was a confirmation that discriminant validity was exhibited in the variables.

4.6.2.3 Model Fit Statistical Tests

Various model fit tests were used to check whether the overall model fitted the data as well as whether path pathways in the path diagram were significant. The adjusted Chi-Square (CMIN), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), and Root Mean Square Error (RMSEA) were used to confirm the fitness of the measurement model. These model fit statistics were used to examine if the data was compatible with the measurement model as recommended by Bayram (2012).

The basic test used was the chi-square goodness of fit test (CMIN). The acceptable chi-square index degree of freedom ratio (CMIN/DF) should be between 1.0 and 3.0.

The chi-square p-value should be less than 0.05 (Marsh et al., 2011). Table 4.36 shows a chi-square statistic of 581.803 with a probability value of 0.000, which was less than the conventional probability value of 0.05, and a CMIN to DF ratio of 1.523, which was within the acceptable range of 1 and 3. This indicated that the model significantly fitted the data.

According to Schumacker and Lomax (2004), chi-square goodness-of-fit values are particularly sensitive to sample size. Hence, other fit statistics should be used to test the model fit for the data such as absolute and incremental fit indices (Hair et al., 2010). This was the case in the current study. The current study employed RMSEA and GFI for absolute fit indices, and NFI and CFI for incremental fit indices. The model's fit indices were used to determine whether it was adequate (Browne & Cudeck, 2003).

Table 4.36: Model Fit Indices for First-Order Confirmatory Factor Analysis

Model	**CMIN**	**CMIN/DF**	**P value**	**GFI**	**CFI**	**NFI**	**RMSEA**
Statistic	581.803	1.523	0.000	0.818	0.931	0.825	0.056
Cut-off	P<0.05, cmin/df ratio range 1 to 3			≥0.8	≥0.8	≥0.8	≤0.05 good ≤0.08 excellent ≤0.1 acceptable

Source (Field Survey, 2022)

RMSEA is a statistic that assesses how well a model fits the data while accounting for the error of approximation. RMSEA values range from 0 to 1, with a lower RMSEA value indicating a better model fit. An RMSEA of less than 0.05 is considered good, 0.05 to 0.08 is excellent, and 0.08 to 0.10 is acceptable (Hu & Bentler, 1999). The RMSEA score was 0.056 in Table 4.36, suggesting that the model fitted the data significantly because the value was less than the permissible threshold.

GFI is a statistic that assesses how well the hypothesized model suits the covariance matrix observed. The fit indexes of the GFI vary from 0 to 1. The coefficients must be greater than or equal to 0.8 (McDonald & Ho, 2002). According to the results in Table 4.36, the GFI value was 0.818, which was within the specified threshold of 0.8. This proved that the model was valid and fit for analysis.

CFI is one of the most extensively used fit indices because it is not affected by the sample size. CFI fit indexes range from 0 to 1, with values of 0.8 or higher considered acceptable (Tabachnick & Fidell, 2013). According to Table 4.36, the CFI value was 0.931. This suggested that the model fitted the data fairly well.

The Normed Fit Index (NFI) compares the sample covariance matrix to a distinct model in which all latent variables are assumed to be uncorrelated. The values of this statistic range from 0 to 1, with values closer to 1 indicating a good fit. An NFI score of 0.8 or higher is regarded as indicative of a perfect fit (Hu & Bentler, 1999). From the results in Table 4.36, the NFI value was 0.825, a sign that the model fitted the data. The overall findings of the model fit statistics show that the model fit was typically adequate.

Further, model fit indices could fall short of the recommended thresholds as a result of high error terms. These can be detected by looking at the modification indices in AMOS output. Where the model indices did not meet the recommended thresholds, error terms that were high and related to a particular latent construct were covarianced as free parameters to reduce the discrepancies. The errors terms (e) in the CFA model which were covarianced included (e29-e30, e28-e30, e24-e25, e21-e23, e22-e23, e17-e19, e10-e11, e9-e10, and e5-e10). Figure 4.6 on the 1st order confirmatory factor analysis model shows the results..

4.7 Confirmatory Structural Modelling and Hypotheses Testing of Study Variables

This section presents, the fitting of the latent variables' structural models and testing hypothesized relationships using the Structural Equation Modelling. Both absolute and incremental fit indices were to determine the fitness of the model before testing the hypotheses. Regression weights were used to assess each indicator's contribution to its component. Since all the variables were measured on the same scale, regression weights were used to test the nature of the relationship. Furthermore, a critical-t value of -1.96 or +1.96, was used to determine whether the models were significant at 0.05 by comparing it with the calculated t- value.

4.7.1 Influence of Investor Sentiments on Performance of Real Estate Investment Trusts

The first objective of the study was to determine the influence of investor sentiment on the performance of Real Estate Investment Trusts in Kenya in Kenya. Exploratory factor analysis was conducted before using structural models to examine if the retained indicators measuring investor sentiment had significant loadings on the latent construct. Table 4.37 shows the results.

Table 4.37: Factor Loadings Investor Sentiments Indicators

Investor Sentiments Indicators	Component/ Loadings
IS1-REITs stocks are trading at a sound value (that's they are correctly valued)	.705
IS2-There is clarity on the exact returns from the underlying assets	.674
IS3-Uptake of REITs has remained low over poor dividend yields	.748
IS4-Prices of REITs has remained low over poor dividend yields	.792
IS5-REITs has a promising durable stream of growing dividends which will reward investors overtime	.829
IS6-Government securities (Treasury bills and bonds) are preferred because they offer relatively attractive returns than REITs	.734
IS7-Investing in companies equities (stocks) offer relatively attractive returns than REITs	.730

Source (Field Survey, 2022)

Table 4.37 shows that factor loadings ranged from 0.674 to 0.829, indicating high convergence because they were all greater than 0.7 and so, perfectly matched to a factor pattern (Byrne, 2006). As a result, the indicators were used in the analysis of the Structural Model fit.

4.7.1.1 Model Test fit Results for Investor Sentiments

The study utilized both absolute and incremental fit indices to determine if the model was a good fit for the data. The model fit statistics in Table 4.38 revealed that the model fitness was generally satisfactory.

Table 4.38: Model Fit Statistics Results for Investor Sentiments

Model	CMIN	CMIN/DF	P value	GFI	CFI	NFI	RMSEA
Statistic	137.241	2.589	0.000	0.874	0.910	0.863	0.098
Cut-off	P<0.05, cmin/df ratio range 1 to 3			≥0.8	≥0.8	≥0.8	≤0.05 good ≤0.08 excellent ≤0.1 acceptable

Source (Field Survey, 2022)

The contribution of each of the investor sentiment indicators to the latent construct (investor sentiments) was tested using regression weights. According to the regression weights results in Table 4.39, an increase of one unit in investor sentiments was related to a 0.855 unit increase in IS1. Since the calculated t-value of 8.015 was greater than 1.96, there is a significant positive relationship between investor sentiments and REITs valuation. The results are in agreement with those of Amiri, Ravanpaknodezh and Jelodari (2016) who examined the relationship between valuation methods and the intrinsic value of listed firms in Iran, and found that stock valuation models employed have a significant influence on the prices of the listed stocks.

For every single unit increase in investor sentiments, there was a 0.791 unit increase in IS2. The corresponding calculated t-value was 7.675, which was greater than 1.96. This shows that there exists a significant association between investor sentiments and clarity on the exact returns from the underlying assets and investor sentiments. The results are consistent with those of Kulab (2017) who found that there is a positive relationship between expected returns from REITs and the actual returns from the underlying property in Thailand.

Additionally, for every unit increase in investor sentiments, there was a 1.003 unit increase in IS3. The calculated t-value was 8.454, and since it was more than 1.96, it indicates that there is a significant positive relationship between investor sentiments and REITs' low uptake over poor dividend yields. A unit increase in investor sentiment was linked to a 1.343 unit increase in IS4. The calculated t-value was 10.035, which was greater than 1.96. This implies that there is a significant positive relationship between investor sentiments and REITs' low prices over poor dividend yields.

In addition, the findings show that a unit increase in investor sentiments is linked to a 1.287 units increase in IS5. The calculated t-value of 10.134 was greater than 1.96, indicating a strong positive association between investor sentiments and REITs' promise of a durable stream of growing dividends that will reward investors over time. The results are consistent with those of Rohaya, Low, Maimunah, Siti and Tiong (2017) who examined property-type allocation in Malaysia and found that REITs had the potential for significant growth although there was a trend of decreasing dividend yields.

Further, a unit increase in investor sentiments is associated with a 1.174 unit increase in IS6. Since the calculated t-value was greater than 1.96, there is a positive significant relationship between investor sentiments and preference for government securities which give comparatively favourable returns compared to REITs. Moreover, a unit increase in investor sentiments was associated with 1 units increase in IS7. The regression weight was set to 1 and not estimated, indicating that investor sentiments and investment in equities which offers relatively better returns than REITs had a perfect relationship. The results agree with those of Ntuli and Omokolade (2017) who examined the performance of REITs in South Africa vis-a-vis other securities. The results indicated that treasury bills and bonds offered more attractive returns that REITs and were thus preferred by investors.

At a 0.05 significance level, regression weights for investor sentiment indicators had calculated t-values that were greater than + or -1.96. This implies that the indicators were significantly associated with investor sentiments, indicating their convergent validity. Furthermore, the study sought to evaluate the null hypothesis based on the first objective of the study, that investor sentiments have no statistically significant influence on the performance of REITs in Kenya. As shown in Figure 4.7 path diagram and Table 4.39, there exists a significant relationship between investor sentiments and the performance of REITs in Kenya. The standard path coefficients on the influence of investor sentiments on the performance of REITs in Kenya were found to be significant (β= 0.40, calculated t-value = 5.107, P<0.05). The calculated-t value of the coefficient of investor sentiments was found to be greater than 1.96. This suggests that a unit increase in the performance of REITs was associated with a 0.40 unit increase in investor sentiments. Thus, the study failed to accept H01, implying that there is a statistically significant influence of investor sentiments on the performance of REITs in Kenya. The findings were in agreement with those of Chen, Chou and Lin (2019) who assessed the

relationship between investor sentiments and the performance of stock prices in the USA. The findings indicated that there was a significant link between investor sentiments and the performance of stock prices. Also, the findings are consistent with those of Hiriyapp (2008) who found that investor sentiments have an impact on the performance of financial securities. The findings also support Chan, Erickson and Wang (2003) findings that institutional investors' sentiments have a significant effect on the performance of Real Estate Investment Trusts.

Further, the results agree with those of Das, Freybote and Marcato (2014) who investigated sentiment-induced institutional trading behaviour and asset pricing in the REIT market in the USA. The study found that institutional investors' sentiments in the unsecuritized commercial real estate market affect their trading behaviour in the securitized market. Additionally, the results agree with those of Huerta, Jackson and Ngo (2015) who examined the impact of investor sentiments on real estate investment trusts returns in the USA. The study found that individual and institutional investors' sentiments are significantly and positively related to REITs returns. Also, Ong and Chong (2011) evaluated the performance of Malaysian REITs from 2005-to 2010 and found that poor perception among institutional investors was the cause of the slow growth of Malaysian REITs. From current findings, it can be implied that investor sentiments which are behavioural aspects play a significant role in portfolio formation. Thus, the findings bring out the relevance of Behavioural Portfolio Theory.

Table 4.39: Regression Weights and C.R Values for Investor Sentiments and Performance of REITs

			Estimate	S.E.	C.R.	P
Performance	<---	Sentiments	.396	.078	5.107	***
IS7	<---	Sentiments	1.000			
IS6	<---	Sentiments	1.174	.127	9.220	***
IS5	<---	Sentiments	1.287	.127	10.134	***
IS4	<---	Sentiments	1.343	.134	10.035	***
IS3	<---	Sentiments	1.003	.119	8.454	***
IS2	<---	Sentiments	.791	.103	7.675	***
IS1	<---	Sentiments	.855	.107	8.015	***

P<0.05***

Source (Field Survey, 2022)

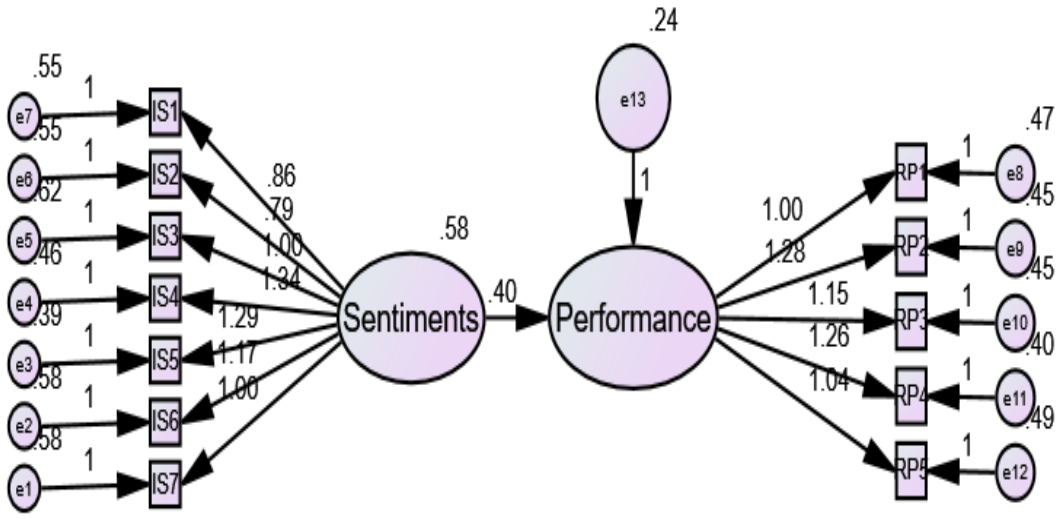


Figure 4.7: Structural Equation Model for Influence of Investor Sentiments on Performance of REITs

Source (Field Survey, 2022)

4.7.2 Moderating Effect of Market Regulatory Framework on Influence of Investor Sentiments on Performance of REITs

The study sought to examine the moderating effect of the market regulatory framework on the influence of investor sentiments on the performance of REITs in Kenya. The moderating effect was assessed by introducing an interaction term between investor sentiments and the market regulatory framework. Figure 4.8 and the path coefficients in Table 4.40 show the Structural Equation Model results of the moderating effect. The coefficient of the interaction term was 0.04 and its calculated t-value was 0.941 (β= 0.04, calculated t-value = 0.941, P>0.05). The calculated t-value of the coefficient of the interaction effect between the market regulatory framework and investor sentiments was smaller than 1.96. This implies that the market regulatory framework does not have a significant moderating effect on the influence of investor sentiments and the performance of REITs.

Hence, the study failed to reject $\mathbf{H_{01a}}$, implying that the market regulatory framework has no statistically significant moderating effect on the influence of investor sentiments on the performance of REITs in Kenya. The results are inconsistent with those of Goel and Dash (2022), who found that government policy has a moderating role in the relationship between sentiments and stock returns in the USA. The results are so because, although the market regulatory framework on REITs is there, players in the REITs market have

not given the focus on the promotion of such securities to enhance uptake and active trading among investors. Hence as a result of low activity in the stock market, there are relative sentiments. Were there active trading of REITs in the stock market, a shift could focus on the existing market regulatory framework such as REITs structure as a result of increased market sentiments regarding REITs' active trading.

Table 4.40: Moderated Regressions Weights and CR Values for Investor Sentiments and Performance of REITs

			Estimate	S.E.	C.R.	P
REITs_performance	<---	sentiments_X_regulatory	.039	.041	.941	.347
REITs_performance	<---	Investor_sentiments	.402	.080	5.027	***
REITs_performance	<---	regulatory framework	.031	.055	.558	.577
IS1	<---	Investor sentiments	.853	.106	8.015	***
IS2	<---	Investor sentiments	.790	.103	7.684	***
IS3	<---	Investor_sentiments	1.002	.118	8.471	***
IS4	<---	Investor_sentiments	1.342	.133	10.063	***
IS5	<---	Investor_sentiments	1.283	.126	10.144	***
IS6	<---	Investor_sentiments	1.173	.127	9.245	***
IS7	<---	Investor_sentiments	1.000			
RF1	<---	regulatory_framework	.876	.109	8.057	***
RF2	<---	regulatory_framework	.987	.106	9.268	***
RF3	<---	regulatory_framework	1.165	.118	9.868	***
RF4	<---	regulatory_framework	.986	.108	9.141	***
RF5	<---	regulatory_framework	1.066	.120	8.867	***
RF6	<---	regulatory_framework	1.078	.110	9.795	***
RF7	<---	regulatory_framework	1.000			
RP5	<---	REITs_performance	1.000			
RP4	<---	REITs_performance	1.208	.158	7.660	***
RP3	<---	REITs_performance	1.105	.151	7.303	***
RP2	<---	REITs_performance	1.228	.162	7.559	***
RP1	<---	REITs_performance	.964	.141	6.831	***

P<0.05***

Source (Field Survey, 2022)

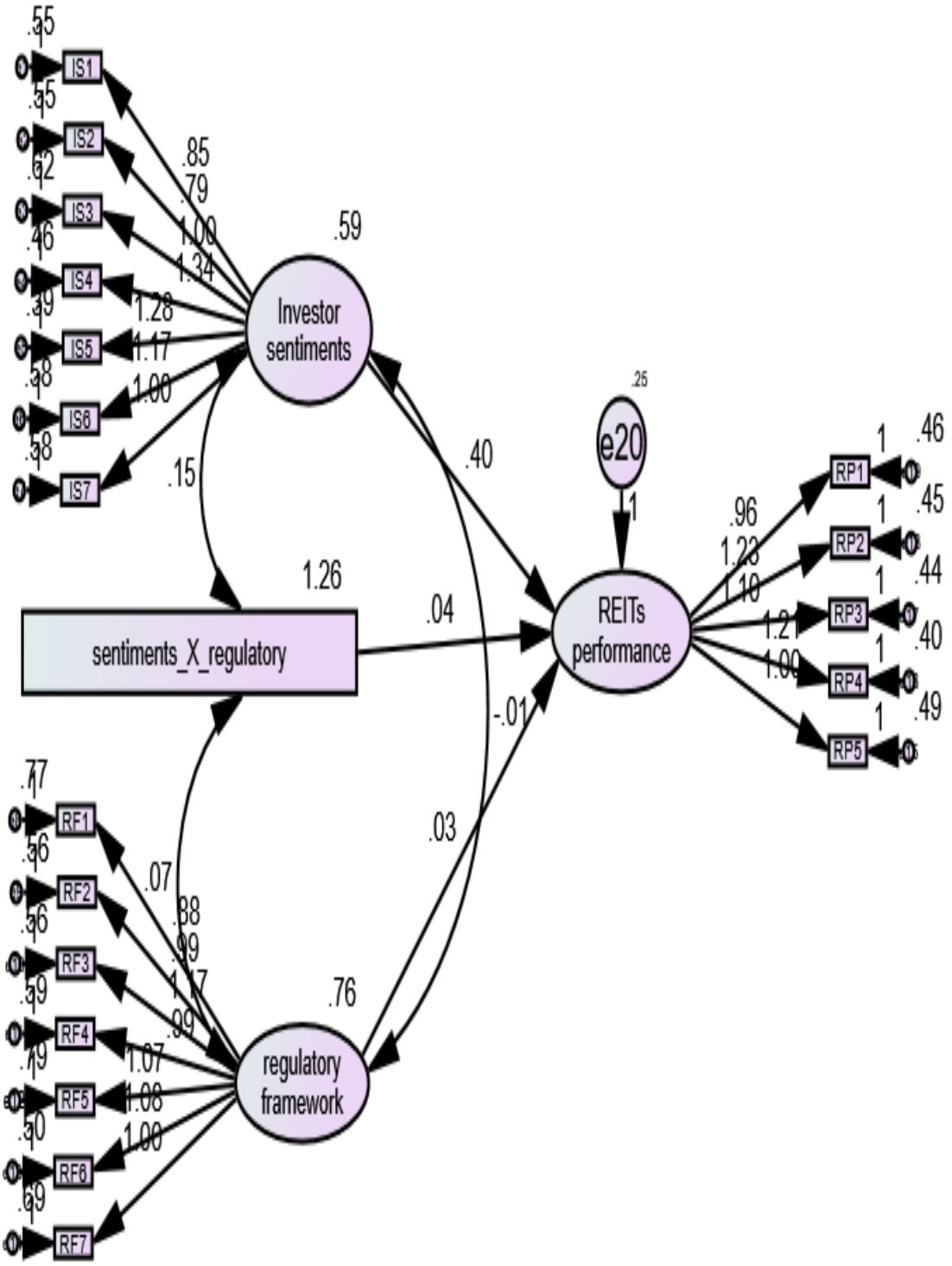


Figure 4.8: Structural Equation Model for Moderating Effect of Market Regulatory Framework on Influence of Investor Sentiments on Performance of REITs

Source (Field Survey, 2022)

4.7.3 Influence of Property Diversification on Performance of Real Estate Investment Trusts

The second objective of the study was to examine the influence of property diversification on the performance of Real Estate Investment Trusts in Kenya. Before running structural models, exploratory factor analysis of extracted indicators measuring property diversification construct was rerun to determine whether they had significant loadings on the latent construct. The results in Table 4.41 indicate that the factor loadings ranged from 0.604 to 0.787. This indicated high convergence since they were above 0.7 and thus perfectly related to a factor pattern. Hence, the indicators were used in further analysis using Structural Models.

Table 4.41: Factor Loadings for Property Diversification Indicators

Property diversification	Component/ Loadings
PD1-Diversification of REITs portfolios on locations enhance REIT return	.787
PD2-Diversifying REITs across location attributes reduces market risks	.776
PD3-Current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centres	.759
PD4-Different property types have varying performance which depends on property nature	.775
PD5-Commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouses) perform better than Industrial REITs (REITs specializing in warehouses and industrial properties)	.604
PD6-Residential REITs (REITs specializing in apartment buildings, students hostels) perform better than commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouses)	.703
PD7-One of the most appealing investment characteristics for REIT investors is the quality of the underlying properties	.714

Source (Field Survey, 2022)

4.7.3.1 Model Test Fit Results for Property Diversification

In order to assess whether the model provided adequate fit for the data, the study considered both absolute fit indices and incremental fit indices. Table 4.42 shows model fit statistics results, indicating generally acceptable model fit.

Table 4.42: Model Fit Statistics Results for Property Diversification

Model	CMIN	CMIN/DF	P value	GFI	CFI	NFI	RMSEA
Statistic	167.190	3.155	0.000	.848	0.910	0.882	.114
Cut-off	P<0.05, cmin/df ratio range 1 to 3			≥0.8	≥0.8	≥0.8	≤0.05 good ≤0.08 excellent ≤0.1 acceptable

Source (Field Survey, 2022)

The contribution of property diversification indicators to the latent construct (property diversification), was tested using regression weights. According to the regression weights results in Table 4.43, increasing property diversification by one unit was related to 1.168 units an increase in PD1. Since the calculated t-value of 9.621 was more than 1.96, there is a significant positive relationship between property diversification and diversification of REITs portfolios on locations, which enhances REIT return.

Additionally, a unit increase in property diversification was linked to a 1.385 unit increase in PD2. Because the calculated t-value of 10.302 associated with the PD2 estimate was larger than 1.96, it implies that there is a significant relationship between property diversification and diversification of REITs across location attributes which reduces market risks. The results agree with those of Zhu and Lizieri (2020), who assert that maintaining REITs' location risks can be used by investors in the construction of portfolios. This implies that portfolio construction and asset allocation can be enhanced by spreading location risks.

The results also indicate that a unit increase in property diversification was associated with a 1.084 unit increase in PD3. The calculated t-value was 8.941, and since it was more than 1.96, it implies that there exists a significant association between property diversification and shifting by current and new tenants to new phases in established malls to tap into existing consumers rather than open stores in new retail centres. Further, a unit increase in property diversification was related to a 1.050 unit increase in PD4. The

calculated t-value for PD4 was 8.658, which was greater than 1.96. This suggests that there exists a significant relationship between property diversification and the varying performance of different types of properties depending on the nature of the property. The results are consistent with those of Chong, Krystalogianni and Stevenson (2012) who evaluated dynamic correlations between REITs sub-sectors and diversification in the USA. The study found that less than 10% of equity REITs were classified as diversified, and there was a predominance of specializing REITs in a single property type.

Furthermore, the findings indicate that a 0.921 unit increase in PD5 is linked to a unit increase in property diversification. The calculated t-value for the PD5 estimate was 7.907, which was higher than 1.96. This implies that there is a significant positive relationship between property diversification and the superior performance of commercial REITs over industrial REITs. A unit increase in property diversification is related to a 1.110 unit increase in PD6. Since the calculated t-value of 8.964 for the PD6 estimate was greater than 1.96, there is a positive significant connection between property diversification and superior performance of residential REITs than commercial REITs.

Moreover, a unit increase in property diversification is associated with a 1.000 unit increase in PD7. This regression weight was fixed to 1 and not estimated indicating a perfect relationship between property diversification and the quality of the underlying properties as one of the most appealing investment characteristics for REIT investors. The findings are in agreement with those of David and Bing (2019) found that underlying assets liquidity and characteristics were associated with REIT return in the USA. Such characteristics include the physical layout of the underlying asset and ease of liquidity.

All the regression weights for property diversification indicators had calculated t-values greater than the critical t-value of + or -1.96 at the 0.05 significance level. This implies that the indicators are significantly related to property diversification, verifying their convergence validity. Based on the second objective, the study sought to test the null hypothesis that property diversification has no statistically significant influence on the performance of REITs in Kenya. From the findings, there was a significant relationship between property diversification and the performance of REITs in Kenya, as seen in Figure 4.9 path coefficients and Table 4.43. Property diversification's influence on the

performance of REITs in Kenya was significant (β = 0.460, calculated t-value = 5.858, P<0.05). At a 5% significance level, the calculated t-value of the coefficient of property diversification was greater than 1.96. This implies that for every unit increase in the performance of REITs, there was a 0.460 units increase in property diversification. As a result, the analysis failed to accept $\mathbf{H_{02}}$, implying that property diversification has a statistically significant influence on the performance of REITs in Kenya.

The results are in agreement with those of Ooi and Liow (2004) who assert that the geographic locations of properties, as well as the property types, were important determinants in explaining residential REITs' performance. Additionally, Newell and Osmadi (2009) found that property location was a significant determinant of the performance of REITs, since a difference in REITs' property type may lead to a difference in performance. The results also agree with those of Jalil, Mohammad and Chai (2018) who found that diversification by economic location attributes influences the performance of REITs in Malaysia. Further, from the current findings, it can be implied that property diversification plays a significant role in portfolio formation and the minimisation of portfolio risks. Thus, the findings bring out the relevance of the Modern Portfolio Theory.

Table 4.43: Regression Weights and C.R values for Property diversification and Performance of REITs

			Estimate	S.E.	C.R.	P
REITs_Performance	<---	Diversification	.460	.079	5.858	***
PD7	<---	Diversification	1.000			
PD6	<---	Diversification	1.110	.124	8.964	***
PD5	<---	Diversification	.921	.116	7.907	***
PD4	<---	Diversification	1.050	.121	8.658	***
PD3	<---	Diversification	1.084	.121	8.941	***
PD2	<---	Diversification	1.385	.134	10.302	***
PD1	<---	Diversification	1.168	.121	9.621	***

P<0.05***

Source (Field Survey, 2022)

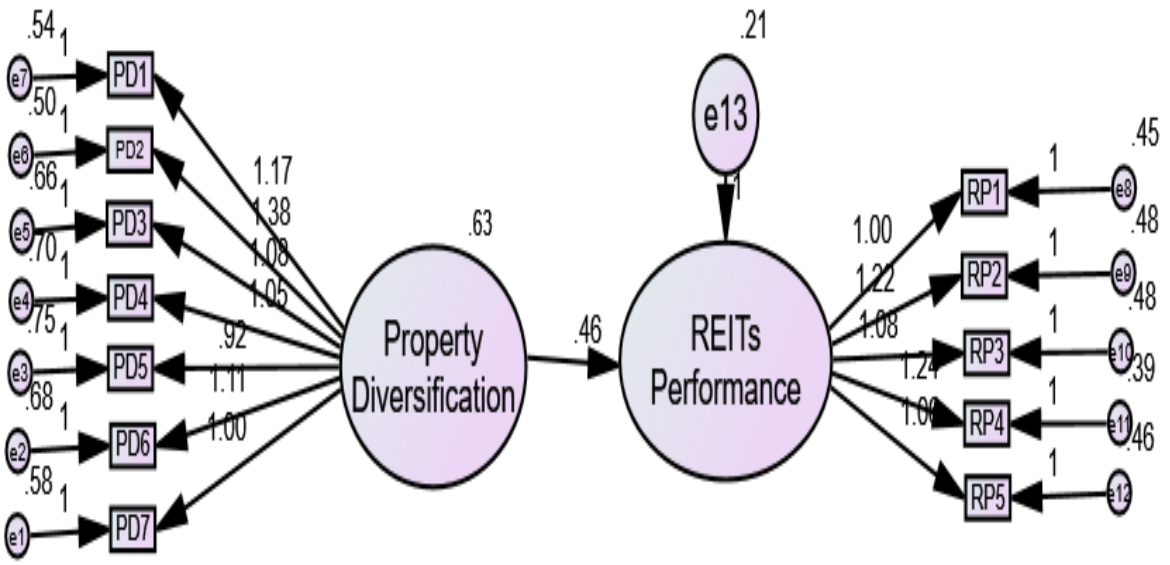


Figure 4.9: Structural Equation Model for Influence of Property diversification on Performance of REITs

Source (Field Survey, 2022)

4.7.4 Moderating Effect of Market Regulatory Framework on Influence of Property Diversification on Performance of REITs

The study examined the moderating effect of the market regulatory framework on the influence of property diversification on the performance of REITs in Kenya. An interaction term was used to measure the moderating effect. The interaction term (property diversification*market regulatory framework) was the product of the independent variable and the moderator. The results of the moderating effect are shown in Figure 4.10 and the path coefficients in Table 4.44.

Table 4.44: Moderated Regression Weights and C.R values for Property Diversification and Performance of REITs

			Estimate	S.E.	C.R.	P
REITs_Performance	<---	Property_Diversification	.482	.082	5.843	***
REITs_Performance	<---	Regulatory_Framework	.008	.054	.147	.883
REITs_Performance	<---	diversification_X_regulatory	.020	.042	.467	.640
PD1	<---	Property_Diversification	1.171	.122	9.623	***
PD2	<---	Property_Diversification	1.386	.135	10.288	***
PD3	<---	Property_Diversification	1.085	.121	8.929	***
PD4	<---	Property_Diversification	1.052	.121	8.656	***
PD5	<---	Property_Diversification	.922	.117	7.897	***
PD6	<---	Property_Diversification	1.111	.124	8.956	***
PD7	<---	Property_Diversification	1.000			
RF1	<---	Regulatory_Framework	.874	.108	8.057	***
RF2	<---	Regulatory_Framework	.983	.106	9.264	***
RF3	<---	Regulatory_Framework	1.163	.118	9.887	***
RF4	<---	Regulatory_Framework	.985	.108	9.160	***
RF5	<---	Regulatory_Framework	1.065	.120	8.883	***
RF6	<---	Regulatory_Framework	1.077	.110	9.821	***
RF7	<---	Regulatory_Framework	1.000			
RP5	<---	REITs_Performance	1.000			
RP4	<---	REITs_Performance	1.175	.145	8.096	***
RP3	<---	REITs_Performance	1.021	.138	7.378	***
RP2	<---	REITs_Performance	1.150	.148	7.752	***
RP1	<---	REITs_Performance	.941	.131	7.186	***

P<0.05**

Source (Field Survey, 2022)

The coefficient of the interaction term was 0.02 and its calculated t-value was 0.640 (β= 0.02, calculated t-value= 0.640, P>0.05). The calculated t-value of the coefficient of the interaction effect between the market regulatory framework and property diversification was smaller than 1.96 which is the standard normal distribution critical ratio at 5% significance. This implies that the market regulatory framework has no significant moderating effect on the influence of property diversification on the performance of REITs in Kenya. As a result, the study failed to reject **$H0_{2a}$**, implying that the market regulatory framework has no statistically significant moderating effect on the influence of property diversification on the performance of REITs in Kenya. The findings are in agreement with those of Chong, Krystalogianni and Stevenson (2012) who evaluated

dynamic correlations between REITs sub-sectors and diversification in the USA for the period 1990 to 2008. The study found that less than 10% of equity REITs were classified as diversified, and there was a predominance of specializing REITs in a single property type. The moderating effect of the regulatory structure was however found to be insignificant.

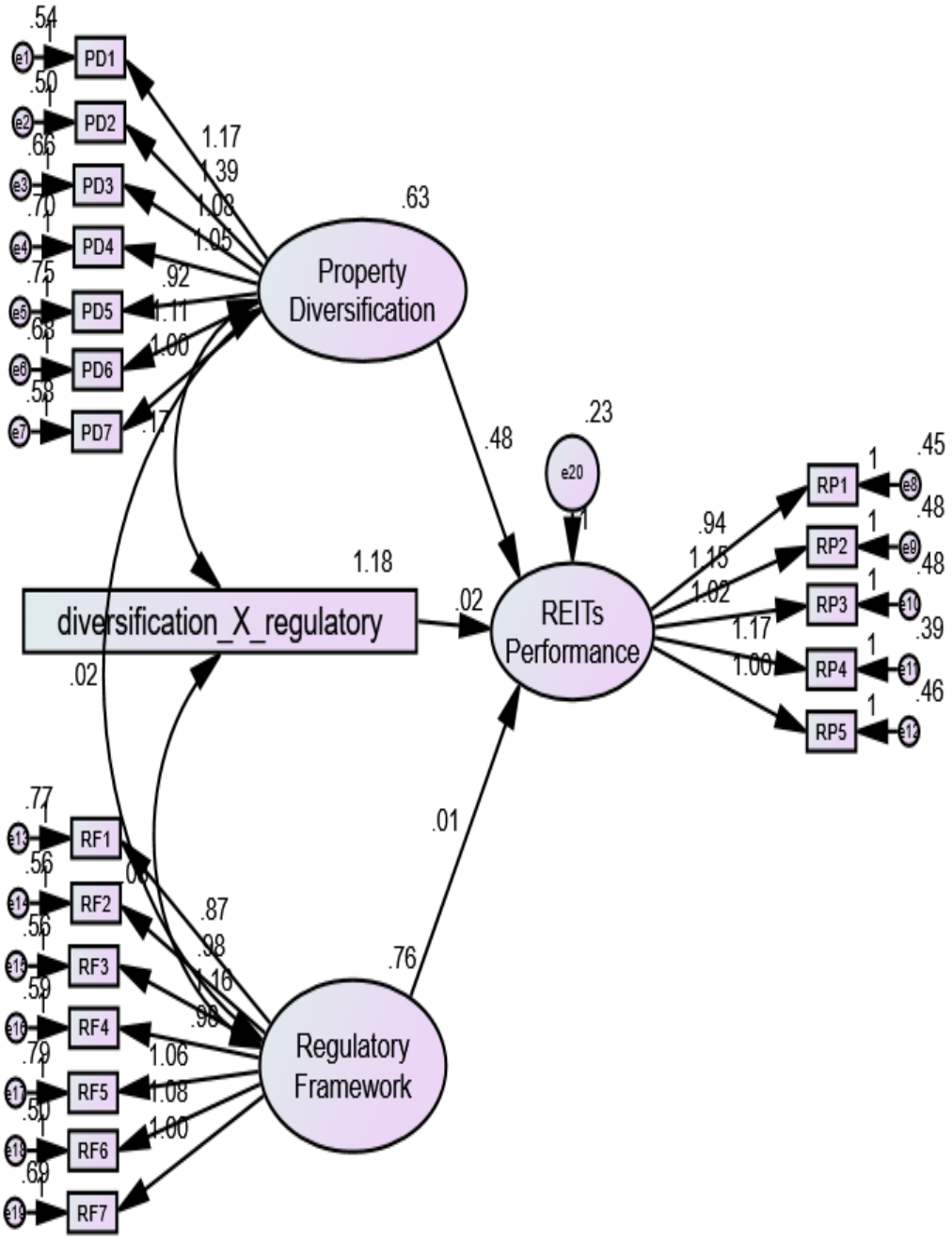


Figure 4.10: Structural Equation Model for Moderating Effect of Market Regulatory Framework on Influence of Property Diversification on Performance of REITs

Source (Field Survey, 2022)

4.7.5 Influence of Investor Awareness on Performance of Real Estate Investment Trusts

The third objective of the study was to examine whether investor awareness influences the performance of Real Estate Investment Trusts in Kenya. Exploratory factor analysis for extracted indicators, evaluating investor awareness construct was conducted before structural models, to determine if they had significant loadings on the latent construct. The factor loadings in Table 4.45 ranged from 0.868 to 0.893, indicating high convergence because they were more than 0.7 and so perfectly related to a factor pattern. As a result, the indicators were used in subsequent structural model analysis.

Table 4.45: Factor Loadings For Investor Awareness Indicators

Investor awareness indicators	Component/ Loadings
IA1-I am knowledgeable about Kenya's real estate market	.886
IA2- My membership in REITs Association of Kenya has provided insightful market research and databases that can be practically used by members	.893
IA3-I can access with ease reports of the REITs issuing firm	.870
IA4-I usually follow and update myself on the REITs markets through the online platform which provides information regarding REITs	.868

Source (Field Survey, 2022)

4.7.5.1 Model Test Fit Results for Investor awareness

The study used both absolute and incremental fit indices to determine whether the model fitted the data. The model fit statistics shown in Table 4.46 indicate that the model fit was generally satisfactory.

Table 4.46: Model Fit Statistics Results for Investor Awareness

Model	CMIN	CMIN/DF	P value	GFI	CFI	NFI	RMSEA
Statistic	87.635	3.371	0.000	.0.899	0.921	0.893	.120
Cut-off	P<0.05, cmin/df ratio range 1 to 3			≥0.8	≥0.8	≥0.8	≤0.05 good ≤0.08 excellent ≤0.1 acceptable

Source (Field Survey, 2022)

The contribution of each of the investor awareness indicators to the latent construct (investor awareness) was tested using regression weights. According to the regression weights results in Table 4.47, a unit increase in investor awareness is associated with a 1.136 increase in IA1. Since the calculated t-value of 12.722 was greater than 1.96, there was a significant positive relationship between investor awareness and investors' knowledge of the real estate market in Kenya. The findings are in agreement with those of Sarkar and Sahu (2018) who analyzed individual investors' behaviour in West Bengal and found that knowledge of stock market operations was significant in influencing investors' behaviour. Additionally, a unit increase in investor awareness was connected with a 1.150 unit increase in IA2. The calculated t-value was 1.150, which was greater than 1.96. This implies that there exists a significant positive relationship between investor awareness and investor membership in the REITs Association of Kenya, which provides members with useful market research and databases.

The results indicate that a unit increase in investor awareness was linked to a 0.931 unit increase in IA3. The calculated t-value of 9.897 was more than 1.96, which indicates that there was a significant positive relationship between investor awareness and investors' ability to access with ease reports of the REITs issuing firm. The results agree with those of Jiang, Cai, Wang and Zhu (2018) who reported that access to information was a key aspect in influencing corporate investment among shareholders in China. Moreover, a unit increase in investor awareness is associated with a 1.000 unit increase in IA4. This regression weight was fixed to 1 and not estimated indicating a perfect relationship between investor awareness and investors' usual follow-up and updates on the REITs markets through the online platform which provides information regarding REITs. The results are in agreement with those of Sofyan, Putra, and Aprayuda (2018) who found that electronic media information influences investment decisions among investors in Indonesia.

All regression weights for investor awareness indicators had calculated t-values greater than the critical t-value of + or -1.96 at a 0.05 significance level. This implies that the indicators had a significant connection with investor awareness, proving their convergence validity. Based on the third objective, the study sought to test the null hypothesis that investor awareness has no statistically significant influence on the performance of Real Estate Investment Trusts in Kenya. As shown in Figure 4.11 path coefficients and Table 4.47, there was no significant relationship between investor

awareness and the performance of REITs in Kenya. The standard path coefficients on the influence of investor awareness on the performance of REITs were found to be insignificant ($\beta = 0.030$, calculated t-value = 0.520, P>0.05). At a 5% significance level, the calculated t-value of the coefficient of investor awareness was found to be less than 1.96. This means that for every unit increase in the performance of REITs, there was a 0.030 units increase in investor awareness. As a result, the analysis failed to reject $\mathbf{H_{03}}$, implying that investor awareness has no statistically significant influence on the performance of REITs in Kenya. The findings are inconsistent with those of Prabakaran (2018) who examined the stock market awareness and performance of stocks invested in India. The study found that there exists a relationship between investor awareness and the performance of a portfolio comprising stocks. The study concluded that without prior knowledge or information, investors can lose heavily. The results are, however, in agreement with those of Ricciardi (2008) who found that investors are not able to absorb all market regulatory framework information. They become selective as to which information can consciously receive their attention and thus determine their level of awareness.

Table 4.47: Regression Weights and C.R Values for Investor Awareness

			Estimate	S.E.	C.R.	P
REITs Performance	<---	Investor_Awareness	.030	.058	.520	.603
IA1	<---	Investor_Awareness	1.136	.089	12.722	***
IA2	<---	Investor_Awareness	1.150	.090	12.758	***
IA3	<---	Investor_Awareness	.931	.094	9.897	***
IA4	<---	Investor_Awareness	1.000			

P<0.05**

Source (Field Survey, 2022)

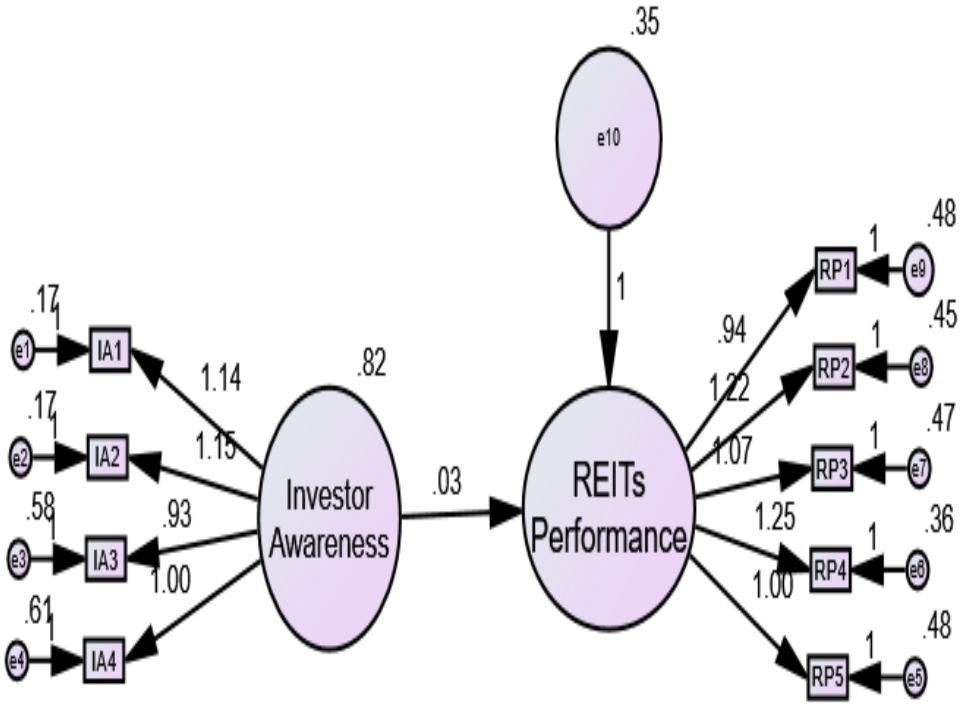


Figure 4.11: Structural Equation Model for Influence of Investor Awareness on Performance of REITs

Source (Field Survey, 2022)

4.7.6 Moderating Effect of Market Regulatory Framework on the Influence of Investor Awareness on Performance of REITs

The study examined whether the market regulatory framework had a moderating effect on the influence of investor awareness on the performance of REITs in Kenya. An interaction term was used to assess the moderating effect. The independent variable and the moderator (investor awareness*market regulatory framework) were multiplied to form the interaction term. The results of the moderating effect are in Figure 4.12 and the path coefficients are in Table 4.48. The interaction term had a coefficient of 0.075 and a calculated t-value of 1.313 (β= 0.075, calculated t-value = 1.313, P>0.05). The calculated t-value was less than 1.96 at a 95% confidence interval. This implies that the market regulatory framework has no significant moderating effect on the influence of investor awareness on the performance of REITs. As a result, the study failed to reject **$H0_{3a}$**, implying that the market regulatory framework has no statistically significant moderating effect on the influence of investor awareness on the performance of Kenyan REITs.

The findings are inconsistent with those of Malathy and Saranya (2017) who examined the relationship between investor awareness and investment decisions in Chennai India.

The study found that investor awareness was a significant factor that influences investors' decisions, leading to better performance for the stock portfolio. Thus, investors' knowledge of policies and economic conditions aids their investment decisions which automatically enhances the performance of stocks. However, government policies were found to be insignificant. In the current study, the existence of a REITs regulatory structure may not have a significant moderating effect since investors' inability to absorb all information plays a major role. If the investors are not aware of the operations and existence of real estate securities, there will be low uptake and hence poor performance of REITs, Hence, the current market regulatory framework remains insignificant in moderating the relationship between investor awareness and performance of REITs in Kenya.

Table 4.48: Moderated Regression Weights and C.R Values for Investor Awareness and Performance of REITs

			Estimate	S.E.	C.R.	P
REITs_Performance	<---	awareness_X_regulatory	.075	.057	1.313	.189
REITs_Performance	<---	Investor_Awareness	.026	.061	.425	.671
REITs_Performance	<---	Regulatory_Framework	.019	.065	.299	.765
IA1	<---	Investor_Awareness	1.144	.090	12.679	***
IA2	<---	Investor_Awareness	1.153	.091	12.671	***
IA3	<---	Investor_Awareness	.933	.095	9.827	***
IA4	<---	Investor_Awareness	1.000			
RP1	<---	REITs_Performance	.941	.141	6.652	***
RP2	<---	REITs_Performance	1.230	.164	7.501	***
RP3	<---	REITs_Performance	1.072	.151	7.086	***
RP4	<---	REITs_Performance	1.256	.162	7.763	***
RP5	<---	REITs_Performance	1.000			
RF1	<---	Regulatory_Framework	.875	.108	8.088	***
RF2	<---	Regulatory_Framework	.980	.106	9.254	***
RF3	<---	Regulatory_Framework	1.163	.117	9.911	***
RF4	<---	Regulatory_Framework	.987	.107	9.196	***
RF5	<---	Regulatory_Framework	1.066	.120	8.913	***
RF6	<---	Regulatory_Framework	1.073	.109	9.804	***
RF7	<---	Regulatory_Framework	1.000			

P<0.05***

Source (Field Survey, 2022)

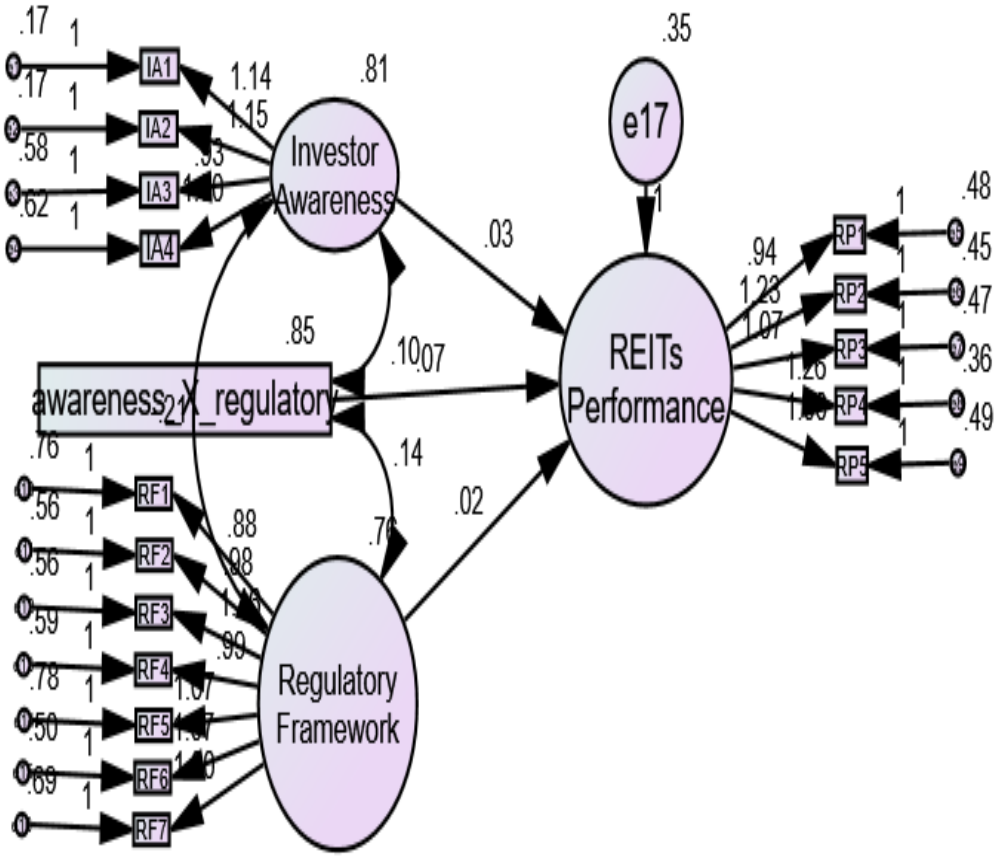


Figure 4.12: Structural Equation Model for Moderating Effect of Market Regulatory Framework on Influence of Investor Awareness on Performance of REITs

Source (Field Survey, 2022)

4.7.7 Joint Influence of Investor Sentiments, Property Diversification, Investor Awareness on Performance of Real Estate Investment Trusts in Kenya

The main objective of the study was to examine how investor sentiments, property diversification, and investor awareness influence the performance of Real Estate Investment Trusts in Kenya. To examine the combined effect of the predictor variables on the performance of REITs, an overall structural equation model was fitted.

4.7.7.1 Overall Structural Equation Model Test Fit Results

The study used both absolute and incremental fit indices to determine whether the model fitted data. The model fit statistics shown in Table 4.49 indicate that the model fit was generally suitable.

Table 4.49: Results of Model Fit Statistics for the Entire Model

Model	CMIN	CMIN/DF	P value	GFI	CFI	NFI	RMSEA
Statistic	510.754	2.280	0.000	0.782	0.870	0.792	0.088
Cut-off	P<0.05, cmin/df ratio range 1 to 3			≥0.8	≥0.8	≥0.8	≤0.05 good ≤0.08 excellent ≤0.1 acceptable

Source (Field Survey, 2022)

The findings of the combined influence of predictor factors on the dependent variable are shown in Figure 4.13 and the path coefficients in Table 4.50. Investor sentiments had a beta coefficient of 0.230 and a calculated t-value of 3.281. Since the calculated t-value of the coefficient of investor awareness was greater than 1.96 at a 5% significance level, this implies that investor sentiments have a significant joint influence on the performance of REITs in Kenya. A unit change in investor sentiments leads to a 0.230 units increase in the performance of REITs in Kenya. These findings are in agreement with those of Huerta, Jackson, and Ngo (2015) who examined the impact of investor sentiments on real estate investment trusts returns in the USA and reported that individual and institutional investors' sentiments are significantly and positively related to REITs returns.

Property diversification had a beta coefficient of 0.358 and a calculated t-value of 4.679. Since the calculated t-value of the coefficient of property diversification was greater than 1.96 at a 5% significance level, it implies that property diversification has a significant joint influence on the performance of REITs in Kenya. A unit change in property diversification was associated with to 0.358 unit increase in the performance of REITs in Kenya. The results are consistent with those of Jalil, Mohammad, and Chai (2018) who found that diversification of underlying property by economic location attributes influences the performance of REITs in Malaysia.

Furthermore, investor awareness had a beta coefficient of 0.022 and a calculated t-value of 0.479. Since the calculated t-value of the coefficient of investor awareness was less than 1.96 at a 5% significance level, it implies that investor awareness has an insignificant joint influence on the performance of REITs in Kenya. It, therefore, implies that a unit change in investor awareness leads to a 0.022 unit increase in the performance

of REITs in Kenya. The results show very minimal unit change which if rounded off to one decimal becomes zero. This means that investor awareness does not influence the performance of REITs in Kenya. The overall results indicate that only investor sentiments and property diversification have a significant joint influence on the performance of REITs in Kenya.

These results supported the rejection of $\mathbf{H_{01}}$ and $\mathbf{H_{02}}$ as well as acceptance of $\mathbf{H_{03}}$ as the earlier analysis indicates. The results are in agreement with those of Ricciardi (2008) who reported that investors are not able to absorb all information. They become selective as to which information can consciously receive their attention and thus determine their awareness level of regulatory policies ceteris paribus. The selectiveness of information far or less affects their investment decisions positively or negatively. In the current study, investor awareness has zero influence on the performance of REITs. The reason could be that, although investors can absorb the information regarding REITs as the information gets availed to them, they are reluctant to use that information in enhancing their uptake of REITs. The reluctance could be a result of the varying perception of the risk-return trade-off of real estate securities as well as underlying dynamics in the real estate market in Kenya.

Table 4.50: Regression Weights and C.R Values for Predictor Variables and Performance of REITs

			Estimate	S.E.	C.R.	P
REITs_Performance	<---	Investor_sentiments	.230	.070	3.281	.001
REITs_Performance	<---	Property_Diversification	.358	.077	4.679	***
REITs_Performance	<---	Investor_Awareness	.022	.046	.479	.632
RP1	<---	REITs_Performance	1.000			
RP2	<---	REITs_Performance	1.217	.159	7.634	***
RP3	<---	REITs_Performance	1.102	.149	7.392	***
RP4	<---	REITs_Performance	1.212	.155	7.816	***
RP5	<---	REITs_Performance	1.048	.145	7.217	***
IS7	<---	Investor_sentiments	1.000			
IS6	<---	Investor_sentiments	1.175	.125	9.395	***
IS5	<---	Investor_sentiments	1.272	.124	10.225	***
IS4	<---	Investor_sentiments	1.336	.131	10.181	***
IS3	<---	Investor_sentiments	.986	.117	8.449	***
IS2	<---	Investor_sentiments	.780	.102	7.681	***
IS1	<---	Investor_sentiments	.842	.105	8.014	***
PD7	<---	Property_Diversification	1.000			
PD6	<---	Property_Diversification	1.109	.126	8.808	***
PD5	<---	Property_Diversification	.920	.118	7.779	***
PD4	<---	Property_Diversification	1.061	.123	8.603	***
PD3	<---	Property_Diversification	1.102	.123	8.930	***
PD2	<---	Property_Diversification	1.405	.137	10.242	***
PD1	<---	Property_Diversification	1.186	.124	9.590	***
IA4	<---	Investor_Awareness	1.000			
IA3	<---	Investor_Awareness	.931	.094	9.906	***
IA2	<---	Investor_Awareness	1.149	.090	12.767	***
IA1	<---	Investor_Awareness	1.135	.089	12.729	***

P<0.05***

Source (Field Survey, 2022)

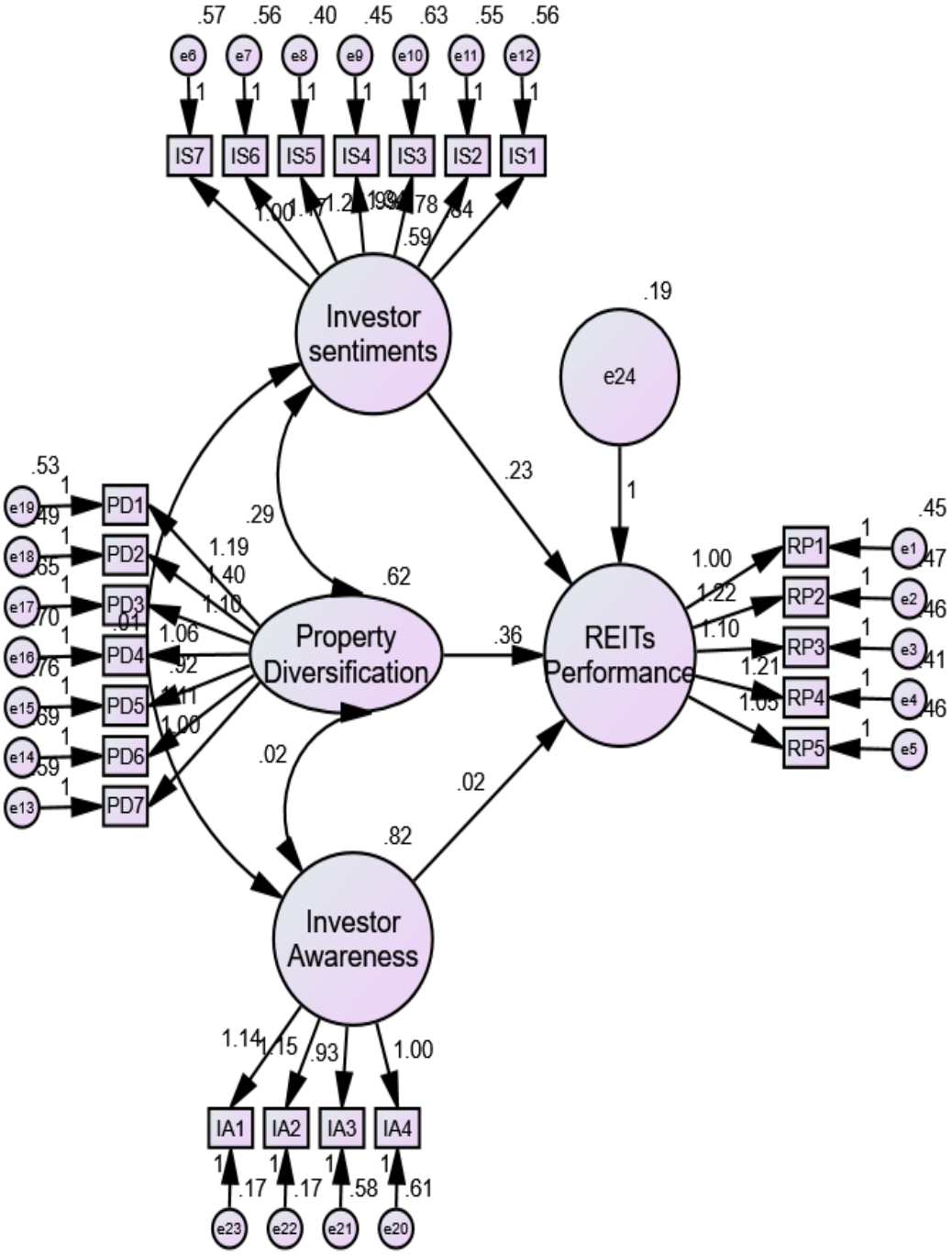


Figure 4.13: Overall Structural Equation Model for Joint Influence of Predictor Variables on Performance of REITs

Source (Field Survey, 2022)

4.7.8 Moderating Effect of Market Regulatory Framework on Joint Influence of Investor Awareness, Property Diversification, Investor Awareness on Performance of REITs

The study assessed if the market regulatory framework had a moderating effect on the combined influence of investor awareness, property diversification, and investor awareness on REIT performance in Kenya. To achieve this objective, the study sought to test the null hypothesis that the market regulatory framework has no statistically significant moderating effect on the combined influence of predictor variables on the performance of REITs in Kenya.

The moderating effect was evaluated by introducing three interaction terms. The interaction terms were the product of the independent variables and the moderator (investor awareness*market regulatory framework), (property diversification*market regulatory framework), and (investor awareness*market regulatory framework). Figure 4.14 and the path coefficients in Table 4.51 show the results of the moderating effect. First, the coefficient of the interaction term for investor sentiments was 0.038 and its calculated t-value was 1.047. The calculated t-value of the coefficient of the interaction effect between the market regulatory framework and investor sentiments was smaller than 1.96. This implies that the market regulatory framework has no significant moderating effect on the combined influence of predictor variables on the performance of REITs.

Secondly, the coefficient of the interaction term for property diversification was 0.000 and its calculated t-value was 0.007. The calculated t-value of the coefficient of the interaction effect between the market regulatory framework and property diversification was smaller than 1.96. This implies that the market regulatory framework has no significant moderating effect on the combined influence of predictor variables on the performance of REITs.

Thirdly, the coefficient of the interaction term for investor awareness was 0.021 and its calculated t-value was 0.478. The calculated t-value of the coefficient of the interaction effect between market regulatory framework and investor awareness was smaller than the 1.96 critical ratio at 5% significance. This implies that the market regulatory framework has no significant moderating effect on the combined influence of predictor variables on the performance of REITs. As a result, the analysis failed to reject the null

hypothesis at a 95% confidence interval, implying that the market regulatory framework has no statistically significant moderating effect on the influence of the predictor variables on the performance of REITs in Kenya. The findings agree with those of Chong, Krystalogianni, and Stevenson (2012) who evaluated regulatory structure as a moderating variable between REITs sub-sectors and diversification in the USA. The study found that regulatory structure was insignificant in influencing the return of REITs. Additionally, the findings are consistent with those of Malathy and Saranya (2017) who examined the relationship between investor awareness and investment decisions in Chennai India. The study found that investor awareness influences investor decisions. Further, the study found that existing government policies on financial securities structure have minimal effect on investment decisions among prospective investors.

Table 4.51: Moderated Regression Weights and C.R values for Predictor Variables and performance of REITs

			Estimate	S.E.	C.R.	P
REITs_performance	<---	awareness_X_regulatory	.021	.044	.478	.632
REITs_performance	<---	Regulatory_Framework	.016	.049	.324	.746
REITs_performance	<---	sentiments_X_regulatory	.038	.036	1.047	.295
REITs_performance	<---	Investor_Sentiments	.221	.070	3.180	.001
REITs_performance	<---	diversification_X_regulatory	.000	.037	.007	.994
REITs_performance	<---	Property_Diversification	.354	.076	4.645	***
REITs_performance	<---	Investor_Awareness	.020	.046	.438	.661
IS7	<---	Investor_Sentiments	1.000			
IS6	<---	Investor_Sentiments	1.175	.125	9.397	***
IS5	<---	Investor_Sentiments	1.273	.124	10.228	***
IS4	<---	Investor_Sentiments	1.336	.131	10.184	***
IS3	<---	Investor_Sentiments	.986	.117	8.443	***
IS2	<---	Investor_Sentiments	.779	.102	7.674	***
IS1	<---	Investor_Sentiments	.841	.105	8.009	***
RF7	<---	Regulatory_Framework	1.000			
RF6	<---	Regulatory_Framework	1.078	.110	9.815	***
RF5	<---	Regulatory_Framework	1.066	.120	8.879	***
RF4	<---	Regulatory_Framework	.985	.108	9.152	***
RF3	<---	Regulatory_Framework	1.164	.118	9.879	***
RF2	<---	Regulatory_Framework	.984	.106	9.260	***
RF1	<---	Regulatory_Framework	.874	.109	8.052	***
PD7	<---	Property_Diversification	1.000			
PD6	<---	Property_Diversification	1.109	.126	8.811	***
PD5	<---	Property_Diversification	.920	.118	7.781	***
PD4	<---	Property_Diversification	1.060	.123	8.603	***
PD3	<---	Property_Diversification	1.101	.123	8.929	***
PD2	<---	Property_Diversification	1.405	.137	10.249	***
PD1	<---	Property_Diversification	1.185	.124	9.591	***
IA4	<---	Investor_Awareness	1.000			
IA3	<---	Investor_Awareness	.931	.094	9.904	***
IA2	<---	Investor_Awareness	1.149	.090	12.766	***
IA1	<---	Investor_Awareness	1.135	.089	12.728	***
RP1	<---	REITs_performance	1.000			
RP2	<---	REITs_performance	1.216	.161	7.559	***
RP3	<---	REITs_performance	1.101	.150	7.317	***
RP4	<---	REITs_performance	1.208	.156	7.725	***
RP5	<---	REITs_performance	1.044	.146	7.133	***

Source: (Author, 2022)

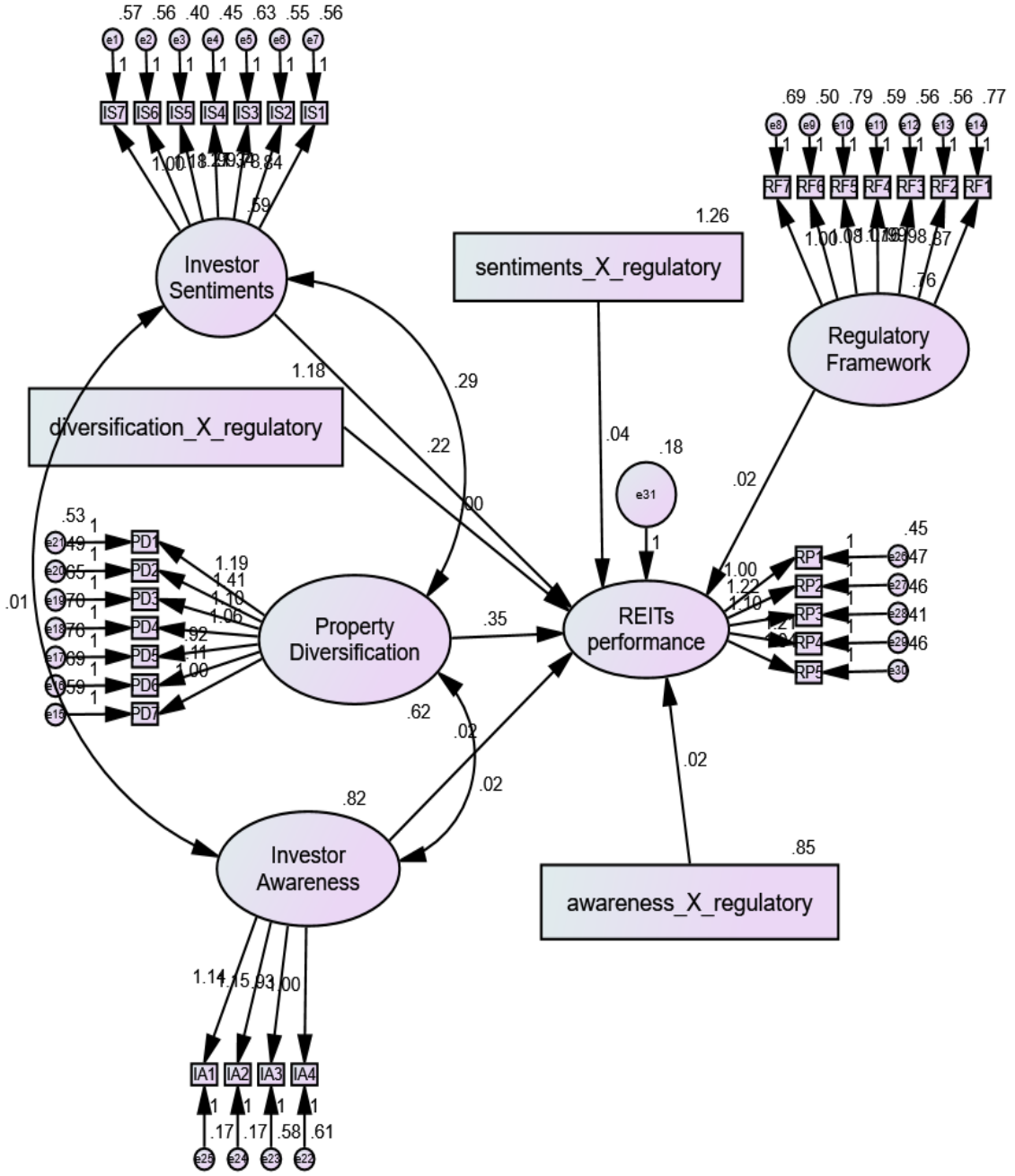


Figure 4.14: Overall Structural Equation Model for Moderating Effect of Market Regulatory Framework on Joint Influence of Predictor Variables on Performance of REITs

Source (Field Survey, 2022)

4.8 Using Moderated Multiple Regression Analysis to Define the Models

The results of Structural Equation Modelling on formulated hypotheses were confirmed using Moderated Multiple Regression analysis to enrich the findings. The OLS models

were compared with the MMR models to examine if the market regulatory framework moderated the relationship between the predictor variables and the dependent variable. Both models were used as estimation methods in the analysis and the confirmation of SEM results.

4.8.1 Moderating Influence of Investor Sentiments on Performance of Real Estate Investment Trusts in Kenya

The coefficient of determination (R^2) for model 1 was 0.230, as shown in Table 4.52. This suggests that investor sentiments account for 23 percent of the variance in the performance of Real Estate Investment Trusts in Kenya. The results of Model 2 are shown in Table 4.52 after an interaction term (investor sentiments*market regulatory framework) was added to the equation. The results show that there was an R^2 change of 0.006 after the interaction term was introduced. This means that the market regulatory framework's moderating influence explains only 0.6 percent of the variance performance of Real Estate Investment Trusts in Kenya, in addition to the variance explained by investor sentiments. However, the change in R^2 was not statistically significant (P>0.05).

Table 4.52: Model Summary for MMR with Investor Sentiments as a Predictor

					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	.480[a]	.230	.226	.63429	.230	49.072	1	164	.000
2	.486[b]	.236	.227	.63387	.006	1.218	1	163	.271

a. Predictors: (Constant), sentiments

b. Predictors: (Constant), sentiments, sentiments_X_regulatory

c. Dependent Variable: performance

Source (Field Survey, 2022)

Model 1 shows that the relationship between investor sentiments and the performance of REITs in Kenya is positive and statistically significant (β=0.401, $p<0.05$) as shown in Table 4.53. This implies that when investor sentiment increases by one unit, the performance of REITs increases by 0.401 units. As a result, the analysis failed to accept $\mathbf{H_{01}}$, implying that investor sentiments have a significant influence on the performance of REITs in Kenya. The findings are consistent with those of Prabakaran (2018) who examined the stock market awareness and performance of stocks in India

and found that there exists a positive relationship between investor awareness and the performance of stocks invested in.

Additionally, Model 2 in Table 4.53 shows that the market regulatory framework has a positive but statistically insignificant moderating effect on the influence of investor sentiments on the performance of REITs in Kenya (β =0.049, p>0.05). This implies that the influence of investor sentiments on the performance of REITs does not depend on the market regulatory framework. Conversely, the influence of the market regulatory framework on the performance of REITs is independent of investor sentiments. As a result, the analysis accepted **$H0_{1a}$**, that the market regulatory framework has an insignificant moderating effect on the influence of investor sentiment on the performance of REITs in Kenya. The results are in agreement with those of Rognone, Hyde, and Zhang (2020) who examined investor sentiments in the crypto currency market globally using panel data. The findings indicated the relationship between new investor sentiments and the performance of Bitcoin is not affected by the market regulatory framework.

The following regressions models were fitted;

OLS Model: Performance of REITs = 2.383+0.40 investor sentiments

MMR Model: Performance of REITs = 2.423+0.39 investor sentiments + 0.049 sentiments_x_regulatory

Table 4.53: Coefficients for MMR with Investor Sentiments as a Predictor

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.383	.212		11.244	.000
	Sentiments	.401	.057	.480	7.005	.000
2	(Constant)	2.423	.215		11.275	.000
	Sentiments	.390	.058	.467	6.713	.000
	sentiments_X_regulatory	.049	.045	.077	1.104	.271

a. Dependent Variable: performance

Source (Field Survey, 2022)

4.8.2 Moderating Influence of Property Diversification on Performance Real Estate Investment Trusts

The results in Table 4.54 show that the R^2 was 0.301 in Model 1. This means that property diversification accounts for 30.1 percent of the variation in the performance of Real Estate Investment Trusts in Kenya. The results of Model 2 are shown in Table 4.54 after an interaction term (property diversification*market regulatory framework) was added to the equation. The results show that there was an R^2 change of 0.001 when the interaction term was included. This implies that the market regulatory framework's moderating effect explains only 0.1 percent of the variance in performance of Real Estate Investment Trusts in Kenya, in addition to the variance explained by property diversification. However, the change in R^2 was not statistically significant (P>0.05).

Table 4.54: Model Summary for MMR with Property Diversification as a Predictor

				Std. Error of	Change Statistics				
Model	R	R Square	Adjusted R Square	the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.549[a]	.301	.297	.60425	.301	70.781	1	164	.000
2	.550[b]	.303	.294	.60566	.001	.240	1	163	.625

a. Predictors: (Constant), diversification
b. Predictors: (Constant), diversification, diversification_X_regulatory
c. Dependent Variable: performance
Source (Field Survey, 2022)

The results of Model 1 in Table 4.55 show that the relationship between property diversification and the performance of REITs in Kenya is positive and statistically significant (β=0.427, $p<0.05$). This implies that increasing property diversification by one unit, increases the performance of REITs in Kenya by 0.427 units. As a result, the study failed to accept $\mathbf{H_{02}}$, implying that property diversification has a statistically significant influence on the performance of REITs in Kenya. The results are consistent with those of Badji, Benetti, and Guimaraes (2021) who examined the diversification advantages of European REITs. The study found that diversification of underlying assets was significant in influencing the performance of REITs.

Also, the results from Model 2 in Table 4.55 indicate that the market regulatory framework has a positive and statistically insignificant moderating effect on the influence of property diversification on REIT performance in Kenya (β =0.022, $p>0.05$). This implies that the influence of property diversification on the performance of REITs

does not depend on the market regulatory framework. Conversely, the influence of the market regulatory framework on the performance of REITs is independent of property diversification. As a result, the study accepted $\mathbf{H_{02a}}$, that the market regulatory framework has an insignificant moderating effect, on the influence of property diversification on the performance of Kenyan REITs. The findings are in agreement with those of Khan and Siddigui (2019) who examined factors influencing the performance of REITs in different economies. The findings found that regulatory framework was a significant factor affecting the performance of REITs in those markets. However, the regulatory policy did moderate the relationship between underlying assets and the performance of REITs.

The following regressions models were fitted;

OLS Model: Performance of REITs = 2.344 +0.427 property diversification

MMR Model: Performance of REITs = 2.361 +0.422 property diversification+ 0.022 diversification_x_regulatory

Table 4.55: Coefficients for MMR with Property Diversification as a Predictor

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.344	.182		12.860	.000
	Diversification	.427	.051	.549	8.413	.000
2	(Constant)	2.361	.186		12.709	.000
	Diversification	.422	.052	.543	8.144	.000
	diversification_X_regulatory	.022	.044	.033	.490	.625

a. Dependent Variable: performance

Source (Field Survey, 2022)

4.8.3 Moderating Influence of Investor Awareness on Performance of Real Estate Investment Trusts

The results from Model 1 show that the R^2 was 0.003, as shown in Table 4.56. This implies that investor awareness accounts for only 0.3 percent of the variation in the performance of Kenyan REITs. The results of Model 2 are also shown in Table 4.56 after an interaction term (investor awareness*market regulatory framework) was added to the equation. The results show that there was an R^2 change of 0.011 when the interaction term was introduced. This implies that the market regulatory framework's moderating influence explains 1.1 percent of the variance in the performance of Real Estate

Investment Trusts in Kenya, in addition to the variance explained by investor awareness. However, the change in R^2 was not statistically significant (P>0.05).

Table 4.56: Model Summary for MMR with Investor Awareness as a Predictor

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.056[a]	.003	-.003	.72186	.003	.512	1	164	.476
2	.120[b]	.014	.002	.71999	.011	1.851	1	163	.175

a. Predictors: (Constant), awareness
b. Predictors: (Constant), awareness, awareness_X_regulatory
c. Dependent Variable: performance

Source (Field Survey, 2022)

Results from Model 1 further show that as investor awareness increases by one unit, the performance of REITs in Kenya increases by 0.040 units, as shown in Table 4.57. As a result, the analysis accepted **H_{03}**, that investor awareness has no statistically significant influence on the performance of REITs in Kenya. The results are consistent with those of Kaur and Bharucha (2021) who examined the relationship between investor awareness and investor behaviour in mutual funds in India. The study found that there was no significant influence of investor awareness on investment behaviour in the mutual funds industry. Further, the findings are in agreement with those of Ricciardi (2008) who asserted that investors are not able to absorb all information, thus they become selective as to which information can consciously receive their attention, and thus determine their awareness level of regulatory policies held constant.

Furthermore, Model 2 presented in Table 4.57 demonstrates that the market regulatory framework has a positive, statistically insignificant moderating effect on the influence of investor awareness on the performance of REITs in Kenya (β=0.083, p>0.05). This implies that the influence of investor awareness on the performance of REITs does not depend on the market regulatory framework. Conversely, the influence of the market regulatory framework on the performance of REITs is independent of investor awareness. As a result, the study accepted **H_{03a}**, indicating that the market regulatory framework has no significant moderating effect on the influence of investor awareness on the performance of REITs in Kenya. The findings are inconsistent with those of Malathy and Saranya (2017) who examined the relationship between investor awareness

and investment decisions in Chennai India. The study found that investor awareness is a significant factor that influences investors' decisions leading to better performance for the stock portfolio. In the current study, the existence of a regulatory structure may not have a significant moderating effect since investors' inability to absorb all information plays a major role. Thus, if the investors are not aware of the operations and existence of real estate securities, there will be low uptake and hence poor performance on REITs in Kenya.

The following regressions models were fitted;

OLS Model: Performance of REITs = 3.670+0.040 investor awareness

MMR Model: Performance of REITs = 3.718+0.032 investor awareness + 0.083 awareness_X_regulatory

Table 4.57: Coefficients for MMR with Investor awareness as a Predictor

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.670	.226		16.202	.000
	Awareness	.040	.055	.056	.715	.476
2	(Constant)	3.718	.229		16.256	.000
	Awareness	.032	.055	.045	.571	.569
	awareness_X_regulatory	.083	.061	.106	1.361	.175

a. Dependent Variable: performance

Source (Field Survey, 2022)

4.8.4 Joint Moderating Influence of Investor Sentiments, Property Diversification, Investor Awareness on Performance of Real Estate Investment Trusts in Kenya

From the findings, the R^2 for Model 1 was 0.380, as shown in Table 4.58. This shows that investor sentiments, property diversification, and investor awareness account for 38% of the variance in the performance of REITs in Kenya. The results for Model 2 are shown in Table 4.58 after interaction terms (investor sentiments*market regulatory framework, property diversification*market regulatory framework, and investor awareness*market regulatory framework) were added to the equation.

Moreover, the results show that there was an R^2 change of 0.004 when the interaction terms were introduced. This means that the market regulatory framework moderates the

relationship between investor sentiments, property diversification, investor awareness and performance of REITs in Kenya by 0.4 percent. However, the increase in R^2 was not statistically significant (P>0.05).

Table 4.58: Model Summary for Overall MMR Model

					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	.616[a]	.380	.368	.57282	.380	33.086	3	162	.000
2	.620[b]	.384	.361	.57629	.004	.351	3	159	.789

a. Predictors: (Constant), awareness, sentiments, diversification
b. Predictors: (Constant), awareness, sentiments, diversification, awareness_X_regulatory, sentiments_X_regulatory, diversification_X_regulatory
c. Dependent Variable: performance

Source (Field Survey, 2022)

From the results, Model 1's beta coefficient for investor sentiments was 0.256 with p <0.05, as shown in Table 4.59. This implies that there exists a statistically significant joint influence of investor sentiments on the performance of Real Estate Investment Trusts in Kenya. These results validated the rejection of $\mathbf{H_{01}}$. Property diversification had a beta coefficient of 0.326 and a p<0.05. This backed up rejection of $\mathbf{H_{02}}$. With a p>0.05, the beta coefficient for investor awareness was 0.034. This supported acceptance of $\mathbf{H_{03}}$. It is reasonable to conclude that the findings of the combined influence of investor sentiments, property diversification, and investor awareness on the performance of REITs justified acceptance or rejection of the results of individual predictor variables' effect on the performance of REITs without a moderator. Similar results were earlier found in the Structural Equation Modelling analysis.

Further, in Table 4.59, Model 2 shows that the beta coefficient for investor sentiments*market regulatory framework is 0.041 with p>0.05. These findings supported the acceptance of $\mathbf{H_{01a}}$. The beta coefficient for property diversification*regulatory was -0.003 with p>0.05. These findings supported the acceptance of $\mathbf{H_{02a}}$. Additionally, the beta coefficient for investor awareness*market regulatory framework was 0.017 with p>0.05. These findings supported the acceptance of $\mathbf{H_{03a}}$. It can therefore be inferred from the findings, that the market regulatory framework's moderating effect on the joint influence of the study’s predictor variables on the performance of REITs, supported

acceptance of the findings of the market regulatory framework's moderating effect on the influence of individual predictor variables on the performance of REITs. Thus, the study accepted **H_{04}**, that the market regulatory framework has an insignificant moderating effect on the joint influence of investor sentiments, property diversification, and investor awareness on the performance of REITs in Kenya. Similar results were earlier found in the Structural Equation Modelling analysis.

The following regressions models were fitted;

OLS Model: Performance of REITs = 1.640+0.256 investor awareness+0.326 property diversification+0.034 investor sentiments

MMR Model: Performance of REITs = 1.708 +0.246 investor awareness+0.324 property diversification+0.028 investor awareness + 0.041 sentiments_X_regulatory - 0.003 diversification_X_regulatory+ 0.017 awareness_X_regulatory

Table 4.59: Coefficients for Overall MMR Model

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.640	.277		5.928	.000
	Sentiments	.256	.057	.306	4.492	.000
	Diversification	.326	.053	.420	6.155	.000
	Awareness	.034	.044	.047	.765	.445
2	(Constant)	1.708	.291		5.871	.000
	Sentiments	.246	.058	.294	4.229	.000
	Diversification	.324	.054	.417	5.979	.000
	Awareness	.028	.045	.040	.630	.530
	sentiments_X_regulatory	.041	.044	.063	.915	.362
	diversification_X_regulatory	-.003	.046	-.005	-.073	.942
	awareness_X_regulatory	.017	.049	.022	.348	.729

a. Dependent Variable: performance

Source (Field Survey, 2022)

4.9 Optimal Model

According to the results of MMR analysis, investor sentiments and property diversification have a significant influence on the performance of REITs in Kenya, while investor awareness has an insignificance influence on the performance of REITs in Kenya. The stepwise hierarchical significance of the predictor variables to the dependent

variable must be determined (Keraro, 2014). The conceptual framework in the literature review section depicts a predicted relationship between investor sentiments, property diversification, investor awareness, and the performance of REITs. Some predictor variables have a significant impact on the dependent variable's change. These predictor variables have varying levels of significance in influencing the dependent variable while others might be insignificant in their influence (Brooks, 2008). The revised conceptual framework was, therefore, run to show predictor variables that were significant in the joint regression analysis. Stepwise hierarchical regression was used to exclude insignificant variables. The revised conceptual framework indicates that investor sentiments and property diversification proved to significantly influence the performance of REITs in Kenya, and thus their inclusion in the revised model. Investor awareness was excluded to arrive at the REITs performance revised conceptual framework, as shown in Figure 4.15.

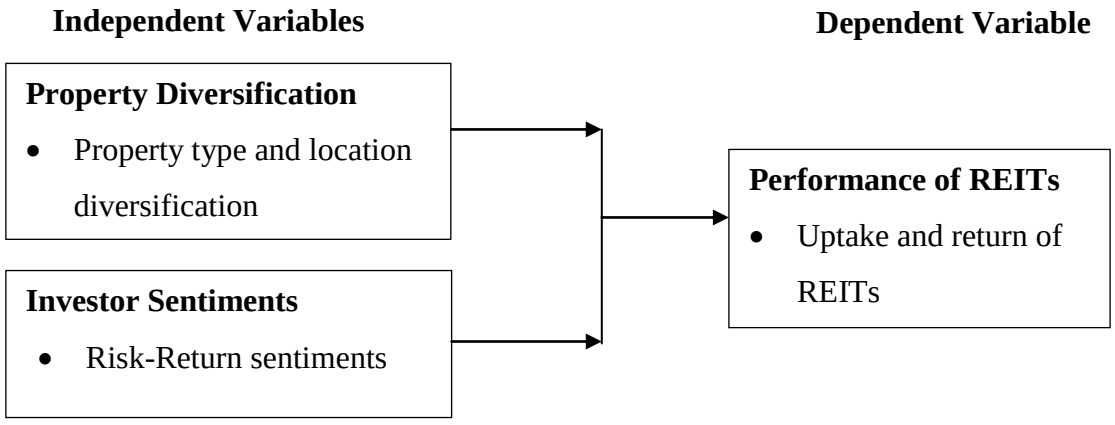


Figure 4.15: Revised Conceptual Framework
Source (Field Survey, 2022)

Figure 4.15 shows indicators retained as measurers of underlying latent variables or constructs. Since the indicators converged validly to respective components (constructs), through their factor loadings as discussed in the Confirmatory Factor Analysis pattern loading matrix, they were given names as indicated in Figure 4.15. They were confirmed to be measurable observed indicators empirically for the constructs. Property diversification measures included the type and location of the property. Investor sentiments measures included risk-return sentiments while the performance of REITs measures included uptake and return of REITs. Based on these findings, it can be inferred that investor sentiments and property diversification are the only variables that

influence the performance of REITs in the current study. The study ran the revised conceptual framework to confirm the hypothesized conceptual framework in Table 2.1. Since the hypothesized conceptual framework was based on the synthesis of the literature by the researcher, it was prudent to confirm the realism of the hypothetical framework through data analysis. Further, through exhaustive analysis, the study was able to determine the real indicators measuring investor sentiments, property diversification, and performance of REITs. In the unrevised conceptual framework, the variables were measured through statements as shown in the research instrument.

4.10 Summary of Hypotheses Test

Table 4.60 summarizes the findings of the tested research hypotheses.

Table 4.60: Summary of Hypotheses

Hypothesis	Coefficient Estimate	Calculated t-value	P value	Conclusion
H_{01}: Investor sentiments have no statistically significant influence on the performance of Real Estate Investment Trusts in Kenya	0.396	5.107	0.000	**H_{01}** Rejected
H_{01a}: Market regulatory framework has no statistically significant moderating effect on the influence of investor sentiments on performance of Real Estate Investment Trusts in Kenya	0.039	0.941	0.347	**H_{01a}** Accepted
H_{02}: Property diversification has no statistically significant influence on the performance of Real Estate Investment Trust in Kenya	0.460	5.858	0.000	**H_{02}** Rejected
H_{02a}: Market regulatory framework has no statistically significant moderating effect on the influence of Property type-location diversification on performance of Real Estate Investment Trusts in Kenya	0.020	0.467	0.640	**H_{02a}** Accepted
H_{03}:Investor awareness has no statistically significant influence on the performance of Real Estate Investment Trusts in Kenya	0.030	0.520	0.603	**H_{03}** Accepted
H_{03a}: Market regulatory framework has no statistically significant moderating effect on the influence of Investor awareness on performance of Real Estate Investment Trusts in Kenya	0.075	1.313	0.189	**H_{03a}** Accepted

Source (Field Survey, 2022)

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the research findings in light of the research objectives and hypotheses. The conclusion of the research findings, as well as recommendations based on the findings, are presented in this chapter. In addition, the chapter makes recommendations for future further research.

5.2 Summary of Findings

The main objective of the study was to analyse the influence of investor sentiments, property diversification, and investor awareness on the performance of REITs in Kenya. Primary data was gathered from respondents. The data was collected from one hundred and sixty-six respondents. A structured questionnaire was used to collect primary data while descriptive and inferential statistics were used in the analysis. This section presents a summary of research findings based on the study's specific objectives.

The first objective of the study was to assess the influence of investor sentiments on the performance of Real Estate Investment Trusts in Kenya. According to the findings, REITs volatility has been caused by investors' negative market views. Avoidance of uncertainty is relevant in determining REITs portfolio allocation decisions while respondents agreed that REITs are perceived as risky investment options by investors. REITs stocks are correctly valued and there is clarity on the exact returns from the underlying assets. The findings indicate that the uptake of REITs has remained low over poor dividend yields. Additionally, prices of REITs have remained low over poor dividend yields. Moreover, REITs have a promising durable stream of growing dividends that will reward investors over time. Government securities are preferred because they offer relatively more attractive returns than REITs. Most respondents agreed that investing in companies' stocks offers relatively more attractive returns than REITs, while some held a neutral opinion. Investors rely on peer trading as capital allocation signals, under the perception that peers may hold superior knowledge. Despite a rise in property prices, people's income has not kept pace. As a result, there is a good chance that property prices in Kenya will fall as potential investors find it difficult to engage in the market. Moreover, there was disagreement among most respondents on the statement that investors have sufficient confidence in the capital markets which has boosted the

capital markets products uptake. There exists a significant positive non-causal relationship between investor sentiments and the performance of REITs in Kenya (Appendix VII). According to the findings, investor sentiments and the performance of REITs in Kenya have a significant positive causal relationship.

The second objective of the study was to examine the influence of property diversification on the performance of Real Estate Investment Trusts in Kenya. The findings indicate that the location of properties is a very important aspect for REIT investors when it comes to property diversification. The nature of the location of the property depends on the economic activities in those locations. Additionally, respondents agreed that diversifying REITs across location attributes reduces market risks. Current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centers. A fair majority of respondents agreed that different property types have varying performance which depends on the nature of the properties. REITs that have specialized in a single type of property perform better than those that target multiple property types. There was agreement from most respondents that commercial REITs perform better than industrial REITs. The findings indicate that REITs' systematic risks are influenced by the property type they invest in. The most appealing investment characteristic for REIT investors is the quality of the underlying properties. Further, there exists a positive correlation between property diversification and the performance of REITs in Kenya (Appendix VII). The results indicate that property diversification and the performance of REITs have a significant positive causal relationship.

The third objective of the study was to evaluate the influence of investor awareness on the performance of Real Estate Investment Trusts in Kenya. According to the findings, membership in the REITs Association of Kenya has provided insightful market research to investors. Additionally, investors can access with ease reports of the REITs issuing firm. There was strong agreement among respondents that they usually follow and update themselves on the REITs markets through the online platform which provides information regarding REITs. A fair majority of the respondents strongly agreed that they have benefited from the exchange of opinions regarding REITs from peers and friends. Engagement with various stakeholders has provided insights into investors' appetite for the REITs product. REITs investors require general knowledge and trends in the real estate market. Most respondents held a neutral opinion that there were publicity

campaigns carried on by the Capital Markets Authority and the Nairobi Securities Exchange to sensitize potential investors on REITs. Further, the findings indicate that property developers have undergone training on how to use the capital markets as a source of funds for commercial and residential property development. Moreover, there exists an insignificant positive correlation between investor awareness and the performance of REITs in Kenya (Appendix VII). The findings reveal that there is no statistically significant causal relationship between investor awareness and the performance of REITs in Kenya.

Lastly, the fourth objective of the study was to analyse the moderating effect of the market regulatory framework on the influence of predictor variables on the performance of Real Estate Investment Trusts in Kenya. The findings indicate that legislation that prohibits REITs from investing more than 5% of their net asset value in other financial instruments makes REITs' operations difficult. Additionally, most respondents showed a neutral opinion on the statement that the Kshs 5 million minimum investment required to be considered as a professional investor for purposes of investing in a D-REIT or restricted I-REIT attracts investors. A large proportion of respondents were undecided about the statement that the lack of a regulatory minimum investment amount for investors in unrestricted I-REITs had improved REIT operations. The minimum listing requirements of a 50% subscription in both D-REIT and I-REIT have had an impact on REIT issuance. There was agreement among respondents that regulations governing the distribution of realized capital gains based on scheme documents improve REIT operations. Further, REITs are limited in their operations by laws that prevent them from selling more than half of their overall assets worth unless they are to be wound up. The REIT market has benefited from the income tax exemption for investors.

A sizable majority of those who responded agreed that the REIT managers' approval processes for issuing REITs have favourable time limits. The requirement for a minimum of seven investors to participate in D-REIT and I-REIT has had an impact on REIT issuance. The findings show that the market regulatory framework has no significant moderating effect on the influence of investor sentiment on the performance of REITs. It was also discovered that the market regulatory framework has a significant moderating effect on the influence of property diversification on the performance of REITs. Furthermore, it was observed that the market regulatory framework has no significant moderating influence on the relationship between investor awareness and performance.

Furthermore, the results show that the regulatory structure in Kenya did not significantly moderate the aggregate influence of predictor variables on REIT performance.

5.3 Conclusions

Based on the study's objectives, the following conclusions are made from the research findings.

Investor sentiments have a significant influence on the performance of Real Estate Investment Trusts in Kenya, according to the findings. Additionally, avoidance of uncertainty is relevant in determining REITs' portfolio allocation decisions. REITs are perceived as risky investment options by investors and are correctly valued. Therefore, there seems to be exact clarity on the exact returns from the underlying assets. Uptake and prices of REITs have remained low over poor dividend yields. However, REITs have a promising durable stream of growing dividends that will reward investors over time.

Treasury bills are preferred because they offer relatively more attractive returns than REITs. Investing in companies' equities also offers relatively more attractive returns than REITs. Investors rely on peer trading under the perception that peers may hold superior knowledge. It was not clear whether REITs' underlying assets are correctly valued. Additionally, there is no clarity on whether REITs investors require an understanding of the operations of the securities to trade in REITs. Despite the rise in property prices, people's income has not kept pace. There is a good chance that property prices in Kenya will fall as potential investors find it difficult to engage in the market. Furthermore, investors have sufficient confidence in the capital markets but this has not boosted the capital markets products uptake. It can be concluded that investor sentiments, majorly risk and return sentiments influence the performance of the REITs market in Kenya, leading to REITs' unexpected performance. Risk and return sentiments have made REITs issuers shy away from issuing new securities in the market. Continuous engagement sessions between the securities market regulatory authority, REITs Association of Kenya, and investors will enhance market confidence, thus lowering the risk-return sentiments.

Property diversification has a significant influence on the performance of Real Estate Investment Trusts in Kenya, according to the findings. The location of properties is a very important aspect for REITs investors when it comes to property diversification. The

nature of the location of the property depends on the economic activities in such locations. Diversifying REITs across location attributes reduces market risks. Current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centres.

It can therefore be concluded that different property types have varying performances, which depend on the property nature. Real Estate Investment Trusts, which are specialized, in a single type of property perform better than those that target multiple property types. Thus, as the level of diversification increases, the return on assets does. REITs specializing in malls, offices, retail stores, and hotels perform better than those specializing in warehouses and industrial properties do. It can be concluded diversification of the REITs underlying property majorly in terms of geographic and economic influence performance of REITs in Kenya. Moreover, property diversification through the type of property is a key determinant in influencing the performance of REITs in Kenya. Thus, continued diversification of real estate across types and locations will enhance the uptake of REITs by investors.

Further, investor awareness has no significant influence on the performance of Real Estate Investment Trusts in Kenya. Additionally, investors are knowledgeable about Kenya's real estate market, and their membership in the REITs Association of Kenya has provided insightful market research and databases. Such investors can access with ease reports of the REITs issuing firm. Although investors usually follow and update themselves on the REIT markets through the online platform, such awareness does not influence the level of performance of REITs in Kenya. Occasionally, the REITs Association of Kenya organizes investor education webinars and conferences, which are beneficial although investors have received minimal training on REITs. Further, there are minimal REITs publicity campaigns carried on by the Capital Markets Authority and the Nairobi Securities Exchange to sensitize potential investors. Although efforts have been put in place to ensure investors' awareness of real estate securities, it can be concluded that such efforts have not boosted the uptake of REITs among investors. Investor awareness efforts employed by Capital Markets Authority in conjunction with the REITs Association of Kenya are not likely to enhance the performance of REITs in Kenya.

From the findings, there is no noticeable effect of the market regulatory framework in terms of moderation on the individual influence of investor sentiments, property

diversification, and investor awareness on the performance of Real Estate Investment Trusts in Kenya. Moreover, the market regulatory framework does not significantly moderate the combined influence of predictor variables on the performance of REITs in Kenya. Legislation that prohibits REITs from investing more than 5% of their net asset value in other financial instruments makes REITs' operations difficult. The REITs market has benefited from the income tax exemption for investors. The requirement for a minimum of seven investors to participate in D-REIT and I-REIT has had an impact on REIT issuance. It can be concluded that any effort to lift REITs' market performance through the design of different forms of regulation is not likely to have a positive effect on the performance of REITs in Kenya.

Further, on implications of the findings, this study adds to the body of knowledge on the performance of REITs. The findings contribute to theory, empirics as well as methodology. On contribution to theory, these findings make a significant contribution to theoretical literature since they bring out the relevance of Market Timing Theory, which was helpful in the analysis of the operating performance of REITs. The findings indicate that the listed REIT has shown operational efficiency over its 5-year period. It can be implied that proper market timing has ensured consistency in the operating performance of the listed REIT, and hence the observed efficiency. Firms that take into account the market dynamics before going public experience positive operating performance which enhances their efficiency. Although studies have focused on Market Timing Theory, its application has been majorly inclined toward general stocks as opposed to REITs (Jain & Kini, 2006). Thus, the current study provides a new theoretical relationship between Market Timing Theory and REITs operating performance specifically in a nascent REITs market like Kenya.

The findings bring out the relevance of Behavioural Portfolio Theory. According to this theory, investors' behaviour aspects play a significant role when they make investment decisions on real estate securities. Such decisions include portfolio construction and the selection of assets. The theory opines that investors are inclined to various psychological behaviours that lead to them to cognitive errors in portfolio formation. From the current findings, it can be implied that risk-return sentiments which are behavioural perception characteristics play a significant role in portfolio formation.

Further, the findings bring out the relevance of the Modern Portfolio Theory. According to this theory, investors diversify their portfolios to maximize return by spreading risks. Although the theory has been used to inform portfolio formation and diversification decisions mostly in fixed-income securities and equities, there exists scant theoretical literature on the application of this theory in informing portfolio formation in real estate securities like REITs. The current findings revealed that there exists a significant relationship between property diversification and the performance of REITs. Thus, it can be implied that investors consider adding diversified real estate investment trusts in terms of property type and economic location to their existing portfolios to increase their expected return and minimize risks.

In contribution to the body of knowledge, the findings make a significant contribution to empirics. The study found that there exists a significant positive causal relationship between risk-return sentiments and the performance of REITs in Kenya. These findings form a fundamental basis for existing scholars who may wish to further studies on the influence of risk-return sentiments and the performance of REITs. Also, the study bridges the knowledge gap on the influence of investor sentiments and the performance of REITs, an area with inadequate empirical literature. Further, the findings revealed that there exists a significant positive causal relationship between property type-location diversification and the performance of REITs in Kenya. The findings address the knowledge gap on the influence of property location, type of property, and performance of REITs, an area with the scant empirical literature.

On contribution to methodology, the findings make a significant contribution to methodology in examining the relationship between investor sentiments, property diversification, and performance of REITs which were the significant factors. The study employed exhaustive data analysis techniques to ensure the authenticity of the results. Firstly, the study conducted Exploratory Factor Analysis to determine indicators that were linked to certain factors. Secondly, Confirmatory Factor Analysis was run to check the convergence validity of the underlying constructs for further Structural Equation Modelling analysis. Structural Equation Modelling was a combination of path diagrams and regression analysis where latent variables were fitted into the structural models for testing the hypothesized relationships. Further, to confirm the results of Structural Equation Modelling findings on hypotheses testing, Moderated Multiple Regression was used. The methodology applied in the current study makes a significant contribution and

enriches the findings of the subject under study and subsequent application in related studies.

5.4 Recommendations

From the research findings, the study makes the following recommendations based on the revised conceptual framework. From the findings, REITs are perceived as risky investment options by investors and their uptake has remained low over poor dividends and unclearness over the exact returns of the underlying assets. Further, the findings indicate that there is sufficient confidence in the capital markets but this has not boosted the capital markets products uptake including REITs. It is recommended that REITs issuing firm should enhance their dividends to boost the uptake of REITs which could continue facing competition from treasury bills, which have minimal risks. REIT issuing firms should also ensure that there is clarity over the returns of the underlying properties, and this will improve REITs stocks returns by creating certainty among investors. Industry practitioners such as the Nairobi Securities Exchange and the REITs association of Kenya should jointly sensitize investors on the operations of the market to create confidence among investors.

The findings indicate that location of properties is a very important aspect for REIT investors when it comes to property diversification. Additionally, REITs that focus on only one type or one property perform better than REITs that target multiple types of properties. It is recommended that REITs issuers ensure that there is diversification of the properties to include multiple property types such as students' hostels, retail stores, hotels, and warehouses. Such a type of diversification is likely to attract potential investors who could be interested in properties with such diversification characteristics.

5.5 Recommendations for Further Research

It is recommended that further studies need to be carried out specifically using the investor sentiments index. An investor sentiments index needs to be constructed using the trading behaviour of the investors. Buy-Sell Imbalance measure (BSI) should be constructed as a measure of investor sentiments. The index-based study will help compare the findings with those of this study to make inferences. Additionally, vector auto regression (VAR) can be used in data analysis to enrich the findings. Since the market regulatory framework was found to have no significant moderating effect on the influence of predictor variables on the performance of REITs, a study should be

conducted to examine whether the management style of REITs adopted could have a moderating effect. The funds' management style employed could be either in-house or external.

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APPENDICES

Appendix I: Letter of Introduction

Laikipia University

P.O Box 1100-20300

Nyahururu, Kenya

20th August 2021

Dear Sir/ Madam,

RE: Permission to Conduct a Research Study

I am a PhD Student in Business Administration at Laikipia University conducting a study titled **Investor Sentiments, Property Diversification, Investor Awareness and their Influence on Performance of Real Estate Investment Trusts in Kenya**.

This letter's aim is to ask for your permission to use the questionnaire to gather information from you(r) employees. Any information given herein shall be treated as confidential as possible and shall be used solely for the purpose of this report. Thank you.

Yours faithfully,

Daniel Thuo Ndung'u

MDB35/4177/18

Appendix II: Questionnaire

I am carrying out an academic investigation titled **Investor Sentiments, Property Diversification, Investor Awareness and their Influence on Performance of Real Estate Investment Trusts in Kenya.** Any information given will not be shared with others and will be used exclusively for academic purposes, with no mention of any individual(s) in the study's report. The questions are on a five-point Likert scale, 5 indicates strong agreement, 4 indicates agreement, 3 indicates moderate agreement, 2 indicates disagreement, and 1 indicates strong disagreement. Please be truthful with your answers to all of the questions.

PART A: Demographic Characteristics

Please indicate your gender

Male [ ] Female [ ]

What is your educational background? .....

Certificate/Diploma [ ] Bachelors [ ] Masters [ ] PhD[ ] Other .....

How long have you been a part of your company?

1 year or less [ ]

3 to 5 years [ ]

5 to 10 years [ ]

More than 10 years [ ]

Part A: External Operating Factors and Performance of REITs

This part contains questions on investor sentiments, property diversification, market regulatory framework, investor awareness and performance of REITs in Kenya.

Section I: Investors' Sentiments

The following measurable indicators relates to investors sentiments, please rate how much you agree with the following statements.

	Statements	**5**	**4**	**3**	**2**	**1**
	Investors' Sentiments					
1.	REITs stocks are trading at a sound value (that's they are correctly valued)					
2.	REITs underlying assets (Residential and commercial real properties) are correctly valued					
3.	There is clarity on the exact returns from the underlying assets					
4.	There has been REITs volatility which has been as result of investors negative sentiments about the market					
5.	Uptake of REITs have remained low over poor dividend yields					
6	Prices of REITs have remained low over poor dividend yields					
7.	REITs has a promising durable stream of growing dividends which will reward investors overtime					
8.	REITs Investors require an understanding on the operations of the Stock Market to trade in REITs					
9.	As capital allocation signals, investors rely on peer trading under the perception that peers may hold superior knowledge.					
10.	Avoidance of uncertainty is relevant in determining REIT portfolio allocation decision					
11.	Government securities (Treasury bills and bonds) are preferred because they offer relatively attractive returns than REITs					
12.	Investing in companies equities (stocks) offer relatively attractive returns than REITs					
13.	REITs are perceived as risky investment options by investors					

14.	Despite the surge in property prices, peoples personal income have not grown in tandem, therefore there is a strong possibility of a downward correction in property prices in Kenya as potential investors find it hard to participate in the market					
15.	Investors have sufficient confidence in the capital markets which has boosted the capital markets products uptake					
16.	There is a lack of workable illustrations of the actual state of affairs of companies owning and running income-generating real estate ventures					

Section II: Property Diversification

Indicate your degree of agreement with the statements relating to property diversification.

	Statements	**5**	**4**	**3**	**2**	**1**
1.	Location of properties is a very important consideration for REIT investors					
2.	The nature of the location of the property depends on the economic activities at these locations.					
3.	Diversification of REITs portfolios on locations enhance REIT return					
4.	REIT that target multiple types of properties to compose its portfolio perform better					
5.	REIT that focus on only one type or one property perform better					
6.	Different property types have varying performance which depends on property nature					
7.	Those REITs which are specialized in a single type of property performs better than those that target multiple property types					
8.	Diversifying REITs across location attributes reduces market risks					
9.	Current and new tenants are opting to move to new phases in the established malls to tap into existing clientele rather than open shops in new retail centres					
11	As the level of diversification increases, the					

	return on assets do					
12	Commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouse) perform better than Industrial REITs (REITs specializing in warehouses and industrial properties)					
13	Residential REITs (REITs specializing apartment buildings, students hostels) perform better than commercial REITs (REITs specializing in malls, offices, retail stores, hotels, warehouse)					
14	REITs' systematic risk is influenced by the property types they invest in					
15	One of the most appealing investment characteristics for REIT investors is the quality of the underlying properties					

Section III: Market Regulatory Framework

The following indicators relates to market regulatory framework of REITs**,** Please indicate how much you agree with the statements below.

	Statements	**5**	**4**	**3**	**2**	**1**
1.	Legislation prohibits REITs from investing more than 5% of their net asset value in other financial instruments, which makes their operations difficult					
2	REITs' operations are boosted by the requirement that they invest no more than 10% of their net asset value in a company owned entirely by the REIT manager					
3.	Income REITs (I-REITs) can only borrow between 35 and 40% of their total asset value, limiting their operations					
4	Development REITs (D-REITs) are only allowed to borrow between 60% and 75% of their total asset value, which has limited their operations					
5.	REITs' operations are limited by the law's requirement that persons not affiliated with the promoter or REIT manager maintain at least 25% float of the REIT security, unless funding is required for unplanned cost overruns					

6.	The Ksh 100 million minimum share capital requirement has limited other suitable players (a large pool of potential trustees) from applying for REIT trustee licenses					
7.	Investors are attracted by Ksh 5 million minimum investment needed to be classified as a professional investor for the purposes of investing in a D-REIT or restricted I-REIT.					
8	The lack of a regulatory minimum investment amount for investors in unrestricted I-REITs has improved REIT operations					
9.	Income REITs' operations are enhanced by laws requiring them to transfer at least 80% of their taxable income to unit holders in the form of dividends					
10.	REIT operations are enhanced by regulations governing the distribution of realized capital gains based on scheme documents (usually, they must be distributed within two years or re-invested to maintain tax status)					
11.	REITs are limited in their operations by laws that prevent them from selling more than half of their overall assets worth unless they are to be wound up.					
12.	The minimum listing requirements of a 50% subscription in both D-REIT and I-REIT have had an impact on REIT issuance					
13.	The REIT market has benefited from the income tax exemption for investors.					
14.	The REIT managers' approval processes for issuing REITs have time limits that are favourable					
15.	The requirement for a minimum of seven investors to participate in D-REIT and I-REIT has had an impact on REIT issuance					

Section IV: Investors Awareness

The following indicators relates to investors' awareness**,** indicate your level of agreement with these statements.

	Statements	**5**	**4**	**3**	**2**	**1**
1.	I am knowledgeable about Kenya's real estate market					
2.	I have received training on REITs					
3.	My membership to REITs Association of Kenya (RAK) has Provided insightful market research and databases that that can be practically used by members					
4.	There are publicity campaigns carried on by the Capital Markets Authority to sensitize potential investors on REITs					
5.	There are publicity campaigns carried on by the Nairobi Securities Exchange to sensitize potential investors on REITs					
6.	I am able to access with ease reports of the REITs issuing firm					
7.	I usually follow and update myself on the REITs markets through the online platform which provides information regarding REITs					
8.	The conference (s) I have attended has provided a highly interactive platform through plenary, breakout, deal making and networking sessions.					
9.	I have benefited from exchange of opinions regarding REITs from peers and friends					
10.	Engagement with various stakeholders has provided insights into investors' appetite for the REITs product					
11.	Property developers have undergone training on how to use the capital markets as a source of funds for commercial and residential property development					
12.	regular communications received from the REITs issuing firms is clear and understandable					
1.3	REITs Investor's require general knowledge and trends of real estate market					
14.	Investors REITs market monitoring enhances REITs uptake					
15.	REITs Association of Kenya (RAK) organizes investor education webinars and conferences which are beneficial					

Section V: Performance of REITs

The following indicators relates to performance of REITs, Please indicate how much you agree with the statements below

	Statements	**5**	**4**	**3**	**2**	**1**
1.	There has been an increases in the number of investors subscribing to REITs due to adequate investor awareness					
2.	REITs have continually offered easy access to the real estate property market at relatively low transaction costs					
3.	Investment in REITs have delivered strong long-term total returns to investors					
4.	There is growth in residential projects (students hostels) being funded through REITs					
5.	There is a growing demand among property developers investment managers (Promoters of REITs) to issue Development REITs meant to diversify real estate funding					
6.	There has been increased competitive price discovery for residential properties (apartments) occasioned by REITs backed real estate projects					
7.	There has been increased competitive price discovery for commercial properties (warehouses, offices, malls, shops) occasioned by REITs backed real estate projects					
8.	REITs returns have decreased due rental defaults and low occupancy rates which have yielded low income					
9.	appetite for REITs has grown since the value of real estate properties keeps on appreciating thus minimizing the risks of capital loss					
10.	REITs uptake have attained a critical mass necessary to create liquidity in the capital market					
11.	REITs have delivered competitive returns thus attracting more institutional investors					
12	REITs have delivered competitive returns thus attracting more retail investors					
13.	REITs have provided the investors with portfolio diversification since investors can now invest in diverse portfolio containing residential buildings, office blocks, industrial facilities and shopping malls					
14.	REITs have been recording increased dividend yields					
15.	Real estate indices in Kenya are quite high					

Thank You

Appendix III: Record Survey Sheet

The information contained in the following record survey sheet was obtained from the audited statements of the listed REIT for the period (2016-2020). The data variables relate to operational efficiency. The data was used to analyse the operational efficiency of the listed REIT at Nairobi Securities Exchange.

Item	**2016 Ksh**	**2017 Ksh**	**2018 Ksh**	**2019 Ksh**	**2020 Ksh**
Total Assets (Billion)	3,715	3,762	3,853	3,878	3,884
Equity capital (Billion)	3,586	3,666	3,724	3,763	3,776
Total Revenue (Million)	450,276	272,442	389,443	378,882	347,081
Operating Income (Million)	197,222	43,986	158,640	153,961	118,018

Appendix IV: REITs Association of Kenya Membership

Association Membership Category	
Kenya Association of Stock Brokers and Investment Banks	
1	African Alliance Kenya Investment Bank Limited
2	ABSA Securities Limited
3	CBA Capital Limited
4	Dyer and Blair Investment Bank Limited
5	Equity Investment Bank Limited
6	Faida Investment Bank Limited
7	Genghis Capital Limited
8	KCB Capital Limited
9	NCBA Investment Bank Limited
10	Renaissance Capital (Kenya) Limited
11	SBG Securities Limited
12	Standard Investment Bank Limited
13	Kestrel Capital (East Africa) Limited
14	Sterling Capital Limited
15	Dry Associates Investment Group
16	Salaam Investment Bank Kenya Limited
17	ABC Capital Limited
18	AIB-AXYS Africa Limited
19	Francis Drummond & Company Limited
20	Kingdom Securities Limited
21	NIC Securities Limited
22	Old Mutual Securities Limited
23	Suntra Investments Limited
24	Securities Africa Kenya Limited
25	EFG Hermes Kenya Limited
Fund Managers Association	
1	Alpha Africa Asset Managers
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 Investment Services Limited
9	FCB Capital Limited
10	Fusion Investment Management Limited
11	GenAfrica Asset Managers Limited
12	ICEA Lion Asset Management Limited
13	Madison Investment Managers Limited

14	Old Mutual Investment Group Limited
15	Sanlam Investments East Africa Limited
16	Standard Chartered Investment Services Limited
17	Stanlib Kenya Limited
18	Zimele Asset Management Company Limited
19	Natbank Trustee and Investment Services Limited
20	Allan Gray (Kenya) Limited
21	Cytonn Asset Managers Limited
22	Altree Capital Kenya Limited
23	Jubilee Financial Services Limited
24	ABSA Asset Management Limited
25	Kenindia Asset Management Company Limited
26	Dry Associates Limited
27	Genghis Capital Limited
Kenya Property Developers Association	
1	HF Development and Investment Ltd
2	Shreeji Development Ltd
3	Two Rivers Development Ltd
4	Username Investments Ltd
5	Acorn Management Services Ltd
6	AHCOF Investments (Kenya) Company Ltd
7	Amazon Projects Ltd
8	Amboseli Court Ltd
9	AMS Properties Ltd
10	Bahati Ridge Development Ltd
11	Blueline Properties Ltd
12	Camelot Consultants Ltd /Lantana Homes
13	Century City Property LTD
14	Cheriez Properties Limited
15	Chigwell Holdings Limited
16	Coral Property International Ltd
17	Cytonn Real Estate
18	Daykio Plantations LTD
19	Dewbury Ltd
20	Dunhill Consulting Ltd
21	Elegant Properties
22	ELM Ridge Ltd
23	Endless Africa Ltd
24	Enkavilla Properties Ltd
25	Emerge Developments Ltd
26	Fairdeal Development & Infrastructure Ltd
27	Fedha (Management) Ltd

28	14Trees Kenya Ltd
29	Golden Compass ltd
30	HASS Consult Ltd
31	Heri Homes Ltd
32	Homes Afrika Ltd
33	Homescope Properties Ltd
34	House and Homes Ltd
35	Ijenga Ventures Ltd
36	Immensity Holdings Ltd
37	Infpac Limited
38	Jabez Properties
39	Karume Holdings Limited
40	Kamhomes Investments Ltd
41	Karibu Homes
42	Kaydee Realty LLP
43	Kings Developers LTD
44	Kzanaka Limited
45	Leo Capital Holdings Ltd
46	Lordship Africa
47	MML Turner & Townsend
48	Meera Construction Ltd
49	Mlima Construction Company Ltd
50	Mugumo Developments Ltd
51	Natureville Homes
52	Norcent Projects Ltd
53	Optiven Limited
54	PDM (Kenya) Ltd
55	Pentagon Properties LTD
56	Pioneer Holdings (Africa) Ltd
57	Prism Residential Ltd
58	Realux Holding Ltd
59	Rozana Properties Ltd
60	Sayani Investment limited
61	Sigimo Enterprises Ltd
62	Sherry Blue Properties Ltd
63	SJR Properties Ltd
64	Slok Construction Ltd
65	Sohail Developments Ltd
66	Soma Properties Ltd
67	Superior Homes LTD
68	Tatu City Ltd
69	Tecnofin Kenya Ltd

70	The Epic Properties Ltd
71	The Combined Warehouses Ltd
72	The GoDown Arts Centre
73	Tilisi Developments Limited
74	Trident Estates
75	TSG Realty Ltd
76	Unity Homes LTD
77	VAAL Real Estate Ltd
78	Vishwa Developers LTD
79	Wood Products (K) Ltd
Corporate Membership Category	
1	MMC Africa
2	Viva Africa Consulting
3	Mboya Wangong'u & Waiyaki advocates
4	Novare Equity Partners

Source: REITs Association of Kenya, 2020

Appendix V: Licensed REIT Managers

1	Nabo Capital Limited
2	CIC Asset Management Limited
3	Fusion Investment Management Limited
4	Stanlib Kenya Limited
5	ICEA Lion Asset Management Limited
6	Sterling REIT Asset Management Limited
7	H.F. Development and Investment Limited
8	Britam Asset Managers Limited
9	Cytonn Asset Managers Limited

Source: Capital Markets Authority, 2020

Appendix VI: Communalities

Retained Indicators	Initial	Extraction
IS1	1.000	.583
IS2	1.000	.528
IS3	1.000	.612
IS4	1.000	.718
IS5	1.000	.730
IS6	1.000	.670
IS7	1.000	.630
PD1	1.000	.701
PD2	1.000	.722
PD3	1.000	.650
PD4	1.000	.627
PD5	1.000	.596
PD6	1.000	.621
PD7	1.000	.633
RF1	1.000	.548
RF2	1.000	.647
RF3	1.000	.697
RF4	1.000	.632
RF5	1.000	.602
RF6	1.000	.688
RF7	1.000	.608
IA1	1.000	.826
IA2	1.000	.828
IA3	1.000	.767
IA4	1.000	.777
RP1	1.000	.528
RP2	1.000	.696
RP3	1.000	.574
RP4	1.000	.658
RP5	1.000	.502

Extraction Method: Principal Component Analysis.

Appendix VII: Correlation Matrix

		Sentiments	Diversification	Awareness	Performance
Sentiments	Pearson Correlation	1	.431**	-.053	.467**
	Sig. (2-tailed)		.000	.500	.000
	N	166	166	166	166
Diversification	Pearson Correlation	.431**	1	.038	.549**
	Sig. (2-tailed)	.000		.627	.000
	N	166	166	166	166
Awareness	Pearson Correlation	-.053	.038	1	.056
	Sig. (2-tailed)	.500	.627		.476
	N	166	166	166	166
Performance	Pearson Correlation	.467**	.549**	.056	1
	Sig. (2-tailed)	.000	.000	.476	
	N	166	166	166	166

**. Correlation is significant at the 0.05 level (2-tailed).

Appendix VIII: Graduate School Authorization Letter

LAIKIPIA UNIVERSITY

P.O. Box 1100-20300,
NYAHURURU,
KENYA

TEL: +254-(0) 20 2671779, 20-2671771;
Cell: +254 0729285902, 0729281902
bpgs@laikipia.ac.ke; www.laikipia.ac.ke

OFFICE OF DIRECTOR
GRADUATE SCHOOL

REF: MDB35/4177/18

22nd July 2021

TO WHOM IT MAY CONCERN

RE: DANIEL THUO NDUNG'U – REG. MDB35/4177/18

The above mentioned is a Postgraduate student of Laikipia University undertaking a **Doctor of Philosophy** (Business Administration) degree under the Department of Commerce, School of Business.

His Research Proposal entitled **"INVESTORS SENTIMENTS, PROPERTY TYPE-LOCATION DIVERSIFICATION AND INVESTOR AWARENESS AND THEIR INFLUENCE ON PERFORMANCE OF REAL ESTATE INVESTMENT TRUSTS IN KENYA"** has been **Examined and Accepted** by the Board of Graduate School.

He is hereby authorized to conduct his research. Any assistance accorded to him will highly be appreciated.

Thank you.

Sincerely,

Mr. Simon Muchendu
FOR DIRECTOR

Appendix IX: Institutional Ethics Review Committee Authorization Letter

LAIKIPIA UNIVERSITY

P.O. Box 1100-20300,
NYAHURURU,
KENYA

TEL: +254-(0) 20 2696596;
Cell: +254 713-552761/
lu-ierc@laikipia.ac.ke; www.laikipia.ac.ke

INSTITUTIONAL ETHICS REVIEW COMMITTEE

Ref: LU/APP/04/2021

9th September, 2021

Daniel Ndung'u Thuo
P.O.BOX 18194-20200,
NAKURU

Dear Daniel,

RE: INNITIAL SUBMISSION: INVESTOR SENTIMENTS, PROPERTY TYPE-LOCATION DIVERSIFICATION AND INVESTOR AWARENESS AND THEIR INFLUENCE ON PERFORMANCE OF REAL ESTATE INVESTMENT TRUSTS IN KENYA

This is to inform you that Laikipia University Institutional Ethics Review Committee (LU-IERC) has reviewed and approved your above research proposal. Your application approval number is **LU/APP/04/2021.** The approval period is **9th September, 2021- 18th September, 2022**

This approval is subject to compliance with the following requirements;

i. Only approved documents including (informed consents, study instruments, MTA) will be used;
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by Laikipia University Institutional Ethics Review Committee;
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to Laikipia University Institutional Ethics Review Committee within 72 hours of notification;
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to Laikipia University Institutional Ethics Review Committee within 72 hours;
v. Clearance for export of biological specimens must be obtained from relevant institutions;

vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal and

vii. Submission of an executive summary report within 90 days upon completion of the study to Laikipia University Institutional Ethics Review Committee.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely

9/9/2021

Prof. Moses K. Rotich PhD

CHAIRMAN
LAIKIPIA UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE

Appendix X: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **598295**

Date of Issue: **19/August/2021**

RESEARCH LICENSE

This is to Certify that Mr.. Daniel Thuo Ndung'u of Laikipia University, has been licensed to conduct research in Nairobi on the topic: INVESTOR SENTIMENTS, PROPERTY TYPE-LOCATION DIVERSIFICATION AND INVESTOR AWARENESS AND THEIR INFLUENCE ON PERFORMANCE OF REAL ESTATE INVESTMENT TRUSTS IN KENYA for the period ending : 19/August/2022.

License No: **NACOSTI/P/21/12351**

598295

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

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