AN ANALYSIS OF FINANCIAL INVESTMENT DETERMINANTS IN THE KENYAN RETAIL PROPERTY MARKET

BY

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DECLARATION

This Research Project is my original work and has never been presented for a degree at any other University for examinations.

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This research proposal has been submitted for examination with my approval as the University supervisor.

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DEDICATION

I devote this research to our Lord and Saviour for the ability and strength to undertake my studies, I do not take that for granted. In addition special Dedication to my Family and especially my mother, you are the great pillars in my life.

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ABBREVIATIONS

CAGR: Compound Annual Growth Rate

CAPM: Capital asset pricing model

CPI: Consumer Price Index

GDP: Gross Domestic Product

KBA: Kenya Bankers Association

KNBS: Kenya National Bureau of Statistics

OBG: Oxford Business Group

P.A: Per Annum

PE: Private Equity

SME: Small & Medium Enterprises

SPSS: Statistical Package for the Social Sciences

ABSTRACT

The Kenyan Retail property sector has experienced considerable growth subsequently becoming the fourth largest contributor to the economy. Recent market analysis indicates that apart from local and foreign investors, institutions such as asset management companies and mutual funds are venturing into the lucrative industry. Investors in the sector have been able to reap high average rental yield hence the rising popularity of development of mega retail complexes among high net worth investors. The study investigated financial investment factors that affect investment in the Kenyan retail property sector. Financial variables selected for the study were interest rates, inflation, GDP growth and land prices. The study implemented quantitative descriptive research design. The study conducted a population study of the Kenyan retail property sector development. Secondary data on retail market indices were sourced from annual reports by market analysts such as Cytonn research, Hass consultants and Knight Frank. Data was analysed and summarized using excel spread sheets and statistical package for social sciences. The findings of the analysis indicated a fairly strong correlation between the selected financial variables and retail property investments. The findings also established that GDP growth has a direct and proportional effect on retail property investments. Interest rates exhibited a statistically significant negative relationship with retail property investments. Similarly, average annual inflation rates have an inverse relationship to retail property investments. In addition though the significance level is marginal land price indices indicated a negative relationship to retail property investment that was noted to be less than proportional. Test of significance indicated that the model was statistically significant in predicting the relationship between retail property growth and the predictor variables. The recommendations of the study highlighted that monetary policy measures should be geared towards economic stimulus. Likewise fiscal policies should be aimed at reducing taxation or subsidizing the property market industry and increasing spending on economic incentives to ensure continuous and sustainable development in the retail sector.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The real estate sector is one of the economic pillars for development of a country. It is a vital sector for growth of any economy as noted from the growth models of developed countries and emerging economies. The sector has a huge multiplier effect on the economy and related sectors through creation of industries such construction, commodity trades, providing employment opportunities, offering shelters to households and enhancing income distribution (Nzalu, 2012).

Commercial real estate is a cyclical market that exhibits four stages specifically inception, growth or expansion phase, over supply and lastly recession or decline. Various real estate markets have experienced market booms and recession cycles most notably the 2007 mortgage crisis that caused financial turmoil around the world. The main cause of the recession was a decline in residential property prices in the United States coupled by an increase in monthly mortgage payments as interest rates soared (Adonis, 2014). On the other hand one of the unique attributes of commercial real estate is that investors can invest successfully across the investment life cycle of the industry.

In Kenya the real estate market is well diversified in terms of income geography and other demographics that reflect on investors. In terms of income, there is a clear segmentation of high, middle and low income. The main property types include residential, retail and office as well as special properties. The key drivers of real estate market in Kenya include

demographics, income, availability, cost of financing, government policy, price, and changing lifestyles (Okumu, 2017).

The Kenyan real-estate sector has shown considerable growth contributing significantly to the national GDP over the years (Knight Frank, 2016). The commercial retail market in particular has experienced rapid expansion over the recent years subsequently becoming the fourth largest contributor to the economy. The sector has experienced an extensive increase in investments from the business community mainly due to favourable returns and future growth prospects (Oxford Business Group, 2016). Hence it is an ideal research project since there is vested interest amongst investors.

1.1.1 Financial Investment Determinants in the Retail Property Sector

Investment in real estate and particularly retail property is attributed directly to specific financial factors that affect investment in the sector. The value or price of an asset is determined by the market dynamics of supply and demand. Price theory states that the optimal market price is the equilibrium where the buyers demand benefit meets the seller's marginal cost (Friedman, 1962). Transaction costs that accompany real estate contracts are normally set as a percentage of the original price. The fees include legal, and other municipal taxes imposed on land and other real estate assets.

Capital comprises of initial funds which is put into project development. The most common source of funding for capital projects is through loans or credit from financial institutions. Most investors have adopted a pooling of resources approach to spread risk and diversify their portfolio.

Interest rates represent the opportunity cost of capital that investors are willing to incur to fund projects while matching other forms of investments. Therefore future interest rate trends play an important role in investment as well. There is an inverse correlation between interest rates and investments implying that an increase in interest rates tends to reduce the quantity of investments while lower interest rates increase investments (Thomas & Harold, 2016).

Gross Domestic Product per Capita is measured as the total output of the economy as a ratio of the total number of people in the country. GDP per capita growth reflects on an increase in productivity. The ratio is applied as an indicator the standard of living, with higher levels representing higher standards of living. Government spending on infrastructure and services is the main driver of GDP growth. The effect is realised by way of an increase in household disposable income which can be directed towards savings and investments. However growth should be accompanied with reduction in inequality so that the entire populace can benefit from economic development (KNBS, 2014).

The level of money flowing in the economy through expansionary or contractionary monetary policies has subsequent effect on investments in real estate since shifts in money supply cause changes in prices of land and other real estate development components such as building material, labour, and construction works. Excessive supply of money could lead to an inflation and consequently affect investments because of higher discount rates (Liow, Ibrahim & Huag, 2005). Inflation can be considered as the changes in the consumer price index (CPI) which is a measure of shifts in retail prices of goods and services directly affects the purchasing power of money and also plays a significant role in the real estate investment decision (Makena, 2011).

1.1.2 Performance of the Retail Property Sector

Investment is a process through which capital is input in one period to realise returns which are mostly measured as future cash flows. Recent market research indicates that apart from private investors both local and foreign, institutions such as asset management companies; mutual funds, insurance companies and pension schemes are venturing into the lucrative real estate industry. Fisher and Sirmans, (1993) applied internal rate of return (IRR) simulation procedure to measure returns on portfolios comprised of commercial properties, U.S stocks and U.S bonds. The simulated IRR method helps to examine the cross sectional distribution of real estate returns over different time periods. The study further outlined that inflation protection as one of the main reasons institutions invest in real estate.

The Kenyan real estate sector has consistently outperformed other asset classes over the last five years, giving a return of 25 to 30 percent per annum. Residential housing sector yields an average return of 5.0%, whereas commercial and retail sectors generate an average return of 9.0% p.a and 10.0% p.a respectively (Cyntonn, 2016). Consequently commercial retail businesses and related activities including land transactions, construction work, retail products and services have emerged as primary drivers of the country's GDP through revenue generated from taxes and sales. Investors in the sector have been able to reap high average rental yield of 11.7% p.a through the malls surge (KPMG, 2016).

1.1.3 Kenyan Retail Property Sector

The Kenya`s retail sector has shown significant growth in recent years, predominantly due to positive macro-economic fundamentals particularly an average GDP growth rate of 5.6% p.a from 2012 to 2016 (KNBS, 2017). A rise in capital investment combined with an increasing urban population has fuelled growth in the sector making Kenya's retail industry the continents fastest growing market and the second largest in that case after South Africa (Gachiri, 2016). The continuous increase in the middle class that is comprised an estimated 45% of the population is also a key driver resulting to soaring consumer spending and purchase power which has risen by as much as 67% (Oxford Business Group, 2016). Despite an increase in formal retail and sprouting of malls the market remains dominated by the informal sector; local dukas, shops and wholesalers where majority shopping is carried out.

An increase in the Kenyan population of approximately 2.6% p.a (KNBS, 2010) has led to a subsequent increase in demand for retail goods and services. Consumer research indicate that the middle class shopping trends and priorities are by and large spending on electronic devices, clothes and other amenities being provided in the malls.

Kenya's economic growth over the last 10 years at a CAGR of 5.3% has in effect lead to an increase in per capita wealth (Deloitte, 2016). There is a notable increase in investments in the commercial property sector through local business community ventures as well as international investors prospecting entrance in the Kenyan market through partnerships with local investors or as sole ventures, making the retail sector a vibrant market.

The industry has seen several new malls opening up coupled with an expansion in the domestic formal supermarket segment as well as arrival of international retailers (Murungi, 2016). Most notably Tuskys and Naivas supermarkets have expanded significantly since 2012 and there has been penetration by several new retailers including CleanShelf, QuickMart, GreenMart, Maathai supermarket, EastMatt as well as new international entrants such as Carrefour and Botswana's Choppies which has acquired most of Ukwala supermarket outlets.

The current infrastructural development projects in the major cities of Nairobi, Mombasa, Kisumu, Eldoret, Nakuru and Meru has led to a subsequent increase in retail space. Nairobi has emerged as a hub for shopping center development and is ranked as the largest market by existing anchor tenants floor space. New retail shopping malls include: Two Rivers mall by Centum Investment, Garden City mall by PE firm Actis. Britam Investment is set to build malls in Kileleshwa and Mlolongo. Others notable new entrants in the industry include The Hub, Green Span Mall and Comesa Mall. Devolution as expected is a catalyst for development in satellite towns which are commercial and administrative centers. Business hubs such as Rongai, Kitengela, Syokimau, Ngong, Ruaka, Juja and Thika are also experiencing a boom in context of development of retail shopping centers (Karuge, 2017).

1.2 Research Problem

Retail property investment is dependent on financial aspects of capital structure and pricing, demand & supply, interest rates and inflation, risk and return all which are affected by market dynamics and shifts within the economy. Retail development in context is also

highly capital intensive from a developers point of view and the same applies to the investors. Malls are large development projects and are require large amount of funding. A shortfall in adequate funding may result in delaying of projects and prolonged project time frames, thus increased cost of financing. The major cause of the slowdown is attributed to financial and management challenges by both investors and developers (Kioleglou, 2016). Relatively high prices of land parcels for development with in urban towns and centres has seen a shift in focus to other towns where large parcels of land at relatively affordable prices are situated. Property developers however are constantly being faced with a number of challenges related to land procurement.

Sannapu and Singh (2012) noted that rapid expansion of retail space could lead to a supply demand imbalance. Establishment of shopping centers in the same area could also lead to stiff competition between malls and therefore marginal uptake in retail space. Karuge (2017) highlights that there are some concerns that the retail market in Nairobi may struggle to accommodate the new retail space since several upcoming mall projects. Existing malls could also be compelled to upgrade to sustain patronage and existing tenants.

Loyford and Moronge (2014) study on economic factors and the effect on performance of real estate in Kenya concluded that interest rates, inflation, cost of transactions highly influenced development of the real estate industry. The study revealed that variations in interest rate have a profound effect the performance of any property market.

Kenya Bankers Association (KBA, 2017) indicate on their report that the recent capping of interest rates by the government initially as a measure to shield customers from interest rate fluctuations is viewed to have affected lending and borrowing of funds. There has been a reduction in flow of credit to Small and Medium Enterprises (SME) due to loan approval and disbursement formalities.

The Government's recent move to increase excise taxes on vehicles and foodstuffs (KPMG, 2016), coupled with the depreciation of the currency could impact future expansion in the near term. Despite this, demand remains comparatively high and the sector is expected to see both investment and overall activity continue on an upwards trajectory well into 2016**.**

Although different researchers conclude that retail property investment is greatly influenced by pecuniary factors of pricing, transaction challenges and economic factors such as interest rates, prevailing tax rates, monetary policies and inflation, little research has been conducted on the initial process of investment and investment management. Though there are new entrants in the industry, the financial and management challenges highlighted are likely to adversely affect the retail property development in the near future. The question of this research is what is the effect of financial factors of the economy on the investment of retail property in Kenya?

1.3 Objectives of the Study

The objectives of the study was discussed in terms of both general and specific objectives. The general objective of the study is to determine the effect of selected financial variables on investment the retail property sector. The specific objectives are:

1.3.1 Specific Objectives

i. To analyse the factors of land pricing and the effect on investments in the retail property sector.
ii. To examine the effect GDP gowth on retail property investment in Kenya.
iii. To establish the impact of interest rates on retail property development in the Kenya market.
iv. To determine the effect of inflation rate variations on investment in retail property market in Kenya.

1.4 Value of the Study

This research is relevant in practice to private investors who are venturing in retail property development as a wealth creation mechanism or diversification to add to the other asset classes. Private developers whose main concerns are raising of capital for their projects, ensuring constant flow of funds till completion and making returns through rental income are also applicable to the study.

Recent market research indicates that institutions are now venturing into retail property investment specifically capital projects such as building malls. Finance institutions such as

investment banks, insuarance companies and mutual investment funds will also find this study useful so as to access information on market statistics and future prospects.

Banks and other microfinance intitutions who are lenders of funds are also captured in this study. Flow of capital to real estate developers at affordable interest rates is a crucial for ensuring growth in the industry.

Foreign Investors prospecting on investing in the kenyan retail market are also stakeholders in the study since they require research on market penetration, the target group for their goods and services and the prevailing and future rates of taxes.

The Counties and the Central Government particularly the sector of Land, Housing and Urban Development & the Ministry Devolution are also stakeholders of this study as more and more projects within the country are directly related to retailing and establishment of Industrial Parks.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature has been reviewed under the following thematic concerns: review of investment theories and macro-economic theories. The conceptual framework and empirical studies of the research are also discussed in this chapter. The concept of property pricing and land use as key determinants of investment is also reviewed in this chapter.

2.2 Investment Theories

Retail property investment and performance is dependent on financial variables such as capital structure and pricing, risk and return, market demand & supply as postulated by specific theories on investment,

2.2.1 Keynesian Investment Theory

The Keynesian investment theory was developed by Keynes in 1936, in order to address the neoclassical view of investment whereby they had classified the determinants of investment in an entity as: cost, return and expectations; he argued that for any investment to be undertaken the prospective investor should compare the marginal efficiency of capital to the real interest rate.

He considered the marginal efficiency of capital (MEC) as the discounting rate that makes the present value of all possible cash inflows over the economic an income generating asset

be equal to its purchase cost. In other words, it is the rate at which an asset is expected to breakeven. It is also evidenced on the prospective cash flows decrease as the investment decreases overtime because the initial investments are concentrated in areas with high returns as compared to the latter ones. (Hanson, 1986)

2.2.2 Market Portfolio Theory

Institutions are slowly moving into investment in real estate to diversify their portfolio. The use of real estate as a portfolio diversifier brings in the need to evaluate the relationship between risk and return as discussed by Harry Markowitz (1952). He postulated that risk and return relate explicitly accounts for the variability of asset returns, which is measured using the standard deviation of a security's return.

The kind of assets to get into a firm's investment even at the property level is an important indicator of how a portfolio of properties should be mixed to maximize the return and minimise the risk. Markowitz`s theory of portfolio selection (1952) postulated the measurement of risk as the contribution of a new security to the overall risk of a diversified portfolio rather than the measurement of each security risk separately. The risk that a new security adds to a diversified portfolio is used in capital budgeting as the risk-adjusted rate of return.

2.2.3 Cash Flow Theory

Cash flow Theory postulates that both past and current returns have been viewed as a predictor of future profit expectations hence used in determination of investments (Biscoff, 1971). Cash flows, being the difference between the opening and the closing balance.

When positive it is seen as an alternative source of income to the firm in event the cost of funds become high due to exhaustion of the firm's internal funds brought about by the imperfect market conditions (Mundia, 2014).

2.3 Macro-Economic Theories

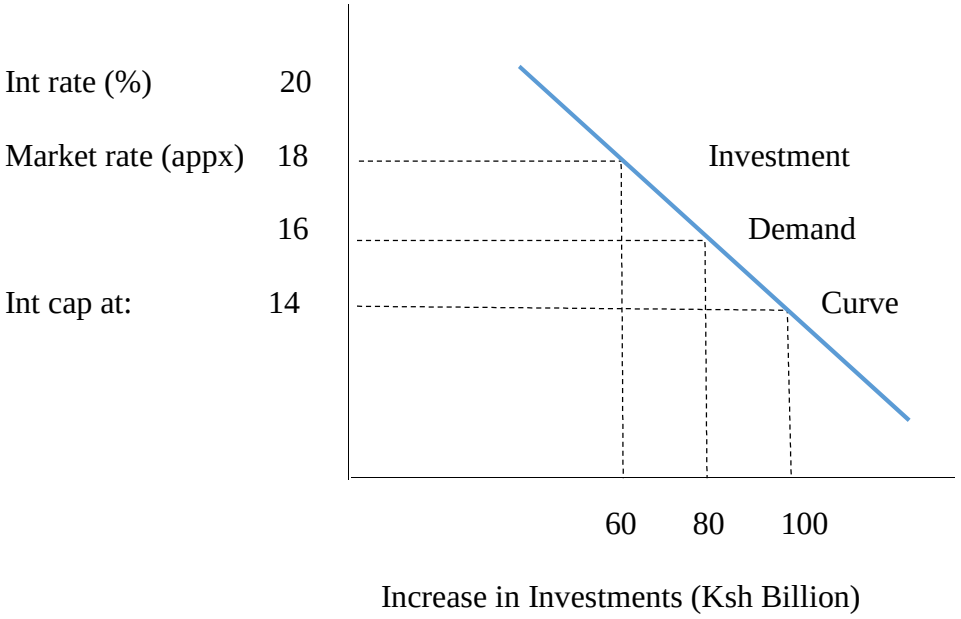
Real estate investment is dependent on economic factors of interest rates and inflation as outlined by the economic theories on interest and inflation.

2.3.1 Monetary Theory of Interest

Interest Rates as a cost of capital is incurred by the borrower of funds for the use of the funds for a given time period (Brigo & Mercurio, 2006). Trends or movement in interest rates affects lending and borrowing of funds to invest the real estate industry. An increase leads to a subsequent increase in cost of borrowing and vice versa.

Interest rates are also used as monetary policy instruments by the Government. Intervention on interest rate caps is applied in situations where the lenders lack self-regulation such as when the price is determined by the lenders and not Demand/Supply mechanism at the disadvantage of customers. If interest cap is set above market clearing rate trade is not restricted. The market rate adjusts through trading and dealings between borrowers and lenders. If the imposed interest rate is set at a lower level than the market-clearing rate, an excess demand by customers sourcing for funds to invest in projects will exist (Bliss, 1997). Figure 2.2.1 shows an investment demand curve for the economy before and after implementation of interest rate caps.

Figure 2.1 Investment Demand Curve



2.3.2 Theory of Inflation

Inflation refers to the persistent increase in the general price level in the economy over a period of time (Kimani & Mutuku, 2013). The impact of inflation in the economy can be quantified monthly, quarterly, semi-annually and annually. As inflation rises, every currency an investor owns buys a smaller percentage of a good or service. A significant rise in inflation would therefore lead to a reduction in retail property investment. Inflation can either be cost push inflation or demand pull inflation.

2.3.3 Economic Growth Model

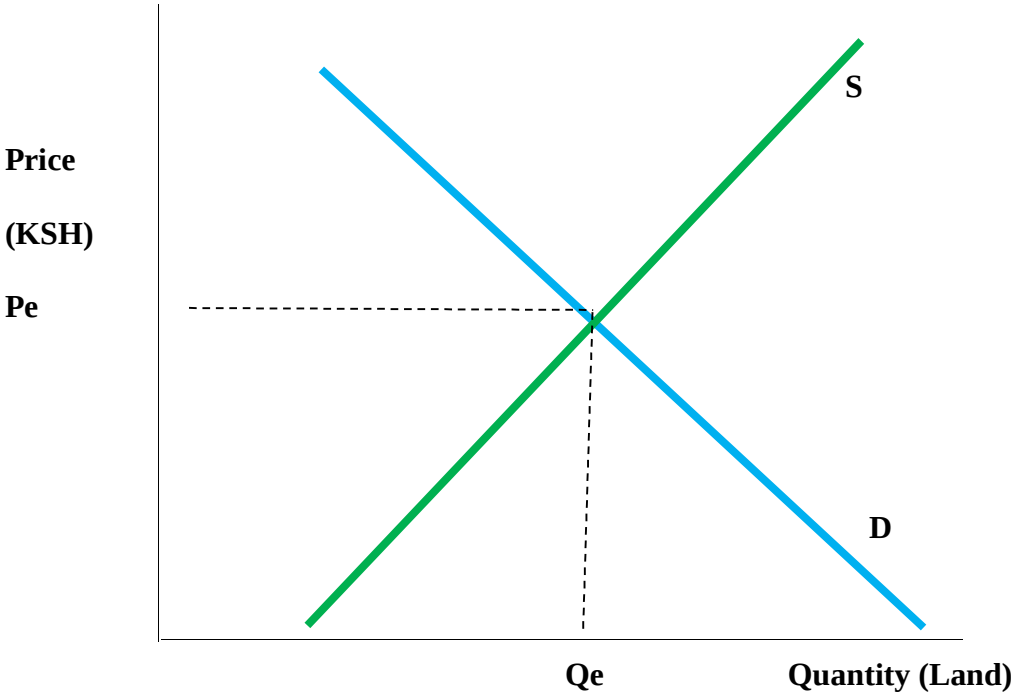
Capital and Labour are key factors of production in any industry including retail property investment. The neo-classical growth model by Robert Solow (1978) postulates that sustained increase in capital investment increases the growth rate only temporarily due to the capital labour ratio. The marginal product of additional units of capital is assumed to

decline with real GDP growing at the same rate as the workforce thus the economy moves back to a long-term growth plan rate. With more capital input and infrastructure development a steady growth path is eventually reached when output, capital and labour are all growing at the same rate, that is capital per worker and output per worker are constant.

2.4 Theories of Land Pricing

The price of real assets such as land is set at the level where the demand for land today is equal to the supply available today (Friedman, 1962). Figure 2.2 illustrates is the demand (D) supply(S) curve showing the quantity demanded and the equilibrium price in the real estate industry.

Figure 2.2: Demand Supply Curve for Real Estate Industry



2.4.1 Bid Rent Theory

Bid rent theory refers to how real estate demand and supply specifically land prices change with distance from the central business district (Mohamed et al, 2014). Land proprietors in the market compete for land near the city centre hence the prices of parcels of land close to the city are quite high. More accessible areas attract greater traffic flow of customers and therefore higher revenues and turnover. Ideally the nearer a retail establishment is to the CBD profits are maximized. Ideally land parcels further away from the CBD attract lower prices. The bid rent function explain the relationship between urban land uses and urban land values (Mohamed et al, 2014)

2.4.2 Economic Land Use Theory

Economic Land Use theory explores the relationship between land use, land value and land price. The theory proposes the application of operational land use models by analysing the association between land value and the intended use for the specified parcel of land. The theory takes into consideration variables related to land use namely; geographical, economic, urban laws and legislation.

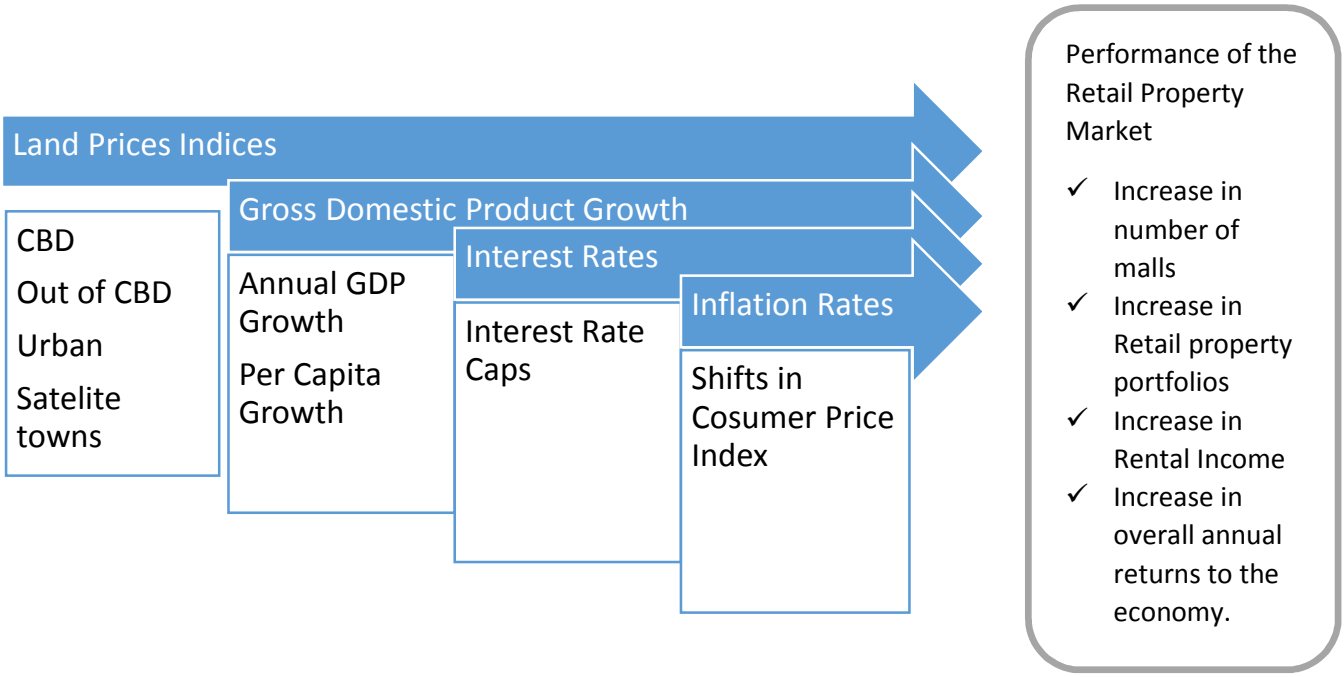
An increase in urbanization leads to congestion within cities and their environs. There is need therefore to outline a framework for land utilisation by different vested interests and for different purposes. Governments apply land use planning to manage the development of land; a process which outlines the basics of the community while safeguarding natural resources (Mohamed et al, 2014). It is an organised evaluation of land facets such as water potential, land use alternatives, economic and other factors; hence the best land use options to implement. This is especially true in the case of counties in Kenya where we are seeing more and more land being set aside for industrial parks and other projects. The development process will entail a designed and structured expansion plan within the towns and cities

2.5 Conceptual Framework

Investment of the real estate market and particularly the retail sector is a product of specific financial factors of investment. The independent variables highlighted in this study with the independent variable as Property pricing, transaction costs, GDP per capita, Interest rates and Inflation. The dependent variable is the Retail Property Sector Performance.

Performance measures have been identified as: increase in property development, increase in retail property portfolios, increase in retail property returns, and increase in retail property related activities. That is the overall contribution of the retail sector to the economy. All these concepts have been proposed and developed over time as seen in this study.

Figure 2.3 Conceptual Framework of Financial Investment Determinants in Kenyan Retail Property sector



2.6 Empirical Studies

Nzalu (2013) analysis of the effect macroeconomic factors on real estate growth indicated that GDP growth had the most substantial positive effect on investment, while a rise in inflation and interest rate variations were analysed to be statistically significant

determinants of real estate growth. The study concluded that policy measures should be geared towards curbing rising inflation rates, maintaining stable interest rates and in general improving the economy. The study outlined the positive effects of GDP growth on property investment as the key driver of increase property procurement. Notably household disposable income which can be diverted to real property investments rises and the market exhibits favorable financial investment conditions.

Kanoga et al (2015) investigated the effect of place mix dimension on mall performance in Nairobi County Kenya. The study concluded that strategic positioning of malls and location criteria was found to be a key factor of customer patronage and subsequently a factor of profit acceleration. The study proposed that shopping malls developers should carry out market research to get more insights on where to build premises and research on designs to incorporate on architectural structure for the purposes of benchmarking in order to attain competitive advantage.

Sannapu and Singh (2012) emphirical study on mall positioning in India identified that as the sector transitioned from traditional retailing to modern retailing major industry players such as Tata Trent and Bharti group ventured into retailing business as diversification strategy. An increase in the middle class, high urbanization rate and accessibility to personal credit are some of the factors that have contributed to a boom in the Indian retail sector. The rush by many developers to join the sector however has had its setbacks. Lack of research marketing, positioning strategy in effect lack of proper planning resulted in under performance of many mall projects. Oversupply of retail space led to high vacancy

levels and a few mall had to close down. None the less shopping malls which were strategically positioned performed well and are still fully operational. The study concluded that overall property management, location, convenience, and entertainment significantly influence customer indulgence which in turn highly influences patronage and hence high revenues and profits.

Nicoleta and Dan-Christian (2014**)** assessment of the Romanian local retail noted a rise in investment from local investors and increase in size of retail space led to the Romanian market reaching a mature stage of growth. The study also established that measuring consumer demand and future growth in demand for retail commodities was crucial in estimation future performance in the sector. Patronage preferences from the customer's point of view was determined by assortment, image, price, communication, environment (décor) and service

Wuhan and Adnan (2015) indicated that there was a long term effect of interest rate shifts on investments in real estate which their analysis calculated to be negative on the long term but positive on the short term. This could be the same case in Kenya where the interest rate caps are estimated to have adverse long term effects on lending particularly to small and medium size enterprises.

Seung-Young and Kim Jinu (2008) in their study on retail prices in Seoul observed that economic conditions, physical characteristics and location have a direct effect on retail property prices in Seoul city. The analysis concluded that financial factors within the retail

trade industry highly influenced retail prices at a statistically significant level within Seoul city. That is price, sum of loan were positively related to retail property prices. Physical attributes of retail properties such as age of building, size of shops and local retail sales were also affected property prices. The building age and size of shops in selected areas were found to be important explanatory variables in calculating the retail property prices. This is also the case in the Kenyan Shopping malls industry as seen with new malls attracting more clientele than informal retail areas or older malls (Murungi, 2016).

2.7 Summary of Literature Review

Retail sector research has evolved over the years as noted by Mark and John (1994). Early research was based on central place theory with simplistic combination of consumer choices and business competition (Hotteling, 1929). Two more areas of research that have emerged with the modernizing and expansion in the retail sector particularly in emerging economies are the benefits that large anchor tenants such as malls have over small non anchor tenants; the traditional shops, general stores, medical stores, food vendors.

While research has featured various aspects of the retail sector little research has been conducted on the investment process. Decision making criteria includes sourcing of funds, identifying suitable contractors, the target market; location on where to put up a mall, time frame amongst other challenges faced by investors especially those who are trying to penetrate new areas. This study will be conducted with the objective of filling these gaps in the studies and also offer market analysis and provide reliable information

2.8 Conclusion

The current market share of organized retail in Kenya compared to other developed markets is still quite low. The Kenyan retail sector is currently in the expansion or growth phase. To capitalise on future potential, investors in this sector should carry out extensive market analysis so as to overcome challenges facing the sector and therefore ensure success of their investments.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter discusses details of the research approach that was employed in the study.

3.2 Research Design

The study used quantitative descriptive survey method. A descriptive study is designed to describe the characteristics of the variables of interest in a situation by constructing a summary of events, group or people. The design adopts data collection and tabulation of the frequencies on research variables or their interaction (Cooper and Schindler 2003). The design was best suited for this study since it comprised a comprehensive analysis of the retail sector and the relevant stakeholders. The research design focused on gaining an understanding of the context of the research and the analytical process.

3.3 Target Population

The study constituted a population study of the Kenyan retail property industry through analysis of statistics in the sector and the factors that affect investment in the sector.

3.4 Data Collection Techniques

The study utilised secondary data collection tools for information on information in the Kenyan retail property market. Data on the independent variables; interest rate, inflation rate, GDP output was obtained from annual reports by Kenya National Bureau of Statistics (KNBS) for the period of 2007 to 2017. While secondary data on the dependent variable

retail property investment indices from the Hass property index, Knight Frank reports, KPMG reports all of which is public information.

3.5 Data Analysis

To obtain meaningful information research data must be analysed and presented properly (Mugenda&Mugenda2003). The data was analysed through excel spread sheets and SPSS statistical tools to derive inferential statistics, percentages, mean, variance and correlation coefficient and presented in graphs and tables. Data was analysed on model estimation, specification and assessment so as to test whether it conformed to the expected economic theory. The analysis process included descriptive statistics analysis and regression analysis. Test statistics involving the t distribution on the specific explanatory variables were conducted. Analysis of Variance (ANOVA) which is the F statistic on the overall effect of the regression equation was also conducted.

3.6 Proposed Research model

Linear multiple regressions will be used to establish and explain the correlation between the selected independent variables and retail market performance.

$PF = \beta 0 + \beta 1\ LPrC + \beta 2 GdP + \beta 3 InF + \beta 4 iNT + \varepsilon j$ Where;

PF= Retail Property investments

$\beta 0$ = Regression constant,

$\beta 1, \beta 2\ \beta 3, \beta 4$ are the model coefficients,

LPrC, GdP, InF, iNT are the Independent Variables,

εj is the error term. The inclusion of a model error, εj, is necessary because other unspecified variables may also affect retail market performance.

LPrC= Land Prices: Prevailing Land Prices existing Nairobi and Environs.

GdP= per capita Gross Domestic Product

InF=Inflation Rates: Prevailing CPI rate

iNT =Interest rates: Prevailing Interest Rates

3.7 Operationalization of Variables

Table 3.1 Summary of Data Analysis

Research Objectives	**Independent Variables**	**Indicators**	**Level of Measurement**	**Dependent Variable**
To analyse the factors of land pricing and the effect on investments in the Kenyan retail property sector.	Property Prices	✓ Higher Prices near CBD ✓ Lower Prices further from CBD	Location Location & Interval	Performance of retail property sector in terms of increase in investments in the sector.
To identify how specific macro-economic factors; affect retail property development in the Kenya market	GDP per capita Interest Rates Inflation Rates	✓ Increase in GDP per capita ✓ Interest rate Caps ✓ Shifts in CPI	Interval Interval Interval	

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

Data analysis and findings of the study is tabulated and presented using graphs and charts in this chapter. Secondary data on financial investment determinants in the Kenyan retail property sector statistics and financial variables that affect investment in the sector was gathered exclusively from published reports from Cytonn Research, Hass consultants, Knight Frank Kenya Bureau of Statistics and Central Bank of Kenya (CBK).

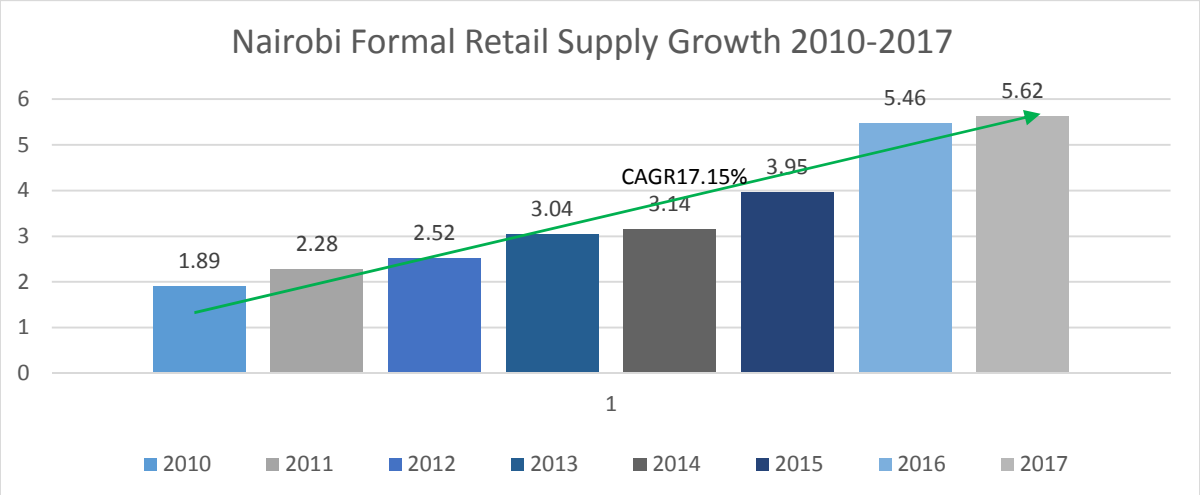
4.2 Data Presentation

The data obtained spanned the period between years 2007 to 2017. Data analysis included trend analysis, descriptive statistics analysis, regression analysis and test statistics analysis. The data was analysed on excel spread sheets and SPSS version 20 and the findings summarized in graphs and tables.

4.2.1 Kenyan Retail Market Performance

The Study research sought to analyse the retail market growth in Kenya over the indicated study period and establish the trend as illustrated by figure 4.1. And figure 4.2.

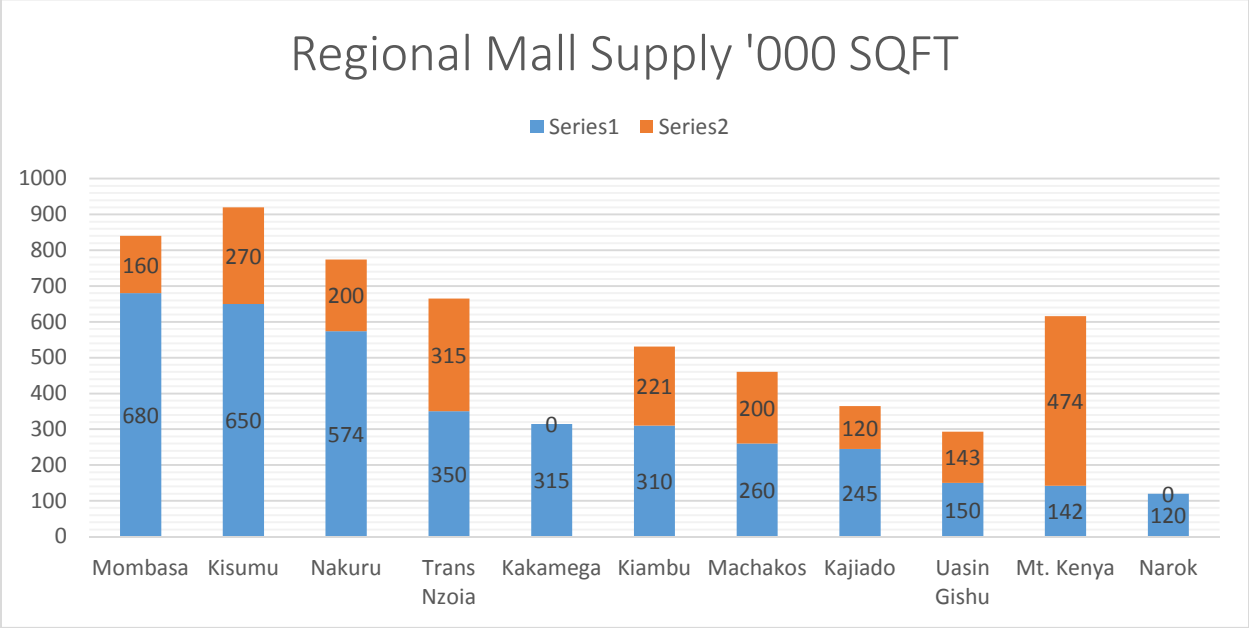
Figure 4.1 Nairobi Retail Supply Growth between years 2010-2017 in Millions of Square Feet



Source: Cytonn Research

The results indicated that the Kenyan retail property market experienced continuous growth over the last decade. Nairobi for instance has experienced a compounded annual growth rate of 17.15% from 2010 to 2017. The highest growth rate of 38.2% experienced between 2015/2016. The least growth rate of 3.3% and 2.9% was experienced between periods 2013/2014 and 2016/2017 respectively. Research also revealed that there are development projects in the pipeline around the specified regions.

Figure 4.2 Regional Retail Space Supply as of July 2016 in '000 Square Feet



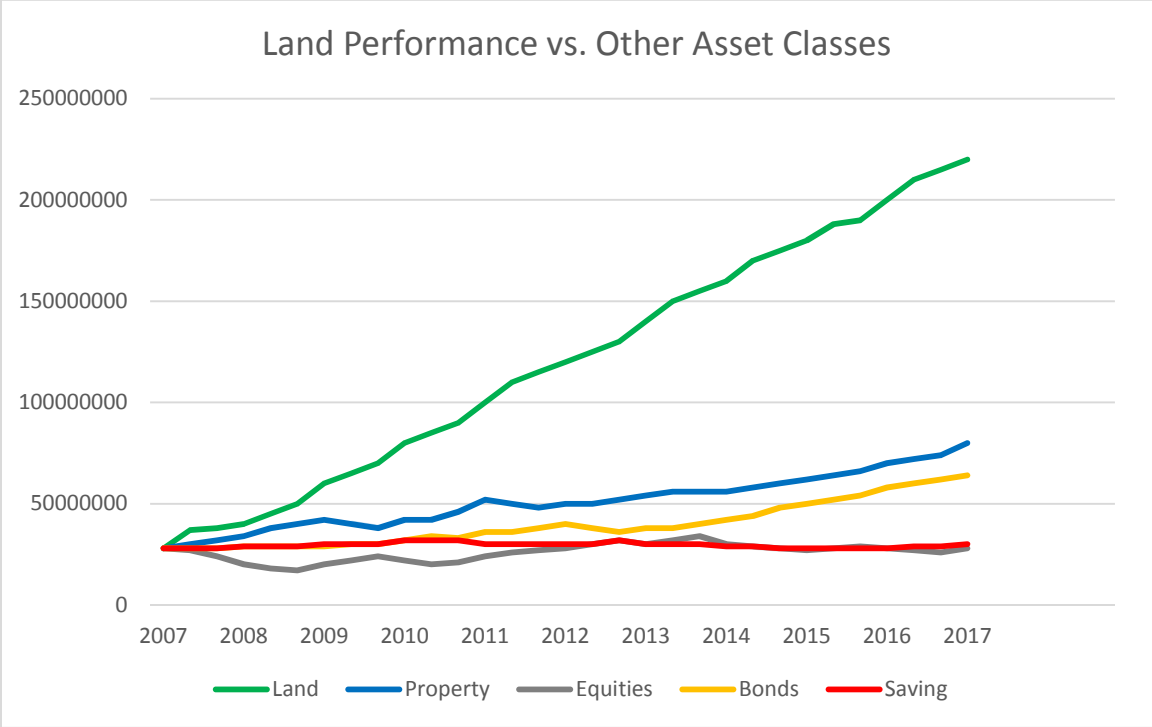
Current Retail Space Upcoming Developments

Source: Cytonn Research

The retail space expansion in Mombasa, Kisumu and Nakuru counties through the ongoing development projects is expected to grow at 19%, 29.3% and 25.8% respectively. The largest ongoing or planned developments are in the regions of Meru, Embu, Nanyuki and Nyeri that constitute the Mt. Kenya Region yielding a growth rate of 76.9%. Other regions that are experiencing considerable expansion are Trans Nzoia, Kiambu, Machakos and Uasin Gishu at a growth rate of 47.4%, 41.6%, 43.5% and 48.8% respectively.

4.2.2 Land Performance VS. Other Asset Classes

Figure 4.3 Land Performance VS. Other Asset Classes



Source: Hass Land Index

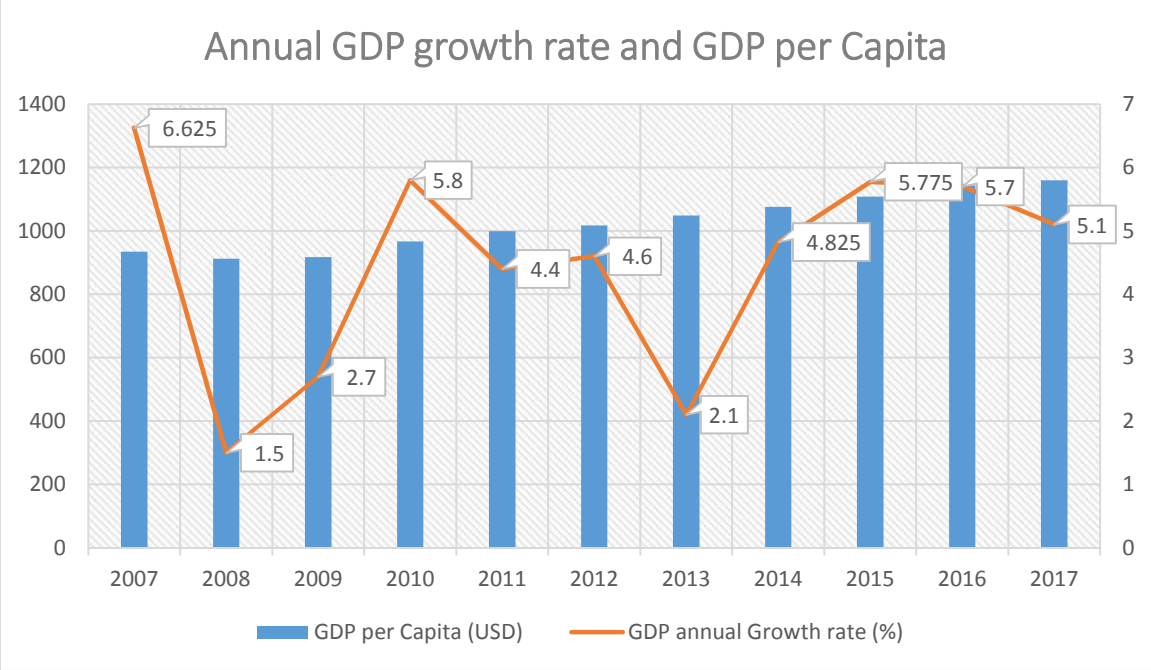
Market research indicates that Land values have increased at approximately 6.11 fold in the suburbs and 8.05 fold in satellite towns outside Nairobi from 2007 to 2017. This is an indicator that there is more demand for land in satellite towns as opposed to land near the CBD. Land price indices however indicate that Land Value near the CBD (suburbs) is higher than in the land in satellite towns.

Land investments have over the past decade outperformed other asset classes in the Kenyan investments portfolios. Market research indicates that an initial invested of Ksh32.4m in 2007 would have appreciated to Ksh173.7m by the end of 2014 if invested in urban land (5.36 fold), Kshs64.2m if invested in Property, Ksh57.8m if invested in Bonds and

Ksh29.2m if invested in Equities (Hass Consult, 2014). By March 2017 the average value of urban land had appreciated 6.1 fold to Ksh184.9m. In satellite towns an investment made on land property worth 2.4m in December 2007 would have appreciated 8.2 fold in value to Ksh19.7m by March 2017. This is an indicator that land investments dynamics are on high demand year in year out and are viewed as a favourable investment due to the rate of appreciation in value.

4.2.4 Growth in Gross Domestic Product and GDP per Capita

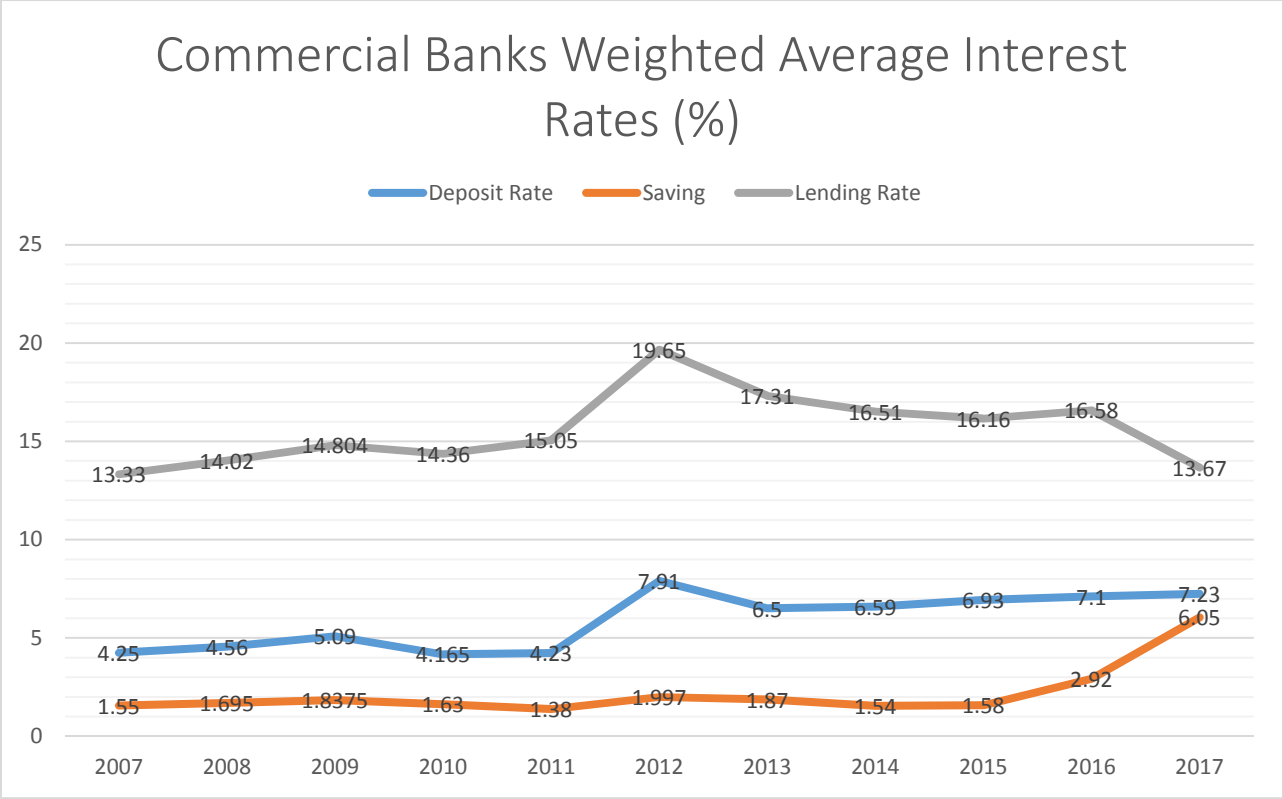
Figure 4.4 Kenya Annual GDP Growth Rate and GDP per Capita



Source: Kenya National Bureau of Statistics

4.2.5 Interest Rates

Figure 4.5 Commercial Banks Weighted Average Interest Rates



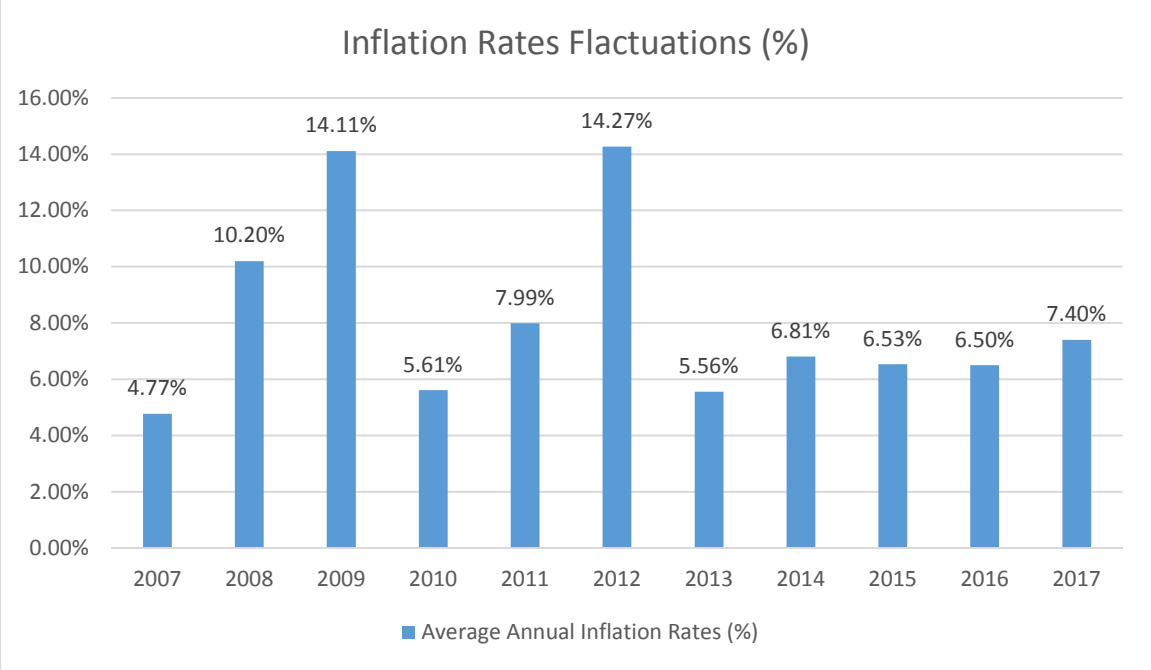
Source: Central Bank of Kenya

The interest rate indicators show that the interest Lending rate was always higher than the commercial banks interest deposit rate and savings rate respectively. The lending rate which is used on secured loans to customers in increased gradually from 2007 from an average interest rate of 13.33% to 19.55% in 2012.According to the analysis the highest Interest rates were recorded in 2012. The rates then declines gradually from 2012 to 2016 at an average of 17.31%, 16.51%, 16.16% and 16.58% for each consecutive year. Interest rate caps were introduced in 2016 at a 4% points above the central bank's benchmark rate which has been maintained at 10.5 percent. That has seen the average interest rate drop to almost the same figures that were being recorded ten years ago at 13.67% for 2017 compared to 2007 at 13.33%.

Interest rates have long term effect on investments such as real estate since they have a direct effect on loanable funds used to make investments which the analysis establishes to be negative on the long term but positive on the short term.

4.2.5 Inflation Rate Trends

Figure 4.6 Inflation Rates Trends in Kenya



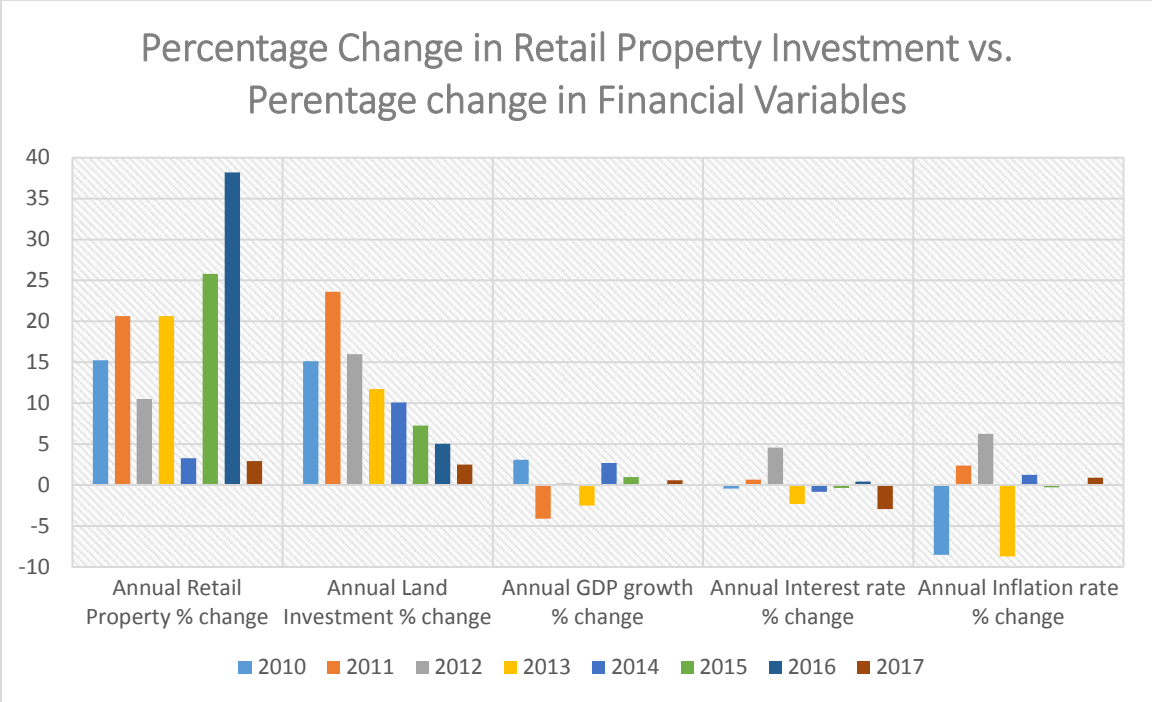
Source: Central Bank of Kenya

Inflation rates average between a low of 4% and a high of 14% in the specified period of 2007/2017. The rates rose rapidly between 2007 at an average rate of 4.8% to 10.2% and 14.1% in 2008 and 2009 respectively. The rate then declined in 2010 to an average of 5.61% after which there was experienced increase in inflation in 2011 and 2012 at an average of 7.9% and 14.3% respectively. Inflation rates then declined again rapidly in 2013 to an average of 5.6% after which there was experienced a gradual but marginal increase in inflation at an average of 6.8%, 6.5%, 6.5% and 7.4% in 2014, 2015, 2016 and 2017 respectively.

The percentage change in the consumer price index for each year stated, indicated that apart from three periods in 2009,2010 and 2012, the general price of commodities by and large was at a manageable or affordable level in the stated period. In this study the indices indicate that retail market goods and services such as building materials and labour and also the consumer goods and services did not experience rapid fluctuations except in two occasions in 2009 and 2012. This is an indicator that market conditions and fiscal policy measures were favourable for the retail industry to operate effectively and in the process attain gradual growth in that period.

4.2.6 Trends in the Retail Sector Growth, VS. Trends in Land Investments, GDP Growth, Interest Rates & Inflation Rate Fluctuations

Figure 4.7 Percentage change in Kenyan Retail Performance vs. Percentage change in Financial Variables.



Source: Study Analysis Results

Trend analysis conducted in the study indicated that retail property investments have recorded positive annual percentage growth each year on the study period. However declines in growth are noted in 2012, 2014 and 2017 at 10.53%, 3.28% and 2.93% decline from the previous year's growth respectively. Land investment annual percentage trends indicate that there was proportional relation to retail property investments growth for three years from 2010, 2011 & 2012 at 15.15%, 23.63% & 16% respectively. A decline was recorded in land investments annual % growth from 2012 to 2017 at a less than proportional relation to Retail property investments growth.

Trends in annual GDP rates, interest rates and inflation rates fluctuated throughout the study period at a less than proportional relation to retail property investments annual growth rates shifts. Interest rates and inflation rates fluctuations are proportional for four periods from 2010-2013 after which annual growth rates varied for the consecutive years from 2013 to 2017.

4.3 Data Analysis

The analysis to determine the relationship and correlation between The Kenyan retail property performance and the specified financial determinants of investment in the sector was conducted through SPSS analysis. Data was analysed on model estimation, specification and assessment so as to test whether it conforms to the expected economic theory. The analysis process included descriptive statistics analysis and regression analysis. Test statistics involving the t distribution on the specific explanatory variables were

conducted. Analysis of Variance (ANOVA) which is the F statistic on the overall effect of the regression equation was also conducted.

4.3.1 Regression Analysis and Model Estimation

The research model proposed for linear multiple regression was of the form:

PF =β0+β1LPrC + β2GdP +β3InF+ β4iNT + εj Where;

PF= Retail Property investments, β0 = Regression constant, β1, β2 β3, β4 are the model coefficients,

LPrC, GdP, InF, iNT are the Independent Variables, εj is the error term.

The study obtained the model summary analysis shown in tables 4.1, 4.2, 4.3 and 4.4 below

Table 4.1 Model Summary Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.725[a]	.526	-.107	12.4734340

a. Predictors: (Constant), Average_Annual_Infation_Rate_Flactuations, Average_Annual_GDP_Growth rate, Averange_Annual_Growth_Rate_Land_Investments, Average_Annual_Interest_Rate_Fluctuations.
b. Dependent Variable: Retail_Property_Investment_Percentage_Annual_Growth

Source: Study Analysis Results

The results of the regression analysis in table 4.2 indicate that there is a strong positive linear relationship between the independent and the dependent variable as indicated by the value of the correlation coefficient (R). The relationship between the four financial variable (Annual GDP growth rate, Annual Growth rate in Land Investment, Annual Interest rate and Inflation rates) and growth in the Kenyan Retail Property market is equivalent to 72.5% correlation.

The results also indicate a fairly strong coefficient of determination which the percentage of the variation in the dependent variable that is explained by total variations in the four financial variables (dependent variables). The analysis indicates that a change or trends in the four financial variables contributed to an equivalent of 52.6% of change in retail property sector investment and in this case growth or expansion of the sector.

4.3.2 Test of Statistical Significance and Analysis of Variance

Table 4.2 Analysis of Variance

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	65.810	4	16.452	.435	.048[b]
	Residual	1020.150	30	37.783		
	Total	1085.960	34			

- Dependent Variable: Retail_Property_Investment_Percentage_Annual_Growth
- Predictors: (Constant), Average_Annual_Infation_Rate_Flactuations, Average_Annual_GDP_Growth, Averange_Annual_Growth_Land_Investments, Average_Annual_Interest_Rate_Fluctuations

Source: Study Analysis Results

From the Analysis of Variance results indicate that the model was statistically significant in predicting the value between Retail property growth and the predictor variables. The probability value was obtained as 0.048 for a normal distribution statistical analysis taken at a 5% confidence level the P value was less than $\alpha=0.05$. By use of a normal distribution table the F12;5;0.05 has a value of 4.34 which is less than the F-test statistic obtained in the study 4.831. as indicated ain table 4.2 above.

4.3.3 Model Coefficients

The model coefficients and corresponding statistics obtained in the results of the analysis are as indicated in table 4.3.

Table 4.3 Model coefficients

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	31.670	12.312		2.572	.082
Averange_Annual_Growth_Land_Investments,	-1.297	.9080	-.747	-1.297	.085
Average_Annual_Interest_Rate_ Fluctuations	-2.790	.373	.929	-1.420	.051
Average_Annual_Infation_Rate_Fluctuations	-1.779	.279	-.782	-1.391	.059
Average_Annual_GDP_Growth,	3.468	.325	.710	1.495	.032

Dependent Variable: Retail Property Investment Percentage Annual Growth

Source: Study Analysis Results

The results of the regression analysis indicated that the relationship between Retail Property Investment Growth and the predictor variables can be expressed as the following regression equation: $Y= 31.67 - 1.297\ LPrC + 3.468\ GdP - 1.779InF - 2.79iNT + \varepsilon j$

From the regression model above holding all other factors constant, 31.67% growth in retail property investments is independent of the selected financial variables Secondly a unit change in each of the predictor variables would cause a change in retail property investment growth by the amount corresponding to the coefficient related with each variable. For instance, holding constant shifts in all the other financial variables, a one percent change in GDP growth would lead to 3.47% change in retail Property Investments with an inverse proportional relationship in effect.

4.4 Interpretation of the Findings

The research established that the Kenyan retail property sector has experienced growth each year on study period indicated. The highest growth was recorded in 2015/2016 economic year and the least growth was recorded twice in 2013/2014 and 2016/2017. Land Prices have also experienced continuous increase in each of the years in the study period. Notably land in satellite towns has a higher price increase percentage compared to land near the suburbs despite the latter fetching a higher price tag. This can be attributed to higher demand for land in the satellite towns due to ongoing developments of those towns. The study also established that GDP, Interest rates and Inflation rate variables fluctuated across the study period. GDP per capita recorded continuous gradual growth across the entire study period resulting in the Kenyan economy acquiring a middle income status.

Annual GDP growth was at the highest peak in 2007 with marginal growth being recorded in 2008, and 2013 notably there was a decline in growth in both cases from the previous year's growth. It is noteworthy that the decline in economic growth as indicated by the annual GDP rate and Retail Investments Index occurred during the Kenyan election period in that is in 2007 and 2013. 2017 has also recorded a marginal decline in growth being also an election year. Electioneering negatively impacts the economy and consequently affects investments in various sectors including Retail property sector.

There was a notable gradual increase in Commercial Banks Interest Lending rates from 2007 to 2012 which recorded the highest rates and similarly there were high rates recorded in subsequent years from 2013 to 2016. The Central Bank's monetary policy committee introduced interest rate caps in 2016 as a measure to curb interest rate rise at the expense of borrowers of funds. Inflation rates were noted to be at manageable levels apart from two occasions in 2008/2009 and 2011/2012

The research findings established a positive correlation between the selected financial variables and retail property investments. The correlation coefficient(R) and coefficient of determination (r) were fairly high at 0.725 and 0.526 respectively. This is an indicator that a variation of trends in the four financial variables contributed to an equivalent of 52.6% change in growth rate of the retail property market growth. The model estimation of the regression analysis indicates that the relationship between retail property growth and the predictor variables of the study can be expressed with the equation: $Y= 31.67 - 1.297 LPrC + 4.368 GdP - 1.779InF - 2.79iNT + \varepsilon j$. The regression constant indicates that 31.67% of

growth in the retail sector was independent from effects of the selected financial variables. This is the autonomous investment. Other factors that determine or influence growth in the retail sector include demographic factors and other economic factors such as infrastructure development, Government policies, location of malls amongst others. The research finding also noted that there was a direct proportional relationship between retail property Investments and GDP growth on the long run.

The findings also indicate an inverse relationship between retail property investments and the other three financial variables; interest rates, inflation rate, land indices at a changes which is less than proportional. Land pricing indices indicated a negative correlation coefficient because of the competition of investable funds between land purchasing and property development. Commercial banks' lending interest rates indicated an inverse relationship since an increase in interest rates leads to an increase in cost of servicing loanable funds and therefore constraining growth in investments. It is noteworthy that real estate development such as retail property is a long term investment that starts to bring cash flows after a few years from inception. Therefore high interest rates are detrimental to retail property development due to the high cost of servicing loanable funds. The study also established an inverse relationship between average annual inflation rates and retail property investment. A decrease in inflation rates would lead to increased commerce and investments and vice versa. Rising inflation rates raises the cost of acquiring capital thus negatively affecting investments. Overall analysis indicated that the selected financial variables had a significant effect on the Kenyan retail property sector investment process.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the research findings in relation to the study main objective; an analysis of financial investment determinants in the Kenyan retail property market. The selected financial variables for the study were land Pricing Index, GDP annual growth rate/ GDP per capita, interest rates and inflation rates. The findings were summarized based on the data analysis with respect to the contribution of each independent variable to the growth in the Kenyan Retail Property market. The summary includes the statistical significance of each variable and test of explanatory ability to the independent variable. The chapter also includes recommendations for various stake holders on policy implementation measures for GDP growth, Interest rate, and inflation rates so as to ensure sustainable growth in the Retail property sector. The chapter draws conclusions on findings, including limitations of the study and points out recommendations for areas of further research.

5.2 Summary of the Study

The study sought to analyse selected financial investment variables in the Kenyan Retail property sector that is how the selected financial variables affect investment and growth in the retail property sector. The study adopted a descriptive research design and incorporated the use of secondary data on annual retail property statistics from Cytonn Real Estate and Hass Consult. Secondary data on the selected financial variables; Annual Land Price Indices, Average GDP growth rate, Average Annual Interest rates And Average Annual

Inflation rates was sourced from Hass consult, Kenya National Bureau of Statistics (KNBS) and Central Bank of Kenya. The data set covered the period between years 2007 to 2017.

The data was analysed using excels spread sheets and statistical package for social sciences (SPSS) and the findings summarized in graphs and tablets. Regression analysis was conducted in order to establish various inferential statistics; R, R-Square, P-value and F-Test statistics. The statistics were used to determine the relationship, strength of the relationship and the statistical significance of the model.

The study established that the Kenyan Retail property sector recorded continuous growth each year of the research study period. Annual Land indices also indicated that Land prices grew gradually for each year with satellite towns attracting more demand compared to the suburbs. Land near the CBD however remained relatively more expensive. The study also established that marginal economic growth recorded in 2008, 2013 and a decline in 2017 was attributed to a slowdown during the election period which was also identified to affect retail property investments amongst other sectors. The least growth in retail property investment growth, was recorded during or immediately after these periods. The other two financial variables; Interest rates and Inflation, fluctuated throughout the study period depending on market driven forces of demand and supply and policy measures put in place through fiscal and monetary policy measures by the government.

The results from the model estimation correlation analysis supported the study expectations and insinuated a fairly significant association between the dependent variable and the predictor variables. The correlation coefficient (R) and coefficient of determination (R

Square) both exhibited fairly strong levels of association. Regression analysis of the Kenyan retail property sector investments and the predictor variables indicated that; GDP had a direct proportional effect on retail property investment as proposed in the theoretical review. Interest rates exhibited a statistically significant negative relationship with retail property investments. Similarly, average annual inflation rates has an inverse relationship to retail property investments. In addition though the significance level was minimal land price indices exhibited a negative proportional relationship to retail investment since they are competing for investable funds non the less land is considered a key factor of production and in this case retail property development. The regression analysis provided results that were fairly relative to expectations of the study and literature review in the proposal.

Test of significance indicated that the model was statistically significant in predicting the value between Retail property growth and the predictor variables. The probability value was obtained as 0.048 for a normal distribution statistical analysis taken at a 5% confidence level the P value was less than $\alpha=0.05$. This was supported by the F test statistics, however each variable wasn't statistically significance in isolation.

Table 5.1 Descriptive Statistics

Descriptive Statistics

	Mean	Std. Deviation	N
Retail_Property_Investments_Percentage_Annual_Growth	17.1550	11.85751	34
Averange_Annual_Growth_Land_Investments	11.4713	6.82466	34
Average_Annual_GDP_Growth	4.7875	1.21824	34
Average_Annual_Interest_Rate_Fluctuations	16.1600	1.87173	34
Average_Annual_Infation_Rate_Flactuations	7.5838	2.82286	34
Valid N (list wise)			34

Descriptive statistics analysis on the study period deduced that annual average retail property investment growth was 17.15% with a fairly high deviation from the mean at 11.85. This is an indicator that growth varied during the stated period. Likewise average annual land investments growth was 11.47% at a standard deviation of 6.8. GDP grew an annual average rate of 4.79% with a standard deviation of 1.12. Commercial Banks lending interest rates maintained an average annual rate of 16.16% with a standard deviation of 1.87. Inflation rates recorded an annual average rate of 7.5% and a standard deviation of 2.82. GDP growth rate, interest rates and inflation rates variance from not so far from the means.

5.3 Conclusion

The results of the analysis established that there was a fairly strong correlation between the selected financial investment variables specifically; GDP growth is a fairly significant

determinant of retail property investment since benefits of economic growth are favourable to investment in all sectors. Investment in Land is also a key determinant of investment in the sector since it is a component of property development. Interest rates and inflation rates were also established as key determinants of investment in the retail sector due to the influence on cost of capital and commodities prices utilised in property development.

5.4 Recommendations

The recommendations of the study touch on individual and institutional investors in the Kenyan retail property market and the regulators in the sector. Investors in the sector should employ various measures to capitalise on future potential. Such measures include. Investors should employ various methods of raising capital such as pooling of resources both locally and internationally in investment groups, Sacco's and Microfinance institutions. This are measures to cushion investors against unfavourable rises in cost of financings and interest rate fluctuations. Investors should also enter into development contracts with suppliers such as fixed rate contracts with material suppliers to avoid shifts in material prices and therefore ensure that projects do not stall. Developers should also incorporate alternative building technologies that are both less costly and environmentally friendly. Investors should also develop a strict investment criteria that includes conducting extensive market analysis so as to overcome challenges in the industry to ensure success of their investments

Policies measures by the Government and market regulators should be geared towards enhancing economic growth, maintaining favourable interest rate and inflation rates. Infrastructure development is a key factor of industrial growth and cuts across all sectors

including the retail property sector. Monetary policies such as interest rate controls and open market operations should be directed towards economic stimulation. Likewise fiscal policies should be aimed at reducing taxation or subsidising the property market and increasing spending on stimulants of economic growth to ensure continuous and sustainable development in the retail sector.

5.5 Areas of further research

Areas of further research include:

I. The effect of Population Demographics and Population Growth on The Kenyan Retail Property Returns.

II. An analysis of renting prices effect on Retail property Annual Income.

III. The Effect of Mall positioning on the Kenyan Retail Market Performance.

5.6 Limitations of the study

Obtaining collective data for the entire retail sector was a constraint due to the vastness of the retail industry. Secondary data acquired from market analysts could also contain possible omissions. Ethical considerations and due diligence was utilised in the study by referring to more than one source of the Kenyan retail property reports and conducting extensive research market reports and reviews.

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APPENDEX RAW DATA

Table 4.1 Regional Retail Property Market Performance

YEAR	AVERAGE ANNUAL GDP RATES (%)	AVERAGE ANNUAL INTEREST (lending rate) (%)	AVERAGE ANNUAL INFLATION RATES (%)
2007	6.64	13.33	4.77
2008	1.5	14.02	10.29
2009	2.7	14.80	14.11
2010	5.8	14.36	5.61
2011	4.4	15.05	7.99
2012	4.6	19.65	14.27
2013	2.1	17.31	5.56
2014	4.8	16.51	6.81
2015	5.8	16.16	6.53
2016	5.7	16.58	6.5
2017	5.1	13.67	7.4

Source: Central Bank Of Kenya and KNBS Report 2017

Summary of Retail Market Performance in Key Regions in Kenya 2017

Location	Rent KshS/SQFT 2017	Occupancy 2017	Rental Yield 2017
Nairobi	185.2	80.3%	9.6%
Kisumu	150.2	75.0%	9.1%
Mt. Kenya	136.0	80.0%	9.1%
Mombasa	130.3	82.8%	7.3%
Eldoret	96.0	83.3%	6.6%
Average	140.7	80.2%	8.3%

LAND PRICE INDEX
QUARTER ONE REPORT 2017

Nairobi Suburbs Land Index	Quarter % change	Annual % Change	Change From 2007	Average Value Per Acre (Kshs)	25 percentile	75 Percentile
Donholm	3.6%	23.8%	6.88 FOLD	63,900,000	44,800,000	86,000,000
Eastleigh	-0.8%	-2.4%	5.41 FOLD	260,100,000	152,000,000	330,000,000
Gigiri	1.9%	10.6%	6.52 FOLD	229,100,000	200,000,000	266,000,000
Karen	2.5%	10.9%	7.29 FOLD	57,000,000	50,000,000	64,000,000
Kileleshwa	1.7%	9.8%	7.14 FOLD	293,000,000	255,000,000	331,000,000
Kilimani	0.5%	1.7%	6.44 FOLD	429,700,000	400,000,000	500,000,000
Kitisuru	1.7%	6.2%	5.67 FOLD	78,000,000	60,000,000	95,000,000
Langata	3.1%	19.5%	5.32 FOLD	57,300,000	47,000,000	65,000,000
Lavington	1.5%	8.3%	5.73 FOLD	237,700,000	193,800,000	257,000,000
Loresho	0.9%	3.4%	5.05 FOLD	80,300,000	62,900,000	90,800,000
Muthaiga	5.7%	30.3%	5.27 FOLD	139,000,000	80,000,000	183,400,000
Nyari	-0.5	-2.6%	6.09 FOLD	101,400,000	90,000,000	120,000,000
Parklands	0.8%	5.3%	5.29 FOLD	411,500,000	340,000,000	480,000,000
Ridgeways	0.7%	10.5%	6.07 FOLD	70,300,000	60,000,000	80,000,000
Runda	1.5%	4.4%	5.79 FOLD	80,000,000	70,000,000	90,000,000
Spring Val	2.0%	7.5%	4.12 FOLD	154,400,000	120,000,000	180,000,000
Upperhill	0.9%	5.6%	9.03 FOLD	542,000,000	478,700,000	603,800,000
Westlands	2.3%	6.2%	5.66 FOLD	414,000,000	350,000,000	500,000,000

Satelite Towns LandIndex	Quarter % Change	Annual % Change	Change From 2007	Average Value per Acre	25 percentile	75 percentile
Athi River	0.6%	1.4%	8.83 FOLD	11,300,000	3,000,000	15,200,000
Juja	5.0%	45.2%	12.85 FOLD	11,100,000	3,800,000	16,000,000
Kiambu	2.4%	14.2%	7.38 FOLD	42,300,000	16,800,000	56,300,000
Kiserian	2.9%	10.5%	7.16 FOLD	7,100,000	2,800,000	10,000,000
Kitengela	3.3%	9.6%	6.57 FOLD	10,000,000	5,000,000	13,600,000
Limuru	4.7%	41.6%	11.22 FOLD	21,300,000	10,000,000	26,900,000
Mlolongo	2.7%	-8.0%	4.88 FOLD	23,600,000	11,000,000	39,300,000
Ngong	0.3%	4.8%	5.99 FOLD	18,400,000	10,000,000	24,000,000
Ongata Rongai	2.1%	16.8%	8.01 FOLD	18,800,000	6,800,000	24,000,000
Ruaka	3.4%	31.2%	7.24 FOLD	80,500,000	60,200,000	100,000,000
Ruiru	5.4%	44.0%	9.78 FOLD	23,000,000	7,500,000	33,300,000
Syokimau	2.7%	13.1%	6.51 FOLD	19,800,000	15,500,000	25,500,000
Thika	3.1%	28.3%	9.85 FOLD	19,400,000	8,100,000	27,500,000
Tigoni	5.9%	14.3%	8.25 FOLD	20,500,000	17,000,000	25,000,000

SOURCE: Hass Consult

*Price Values rounded to nearest Kshs. 100,000