ASSESSMENT OF RISK AND RETURNS ON RESIDENTIAL PROPERTY INVESTMENT IN KANO, NIGERIA

BY

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M.Tech/SET/2017/7124

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ABSTRACT

The research assessed the risk and return in residential property market in Kano with a view to examining the trend in returns of residential property investment types and the risk-return in relation to residential property investment. Residential property investment return in Kano has

been influenced by several risk factors which affect the property market and the economy, Kano has been chosen for this study because is the commercial centre of northern Nigeria and due to the inflow of people the residential housing infrastructure is growing. Exploratory and descriptive research design was adopted, population of study is estate firms in the study area and systematic ramdom sampling techniques was adopted to select properties in each firm portfolio using Frankfort-Nachmias (1996) to arrived at sample size of (338) and survey questionnaires was used to collect data. The study utilized descriptive (standard deviation, viariance, line graph) and inferential method (ANOVA) & factor analysis. The results of descriptive analysis across the five markets showed. The properties sampled are1Bedroom, 2Bedroom, 3Bedroom and 4Bedroom which showed that Badawa and Bompai maintained double digit of growth over the other three market. And the variance result revealed that, variation in returns on residential property investment across the market in the selected areas of Kano is statistically significant since the p.value across the market are less than 0.05 level of significance. The study also discovered that market factors, legal factor, financial factors, physical factors, economic factors, administrative factors, institutional factors and housing policy factors must be addressed to ensure a conducive environment for residential property investment. The bedrock of residential property investment performance is rooted location infrastructure, in order to have stable and steady returns it is therefore recommended that housing supportive facilities should be provided at lower cost to residential property investment in the selected areas of Kano. It is also recommended that estate surveyors and other real estate investors should liaise with government on challenges facing real estate sector as to reduce rate of risk in the market such as taxation risk, housing policy and institutional constraints.

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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

Experience shows that since the creation of Kano State, residential property investments in Kano have continued to increase with no proper assessment of risk and return on residential property investment. One of the major drivers of economic growth could be said to be an investment in housing.

According to Daniel *et al* (2014), an investment is considered risky because the investor is unsure of the actual returns which he will realize from his investment. The degree of variability of the actual return from the estimated return of investment as well as the possibility of loss of capital reflects the risk elements of investment (Ubom, 2010). This shows that where variable are higher, the risk involved in the investment will also be higher and vice versa. And the study intends to assess the various risk portfolio which affect the returns on residential properties in the study area.

Several issues regarding the general nature of real estate returns focus of real estate market efficiency in Kano, as measured by the distribution of returns and predictability of real estate returns, determine the impacts of the different elements of risk on residential real estate investment return in the study area and returns of specific types of property (such as 1-bedroom semi-detached, 2-bedroom semi-detached, 3-bedroom semi-detached and 4bedroom detached bungalows are captured in Kano).

The potentials of residential property investment in Kano is very high. The State has an estimated population of 12 million, 50% of which are young and growing at 3.5% p.a. (Kano investment handbook, 2013). In addition, there is a huge influx of people from within and outside the country due to Kano's strategic status as the commercial and investment hub of Northern Nigeria. Investment in Kano State offers access to various attractive incentives from both the Federal and the State governments. Investors can take advantage of import concessions, tax exemption for exported products, tax reductions for qualifying companies and some residential properties [i.e. pioneer companies, manufacturing companies] and tax deductions for research and development expenses (Kano investment handbook, 2013).

In the light of the facts around the unclear observations that investors face in term of turnover on their investment in residential property which can be from government policy, individual

occupant or the management surveyor? It is these and other issues that necessitated the need to carry out this research with the view to assess the risk and return on residential property investments in Nigeria, using Kano as the case study.

1.2 Statement of the Research Problem

Residential property investment return in Kano has been influenced by several risk factors which affect the property market and the economy. But the level of influence of each factor has not been "fully" assessed. The rise and fall of property investment returns with unpredictable risk factors ranging from lack of payment of rent when due, different policy guideline regarding policy and task factors. This has been the major source of contention among the residential property investors in Kano.

There is different element of risk on residential property investment in Kano, this risks affect returns which is also discouraging factor to some investors of residential property sector and study intends to examine the foregoing. Each residential property investment type come with a level of return this also have a peculiar problem attached to each and study will address, also there are many impacts of the different element of risk on residential property investment returns, the impacts which geared some negative effect on returns.

From the above, measurement of risk and return is fundamental to any investment, although there appears to be greater focus on risks in Kano residential property investment market and returns, real estate investment risk and return analysis is difficult as only a few researchers have conducted studies on residential property in some part of the country but not in Kano.

Sirmans & Worzala (2013) studies examine the returns on single-family home prices and excess returns in metropolitan areas United Kingdom and find that the single-family housing market is not efficient.

There is limited knowledge on risk-return relationship and diversification which leads to poor decision making in resource allocation in the investment process. The investor is not able to establish the probability of making a loss or exceeding the target, determine the variability of returns in relation to the expected returns. With such limited knowledge, the investor is also not able to determine the protection mechanisms necessary to guarantee the required minimum returns from the investment. The limited risk-return knowledge makes the investor lack the awareness and essence of risk preparedness. This often results in financial losses whereby money invested cannot be available any longer either for immediate present-day spending on other investment or for present day consumption and investment in the residential real estate, is a capital budget decision which is not reversible. It is out of this background that this study is undertaken to Assess Risk and Return on residential property investment which is first in the study area and investment, to help in rational decision making when it entails mutually exclusive investments and to consider the element of diversification, particularly when diversifying in a given portfolio.

This study seeks to identify the causes of risk and also increase or decrease in returns of Residential property investments in Kano and it should be easy for valuers to use in residential property investments analysis which will help residential property investors in the study area to know some expected risk that may affect their return, Most of the previous literature reviewed focus on commercial properties there is no study carry out on Kano residential property investment market.

1.3 Aim and Objectives

The aim of this research is to assess the risks and returns on residential property investments in Kano, Nigeria. With a view to provide a guide to current and potential investors in residential property investment.

The objectives are to:

1. Examine the temporal trend in returns of residential property investment types in the study area;
2. Examine the risk in relation to residential property investment in Kano;
3. Examine the spatial variation in returns on residential properties across the study areas and
4. Examine the contributory factors of risk on residential property returns in the study area.

1.4 Research Question

This research study hopes to answer the following questions: -

1. What are the returns on residential property investment types in Kano?
2. What is the level of risk and return on residential property investment in Kano?
3. Do returns across the study vary significantly?
4. What are the contributory factors to risk on residential property investment?

1.5 Justification of the Study

Kano has been chosen for this study because is the commercial city of northern Nigeria and due to the inflow of people the residential housing infrastructure is growing. The need to conduct a study on risk and return on residential property investment in Kano Nigeria is justified on the basis that, over the years' investors in residential property sector are complaining on rise and fall of their returns which are affected by risk which is difficult to know**.**

Suliman (2012) study examined the trade-off between risk and expected returns for the Saudi Arabia and Egyptian stock indices between the beginning of January 2007 and end of December 2011. Empirical analysis of the paper is carried out by means of general autoregressive conditions and heteroscedastic in mean methodology indicating both symmetric and asymmetric models. The results of the study show that the risk-return relationship is quite different between Saudi Arabia and Egyptian stock markets. A negative, insignificant relationship between expected returns and conditional volatility is found for daily returns in Egypt. In Saudi Arabia market, a result which is consistent with the theory of positive risk-return premium on stock indices which states that higher returns are expected for assets with a higher level of risk.

Bosire (2013) study risk and return in residential property market in Nairobi, and regression was used to compare the relationship between residential property investment and commercial & industrial property investment. The study revealed that there is lesser risk in investing in residential property. Safia (2015) consider risk and real estate in Accra, and vector auto regression model was used to analyzed result were he examined credit, market, operational and liquidity risk and the result shows how unemployment, interest rate and exchange rate affect return on investment. Also Olayiwola (2013) looked at the profitability analysis of real estate investment considering four cities Turku, Jyvaskyla, Tampere and Helsinki using simple percentage and the result show the variation in different rental value within the cities and city with higher commercial activities have higher rental returns.

In Kano State, there has been phenomenal growth in real estate investment especially in Kano Metropolis – the Capital City –due to the influx of people and investors from other parts of the country as well as the ongoing infrastructural development. Therefore, the need to empirically assess the risk-return structure/ components associated with residential property investment in the area in order to generate a roadmap that would guide prospective investors

in the real sector. Also, in researching the gap between residential property investment risk and return this research will be of great interest to current as well as potential investors wishing to invest in the Kano property market in particular and Nigeria in general. With increasing investor interest in Africa, the need for such research is of paramount interest to all the stakeholders interested in Nigeria property market.

1.6 The Significance of the Study

This research will be useful to estate surveyors and valuers who are active in the residential property management in Kano by educating their client and enriching their self in the risk and return portfolio in all form of residential property investment. Besides, prospective property investors, developers and financial institutions interested in residential property investments in the Kano city will find this research very useful by knowing the risk attached to each investment and also return therein. It will also prove useful to Lecturers of Estate Management and valuation and students in the Universities, Polytechnics and who studying estate management it will serve to them as a study guide and lecture reference materials. Also, this research provides a background for further research on assessing risk and returns in property investments in Kano, other than residential property investments.

1.7 The Scope of the Study

This research is concerned with the assessment of risk and returns on residential property in the determination of residential property investments in Kano. It will cover the year 2005 to the year 2018. The fourteen years' period is selected because is the period of banking reform in Nigeria where merger and acquisition take place in banking sector to stabilized the economy which affect the property returns, also stabilized the lending interest rate to real estate investors and it will capture the rent review period which will show the change in returns and also the risk portfolio. The residential property investments under study comprise

bungalows and flats. The bungalows are 1-bedroom semi-detached, 2-bedroom semi-detached, 4-bedroom semi-detached, and 2bedroom detached bungalows. because there are the predominant residential property types. The study covers Kano metropolitan with the following neighborhoods are selected: Sabon Gari, Bompai, Ungowa uku, Naibawa and Badawa which accommodate the large number of rented apartments. The estate firms within this location will be selected and administered questionnaire and some selected residential property investors too will be captured, this respondent is selected because they will provide the adequate answer to the research objectives.

1.8 Description of the Study Area.

1.8.1 Geographical Location and Climate

The study area Kano is located in the north-west geographical region, it shares boundaries with the following states: Kaduna, Katsina and Jigawa state respectively. Kano is the state capital of Kano state in north-west Nigeria which has a coordinate of longitude 10.30oN to 13oN and latitude 7.40oE and 10.39oE of the equator as shown in the figure. Kano city is said to have a height of about 472.45 meters above sea level. It has a total land area of 21,276.872 km2 with 1,754,200 hectares agricultural and 75,000 hectares of forest vegetation and grazing land. Consequently, the state population according to 2006 National Population Census was said to have a total population of about 9,401,288 people consisting about 4.33% of the total population of the country. Kano city has the following local government areas: Kano Municipal; Nassarawa; Fagge; Tarauni; Gwale; Dala; Ungogo and Kumbotso respectively but the housing estates under study are Kwankwasiyya Housing estate and Kundila housing estates in Kumbotso local government and Kano municipal respectively. The state is noted for its fairly table climate with relatively minor changes in temperature and humidity. The year is divided into rainy and dry seasons. The dry season lasts from October

to May. During the months of December and January the harmattan is at its peak, and the temperature can fall as low as 10oC, but between March-May the mean temperature can go up to 300C - 330C. The rainfall pattern is unimodal; with an average rainfall of 600mm.

1.8.2 Historical Development of the Study Area

Kano was among the 12 states created in May 1967 out of the former Northern Region. The state remained intact until August 27, 1991, when Jigawa State was carved out of it. It is located in the northwest geopolitical zone of Nigeria. Hausa and Fulani, who are predominantly Muslims, inhabit Kano State. Kano State is one of the largest states in Nigeria in terms of population, having a population of about 9, 383, 682 in the 2006 census. It has 44 local governments, with an area of 20,479.6 square kilometers. The population density is about 458 persons per square kilometer. The walled city of Kano, which serves as the state capital, is the commercial nerve center of Kano State and indeed the whole of northern Nigeria. Many immigrants, mainly Yoruba and Igbo, live in Kano City. Six local government areas (Fagge, Gwale, Tarauni, Kano Municipal, Nassarawa, and Dala) have virtually merged into what a visitor would call Kano metropolis. The official language of Kano State is Hausa, but the English language is commonly spoken as the country's official language. Most natives can also read Arabic literature. Historically, Kano State has been a commercial and agricultural state, which is known for the production of groundnuts. The state has over 18, 684 square kilometers of cultivable land and it is the most extensively irrigated state in Nigeria. Kano State is noted for its famous markets and it is the most leading industrial center in the north. Trading articles in the Kano City include leather goods, local crafts, dyed textile materials as well as camels. Giant industrial plants include textile, oil, motor assembly, bicycle assembly, and many agro-based industries. Kano City is linked by rail, road, and air to all parts of the country and internationally.

Historical examination of the state reveals that Kano State formally came into being on April 1, 1968. The state is bordered by Jigawa State in the north-east, Katsina State in the north-west and Kaduna State is on the southern boundary. It has a total land area of 20,760 square kilometres with 1,754,200 hectares agricultural and 75,000 hectares of forest vegetation and grazing land.

Although Hausa is the predominant language spoken by both indigenes and non-indigenes in Kano in all forms of businesses and social interactions, English is the official language in government, and to some extent, in business transactions. Other languages spoken in the state are Fulfulde, Yoruba, Ibo, Kanuri, Igbira, mostly by other non-indigene settlers.

Kano has been a historic state capital which made it today a complex town, in terms of political, social and economic structures. Since Kano town came to being, its population has been increasing in alarming rate, due to activities offered therein. This enhances a substantial increase in the areas used for residential, commercial, industrial, recreational and allied uses.

1.8.3 Administrative Structure

Administrative Areas: With Kano as capital, the state is divided into forty-four local government areas which form twenty-four federal constituencies and three senatorial districts. Administrative Structure: The administrative machinery of the State revolves around the Executive and the Legislature, the local government, and the traditional/customary administration. Kano State is divided into twenty-four federal constituencies and three senatorial districts.

Kano has great respect for tradition. Thus, the ward head (Maianguwa), the village head (Dagaci), the district head (Hakimi), and the Emir at the top of the hierarchy are still actively involved in governance. District heads appointed by the Emir after consultation with the

Local Governments, and with the approval of the state governor, have dual loyalty being responsible to the Emir on traditional matters and to the Local Government Council. The Emirate Council (EC) has the Emir as the President. Other members of the EC are the traditional Kingmakers, chairmen of Local Governments, and nominated persons who are capable of making useful inputs into the process of decision making. At least nine roles are outlined for the EC.

1.8.4 Economic Base of the Study Area

Agriculture is the mainstay of the economy involving at least 75% of the rural population. Important crops produced in the State include cotton, guinea-corn, maize, cowpeas and varieties of vegetables. There are occurrences of solid minerals in the crystalline basement complex routes in the southern parts of the State.

These include tin, gold stones, lead, zinc, copper, wolfram, and bauxite. There are well over 300 large and medium industrial establishments in Kano spread across Bompai, Sharada and Challawa Industrial Estates. During the past three decades (the 1960s to 1990), modern manufacturing enterprises involving the processing of basic raw materials such as groundnut milling and other demand-based industries like tanning, metalwork, confectionery, textile goods, and garment-making have been established.

In addition to the formal industrial sector, there are a number of small-scale industrial and commercial activities that make up the Kano Economy.

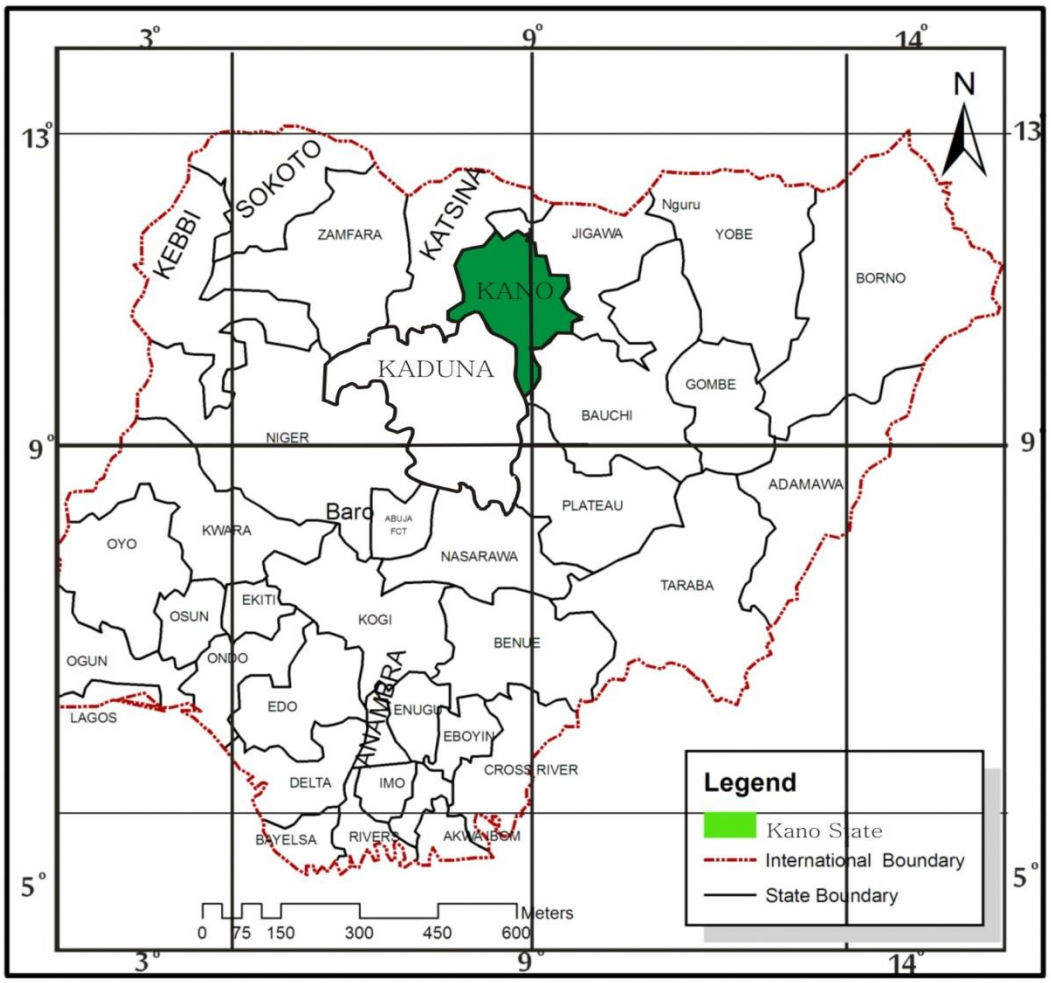

Figure 1.1: Map of Nigeria showing Kano State

Source: Kano State Ministry of Land and Physical Planning (2018)

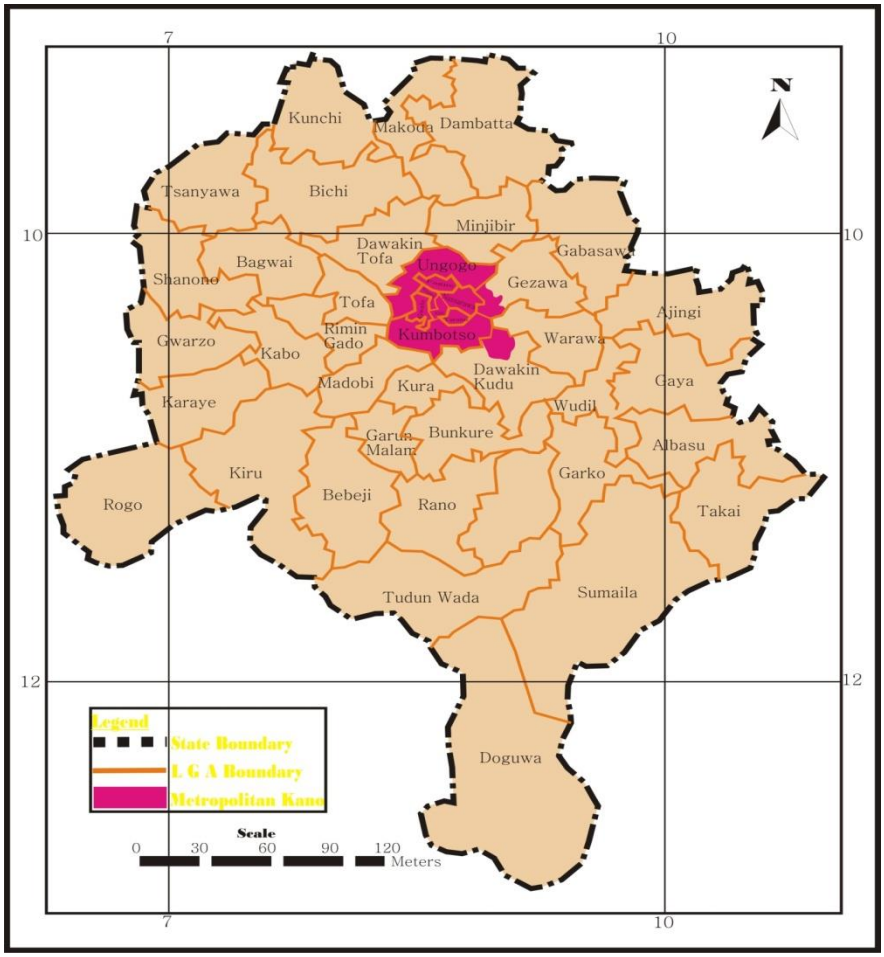

Figure 1.2: Map of Kano State Showing Metropolitan Kano

Source: Kano State Ministry of Land and Physical Planning (2018)

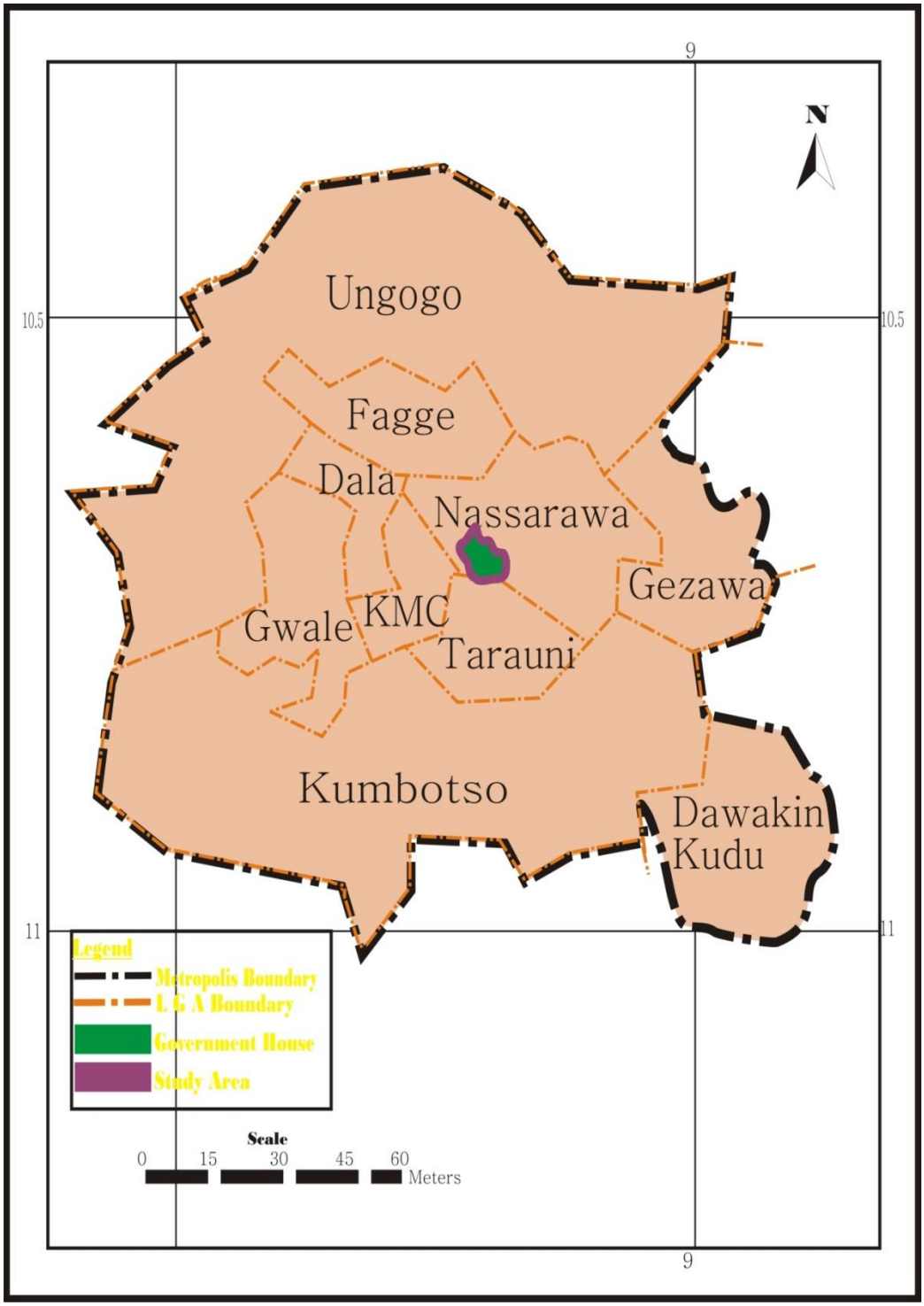

Figure 1.3: Map of Metropolitan Kano Showing Study Area.

Source: Kano State Ministry of Land and Physical Planning (2018)

CHAPTER TWO

2.0 Literature Review

2.1 Property Investment Risk: The Theoretical Framework

The risk is a common feature of all forms of investment including real estate and fundamental to investment choice. Therefore, any investor who embarks on a project development or acquires a property expects some benefits as future returns. Like any other form of investment, real estate has two principal components: expected return and risk (Francis, 2016). The risk is seen as the level of probability that a required return will be achieved when measured in terms of capital value and income. As an investment, some properties have a high-risk profile while others have a low-risk profile. This depends on the type, nature, location and possibly, the lease term of the property. Risk is therefore perceived as the probability of earning lower income than expected, i.e. as a real or relative loss (measured against expectations) and other definitions of risk is presented in Figure 2.1. The use of a standard deviation as a measure of risk arises from the classical approach, represented mainly by the portfolio analysis. A semi-standard deviation assesses the risk of an investor earning a lower return than they expected when making the investment (Cheng, 2005). The analysis of risk in the framework of behavioral finance leads to similar conclusions. The most commonly adopted concept of risk is variation in returns or spread of the distribution, measured by standard deviation. Standard deviation measures the spread of actual returns achieved around the mean, with a greater spread indicating a greater level of risk (Hoesli and MacGregor, 2000) and may be used to measure risk at the investment level, at the fund level, at the portfolio level, and at the individual property level.

It has been observed that investors tend to concentrate on successes rather than failures. When investors give as much attention to downside standard deviations as to upside standard

deviations as a measure of risk, they run the risk that their return will be lower than expected. The phenomenon is known as „excessive optimism" (Gajdka, 2013). An important element of the analysis of risk is its variability in time, i.e. changes occurring over the maturity period (Cooper & Priestley, 2009). Because investors tend to form their expectations from the historical rates of return, it is very likely that they also use historical data also to assess risk. Investments in the money market are considered the least risky, and then investments in real estate and investments in the capital market that offer a range of options. This ranking can be found in many studies, the authors of which also stress that investing in real estate is relatively safe (Kucharska-Stasiak, 2006).

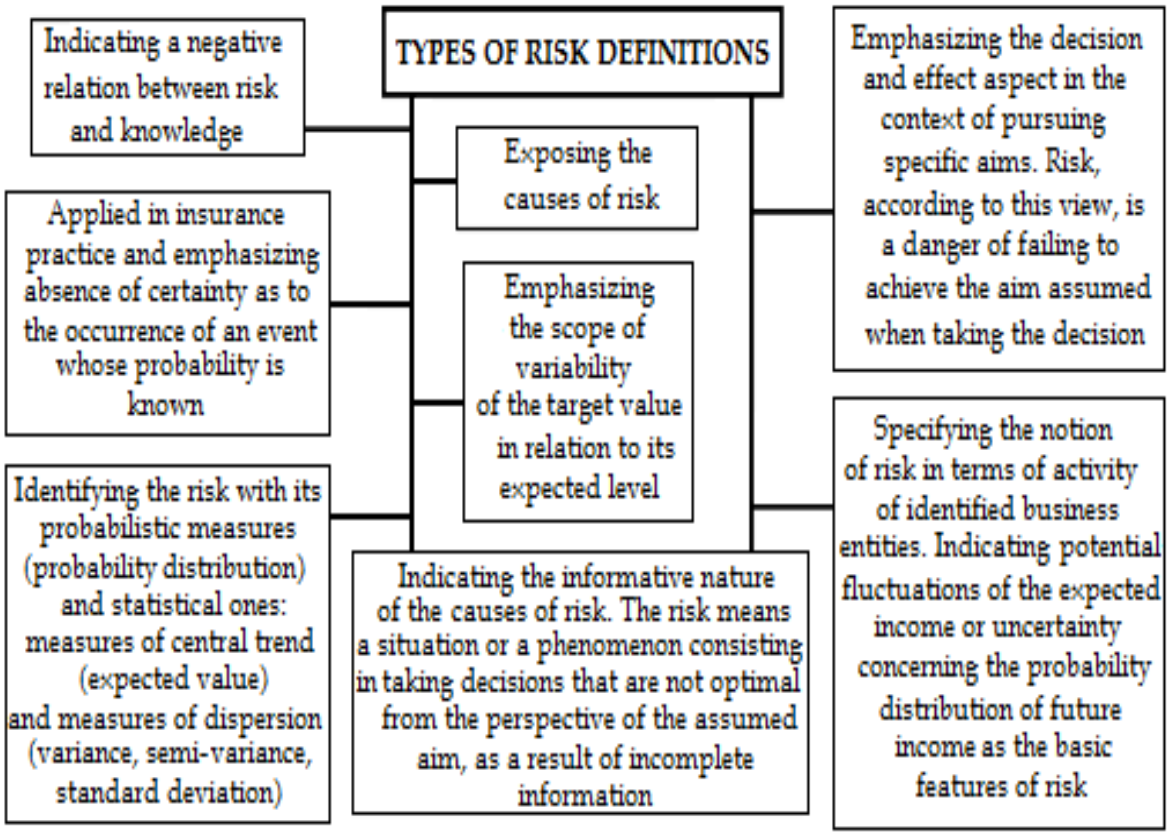

Figure 2.1: Risk Definitions

Source: Adopted Kubińska-Kaleta (2008).

Real estate investors come across various types of risk in the course of embarking on projects and in the life of the projects. Investment risk may be examined on the basis of the fundamental components or sources of risk and making predictions on how future returns will be affected by each fundamental risk. Risks have been variously classified into business, financial, interest rate, market and business power risks as classified in Figure 2.2. Other forms of risk are political risk, tenant risk, sector risk, structural risk, taxation risk, planning risk, legal risk, comparative risk, timing risk and holding period risk, risk of unplanned obsolescence as well as management or union risk (Alexxandra, 2014; and Udoudoh, 2016). The risk in residential property is low, compared with other major risk investment, the equity share market. Housing is a necessity: people must have a dwelling to live in, either as owner-occupier or as a rent-paying tenant. This reduces the possibility of a major downturn in the residential market. Conversely, investment in equity shares is discretionary. Investors can withdraw from the share market, triggering substantial price falls. The risk of a market downturn is evidenced by major historical price slumps (Bryan, 2001)

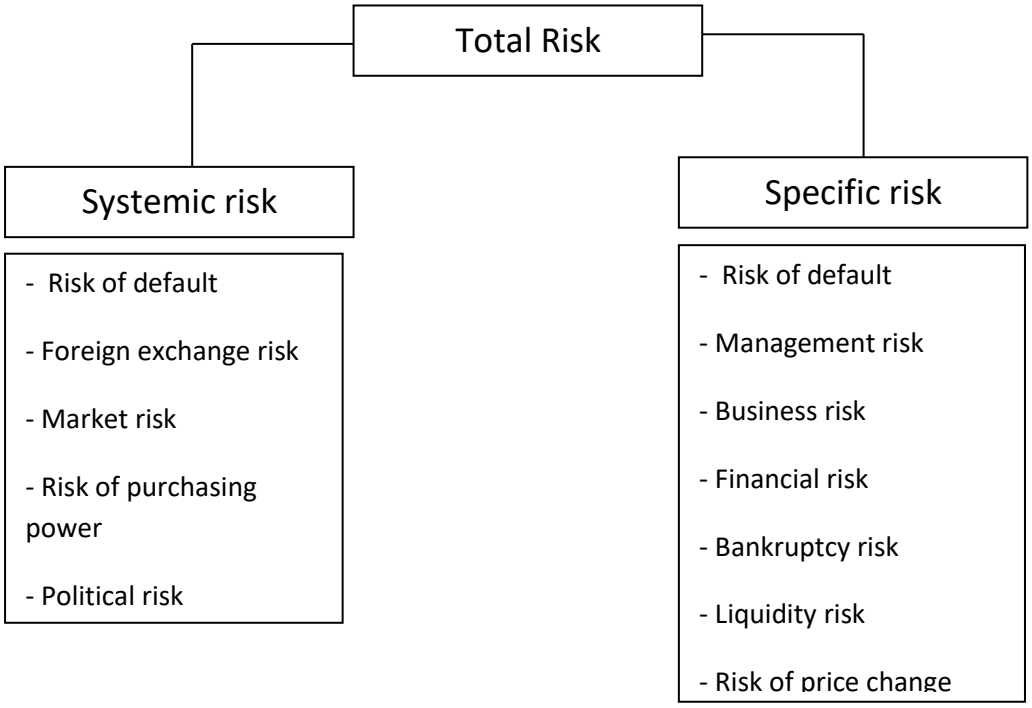

Figure 2.2: Systemic and Specific Risk.

Source: Kalinowski (2009)

Risk of an asset consists of unsystematic and systematic (market) risk. According to Markowitz's Modern Portfolio Theory (MPT), the unsystematic risk can be eliminated by combining enough assets into a well-diversified portfolio. A good example of this type of portfolio that does not include unsystematic risk is the market portfolio which combines all assets available on a particular market. Since market portfolio does not include any unsystematic risk, only the systematic risk of the markets can be quantified to represent the overall riskiness related to market return. This systematic risk that cannot be eliminated by diversification is called market risk premium and it can be defined as return on the market minus the return on a risk-free investment. Hence, the systematic risk of an individual asset is the risk that an asset contributes to a well-diversified portfolio. It can be measured with the covariance between asset returns and market returns.

According to Daniel *et al* (2014), an investment is considered risky because the investor is unsure of the actual returns which he will realize from his investment. The degree of variability of the actual return from the estimated return of investment as well as the possibility of loss of capital reflects the risk elements of investment (Ubom, 2010). This clearly indicated that where the degree of variability is higher, the risk involved in the investment is certainly higher and vice versa.

The most overlooked aspect of this definition is the concept of "better-than-expected" returns. That is, low risk implies that the variability of expected returns is limited and as such, an investment is not necessarily less risky simply if it has lower downside return expectations; outsized upside returns also means more risk. Risk can be quantified as variance and the standard deviation about an expected outcome or a sample mean (Staiger, 2011). Managing risk involves three steps: analysis, identification, and quantification of the risks regarding their effect on the investment. After this, an investor must either accept the circumstances or

proceed with appropriate measures to eliminate or reduce the risks depending on the investment strategy and goals.

Curcio *et al.*, (2014) they, therefore, categorized risks that can decrease profitability or disturb the investment process are:

1. Price risk – a significant decrease in real estate prices

2. Interest rate risk – a significant rise in the interest rates of loans

3. Empty months risk – the lack of a tenant for some period of time

4. Tenant risk – bad tenant: doesn't pay the rent or damages the apartment

5. Rental level risk – a significant decrease in rental levels

6. Maintenance charge risk – the expense level of the condominium rises significantly

7. Renovation risk – there is a longer and more expensive renovation to the condominium than expected

8. Political risk – a significant rise in taxes, a cut in the student benefits, regional decisions concerning study facilities, etc.

2.1.1 Risk Classification

The complexity of the problem of risk leads to difficulties in constructing a uniform and interdisciplinary paradigm of the definition. Therefore, its various classifications are currently in use, adjusted to the analyzed fields of life and science. In 1928, Kulp classified risk in terms of factors shaping it, i.e. distinguished systematic risk and specific risk. At the same time, the unavoidable risk is determined by external forces (e.g. environmental conditions, global economics, social and economic situation) with an unknown effect to the subject.

Specific risk, in turn, is the relation between the area of the activity and the possible control of a given object. A detailed division of risk with reference to six categories according to Kalinowski (2009) as presented in Figure 2.3.

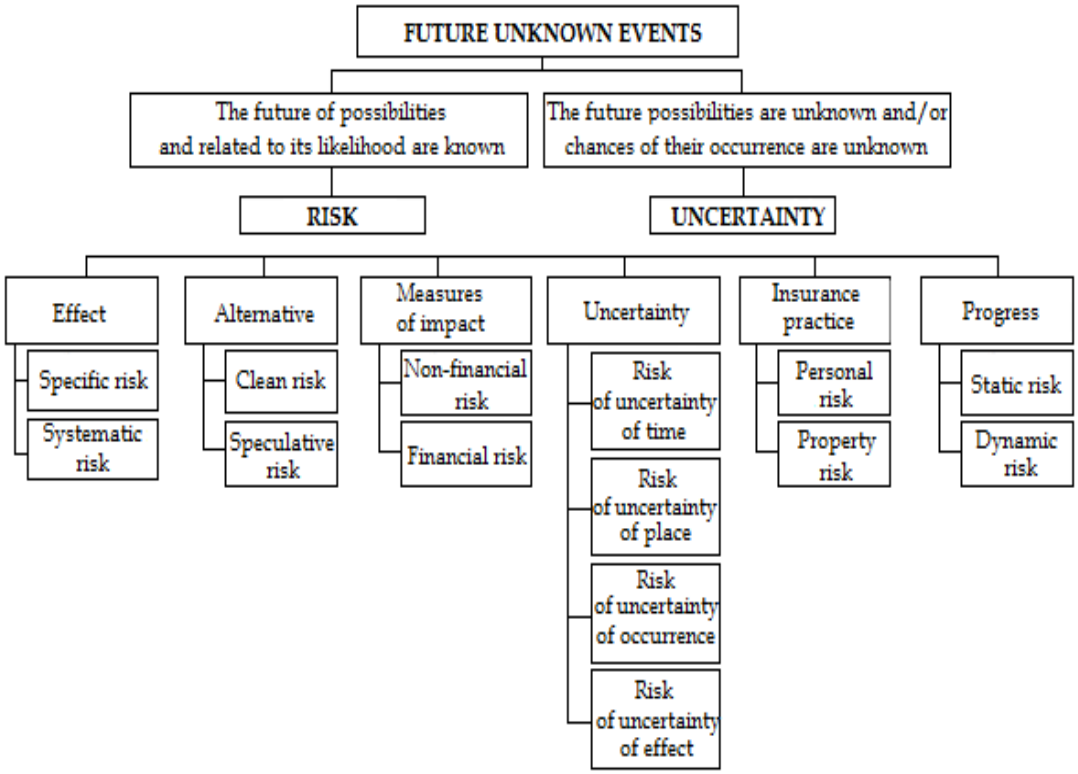

Figure 2.3: Types of risk.

Source: Kalinowski, 2009

2.1.2 Risk Factors in Real Estate Investment

Earlier studies have shown that the risk level decrease when the portfolio increases in size and, all other things equal, that the strongest decrease occurs within the first 20-40 properties (Bryan, 2001). Any increase in portfolio size after 40 properties results in a marginal decrease in risk level. Consequently, managers investing in a mix-asset portfolio would believe that only a relatively few properties are needed to decrease the unsystematic risk to almost zero. The most noticeable is that risk factors such as illiquidity, lower transparency and

geographical which could eventually give another perspective on the outcome of the risk-adjusted return (Rosa, 2011).

Bryan (2001), applied equal-weighted simulated portfolios when estimating risk levels within real estate, which more often than rarely actually is value-weighted. On the other hand, value-weighted simulated real estate portfolios are most likely unrealistic to obtain and be able to use by practitioners due to the unique factors that influence real estate. Instead, actual data of real estate portfolios of different size are preferred to be used.

The empirical study carried out by Bryan (2001) with actual data on real estate portfolios of different sizes. The regression results confirm earlier studies in the area that, on average, large portfolios tend to have lower risk than smaller portfolios. Noticeable is that there are still relatively many small-sized portfolios that can have either very high risk or very low risk, indicating the power of uniqueness of real estates. As a result, portfolio managers who invest with the aim to gain the average risk may very well get a risk greatly higher or lower than anticipated (in other words, the risk calculated as average), due to the large spread in actual risk.

Liow (2001) have conducted a study on the US, UK, Hong Kong, and Singapore which accounts for 74% of the global securitized real estate market to investigate if there are any common risk factors to be found. The research is based on data from 142 firms from US, UK, Hong Kong, and Singapore during the period 1993-2003. The result by Liow (2001) shows that securitized real estate returns are in great extent influenced by domestic economic forces; as a result, the local market returns have a major impact on the local real estate returns (from an Arbitrage Pricing Theory view). The US securitized real estate market also has a higher capability of accounting for variances in the UK, Hong Kong, and Singapore securitized real estate markets than vice versa. This indicates an economic interdependence from the UK,

Hong Kong, and Singapore towards the returns from the US. Also, all the four markets have factors that are moderately correlated to the world real estate market (and to a lesser extent to the world stock market).

This, in turn, gives proof that country-specific factors do influence the international real estate market. The relationship between the four economies US, UK, Hong Kong, and Singapore are closely related, meanwhile, the four securitized real estate markets in each country are less related, according to Liow (2001). As a result, the potential for attractive diversification benefits within a mixed-asset portfolio remains good for the international securitized real estate.

2.1.3 Systematic Risk

Systematic risk is associated with the environment within which a project is to be implemented. It is also called market risk. This type of risk includes all those factors that might affect the general economy and investment securities. Macroeconomic news of inflation, consumer confidence, interest rates, industrial production all affects stock in some way, (Bassey, 2018). Bassey, 2018 further notes that market risk is the type of risk you are rewarded for taking. The more market risk you take, the higher the return you expect.

2.1.4 Non-systematic Risk

Non-systematic risk, also called non-market or diversifiable risk is attributable to factors unique to an investment. (Bassey, 2018) notes that non-systematic risk is the risk you take when you own the stock of only one company. The company may report bad news, which will adversely affect the stock price. Unlike news about inflation or consumer confidence, bad news does not affect the thousands of other firms. The only way an investor can reduce

risk is to investigate the companies and industries he intends to invest in and make decisions on the basis of records while diversifying.

2.1.5 Major Risk Element

Risk element is usually characterized by their origin. The risk inherent in the use of borrowed funds and thus determined by choices of financial arrangements is called financial risk. Risk of loss from the natural hazard (fire, flood, storm and so forth) can be transferred to insurance companies and so is characterized as insurance risk (Black, 2010). Risk steaming from the possibilities of making inappropriate business decisions or of misjudging the economic consequence of one's actions is labeled business risk.

2.1.5.1 Financial Risk

The financial leverage (using borrowed funds) increases the yield on an equity investment (and is therefore considered positive, or favorable) so long the cost of borrowed funds is less than the yields on assets. Unfavorable leverage, in contrast, decreases the yield of an investor's equity fund. Financial leverage also amplifies the variability of possible returns to equity investors. Increased variability represents an additional risk due to the financing decision and is so part of the financial risk associated with the investment.

2.1.5.2 Insurable Risk

Accurate prediction of loses due to fire, flood, and other natural hazards is virtually impossible for any particular building or property. It is possible, of course, to calculate the odds of such a loss, based on a statistical sampling technique. But to an investor who has been wiped out by fire or flood, how significant is the fact that the likelihood of the occurrence was, say, 1 in 10,000?

Predictability base on statistical averages is the foundation of the insurance industry. Because their dollar losses are relatively predictable, the insurer can develop a fee schedule that compensates for all projected losses plus a premium for expenses and profits and a reserve for the unexpected. For large firms, the degree of uncertainty involved, in the insurance function is very small. Investors can transfer many risk elements to insurance firms that specialize in bearing statistically predictable risk.

2.1.5.3 Business Risk

Even the most precisely calibrated projections are subject to gross errors. The likelihood that actual operating results will vary from expectations is sometimes called business risk.

The business risk stems both from factors internal to the investments equations and form circumstances attributable to the economic environment surrounding a project. Management inefficiencies may cause operating expense to exceed expectations, for example, or may result in an inordinately high vacancy rate. Sloppy credit investigation and lax rent collection practices may spawn unexpectedly high credit losses. Any of these events, all internal to the investment equation will cause net operating income to fall below the forecast.

2.1.6 Controlling Risk

Eichholtz, (2007) breaks down risk control measures as follows:

2.1.6.1 Reducing risk through judicious investment selection.

One way to decrease risk is simply to invest in less risky projects. Accepting those opportunities whose outcomes are fairly well-ascertainable reduces default risk essentially to zero and virtually eliminates the uncertainty associated with the outcome of investment itself (though not the uncertainty and risk of purchasing power loss through an inflation rate that exceeds the rate of return on the investment).

2.1.6.2 Diversification as a risk management tool

Investors can further control risk exposure by considering the relationship between assets already held and potential new acquisitions. Because factors influencing profitability and market value do not uniformly impact all properties, holders to diversified portfolios can expect a more stable and predictable pattern of earning that would result in concentrating all wealth in a single project. Diversification does not ensure risk reduction, however, unless properties are chosen to ensure high correlation between investment performances among various assets.

2.1.6.3 Market research as a risk control tool

Real estate investors make assumptions about a venture's ability to generate income over an extended period. Risk can usefully be viewed as the possibility of the variance between assumptions and actual outcomes. One of the best methods of that variance is to make more accurate assumptions.

2.1.6.4 Property Management to control risk

Professional property managers are uniquely positioned to enhance the accuracy of cash-flow projections. Their access to market data and their knowledge and experience regarding the economics of property operations are valuable forecasting ingredients. Competent management also plays a vital role in making outcomes conform to assumptions.

2.1.6.5 Shifting risk to tenants

Lease agreement often permits landlords to shift risk to tenants. Expense stops commit tenants to pay specified operating expenses above some contractual level. The triple net lease makes tenants responsible for all expense.

2.1.6.6 Hedging to control risk

Hedging, a common practice in securities and commodities markets may also reduce the risk for real estate investors. Purchase options are a common form of hedging used in real estate. When contemplating a development project, for example, a developer might purchase an option to buy a selected site. This provides time to plan, to obtain required governmental approval, and to secure needed financing. Soil and engineering studies may also be completed while the property is under options. Purchase options thus provide time to eliminate some of the uncertainty associated with the development process.

2.1.7 Measurements of Risk in Real Estate Investment

A semi-standard deviation assesses the risk of an investor earning a lower return than they expected when making the investment. It gives investors a much more realistic insight into the level of risk and likely gains than a standard deviation does because it shows them the true risk that an investment will fall short of their expectations, rather than sugarcoating the reality (Cheng 2005). Studies based on the classical equilibrium model show that investors using the downside risk measures are awarded a higher market premium (Daniel et.al. 2006). Some authors attribute this phenomenon to financial data skewness. Risk measured with a semi-standard deviation is understood as the probability of return being lower than expected. The analysis of risk in the framework of behavioral finance leads to similar conclusions. It has been observed that investors tend to concentrate on successes rather than failures. When investors give as much attention to downside standard deviations as to upside standard

deviations as a measure of risk, they run the risk that their return will be lower than expected. The phenomenon is known as excessive optimism" (Tyszka, Zielonka 2002; Utkus 2006; Fellner 2009; De La Rosa 2011; Gajdka, 2013). According to some studies, using the downside measures of risk may lead to the underestimation of investment risk when asset prices, e.g. real property prices, are rising fast (Wolski, 2013).

While standard deviation provides a measure of risk that can be considered in isolation and compared to that for other assets, portfolios, funds or REITs, it is not particularly informative about the level of risk relative to return. Simple risk-adjusted returns at the REIT, fund, portfolio or individual property level may be determined by dividing the average return by the standard deviation of that return (Fellner, 2009). This provides a basic indication of risk-return relativity that works for several levels including the REIT, fund, portfolio and individual property but does not address different types of risk from a capital market theory viewpoint. Also, the measurement of risk is by statistical standard deviation. Hence, Baum and Crosby (2007), Torto Wheaton (2001), Kalu (2007) and Hoesli and MacGregor (2000), all agree that the traditional approach is to take the standard deviation of the historical variability as a measure of risk and that variance or standard deviation is the most frequently used measure of dispersion and interpreted as risk. Therefore, to evaluate risk, the standard deviation of ungrouped data is used. Appraisal Institute (2000) and Bello (2003) stated the formula as:

$$S = \frac{\sum (Xi - X)\,2}{N}$$

Where

Xi = the asset periodic return

X = the mean return

N = the number of observations

In the evaluation of risk, investors can use various statistical methods to measure risk which includes;

a) Variance,

b) Standard deviation,

c) Coefficient of variation.

a. Variance

Variance is the average of the squared deviation scores from the distribution mean. It is a measure of score dispersion about the mean. If all scores are identical, then the variance is 0, (Cooper and Schindler, 2003). The greater the dispersion of scores, the greater the variance. The variance is computed by summing the squared distance from the mean for all cases and dividing the sum by the number of cases minus 1. S2 =∑X1-U2n-1

b. Standard deviation

The standard deviation summarizes how far away from the average the data values typically are. It is perhaps the most frequently used measure of spread because it improves interpretability by removing variance's square and expressing deviations in their original units (e.g. revenues in dollars, not dollars squared. It is also an important concept for descriptive statistics because it reveals the amounts of the variability of individuals within a dataset. It is affected by the extreme score. It is calculated by finding the square root of variance as shown; S=s2

c. Coefficient of variation

The coefficient of variation is a statistic ratio of the standard deviation to the mean expressed as a percentage and is denoted CV. (CV= δ/u). The coefficient of variation essentially is a relative comparison of a standard deviation to its mean, (Black, 2010). It measures the relationship between risk and return and allows for comparison among various investments that have different risks and different returns. The coefficient of variation can also be defined as the standard deviation divided by the expected profit. An investment with a lower coefficient of variation is preferred to an investment with a higher coefficient of variation. Why? This is because the lower risk is preferred to higher risk and higher return is preferred to a lower return. CV is a means of adjusting for the scale or the size of the return relative to risk. It is more applicable to those situations where risk is measured in absolute terms (expected return) rather than relative values (percentage return).

2.2 Returns on Investment

This is the income generated or capital gain achieved from an investment which is measured by converting it to a percentage of the capital outlay, (Nigel and David, 2002). This percentage is normally calculated on an annual basis and is referred as to the rate of interest. A capital gain can be described in terms of an annual discount rate by calculating the rate of compound interest required to achieve a certain capital gain over a given period of time. Return on real estate investment is measured by the change in the value of the investment portfolio, while risk is related to the chance that future portfolio values will be less than expected. For example, real estate investor buys properties with initial capital investment, and expects the growth of the future value of properties. since this expected return (change in value) is not certain in the future, risk (chance of return which is lower than expected) exists before the return is realized (Qing Xu, 2002).

An investor who purchases an income producing property expects a return of investment and a return on investment. A return of investment is the right to get back the purchase price at the end of the ownership period and is ordinarily expressed as an annual rate whereas the return on investment is the investor's profit on the money used to purchase the property and is expressed as the interest rate, (Bryan, 2001).

The return from a property is generated in form of capital and income, (Andrew & Neil, 2007). Inform of capital, the investment may produce a return of capital by way of resale which may exceed or be less than the original investment value. Inform of income, the investment provides a varying income depending upon rental values being a product of demand for use of the property and supply of alternatives. There are different forms of returns which include; return on capital employed, return on equity, return on investment and return on investment.

2.2.1 Property investment Returns: Conceptual Framework

Real estate returns can be measured either as periodic returns or multi periodic returns. For the purpose of this study, periodic returns are more of interest since they can be averaged across time and are more comparable with returns from other conventional assets, such as shares and bonds. Periodic returns are particularly useful because they enable investors to measure changes in asset returns over time. Hence, they can be used to assess assets return volatility and co-movements between different asset classes. The rate of return is one of the key investment performance measures medium both in financial economics and investment decision making, (Brown & Matysiak, 2000).

Kuye, (2007) use single-family home prices and excess returns in metropolitan areas and find that the single-family housing market is not efficient. They find price changes typically continue in the same pattern for more than one year. Price changes and excess returns for a

subsequent year are all positively related to construction costs, real per capita income growth and adult population growth. Also examine U.K. data, as well as indices of the U.S. and Canada, and note the returns on real estate may predict the appraisal-based indices.

Ling, Naranjo and Nimalendran (2000) examine commercial real estate and find a latent-variable real estate return series to have volatility inconsistent with the NCREIF and NAREIT indices.

Lizieri, Baum and Scott (2000) conclude that office property returns in London are more volatile than those in other British real estate markets. They explain that this may be somewhat caused by fluctuation in capital flows, in turn, caused by ownership changes brought on by the development of London as a highly specialized financial services market.

Real estate returns could also be measured by using the internal rate of return (IRR). IRR is a micro-level approach on returns and it measures the returns of the capital invested in the property for the duration of the investment. IRR does not tell us at what point in time during the investment horizon the return is actually formed thus, it is not suitable for computing statistics on the co-movements of different real estate assets (Geltner et al. 2007). Therefore, within the scope of this study, periodic returns are seen to be more relevant and more focus is placed on them.

Consequently, from an investors' perspective, the attractiveness of expected return is dependent on the risk the investment holds together with the returns' possible movements with other asset returns. Hence, it is important that the relationship between risk and return can be quantified so that investors are able to compare different asset classes and also test their possible correlations. Risk can be defined as the probability that the ex-post (observed) return differs from the ex-ante (expected) return, and it can be quantified by calculating the standard deviation for the probability distribution of the expected returns. This risk

measurement is also referred to as the volatility of the investment. Periodic returns enable the investors to measure the historical volatility of the asset and use that to compare the historical riskiness of the real estate asset to other assets. As investors are assumed to be risk averse they expect a higher level of return for the higher level of risk (Geltner *et al.*, 2007).

2.2.2 Measurement of Real Estate Returns

Real estate return is measured in terms of total return (TRT) which comprises income return (IRT), and capital return (CRT), (Hoesli and MacGregor, 2000, Baum, Mackmin and Nunning, 2011).

Income return is expressed:

$$\text{IRt} = \frac{NIt}{CVt-1}$$

Where

IRt = income return for period t

Nit = net income received in period t

CVT – 1 = CV at the end of period t – 1

The capital returns

$$\text{CRT} = \frac{CVt-\text{CVt}-1}{CVt-1}$$

Where

CRT = capital return for period t

CVT = CV at the start of the measurement period

CVT – 1 = CV at the end of period t – 1

For total return

$$TRT = \frac{NIt+(CVt-CVt-1)x^2}{CVt-1}$$

CVT = capital value of the direct property at the beginning

CVT – 1 = capital value of the direct property at the end

NIt = income of direct property received during the holding period.

2.3 Relationship of Risk and Returns in Real Estate Investment

The most important underlying factor that could influence residential property investment would be the earning rate. Return on investment could be said to be the profit expressed as a percentage of the initial investment. Profit on the other hand, would include income and capital gains while risk is simply the probability that an original investment would not grow as expected, or would even decline in value. Return and risk are inextricably intertwined so it is essential to consider risk-adjusted returns. Though high returns are intuitively attractive, they are insufficient alone unless accompanied by a clear understanding of the level of risk accepted. Investment decisions are guided (though not limited) by risk characteristics and return characteristics. Any investment decision invariably involves a trade-off between risk and return.

Markowitz, (1952) in Abu (2012) sets the golden rule underlining the theory of investment that ―investors seek either to maximize returns at a given level of risk or to minimize risk at a given level of returns on their investment' (Abu, 2012). it is possible to reduce risk by diversifying across investments without sacrificing return. He provided a solution to the problem of portfolio construction by demonstrating that risk is quantifiable and can be divided into two parts; the systematic part, or the portion that is unavoidable once the investor

invests in a particular asset class, and the unsystematic risk, or the part that can be reduced by creating a mixed-asset portfolio.

Investors' informed decisions with respect to the risk-return strategies of real estate investments provide many benefits. It can provide diversification benefits; has low historical correlations to other asset classes; provides current income and the potential for capital appreciation; hedges inflation with returns that equals or exceeds the rate of inflation over longer periods of time; and has the capacity to produce superior risk-adjusted returns relative to other investments asset classes (Hui and Eddie, 2009).

Steinke (2011) revealed that in real estate investments, characteristics of market, tenancy and the features of the property influences the expectations regarding the risks and returns of the investments. Furthermore, Mughees (2010) and Steinke (2011) identified and distinguished real estate' risk-return strategies as Core/Core plus (low risk); Value Add (moderate risk) and Opportunistic (high risk).

Mughees (2010) posited that the size of the allocation among the real estate risk-return strategies depends on an investor's risk-return appetite, but can generally be in the range of 5% - 15%.

According to Ubom (2010), the degree of variability of the actual return from the estimated return of the investment as well as the probability of the loss of capital reflects the risk elements of investment. The higher the degree of such variability, the higher the risk involved and vice versa; and the greater the risk involved in a project, the greater the expected rate of return or cost of capital. The problems associated with investment risk cannot be totally eliminated even in an ideal economic situation.

Over time, the variance of actual return from expected return can be measured and used to help determine the probability level. The risk is a deviation from the expected return and not just the chance that the return on an investment will be below expectations (Geddes, 2002).

Jud *et.al.,* (2005) compared risk and return between US stocks included in the S&P500 index and investments in housing properties represented in the years 1975-2003. The risk was assessed for investment periods of 1, 3, 5 and 7 years by means of a standard deviation. The authors concluded that stocks were a more profitable investment, but also riskier.

The conclusions of most studies on the developed US market are not different from the results of investigations into other markets. Liow (2001) analyzed the rates of return and standard deviations for all stocks and real estate companies listed at the Singapore Stock Exchange (SGX) using to this end the respective indices. Real estate was analyzed with respect to three indices: for residential properties, commercial properties, and industrial properties. The study showed that although in the years 1975- 1996 stocks yielded higher returns than real estate, they were also a less certain option. Wolski (2016) studied the housing property market and the capital market to determine risk-return ratios for both markets. Investments in housing property proved safer as well as more profitable, a finding contrasting with what is observed in developed markets. Whilst we would all love to find a perfect investment which has low risk and high returns, the fact is that this doesn't exist because risk and return are positively related.

This means that the lower risk investments – while good for peace of mind – will generally provide a lower long-term return than a high-risk investment.

The chart below shows the risk-return profiles of each of the different asset classes.

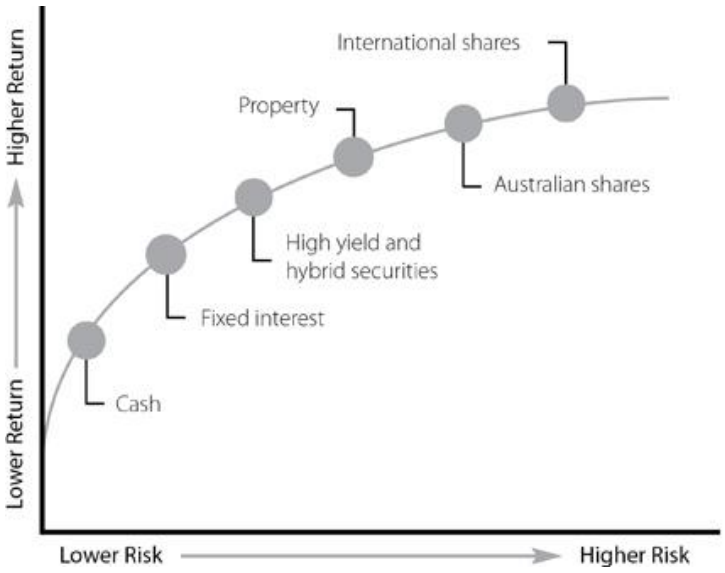

Figure 2.4: Show the relationship between risk and return.

Source: Adapted from Geddes (2002).

The above relationship is based on the modern portfolio theory originally conceptualized by Markowitz, (1952) in Geddes (2002). Which says that the valuation of financial assets rests on two aspects of the assets, risk and return". In fact, Markowitz (1952) in Geddes (2002). sets the golden rule underlining the theory of investment that ―investors seek either to maximize returns at a given level of risk or to minimize risk at a given level of returns on their investment' (Abu, 2012). In other words, in order for one to be willing to accept the risk that an investment could do poorly, investors would have to be compensated with a greater return. In retrospect also, with very safe, low-risk investments, the return would likely also below. For real estate, construction alone is a major source of risk since investor‘s funds would be ―tied up during that entire period, meaning the investment period would generally take a longer time for recovery. This could be mainly because the product development process from the acquisition of land, through to the construction to leasing or eventual sale of the property usually takes a long time (18 months on average).

2.3.1 Property Investment Risk and Return

A risk is regarded as at least as important as the return in the financial market. Financial risk quantification is a routine task for most investment managers. Various techniques are used for measuring investment risk, for example, the mean-variance approach and value at risk. As an asset class of portfolio, real estate investment is also required to be measured by both risks and return in order that it may be compared to the performance of another financial instrument. Due to both the lack of the tool for analyzing risk and the tradition this industry, real estate investors were used to setting the target return for their real estate investment, but they were not confident enough to set risk targets. Investment objective should be to combine risk criteria to ensure that the investment return fluctuates in an acceptable manner. Baum and Crosby (2007) stated that the element of uncertainty demands another level of decision aiding analysis. However, risk analysis, well explored in financial theory, has not yet been the subject of comprehensive examination in the real estate sector, and empirical tests of real estate risk have not yet been developed to a point which enables risk-return analysis to be widely practiced in the property market. All level of decision technology for real estate investment discussed in this study will be based on discounted cash flow analysis and utilize a return measure. Estimation of return may be by net present value (NPV) or internal rate of return (IRR).

The risk and investor assume by investing in a security/asset/real estate include the possibility of not realizing the expected return, the main reason for investment is to realize a satisfactory return on investment. Total return from an investment equals the price change of the security plus income in the form of interest or dividends (Wolski, 2016).

In general, the return on investment can be defined by some objective economic and financial variables such as net present value, internal rate of return, net yield, cost-benefit ratio, capital

growth, cash flow, and total return, etc. risk considered as a probability distribution of the return. Stated another way, the risk is the probability of the future return being lower than expected return. Uncertainty in the following manner, the risk is measurable in terms of probability outcomes, so that risk has statistical measures and the, therefore "known". Uncertainty is not measurable in (Chandra, 2010).

This distinction may be useful in conceptual terms, but it has limited value in practical risk analysis. In this study uncertainty refers to unexpected situation and risk is the potential consequence for the investment objective. In other words, the risk is related to target criteria of investment as a whole as perceived by decision makers; uncertainty is all related variable that may have impacts on the target criteria (Qing Xu 2002).

2.4 Residential Property Investment General Over View

Abu (1997) in Abu (2012) stated that Residential Property investment has grown substantially over the past few years. As the proportion of investment funds invested in property increased, property investors became very keen on the proper management of their property investments. For this reason, property return measurement has a very important role to play as an analytical tool, to assess the performance of property investments.

Investment in property may be achieved in a number of ways, but the chief of which are: property acquisition, mortgage investment, property development and acquisition of shares in property companies, options to purchase and other titles based on property assets in Abu (2012).

Property acquisition: by purchasing a property, an investor may accept all the risk and responsibilities of estate ownership and management and reap all of the rewards. an investor is also able to suit his own particular investment needs by selecting the types of property

which serves their best with regard to risk, income, possibilities, of capital appreciation, payment of taxes and extent of management responsibility.

Property company shares: outside the province of estate management it is necessary to know that, property investment can be achieved by acquiring shares in a company whose assets are wholly or largely made up of an estate. By this, it means, estate management problems are avoided by the investor and his risk are spread over the whole range of property assets held by the company.

Mortgage investment: a mortgage is a loan secured on the value of a property. The capital usually perfectly sale as the amount of the mortgage is normally well below the realizable value of the security. The mortgagee who is satisfied regarding the personal work of the mortgagor may rely first on the borrower coming to the end of his own resources before defaulting: second , on taking the income arising from the property to meet Claris, third, on foreclosure and selling this property to repay the debts and fourth on securing the mortgagor personally on any balance owning in develop nations residential property investment by way of mortgage has always been popular and in the nineteenth century funds lent out in this way, usually through the medium of family solicitors, played a major part in financing urban expansion. Investment by way of the mortgage offers no direct hedge against inflation; but they are normally realizable on short notice and, if the market rate for money moves upward for more a temporary period, it is usually possible to agree a higher interest rate. This research which is particularly concern with residential property investment in Abu (2012) see residential property investment in two main types which are: the first is the cheaper kind of privately-let housing, which is normally subject to rent control, which is not common in Nigeria but in practice in the United Kingdom, and the second is the rather small class of luxury accommodation, available for letting particularly in central urban areas. Like the study

area of this research which is Kano. The investment characteristics of these two classes of property are different.

Rent control premises usually have a low value and, a poor condition lacking in modern amenities. As owners are unable to increase their income, which is constantly being reduced in the real term by inflation and rising cost, they have little incentive to keep the premises in good repairs and maintain high standards of estate management.

A survey in the nation with rent control suggests that investors in such property seldom have much capital and are typically elderly, owning no more than two or three houses which they have often received by way of inheritance. Though there are some large landlords of these types of property, they are tending to diminish in number as the political risk, the social opprobrium, the high costs of management and maintenance make such propositions unattractive to this type of investor except a low return.

wolski (2016) stated that dwellings constitute quite a different, investment and may be combined with shops and other types of property in the central area. Outgoing can usually be passed on to the tenant either directly or by means of service change and the political risk of rent control are not considered to be as great as with cheaper property. It usual to grant short leases of such premises so that rent can be revised from time to time or to allow for rent review or rising rent where the term of twenty-one years or more are granted.

2.4.1 Property Investments and Their Classes

Property investments are properties which are expected to produce benefits in the form of direct monetary return in Ifediora (2003). They are properties which are income-yielding and as such produce an income-flow (Millington, 1982) or are acquired purely as an investment (Baum and Crosby, 1988) in Baum and Crosby (2007) Property investments may be

classified based on some parameters. These are (a) Nature of use for which they are put in; (b) Nature of interest subsisting in them; and (c) Nature of income produced by them.

2.4.1.1 Classification Based on the Nature of Use

Property investments are classified based on the type of use for which they are put. Property investments which are used for commercial purposes such as offices, shops etc. are classified as commercial property investments. Similarly, income-generating properties used for residential, agricultural and industrial purposes are classified as residential property investments, agricultural property investments and industrial property investments respectively and this study is on residential property investment.

2.4.1.2Classification Based on the Nature of Interest

Like other types of property, interest is what is owned in an investment property and not the property itself. There are two major interests which can subsist in a property, be it investment property or any other type of property. These are freehold interest and Leasehold interest. While the freehold interest is non-derivative, the leasehold interest is derivative interest for a term of years and is always derived from the freehold interest. In this context, property investments may be classified as freehold property investments or leasehold property investments. While the ownership right in the former is of a perpetual nature, the ownership right in the latter is of a terminal nature and all these interests have both risk and return associated with each.

2.4.1.3 Classification Based on the Nature of Income

Generally, property investments are properties which are owned, acquired or held for the sake of monetary income. A monetary income may be fixed or variable, in which case it is allowed to grow with inflation. On this basis, property investments generating fixed income may be

classified as fixed income property investments, while property investments generating variable income may be classified as variable income property investments. The classification of property investments in inflationary times is based on the nature of income generated by them as this gives a clear indication as to whether the income generated is prone to inflation or is inflation - proof. The diagram below illustrates the classification of property investments.

2.5 Sources of Residential Property Investment Risk

The following are sources of property investment risk according to Andrew &Neil (2007):

1. Tenant risk

2. Sector risk

3. Structural risk

4. Legislative risk

5. Taxation risk

6. Planning risk

7. Legal risk

8. Valuation risk

2.5.1 Tenant Risk: is the chance that the tenant will affect a return by his or her action. The most serious concern of the investor will be the chance of voids, the possibility of tenant vacating the premises and paying no rent. Even where long lease are signed by tenants, the possibility of bankruptcy must be considered. Legal actions are expensive and ponderous where actions to recover rent are undertaken.

Tenant may fail to perform repairing and insuring obligations. They may cause physical damage to or stigmatize a property. They may alienate adjoining owners or other tenants.

These prospects lend a risk to property which is near-unique. Perhaps the closest parallel is the risk of investing in ordinary shares which derives from bad management policies; it is much reduce, if can be parallel at all, in government securities and bank deposits. For example, stigmatization on property and also rumor on the property that any occupant a property always dies, it will affect the property negatively. It can be diversified by balancing portfolio construction through proper tenant selection.

2.5.2 Sector Risk: is the chance that sectorial movement will affect the property investment. Such a risk is certainly present in the ordinary share market, where the choice of sector may be vital. Electrical may underperform industrial and chemicals; within that sector, microelectronics may underperform household goods.

A property sector risk is more sharply focused than this. Given the 'lumpiness' of property investment, where large sums of money may be tied up in one investment, property is particularly prone to sector and regional risk. Example Residential, Commercial, Industrial etc. and also it will be break into sub-sector like flat, Bungalow, maisonette. Sector risk can be diversified by balance property investment by type, region, city, and locality.

2.5.3 Structural Risk: is the chance of high repair costs, high maintenance costs or refurbishment cost becoming necessary, and eventually rebuilding becoming necessary, either through structural failure or economic or functional obsolescence. Such risk are paralleled in the other markets other than indirectly and even then in a highly diversified manner. (for example, there may be a structural risk attaching to the performance of ordinary shares in a heavy industry company with one old manufacturing plant, but this risk type would be much reduced in the case of chain of retail shops, where many more units (if owned

freehold) would diversify such risk and reduce its impact upon performance.) This can also be diversified by choice of building material meaning some building material should not use all through.

2.5.4 Legislative risk: is the chance of changes in case law and statute law which directly affect property investment returns. Certain property investors have suffered in this respect in past decades by the introduction and extension of the Rent Control Acts, the Leasehold Reform Act, VAT, the Town and Country Planning Act. As one man's meat is another man's poison, so the concept of 'shifting value' probably resulted in balancing gains for others. For example, rental values of residential properties outside the Rent Control Acts increased as protected tenancy rents became artificially depressed. More generally, legislative risk can have an upside as well as downside. For example, the introduction of Sunday trading in UK doubtless increased the relative value of out town shopping outlets. It is a systematic risk which cannot be diversified?

2.5.5 Taxation risk: is describe the chance of imposition of new taxes upon the investment type of the alterations of existing once. Property can be uniquely prone to taxation risk. Prior to massive institutional investment, it was possible to generalize that the person in the street was much less likely (aside from home ownership) to be a property investor than a stock market investor; that is still true in terms of direct investment. Property easily identified as a taxation target and is not electorally disastrous, as long as home ownership is avoided. It is a systematic risk.

2.5.6 Planning risk: is a chance that central or local government region policy including transport -policy will affect property investment value negatively or positively. Planning risk can be diversified by shifting property value by land use conversion. At the regional level, policies of redistribution (such as the setting of government departments in depressed areas)

will have broad effects; at the local level, proposal for such traffic improvements as the M25 in UK and the channel Tunnel had an immediate impact upon values.

2.5.7 Legal risk: is the chance that the title to property investment is encumbered, with certain restrictions. And it cannot be diversified. The World Bank estimated that registering for formal ownership/lease over a piece of unencumbered land in Nigeria was the third longest registration process in the world. Such problems which usually result from litigation problems come up when there is a failure to correctly document, enforce or adhere to contractual arrangements; inadequate management of non-contractual rights; or failure to meet non-contractual obligations in land issues that could sometimes drag out real estate development. Such situations would result in a risk of financial or reputational loss arising from the regulatory or legal action (Whalley, 2011). Financial loss could also occur as a result of expenses of litigation to a company (Johnson & Swanson, 2007)

2.5.8 Valuation Risk: This form of risk would usually arise when there is the possibility that a financial instrument, in this case, real estate, would mature or is sold in the market at an amount less than what was anticipated by the seller (Whalley 2011). This failing underlies virtually all modern asset-pricing puzzles.

The valuation of property and property-related assets is inherently subjective. Therefore, there are no assurances that the valuation of the properties and property-related assets will reflect actual sale prices even in cases where such sales occur shortly after the relevant valuation date. This risk could, therefore, be of concern for investors, lenders, regulators and other people involved in the financial markets. Overvalued assets, for instance, could create losses for their owners and lead to reputational risks; potentially impacting credit ratings, funding costs and the management structures of financial institutions (Gregoriou, 2009).

Moreover, all property valuations, including the valuation report, are made on assumptions which might not reflect the true position of the owner.

2.6 Contributory Factors Affecting Residential Property Investment Returns

2.6.1 Insecurity of land title

Security of tenure on land for housing development in urban centres in Nigeria appears to be problematic. Basically, there is no absolute security of tenure of land. Developers who are able to process and obtain the consent for Certificate of Occupancy (C of O) may have security of tenure but this may not be absolute as land speculators at times have their ways by creating a state of dual ownership in situations where land is sold to two different buyers. So it is the first person to get the C of O that has the land. Apart from this, there exists contradiction in some clauses spelt out in the Urban and Regional Planning Decree 8 of 1992; and the 1978 Land Use Act. For example under S.75 (1) of Decree 8, a Right of Occupancy (R of O) can be repealed if observed by the Commission, Board and Authority (created under the Decree) that the land is needed for planned urban and rural development. Again, in the LUA, an R of O can be annulled for public purposes as stipulated in S.51 under the Act. Following this contradiction, it means the private sector developer is at risk. If at all the developer's land is not trapped up under the LUA, it might be trapped by the Urban and Regional Planning Decree (Olayiwola, 2011).

2.6.2 Cost of Finance

It is unarguable that the role of finance has become very critical in housing development. In other words, Afolayan (1991) stated that finance plays a leading role in housing development because it determines whether or not a project would be successfully completed or abandoned. No matter the nature of a housing project, without adequate funding arrangement, it remains a day dream. Hence, Kuye (2007) citing Bello (2003) described finance as pecuniary sources used in the purchase of goods and services for consumption and production

of goods and services including housing developments. Geddes (2002) emphasized that access to adequate finance remains the corner stone to effective housing delivery. Following this, access to finance is no doubt important to housing development. Therefore, the challenges of inadequate finance shall be assessed under three major perspectives which include constraints posed by policies, institutional and political problems.

2.6.3 Access to Land

Undoubtedly, land is a prerequisite for effective housing provisions and its accessibility is vital to sustainable housing delivery. More so, land issues for housing development are interpreted as land accessibility for housing development, as well as the nature of government intervention in the use and control of land. Land accessibility therefore entails the process of land possession for the sole purpose of immediate or future use and control. The intention of individuals seeking access to land is to have the opportunity to develop properties. In the same vein, Afolayan (1991) noted that land accessibility determines the form in which housing is offered as a commodity for consumption. In other words, land accessibility determines the extent to which housing development can take place. By implication, where there is ease of land acquisition then housing development can take place with much dexterity and vice-versa. Land accessibility involves land tenure security, land affordability, land availability and the ease of land acquisition (Omirin, 2002). Access to land for residential development remains a huge problem most developing countries including Nigeria are being faced with today. This issue has forced many city dwellers to reside in squatter settlements and slums characterized by lack of secured tenure, basic amenities and overall poor housing conditions harmful to human, physical and economic development.

2.6.4 High Cost of Land

This largely depends on ability to pay for the cost of the land. Land cost varies from one location to the other within the city. It also differs from one town to the other. In the case of Lagos, Olayiwola *et. al.*, (2006) identified some factors affecting the value/cost of land to include location, transport improvement, rent, infrastructural facilities, government regulation and neighbourhood quality. Lands in prime locations within cities are unreachable to low and medium income earners in Nigeria**.** For instance, the land price land in Bompai and Badawa in Kano ranges from between ₦200 million and ₦150 million (Daily 16th May, 2014). In the other areas, land (alone) for housing estates costs ₦10 million. Following this price tag, it could be seen that the highest paid civil servant in Nigeria may not be able to afford lands in good locations. Some civil servants even if they save their gross earnings from the day they assume duty till their retirement from service may not be able to afford the cost of land in some prime locations in major urban areas in Nigeria. Generally, it is most likely that the high cost of land may affect people's accessibility to land for housing development.

2.6.5 Income Level

The cost at which the houses reach the market will go a long way to determine affordability. Where per unit cost is abnormally high as we have today, the simple implication is that few people will be able to afford it. The limited finance will not be able to spread around the potential homeowners. Repayment period is also increased making it impossible to revolve the loan around many people with a short period.

According to Okupe (2000) the gap between income and shelter cost in Nigeria is very wide. This has eliminated the low-income earners from the housing market. High cost had been attributed to the following: Rising cost of building materials, inflation rate in the economy, high space and quality standard adopted by designers, fees of professional involved in housing designs and construction, excessive profit of contractors and 10% interest payable on NHF.

Other challenges associated with housing affordability is high cost of building materials, inadequate financial structure as well as poor managerial skill of our mortgage institutions.

2.6.6 General Inflation in Economy

Another key factor that affects the value of real estate is the overall health of the economy. This is generally measured by economic indicators such as the gross domestic product GDP, employment data, manufacturing activity, the prices of goods, etc. Broadly speaking, when the economy is sluggish, so is real estate.

However, the cyclicality of the economy can have varying effects on different types of real estate. For example, if an REIT has a larger percentage of its investments in hotels, they would typically be more affected by an economic downturn than an REIT that had invested in office buildings. Hotels are a form of property that is very sensitive to economic activity due to the type of lease structure inherent in the business. Renting a hotel room can be thought of as a form of short-term lease that can be easily avoided by hotel customers should the economy be doing poorly. On the other hand, office tenants generally have longer-term leases that can't be changed in the middle of an economic downturn. Thus, although you should be aware of the part of the cycle the economy is in, you should also be cognizant of the real estate property's sensitivity to the economic cycle.

2.6.7 Unregulated real estate market

The increase in rents in recent years has increased the *desire* of many renters to buy a home instead of renting. However, having to pay higher rents has reduced the *ability* of these households to save a deposit. The net impact on the effective demand for house purchases is therefore ambiguous.

2.6.8 Government Policies/Subsidies.

Legislation is also another factor that can have a sizable impact on property demand and prices. Tax credits, deductions and subsidies are some of the ways the government can temporarily boost demand for real estate for as long as they are in place. Being aware of current government incentives can help you determine changes in supply and demand and identify potentially false trends. For example, in 2009, the U.S. government introduced a first-time homebuyer's tax credit to homeowners in an attempt to jump-start home sales in a sluggish economy (only those who purchased homes between 2008-2010 is eligible). According to the National Association of Realtors (NAR), this tax incentive alone led to 900,000 homebuyers to buy homes. This was quite a sizable increase, although temporary, and without knowing the increase was a result of the tax incentive, you may have ended up concluding that the demand for housing was going up based on other factors.

2.6.9 Tax Advantage

If you rent out your investment property commercial of residential, there are a number of tax implications to be aware of. You must include any rental income in your tax return but you can claim tax deductions for certain property expense.

2.7 Literature Gap

Suliman (2012) study examined the trade-off between risk and expected returns for the Saudi Arabia and Egyptian stock indices between the beginning of January, 2007 and end of December, 2011. Empirical analysis of the paper is carried out by means of general autoregressive conditions and heteroscedastic in mean methodology indicating both symmetric and asymmetric models. The results of the paper show that the risk-return relationship is quite different between Saudi Arabia and Egyptian stock markets. A negative, insignificant relationship between expected returns and conditional volatility is found for

daily returns in Egypt. In Saudi Arabia market, a result which is consistent with the theory of positive risk-return premium on stock indices which states that higher returns are expected for assets with a higher level of risk.

Bosire (2013) the study is on evaluating risk and return in the residential property market and that of the financial assets in Nairobi and analyzed returns in a given property market and their respective risks with the aim of evaluating risk and return in the residential property market and that of the financial assets. The objectives of the study are; to understand what return is and how return is measured, know what risk is and how it can be quantified, describe measures for assessing and measuring risk of a single asset, and correlate the returns from the two markets with inflation and compare the relationship and recommend from findings of the study.

Safia (2015) studied on risk and real estate investment in Ghana and adopted a Vector Autoregressive Model where each of these risks was examined in turn to see if they were sufficiently large to deter real estate investment in the region in general. The study it was found that stocks to the expected returns, the GDP growth rate, and the interest rate explained about 90% of the movement of the expected returns, indicating that these variables are good at transmitting the effects of stocks to the housing market.

Based on the above review of different researchers and scholars there exists a knowledge gap which calls for more work to establish the relationship between risk and return on residential property and Kano the study area which is first of its kind. This forms the groundwork for the research. And the study will differ from above in terms of period of coverage which is fourteen years, the populations and methodology which is Regression analysis.

CHAPTER THREE

3.0 RESEARCH METHODLOGY

3.1. Introduction

From the review of related literature in the preceding chapters, this section describes the methodological frameworks employed empirically to investigate raised issues in an attempt at satisfying objectives of the study.

The chapter proceeded to address in detail the research design, population, determination of sampling techniques and sample frame, sources of data required for the study, methods of collecting such data, distribution of questionnaires and the analysis data techniques for the study.

3.2 Research Design

The research design adopted for the study is Exploratory and Descriptive Designs: This is required for investigating a research problem when there are few or no earlier studies to refer to and this is used to describe existing conditions in a situation or variables. The two designs will be combining to source information's rents, sales, and risk factors variables on residential property investment in the selected neighbourhoods of the study area.

3.3 Sources of Data

3.3.1 Primary source of Data

The primary data on rental values and sale values was collected through questionnaires. The study required the selection of registered firms of estate surveyors and valuers in Kano to give information on rental and capital values, residential property types. The Nigerian of Institution of Estate Surveyors and Valuers (NIESV) through its annual Directory (2018) put

the figure of active estate surveyor and valuer firms in Kano at 53 from which the relevant information on residential property investment obtained.

3.3.2 Secondary Sources of Data

Secondary data comprises of published material used for this study. this comprises of journal, Conference papers and seminars papers which were employed for the study.

Table 3.1: Population and Sampled Size for the Study

Study areas	Total Residential Transactions	Total sampled
Badawa		123
Bompai		55
Sabon Gari		62
Naibawa		48
Unguwa Ukwu		50
Total		**338**

Source: Field Survey, 2019

3.4 Population of the Study

The study population comprises the direct residential property investment in Kano. The information from direct residential property investment includes annual rental values and capital values of residential properties over a period. The information on direct property investment was sought directly from registered estate firms in Kano. Information on rental and capital values a period was sought directly.

3.5 Sample Size

The sample size for each residential sub-market in Kano was quantitatively determined using the model developed by Frankfort-Nachmias (1996) for sample size determination as follows:

$$n = \frac{Z^2 pqN}{e^2(N-1) + Z^2 pq} \qquad 3.1$$

Where N = population size

n = sample size

p = 95% confidence level of the target population

q = 1- p

e = Acceptable error (0.05) Z = 1.96(the standard normal deviation at 95% confidence level, P = 90% = 0.9)

3.6 Sampling Technique

Systematic random sampling was adopted to select residential properties that have required data for the study. Systematic random sampling involved the selection of residential property units of the sample at a fixed interval on sampling frame which comprised the list of residential investment under firm's portfolio with the first number selected at random.

3.7 Method of Data Collection

The study utilized field survey questionnaires to collect relevant data from closed ended questionnaires, data on rental value and sale value were collected through close-ended questionnaires from 338 properties in portfolio of registered estate surveyors and valuers firms from 2005 - 2018.

3.7.1 Questionnaires: the study utilized closed ended questionnaires to collect relevant information from registered estate surveyor and valuers in Kano metropolis. Information on rental value and capital value were collected through registered estate surveyors and valuers. And 5point likert scale questions on factors contributing to risk of an investment were asked

and rank on strongly agree, agree, indifferent, disagree and strongly disagree. With seven factors rises and 25 variables.

Table 3.2: Objective of the Study, Data Required and Data Source

Objectives of Study	Data Required	Data Source
To examine the trend in returns of residential property investment types in the study area	Rent and capital value from direct investment over a period	Primary source (Registered Estate surveyors and Valuers)
To examine the risk in relation to residential property investment in Kano	Risk from direct property investment in Kano	Primary source (Registered Estate surveyors and Valuers)
To examine the variation in returns on residential properties across the study areas	Returns from direct property investment in Kano	Primary source (Registered Estate surveyors and Valuers)
To examine factors contributing to risk on residential property returns in the study area	Identified factors from property market	Primary source (Registered Estate surveyors and Valuers)

Source: Researcher's Compilation, 2019

3.8 Method of Data Analysis and Analytical Techniques

The study utilized quantitative data analysis. The study employed both descriptive and inferential methods of Analysis.

3.8.1 Descriptive analysis: statistics such as total return, standard deviation, variance and coefficient of variation. The use of mean rental growth is to calculate the mean of the rental growth of residential properties.

Annual holding period of return (total return) was determined as follows:

$$Total\ Return = \frac{(CV_t - CV_{t-1}) + NI}{CV_{t-1}} \qquad equa \qquad 3.2$$

Where CV_t is capital value at end of the year, CV_{t-1} is the capital value beginning of the year and NI represents net income or rental value.

Standard deviation is the square root of variance. It is a measure of variability of a given set of data. It provides a much useable measure of dispersion, particularly when it is used to compare alternative investment opportunities with significantly different expected values,

Standard deviation measure of volatility in property investment. Standard deviation expressed as follows:

$$S.D = \frac{\sqrt{\sum(X_1 - \bar{R})^2}}{N} \qquad equa \qquad 3.2$$

Where X_1 is individual observation and $\bar{R}$ is the mean and N is total number of observation.

Coefficient of variation (C.V) was adopted to measure the risk-growth ratio of various property investments across the markets to determine the market with minimum risk at higher average rate of growth. In other word, it measures the relative performance of property investment with respect unit of risk taken in relative to average growth rate. it is given as follows:

$$Cv. = \frac{S.D}{\bar{R}}. \qquad equa \qquad 3.3$$

3.8.2 Inferential Analysis: inferential analysis featured the use of analysis of variance (ANOVA). This is used to establish the level of variation in rental growth rate.

Analysis of Variance (F – Statistics) It usually aims at finding out whether the explanatory variable X_1, actually have any significant influence on the dependent variable Y. The test of

the overall significant difference in property investment returns and amount collected across the study areas make the test relevant for the study. ANOVA model can be stated thus:

$$ANOVA(F-ratio) = \left(\left(\frac{\varepsilon(X)^2}{n} - \frac{(\varepsilon X)^2}{N}\right) \div (K-1)\right) \div \left(\left(\in X^2 - \frac{(\varepsilon X)^2}{N}\right) \div (N-K)\right)$$

Factor Analysis: Factor analysis (Principal Component Analysis) is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors. Factor analysis aim to reduce the dimensionality of a set of data

$$y_{ij} = \nu_j + \lambda_{j1}\eta_{i1} + \lambda_{j2}\eta_{i2} + \ldots + \lambda_{jk}\eta_{ik} + \ldots + \lambda_{jm}\eta_{im} + \varepsilon_{ij}$$

where νjare intercepts, λjk are factor loadings ηik are factor values εij are residuals with zero means and correlations of zero with the factors

Table 3.3: Objective of the Study, Method of Analysis and analytical techniques

Objectives of Study	Methods	Techniques
To examine the trend in returns of residential property investment types in the study area	Descriptive	Mean returns
To examine the risk in relation to residential property investment in Kano	Descriptive	Average return, Standard deviation, coefficient of variation (risk-adjusted return) Frequency tables Analysis of Variance
To examine the variation in returns on residential properties across the study areas	Inferential	
To examine factors contributing to risk on residential property returns in the study area	Descriptive /Inferential	Mean score/factor analysis(principal component analysis)

Source: Researcher's Compilation, 2019

CHAPTER FOUR

4.0 Results and Discussion

4.1 Introduction

The purpose of this chapter is to summarise the collected data and statistical treatment. the nature of is quantitative data, which is a time series data on returns on residential property investment collected ranges from 2005 to 2018, it time series data because they change over time, the risk attached to change and factors that lead to the change are all analyses.

Table 4.1 Rate of Returns on 1Bed Room Bungalows Property Investment in Kano

Year	Badawa	Bompai	Sabon Gari	Naibawa	Unguwa Uku
2005	9.12	9.79	10.64	14.19	29.19
2006	10.91	11.22	11.42	13.19	30.35
2007	12.39	5.70	5.88	14.25	39.36
2008	9.43	6.89	7.09	12.25	22.59
2009	9.66	3.13	8.04	11.16	11.41
2010	8.06	2.19	6.53	11.12	22.68
2011	7.72	8.33	9.86	11.12	32.93
2012	4.65	9.73	10.97	11.35	18.85
2013	3.67	10.09	6.47	12.23	30.98
2014	10.57	9.95	7.85	27.31	25.87
2015	9.33	9.50	9.99	13.33	18.16
2016	9.83	4.45	3.49	11.89	11.70
2017	10.25	10.20	9.25	14.35	14.02
2018	11.20	9.22	11.9	13.15	12.05

Source: Field Survey, 2019

The rate of returns on 1B/R property investment in Kano is presented in Table 4.1. This showed the annual trends in returns of 1B/R properties over a period (2005-2018). The returns in Badawa maintained double digit returns on 1B/R property investment in five periods, 2006, 2007, 2014, 2017 and 2018 at 10.91%, 12.39%, 10.57%, 10.25% and 11.20% respectively. In Bompai, the returns maintained double digits 2006, 2013 and 2017 at 11.22%, 10.09% and 10.20% respectively. In Sabon Gari, there were double digits in four

periods as in 2005, 2006, 2012 and 2018 at 10.64%, 11.42% 10.97% and 11.9% respectively. Naibawa and Unguwa Uku maintained double digit through the periods. This indicates that 1B/R property investment yielded higher returns in Naibawa and Unguwa Uku than Badawa, sabon gari and Bompai. And this shows that investors will invest in one 1Bedroom in the two areas for more returns on investment.

Table 4.2 Rate of Returns on 2Bed Room Bungalows Property Investment in Kano

Year	Badawa	Bompai	Sabon Gari	Naibawa	Unguwa Uku
2005	19.23	12.09	19.05	21.98	2.43
2006	23.19	20.13	11.07	15.63	8.95
2007	15.66	16.11	8.37	20.06	7.99
2008	20.85	20.50	15.09	5.98	3.70
2009	14.59	27.35	10.08	8.99	2.52
2010	25.23	18.73	28.04	20.09	12.28
2011	14.56	27.24	9.44	26.37	6.96
2012	16.53	25.84	19.54	9.84	11.96
2013	27.12	16.59	17.09	8.68	3.34
2014	37.09	18.65	10.02	10.88	4.05
2015	37.40	17.66	16.07	17.45	9.12
2016	22.86	10.45	10.82	9.39	6.85
2017	20.16	11.08	10.24	12.33	10.36
2018	21.04	18.11	14.44	15.12	13.02

Source: Field Survey, 2019

The rate of returns on 2B/R property investment in Kano is presented in Table 4.2. This showed the annual trends in returns of 2B/R properties over a period (2005-2018). The returns in Badawa, Bompai and sabon gari maintained double digit returns on 2B/R property investment over the periods. In Sabon Gari, there were single digits in four periods as in 2007and 2011 at 8.37%, and 9.44% respectively the single digit be as result of election period were the fear of crisis make people to relocate for some time.. Naibawa maintained double digit rate of returns in 2005, 2006, 2007, 2010, 2011, 2014, 2015, 2017 and 2018 at 21.98%, 15.63%, 20.06%, 20.09%, 26.37%, 10.88%, 17.45% , 12.33% and 15.12 respectively and Unguwa Uku maintained double digit rate of returns in 2010, 2012, 2017 and 2018 at

12.28%, 11.96%, 10.36% and 13.02 respectively. This indicates that 2B/R property investment yielded higher returns in Badawa, Bompai and Sabon Gari than Naibawa **l**ist performing in the market which is Unguwa Uku.

Table 4.3 Rate of Returns on 3Bed Room Bungalows Property Investment in Kano

Year	Badawa	Bompai	Sabon Gari	Naibawa	Unguwa Uku
2005	15.24	23.44	12.45	12.04	2.08
2006	20.39	29.60	8.01	9.09	6.04
2007	24.96	32.28	16.72	18.09	7.24
2008	37.60	29.06	27.20	11.09	11.35
2009	12.09	25.26	8.87	20.02	10.32
2010	16.12	34.12	18.28	9.08	8.34
2011	29.97	33.97	9.62	21.33	6.36
2012	33.87	21.87	12.42	10.39	11.17
2013	18.27	20.50	27.24	17.32	6.15
2014	39.42	27.44	19.31	6.37	11.16
2015	20.29	19.45	27.41	15.81	17.21
2016	26.01	14.01	5.19	8.99	16.33
2017	10.29	10.21	9.34	5.35	10.15
2018	15.09	13.02	13.22	11.44	14.77

Source: Field Survey, 2019

The rate of returns on 3B/R property investment in Kano is presented in Table 4.3. This showed the annual trends in returns of 3B/R properties over a period (2005-2018). The returns in Badawa and Bompai maintained double digit returns on 3B/R property investment over the periods. In Sabon Gari, there were double digits in four periods as in 2005, 2007, 2008, 2010, 2012, 2013, 2014, 2016 and 2018 at 12.45%, 16.72%, 27.20%, 18.28%, 12.42%, 27.41%, and 13.22% respectively and single digit in 2006, 2009, 2011, 2016 and 2017 at 8.01%, 8.87%, 9.62%, 5.19% and 9.34% . Naibawa maintained double digit rate of returns in 2005, 2007, 2008, 2009, 2011, 2012, 2013, 2015 and 2018 at 12.04%, 18.09%, 11.09%, 20.02%, 21.33%, 10.39%, 17.32%, 15.18% and 11.44% respectively and Unguwa Uku maintained double digit rate of returns in 2008, 2009, 2012, 2014, 2015, 2016 , 2017 and 2018 at 11.35%, 10.32% 11.17%, 10.36% and 14.77% respectively. This indicates that 3B/R

property investment yielded higher returns in Badawa, Bompai and Sabon Gari than Naibawa and Unguwa Uku.

Table 4.4 Rate of Returns on 4Bed Room Bungalows Property Investment in Kano

Year	Badawa	Bompai	Sabon Gari	Naibawa	Unguwa Uku
2005	23.86	29.19	11.34	7.21	15.34
2006	25.32	20.32	10.09	12.89	11.42
2007	20.27	18.09	6.80	9.65	17.10
2008	27.06	20.05	10.88	15.93	6.76
2009	36.44	26.02	9.03	3.92	2.73
2010	24.09	30.09	9.53	12.80	7.77
2011	29.34	20.79	3.08	13.30	18.37
2012	18.20	25.98	8.27	6.63	7.81
2013	25.54	21.46	3.75	16.42	14.98
2014	20.67	31.45	9.08	4.18	7.84
2015	29.83	22.16	20.75	13.09	15.51
2016	22.65	19.92	13.09	10.07	8.52
2017	20.12	10.08	11.29	9.46	9.37
2018	25.7	35.03	9.88	9.25	9.22

Source: Field Survey, 2019

The rate of returns on 4B/R property investment in Kano is presented in Table 4.4. This showed the annual trends in returns of 4B/R properties over a period (2005-2018). The returns in Badawa and Bompai maintained double digit returns on 4B/R property investment over the periods this show that, investors will prefer investing in 4bedroom properties in the two areas than other three neighbourhood . In Sabon Gari, there were double digits in four periods as in 2005, 2006, 2008, 2015, 2016, and 2017 at 11.34%, 10.09% 20.75%, 13.09%, and 11.29% respectively. Naibawa maintained single digit rate of returns in 2005, 2007, 2009, 2012, 2014, 2017 and 2018 at 7.21%, 9.65%, 3.92%, 6.63%, 9.46%, and 9.25% respectively which means investor will thinking diversification of their portfolio for other options of property types. and Unguwa Ukwu maintained single digit rate of returns in 2008, 2009, 2010, 2014, 2016, 2017 and 2018 at 6.76%, 2.73% 7.77% 7.81%, 7.84%, 8.52%, 9.37%

and 9.22% respectively. This indicates that 4B/R property investment yielded higher returns in Badawa, Bompai and Sabon Gari than Naibawa and Unguwa Uku.

Table 4.5: Analysis of Risk and Returns on 1B/R Bungalows Property Investment

Market	N	Mean	Std. Deviation	Variance	Coefficient of Variation
Badawa	14	9.0564	2.40591	5.788	0.27
Bompai	14	7.8850	2.90670	8.449	0.37
Sabon Gari	14	8.5271	2.44913	5.998	0.29
Naibawa	14	13.6350	4.11062	16.897	0.30
Unguwa Ukwu	14	22.7243	9.12362	83.240	0.40
Valid N (listwise)	14				

Source: Computed from Table 4.1

The result of risk and return analysis of residential property investment in selected areas of Kano Metropolis is presented in table 4.5. This Table revealed risk content of the investment and the most performed investment market areas. The risk-return also known as coefficient of variation is used to measure the performance of the market. From the analysis, Badawa and Sabon Gari are most performed markets on the basis of risk return because it offers the least risk per unit of investment but on the basis of average return Ungwan Ukwu and Naibawa are the most risky market but performed on the basis average returns but having the highest risk per unit of investment and it most undesirable market for prudent investors because it is most volatile market. Bompai is referred to as poor property market for one bedroom property market. This revealed that any prudent investors who wish to have a stable one bedroom market and least risky investment should invest in Badawa and Sabon Gari.

Table 4.6: Analysis of Risk and Returns on 2B/R Bungalows Property Investment

	N	Mean	Std. Deviation	Variance	Coefficient of Variation
Badawa	14	22.5364	7.30291	53.333	0.32
Bompai	14	17.9664	6.01611	36.194	0.33
Sabon Gari	14	14.0679	5.63209	31.720	0.40
Naibawa	14	13.8421	6.41883	41.201	0.46
Unguwa Ukwu	14	7.1093	3.40731	11.610	0.48
Valid N (listwise)	14				

Source: Computed from Table 4.2

The result of risk and return analysis of 2B/R residential property investment in selected areas of Kano Metropolis is presented in Table 4.6. This table revealed risk content of the investment and the most performed investment market areas. The risk-return also known as coefficient of variation is used to measure the performance of the market. From the analysis, Badawa and Bompai are the most performed markets on the basis of risk return because it offers the least risk per unit of investment at 32% and 33% respectively but on the basis of average return Sabon Gari, Ungwan Ukwu and Naibawa are the most risky market with highest the highest risk per unit of investment and it most undesirable market for prudent investors because it is most volatile market. This revealed that any prudent investors who wish to have a stable 2B/R market and least risky investment should invest in Badawa and Bompai.

Table 4.7: Analysis of Risk and Returns on 3B/R Bungalows Property Investment

	N	Mean	Std. Deviation	Variance	Coefficient of Variation
Badawa	14	24.8850	4.77427	22.794	0.19
Bompai	14	23.6164	6.45550	41.674	0.27
Sabon	14	9.4900	4.34012	18.837	0.46
Naibawa	14	10.0071	4.23458	17.932	0.42
Unguwa	14	10.1957	5.20653	27.108	0.51
Valid N (listwise)	14				

Source: Computed from Table 4.3

The result of risk and return analysis of 3B/R residential property investment in selected areas of Kano Metropolis is presented in Table 4.7. This table revealed risk content of the investment and the most performed investment market areas. The risk-return also known as coefficient of variation is used to measure the performance of the market. From the analysis, Badawa and Bompai are the most performed markets on the basis of risk return because it offers the least risk per unit of investment at 19% and 27% respectively but on the basis of average return Sabon Gari, Ungwan Ukwu and Naibawa are the most risky market with highest the highest risk per unit of investment and it most undesirable market for prudent investors because it is most volatile market. This revealed that any prudent investors who wish to have a stable 3B/R market and least risky investment should invest in Badawa and Bompai.

Table 4.8: Analysis of Risk and Returns on 4B/R Bungalows Property Investment

	N	Mean	Std. Deviation	Variance	Coefficient of Variation
Badawa	14	22.8293	9.40225	88.402	.412
Bompai	14	23.7307	8.01916	64.307	.337
Sabon	14	16.8057	8.31907	69.207	.494
Naibawa	14	11.8864	5.94141	35.300	.501
Unguwa	14	9.3336	4.09299	16.753	.438
Valid N (listwise)	14				

Source: Computed from table 4.4

The result of risk and return analysis of 4B/R residential property investment in selected areas of Kano Metropolis is presented in Table 4.8. This table revealed risk content of the investment and the most performed investment market areas. The risk-return also known as coefficient of variation is used to measure the performance of the market. From the analysis, only Bompai is the most performed markets on the basis of risk return because it offers the least risk per unit of investment at 33.7% and also performed better on the basis of average returns. Badawa, Sabon Gari, Ungwan Ukwu and Naibawa are the most risky market with the highest risk per unit of investment and it most undesirable market for prudent investors because it is most volatile market. This revealed that any prudent investors who wish to have a stable 4B/R market and least risky investment should invest in Bompai.

Table 4.9: Showing Risk in Relation to Residential Property Investment in Badawa

Type of risk	Frequency	%
Tenant risk	11	19.0
Taxation risk	21	36.2
Structural risk	6	10.3
Sector risk	2	3.4
Valuation risk	8	13.8
Void period risk	7	12.1
Legislative risk	0	0
Legal risk	3	5.0
Planning risk	0	0

Source: Field Survey, 2019

Risk in investment are in two form previous literature which are systematic risk and non-systematic risk, the above property risk types in table 4.9 can fall in the two categories. In Badawa tenant risk affect residential property more than any property risk type with 19.0% tenant risk which is the chance that the tenant will affect a return by his or her action. Taxation risk affects property investment with 36.2% for the period understudy. Void period risks have 12.1% effect on residential property investment Badawa which is the period a property remain unoccupied. Structural affect residential property by 10.3%, Structural risk which have to do with maintenance and refurbishment cost can be diversified Valuation risk affects residential property at the level of 13.8%. Valuation risks have to do with disposing of property below the market value. Legal risk affects property investment in Badawa with 5.0% this has to do with encumbrance on property. Planning risk affect residential property investment in Badawa with 0% these have to do with government policies on improvements. And legislative have 0% effect on residential property investment.

Table 4.10: Showing Risk in Relation to Residential Property Investment in Bompai

Type of risk	Frequency	%
Tenant risk	4	6.3
Taxation risk	29	45.3
Structural risk	0	0
Sector risk	0	0
Valuation risk	5	7.8
Void period risk	18	28.1
Legislative risk	0	0
Legal risk	8	12.5
Planning risk	0	0

Source: Field Survey, 2019

As each neighborhood has it investment potential so also, the related risk. From Table 4.10 taxation risk have high value of 45.3% which show that the imposition of tax on residential property is high in the Bompai neighbourhood due their high level of return on investment. Structural risk has 0% this shows that because of their sophisticated nature of their buildings. Void period with 28.1% show that some property takes a longer period of time before they are occupied. Valuation risk have 7.8% which means some property do change hand below their market values. Tenant risk has 6.3% on residential property investment. Sector risk has 0%, show that the Sectorial movements have no effect on property investment by said percentage. Also planning and legislative risk with 0% effect on residential property investment in Bompai neighbourhood. There is encumbrance, with legal risk of 12.5%. This may be as a result of non-loan payment or other related cases.

Table 4.11: Showing Risk in Relation to Residential Property Investment in Sabon Gari

Type of risk	Frequency	%
Tenant risk	26	36.5
Taxation risk	2	2.7
Structural risk	15	20.5
Sector risk	0	0
Valuation risk	8	11.0
Void period risk	4	5.5
Legislative risk	0	0
Legal risk	1	1.4
Planning risk	17	23.3

Source: Field Survey, 2019

Risk which is common feature of all forms of residential investment and Sabon gari which almost all forms of investment. In Table 4.11 above planning risk affect residential property investment by 23.3% which show that investor in residential property are face with challenges' with regard planning and various land use policies. Tenant risk with 36.5%, it show that investors are faced with the problems from different actions of tenant. Void period risks with percentage of 5.5% that affect residential property investment it may be political or unstable economy and Sabon Gari have also highest population settlers. Legal risks also have 1.4% which shows no encumbrances. Structural risk affect the residential properties in Sabon Gari by 20.5% this can be due age of the buildings or overcrowding/usage. Taxation risk also affects residential property by 2.7% the present of tenement rating in the neighbourhood. Legislative risk have 0% effect on residential property investment is may be strict adherences to property used. Valuation risks have 11.0% effect on residential property investment in Sabon Gari.

Table 4.12: Showing Risk in Relation to Residential Property Investment in Naibawa

Type of risk	Frequency	%
Tenant risk	9	13.2
Taxation risk	2	2.9
Structural risk	18	26.5
Sector risk	0	0
Valuation risk	6	8.8
Void period risk	12	17.6
Legislative risk	0	0
Legal risk	0	0
Planning risk	21	30.9

Source: Field Survey, 2019

In Table 4.12 Valuation risk arise when there is possibility that real estate is sold in the market at an amount less than what was anticipated by the seller and this have 8.8% in the neighbourhood and this could be the nature of growth of the market or title document of the property, which affect the market of the property. Planning risk is 30.9% it's obvious that the neighbourhood have planning challenges, which if these risk are not well address it will affect the residential property asset seriously. The action of the tenant with 13.2% shows also, the activities of tenant not staying to their obligations affect residential property investment. Structural risk has 26.5% effect on residential property investment Naibawa area. Void period risk carried s percentage of 17.6% which indicate that lack of maintenance of property will lead to void, meaning the property to remain unoccupied. Taxation risk with 2.9% this shown that investor on residential property investment in the neighbourhood fewer number are affected by tenement rate payment. Sector risks with 0% which indicate sectorial movement

have no effect on residential property investment. The 0% legal risk also shows the lack of encumbrance on residential property investment in the study area.

Table 4.13: Showing Risk in Relation to Residential Property Investment in Uguwa Uku

Type of risk	Frequency	%
Tenant risk	27	35.5
Taxation risk	0	0
Structural risk	7	9.2
Sector risk	0	0
Valuation risk	13	17.1
Void period risk	8	10.5
Legislative risk	0	0
Legal risk	0	0
Planning risk	19	25.0

Source: Field Survey, 2019

From Table: 4.13 above planning risk affect the residential property investment with a percentage of 25.0%, this may discourage some investors if the authorities did not address the matter. Valuation risks with 17.1% this show due to the poor planning of the neighbourhood it affect the residential properties market value. Tenant risks have 35.5% it shows that, the action of tenant affect the residential property investment and it can be diversified. Void period risk affect residential property investment by 10.5%, this means low income earners are base in this location, and can be diversified through proper marketing concept to avoid the frequent occurrences of the risk. Taxation is 0% which is non-diversifiable risk affects the residential property investment all the selected neighbourhood across the five areas. These show present of tenement rating. Structural risks which have to do with maintenance aspect of the investment have affect residential property investment by 9.2%. Legislative risk affect

property investment by 0% also effect on investment portfolio of any investment. The legal risk has 0% which shows no encumbrances in the neighbourhood.

Table 4.14: Testing Significance across Selected Neighbourhood of Kano Metropolis

Market	*Source of Variation*	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
1B/R Across 5 areas	Between Groups	2165.434	4	541.3586	22.48667	.000	2.51304
	Within Groups	1564.852	65	24.07464			
	Total	3730.286	69				
2B/R Across 5 areas	Between Groups	1820.222	4	455.0554	13.07196	.000	2.51304
	Within Groups	2262.751	65	34.81155			
	Total	4082.973	69				
3B/R Across 5 areas	Between Groups	2298.929	4	574.7324	10.489	.000	2.51304
	Within Groups	3561.599	65	54.79383			
	Total	5860.528	69				
***4B/R* Across 5 areas**	Between Groups	3475.994	4	868.9984	33.85442	.000	2.51304
	Within Groups	1668.465	65	25.66868			
	Total	5144.458	69				

Source: Computed from Table 4:1, Table 4:2, Table 4:3 and Table 4:4

The result of variation in returns on residential properties investment presented in Table 4.5 revealed that variation in returns on residential property investment across the markets the selected neighbourhood of Kano is statistically significant since p-values across the markets are less than 0.05 level of significance. This further indicates that returns on residential property investment are significantly differed across the selected areas. This significant difference is attributed to differences in environmental quality the implication this finding is that the selected areas experiences in environmental quality across market areas.

4.2 Analysis of Contributory Factors of Risk on Residential Returns in the Study Area.

In the subsequent discussions in table 4.7, 4.9, 4.13 and 4.14 are discussing seven factors which contribute to risk on residential property investment returns in Kano for period 2005 to 2018. **Institutional factors** with the following variables. Decrease in demand for residential property, General Unregulated real estate market, Access to land, general inflation in the economy and Bureaucracy. **Financial and physical factors** with the following variable. Property market constraint, land information system, poor infrastructure, Accessibility factor, High development cost, location factor and High cost of Building Materials. **Market factors** with the following variables. Poor Housing market, Increase in land prices and Land speculation. **Economic factors** with the following variables. Demand for property, Cost of finance and General inflation in Economy. **Administrative factors** with the following variables. Poor land administration, insecurity land title, and income level and tax advantages. **Legal factors** with the following variables. Ineffective intuitional framework. **Housing policy factors** with the following variables. Poor mortgage facilities, high cost of labour. All the listed factors and there variables are shown in tables mention in the first paragraph on how they contribute residential property investment.

Table 4.15 CRONBACH'S ALPHA
(Reliability Statistics)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.790	.867	25

Source: Field Survey, 2019

From the reliability test of cronbachs Alpha, it show reliability greater than 0.5, the result is 0.79 which is acceptable it can now be used to run the likert scale.

Table 4.16: Factors Contributing to Risk on Residential Property Returns

Factors (cronbach alpha @0.79)	N	Sum	Mean
Poor Housing market	338	1528	4.52
Increase in land prices	338	1477	4.37
land speculation	338	1413	4.18
Decrease in demand for residential prices	338	1541	4.56
Unregulated real estate market	338	1558	4.61
access to land	338	1480	4.38
Bureaucracy	338	1497	4.43
Ineffective Institutional framework	338	1562	4.62
poor land administration	338	1396	4.13
Tax advantage	338	1507	4.46
land information system	338	1477	4.37
Insecurity of land title	338	1497	4.43
complicated nature of land ownership	338	1484	4.39
income level	338	1518	4.49
general inflation in economy	338	1606	4.75
cost of finance	338	1548	4.58
Demand for property	338	1592	4.71
poor mortgage facilities	338	1636	4.84
poor infrastructure	338	1537	4.55
location factor	338	1551	4.59
accessibility factor	338	1433	4.24
High development cost	338	1470	4.35
high cost of building materials	338	1460	4.32
high cost of labour	338	1541	4.56
high cost of land title registration	338	1443	4.27
Valid N (listwise)			

Source: Field Survey, 2019

The result of mean analysis presented in Table 4.16 revealed that, the reliability test carried out to ascertain the degree of internal consistent among the items. The result showed that at minimum acceptable alpha at 0.79 (79%), all the items across the study areas maintained high level of internal consistency across the selected areas of Kano metropolis. The mean or benchmark is calculated as (5+4+3+2+1= 15/5=3). Also, any factor with mean condition higher than average threshold or mean is referred to as most contributing factor of risk in residential areas. Therefore all the mean average response toward the factors showed higher mean over and above benchmark this indicates that all the factors contribute to risk on residential property investment in selected areas of Kano. With poor mortgage facilities of

housing policy factor with high response of 4.84, follow by general inflation in economy with response of 4.75 under economic factor and demand for property with response of 4.71 under economic factor too. For the lower response are poor land administration with response of 4.13 under administrative factor, followed by land speculation with 4.18 under market factor and accessibility factor with response of 4.24 under financial and physical factors.

Table 4.17 KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.773
Bartlett's Test of Sphericity	Approx. Chi-Square	1751.639
	Df	300
	Sig.	.000

Source: Field Survey, 2019

To verify that data is suitable for factor analysis, check that the Kaiser Meyer Olkin measure of sampling adequacy (KMO) value is 0.6 or above and that the Bartletts Test of sphericity value is acceptable from table 4.8 is 0.7 and the p.value is significant (p= .000) is less than .001, therefore factor analysis is appropriate.

Table 4.18 showing Key/Component of Table 4.10

Serial no.	Variables/component
1	Poor Housing market
2	Increase in land prices
3	land speculation
4	Decrease in demand for residential prices
5	Unregulated real estate market
6	access to land
7	Bureaucracy
8	Ineffective Institutional framework
9	poor land administration
10	Tax advantage
11	land information system
12	Insecurity of land title
13	complicated nature of land ownership
14	income level
15	general inflation in economy
16	cost of finance
17	Demand for property
18	poor mortgage facilities
19	poor infrastructure
20	location factor
21	accessibility factor
22	High development cost
23	high cost of building materials
24	high cost of labour
25	high cost of land title registration

Table 4:19: Total Variance Explained in Factor Analysis

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.651	26.605	26.605	6.651	26.605	26.605	3.413	13.654	13.654
2	2.282	9.130	35.735	2.282	9.130	35.735	3.244	12.976	26.630
3	1.975	7.900	43.635	1.975	7.900	43.635	2.803	11.213	37.843
4	1.705	6.821	50.456	1.705	6.821	50.456	2.715	10.859	48.702
5	1.375	5.500	55.956	1.375	5.500	55.956	1.440	5.760	54.463
6	1.044	4.177	60.133	1.044	4.177	60.133	1.315	5.261	59.723
7	1.013	4.052	64.185	1.013	4.052	64.185	1.115	4.462	64.185
8	.968	3.871	68.056						
9	.912	3.646	71.702						
10	.860	3.439	75.141						
11	.785	3.141	78.283						
12	.698	2.794	81.077						
13	.658	2.631	83.707						
14	.598	2.392	86.100						
15	.546	2.186	88.286						
16	.432	1.730	90.015						
17	.405	1.621	91.636						
18	.378	1.513	93.149						
19	.352	1.409	94.559						
20	.329	1.314	95.873						
21	.259	1.037	96.910						
22	.228	.913	97.823						
23	.216	.865	98.688						
24	.180	.720	99.408						
25	.148	.592	100.000						

Extraction Method: Principal Component Analysis

The cumulative variance of the seven the most correlated factor contributing to risk of residential property investment returns in Kano is presented in table 4.19. The Eigen value in the table, and the total under Eigen value revealed the amount of total variance in the original variable accounted for by each of the components. The variance which is simply the ratio of variance accounted for by each of the component to the total variance of the variables. The analysis required the first seven components to be extracted and the first five components form extracted solution and the most highly emphasized factors contributing to risk of property investment. The extraction of sum of the square loadings in the second section explained the variability in original 25 variables. The extracted components explained 64.18% variability in the original variables. therefore this study considerably reduce the data by selecting the extracted components as the most emphasized factors or components with the minimum of 35.82% loss of information. Under rotation sums of squared loading explained how each factor contribute to risk on residential property investment returns. The institutional factor contributes higher risk on residential property investment with 13.654%. Financial and physical factors also contribute to risk on residential property investment in Kano for the period under study with 12.976%. Market factor, which every layman look at risk from market angle contribute to risk on residential property investment return with 11.213%. Economic factor this affect the residential property investment return with 10.859%. Administrative factor and legal factors have almost same level of effect with just above 5% contributory effect on residential property investment returns in Kano. Housing policy factor having lesser figure of 4.462%. This shows that some of the developers do not patronized mortgage facilities much for their residential property investment.

Table 4:20: Risk-Factor Loading analysis of property Investment Returns

Determinants	Factor loadings	Eigen value	% of variance
Factor 1: Institutional factors		3.413	13.654
1.Decrease in demand for residential property	.792		
2.General Unregulated real estate market	.713		
3.Access to land	.726		
4.Bureaucracy	.688		
Factor 2: financial and physical Factors		3.244	12.976
1.Property market constraint	.769		
2.land information system	.701		
3.poor infrastructure	.556		
4.Accessibility factor	.659		
5.High development cost	.608		
6.High cost of Building Materials	.538		
Factor 3: Market factors		2.803	11.213
1.Poor Housing market	.846		
2.Increase in land prices	. 718		
3.Land speculation	.824		
Factor 4: Economic Factors		2.715	10.859
1.Demand for property	.814		
2.Cost of finance	.775		
3.General inflation in Economy	.851		
Factor 5: Administrative factors		1.440	5.760
1.poor land administration	.660		
Factor 6: legal factor		1.315	5.265
1.Ineffective Institutional framework	.803		
Factor 7: Housing Policy factor		1.115	4.462
1.Poor mortgage facilities	.671		

Source: Field Survey, 2019

The result of analysis of factors contributing on risk of residential property investment in Kano is presented in Table 4.20 revealed that the seven factors were loaded constitutes about 64.18% variance in the factors influencing risk of residential property investment in Kano. The cut-off point for this study is taken 0.5 and above as general rule of thumb applied. The most important factor is institutional factor and it explained 13.654% variance across 25 components, this suggests that market & legal factor such as Decrease in demand for

residential prices, General Unregulated real estate market, Access to land and bureaucracy contributes majorly the variance in the factors influencing risk of residential property investment in Kano.

Financial and physical Factors and it explained about 12.976% variance in the factors influencing risk of residential property investment in Kano and such financial and physical factors comprise of land information, poor infrastructure, accessibility factor, high development cost and high cost of building. Market factors and it explained 11.213% variance in the factors influencing risk of residential property investment in Kano. Such Market factors comprises of Poor Housing market, Increase in land prices and Land speculation. Economic factors and it explained 10.859% variance in the factors influencing risk of residential property investment. Such economic factors comprise of Demand for property, Cost of finance a general inflation in Economy. Administrative factors and it explained 5.760% variance in the factors influencing risk of residential property investment, such poor land administration. Legal factors and it is explained 5.26% variance in the factors influencing risk of residential property investment, such as poor institutional framework. Housing policy factors and it explained 4.426% variance in the factors influencing risk of residential property investment, such as poor mortgage facilities.

4.4 Summary of Findings

1. The study discovered that property investment has double digit rate of returns in some area. 1B/R property investment yielded higher returns in Naibawa and Unguwa Uku and 2B/R property investment yielded higher returns in Badawa, Bompai and Sabon Gari. It was found that 3B/R and 4B/R property investment yielded higher returns in

Badawa, Bompai and Sabon Gari. This indicates that these areas were operating double-digits rate of returns over periods 2005 to 2018.

2. The study revealed that, taxation risk have higher effect in Badawa with 36.2% and tenant with 19.0%, which planning and Legislative risk have no effect on Residential property in investment in the Area. Bompai have Taxation risk of 45.3% and void period risk is 28.1% effect on residential property investment, which structural, sector, legislative and planning risk have no effect on Residential property investment in the area. Sabon gari have Tenant risk of 36.5%, planning risk 23.3% and Structural risk 20.5% have on residential property investment while sector and legislative risk have no effect on residential property investment in the area. Naibawa area is majorly faced with planning and structural risk with 30.9% & 26.5% respectively while sector, legislative and legal risks have no effect on residential property investment in the area. Ugowan Uku area is also faced with tenant risk of 35.5% and planning risk of 25.6% effect on residential property investment while legal, legislative, sector and taxation risks have no effects on Residential property investment in the neighbourhood.
3. The study revealed that returns across the study areas statistically significant differences across the market areas. the difference has been observed and it is due to difference in locational neighborhood and structural attributes. This futher indicated that all the markets areas performed differently and area like Badawa Bompai and Sabon Gari constitutes bulk off difference in returns.
4. The study found that all the identified factors had an more than average mean response which indicated that all the identified contribute to risk in residential property investment and at same time, the result of factor analysis revealed that seven factors

explained 64.18% variability in the original variables. Therefore the identified factors were the most emphasized factors with the minimum of 35.82% loss of information. And The study discovered that market factors, legal factor, financial factors, physical factors, economic factors, administrative factors, institutional factors and housing policy factors were major factors contributing to risk on residential property investment in Kano metropolis

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The study risk and return of residential property investment across the study areas carried on some selected area of Kano has indicated that while some areas were more volatile and others were stable and steady in term of movement in return over a periods. The risk in residential property investment market is higher in some areas and more lower in some area, but an area where there is high risk tend to have highest return that are stable and not steady. But the lower risk areas are more stable and steady in returns and the risk per unit of investment is lower. Therefore the implication is that any prudent investor who wishes to invest in residential property investment must invest in area where returns are stable and steady with least risk per unit of residential property investment. The variation in return on residential properties across the selected areas is significant and this attributed to differences in environmental quality. The study also discovered that market factors, legal factor, financial factors, physical factors, economic factors, administrative factors, institutional factors and housing policy factors must be addressed to ensure a conducive environment for residential property investment.

5.2 Recommendations

1. It has been observed that significant difference in residential property returns across the study areas is due to unequal distribution of supporting facilities in Badawa,

Bompai, Sabon gari, Naibawa and Ugowan Uku, therefore it is recommended that the government should ensure even distribution of community service provision and equal development across the selected areas.

2. Investment risk has been associated property risk ranging from Taxation risk to Planning risks. It is therefore recommended that stakeholders in property market should take drastic measures in addressing the diversifiable risk, reduce tenement to developable land, and avoid land speculation and proper institutional regulations.
3. Base on the findings of this study, it is therefore recommended that the Nigerian Institution of Estate Surveyors and Valuers should develop a geographical information system database that will capture the rate of returns on residential property investment across residential markets in Kano which will help investors to know the profitable area of investment.

4. It is also recommended that estate surveyors and other real estate investors should liaise with government on challenges facing real estate sector as to reduce rate of risk in the market such as planning risk, housing policy and institutional constraints.

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