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**AN EVALUATION OF THE PERFORMANCE OF RESIDENTIAL PROPERTY INVESTMENTS IN MINNA, NIGERIA**

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**ABSTRACT**

The study evaluated the performance of residential property investments in Minna, Nigeria. Data for the study were collected through field survey using multi-stage sampling technique. This involved the selection of estate surveying and valuation firms which are active in the residential property market in Minna through purposive sampling technique and thereafter, residential investment properties managed by these firms were selected using simple random sampling technique. Thus, a total of 382 residential investment properties were selected from the property portfolio of estate surveying and valuation firms in the city for the study. Structured questionnaire was administered to the managers of these properties for data collection. Data collected for the study include the capital value, annual expenses in form of taxes, rates, repairs etc. and annual rental value of 1-BR, 2-BR and 3-BR apartments for the period, 2009 – 2021. Data collected for the study were analysed using descriptive and inferential statistical techniques. The analysis of variance in total return produced calculated F-values of 2.139636, 2.928597 and 2.941148 for 1-BR, 2-BR and 3-BR apartments respectively with  $p \leq 0.05$ . This indicates that the variance in total return for all residential investment property types across all the study locations is statistically significant. The study also found that the risk associated with this return varies according to the residential property investment types across all the locations considered in the study. It recommends that prudent residential real estate investors in the city require impeccable pre-investment appraisal of residential property investments at all locations in the city before investing their capital, particularly if they are risk averse.

**Keywords:** Residential property; Investment performance; Total return; Risk; Minna

## Introduction

Residential property investment is one of the major types of property investment that are undertaken by real estate investors in Nigeria. It entails the provision of shelter for the generation of regular income flows (rental income) or capital gain or both. The huge housing deficit in Nigeria (Moore, 2019) coupled with effective demand for residential accommodation in urban centres in the country has created significant investment opportunities for investors in the residential property sector of the nation's economy. This has necessitated the need for empirical studies on the performance of residential property investments in the country to provide insight on the worthwhileness of such investments in terms of types and location. Property investors should know the type of property to invest in whether it would be used for either residential, shopping malls, ware houses, or a combination of all these (Ryder, 2012). Ajayi and Fabiyi (1984) explained that property investors should no longer base their decision on intuition and guess work on property market which may later become unrealistic. This reinforces the need for property investment performance analysis.

Thus, a property investor needs to choose a particular type of residential property he or she wants to invest in before going into the investment process. This would guide the investor on the nature of risk-return characteristics associated with the property investment type. The major requirement in property investment is to put into consideration the expected risk and return (MacGregor & Nanthakumaran, 1992; Newell & Webb, 1996; Adair *et al.*, 2005). Apparently, an investor who has invested a huge amount of funds into residential property would like to know how the property has performed through its various returns in comparison with other property types. Hence, the aim of this study is to evaluate the performance of residential property investments in Minna, Nigeria. The specific objectives of this study are to:

- (a) assess the level of residential property investment returns in the study area;
- (b) examine the trend in residential property investment returns in the study area.
- (c) evaluate whether variation in residential property investment returns across residential property types and neighbourhoods in the study area is statistically significant; and
- (d) evaluate the risk associated with residential property investment in the study area.

### **Literature Review**

Idowu (2006) conducted a study on residential property returns in Lagos and its environs between 1991 and 2004. The study discovered that returns displayed an un-stable pattern in real terms while rental and capital value showed an upward growth. The limitation of this study is that it focused only on residential property return in the city center, ignoring the satellite town. Udoetuk (2008) evaluated the performance of residential property investments in selected areas of Lagos state from 1990-2004. The study utilised data on rental and capital values of residential properties in Victoria Island, Ikeja Lekki Phase 1, Ikeja and Agege. The study found that residential property investments in Victoria Island and Lekki phase 1 had the highest rental and capital growth, compared to those in Ikeja and Agege.

Mathew (2013) assessed the performance of retail property investments and residential property investments within a period of 11 years i.e. 2000-2011 in Ilorin, Nigeria. The study obtained average return, adjusted risk return, capital value and capital growth for the property investments. A regression model was developed to predict rental growth rate of the properties. The study found that commercial properties performed better than residential properties, having a mean annual return of 1.2% against 11.8%. Also in terms of adjusted risk return, commercial property investments performed better with shape index of 1.11 to 0.55 of residential property investment.

Bello (2012) examined both stock market and commercial property investments in Nigeria. The study was based on the analysis of risk and returns of commercial properties in south western part of Nigeria between 2000 and 2009. It made a comparison of inflation hedging characteristics and inflation potential of investing in commercial properties and selected stock market investments. Rental values and capital values constituted the primary data collected for the study. Also, the characteristics of the property were also put into consideration. These were collected from managers of the properties through the structured questionnaire administered to them. Secondary data were sourced from Nigeria stock exchange from the period (2000-2009). The study found that average returns on all selected stock investments were higher and also had a better hedging capacity than that of commercial property investments. The study revealed that commercial property investments in the study area are riskier when compared to stocks.

Mfam and Kalu (2012) analyzed risk and return on direct residential and commercial real estate investments in Calabar, Nigeria. Using judgmental

sampling approach, 30 units of residential and commercial properties were selected from the population. Returns gotten from the property market and appraised data were analyzed to get the implied risk over a period of 17 years. The study found that mean return at sectional levels for residential and commercial properties were 23% and 23.82%, 11.27% and 10% respectively for the associated risk.

Usman (2014) assessed property returns across Minna, Nigeria. The study identified some of the factors that are responsible for variation in the level of returns between residential and commercial properties. Variation in returns was tested using Analysis of Variance technique. The study found that residential properties performed better when compared to commercial properties in the locality. Ogunleye (2014) compared the investment performance of housing estates in government reserved areas (GRA) at Ijapo and Alabaka in Akure, Ondo State of Nigeria. Data for the study comprised rental values of residential properties and were obtained from practicing estate surveying and valuation firms in Akure within the period, 2004 - 2014. Simple descriptive statistical models were adopted for the analysis. The outcome of the study revealed that housing investments in Alabaka performed better than that of Ijapo during the study period.

Adeniran (2015) conducted a study on the performance of residential property investments in Ado-Ekiti for the period, 2008-2014. Rental and capital values of residential properties in the study area were the primary data utilised for the study. The findings revealed that residential property investments in GRA, Adebayo and Ajilosun produced the highest rental and capital values, while those in Ajebandele, Basiri and Okella had a lower return. Returns of the residential properties in Basiri and Adebayo showed a massive increase in the last three years when comparison was made with those in other areas. Adebayo (2015) evaluated commercial property investments (shops) in Jos and Minna. The study covered a period of 14 years (1999-2014). Rental value per square metre were obtained for the study from occupants of shop properties in the study areas through structured questionnaire that was designed solely for the purpose of the study. GPRS was used to take the coordinates of the shops and the size of the shops was measured using a laser tape. The findings of the study showed that shop property investment return in Jos was higher than that of Minna for the period of the study.

Udobi *et al* (2019) analysed the performance of residential real estate investments in some selected urban areas of Anambra State of Nigeria, namely

Onitsha and Awka. The return on residential real estate investments in the two urban areas were compared. The risk of residential property investment in Awka and Onitsha were 29.2% and 26.3% respectively. The study showed that residential property investments in Awka was slightly riskier than those of Onitsha during the period. Oyewole (2013) investigated the performance of residential and commercial property investments in Ilorin. The study used standard deviation, coefficient of variation and Sharpe index as indicators for performance measurement. The outcome of the study revealed that residential property investments in the study area is riskier with a high coefficient of variation (0.74) than commercial property investments with coefficient of variation of 0.46. The total Sharpe index showed that commercial property investments performed better when compared to residential property investments.

Similarly, Umeh (2014), measured the relative performance of investment in real estate stock before and after stock market crash using Modigliani analysis. The study showed that real estate performed better in the post market crash than it was before the crash. Also, Ade (2015) analyzed the performance of residential property investments in various locations in Ado-Ekiti. The study used income return from residential property investments across the locations. From the study, it was discovered that rental and capital growth were tremendous overtime and the rate of growth was not static. In view of this, the return from the property investments in G.R.A was higher than those in other locations. Olanrele *et al* (2015) analyzed REIT dividend performance in Nigeria and Malaysia between 2008-2014 based on risk - return and risk - adjusted performance indicators . The outcome of the study showed that Malaysian market performed better than Nigerian market based on average return and risk - adjusted return.

Wahab et al (2016) evaluated the performance of three- bedroom residential property investments in four locations in Abuja. Coefficient of variability and Sharpe index were adopted as indicators of performance. The findings revealed that Gwarimpa market performed better than others on the basis of risk- return. Olaleye (2000) carried out a study on property portfolio performance in Lagos Nigeria. The study revealed that property portfolio in Ikeja performed better in terms of mean return as against risk free rate during the study period. The performance level in Yaba was lower than the investor's target rate. Olaleye, Adegoke and Oyewole (2010) examined the nature of direct property investments and made a list of property Companies in comparison with other

securities in the Nigeria stock exchange over the period, 2001 - 2007. Mean return, standard deviation, correlation and Sharpe market index model were employed to evaluate the capital return and diversification potential of the investment media. The study revealed that various investment options in real estate and stock markets had attractive returns and investment in real estate performed better than stocks.

Ayodele and Olaleye (2015) examined the risk adjusted performance of public real estate and some other assets in the Nigerian investment market based on a down side risk perspective. Quarterly returns were analyzed from 2000 to 2013. The study found that shares followed by listed properties stock outperformed other assets while debentures underperformed other assets. Diala (2016) evaluated the risk and return characteristics of residential and commercial property investments. Abuja and Port Harcourt were the property markets used for the study. The aim of the study was to identify the property class and market that gives variability in returns. The data collected for the study were analysed through arithmetic mean return (AMR), standard deviation (SD) and coefficient of variation (CV) models. The study found that residential and commercial property investments produced good returns but very risky as shown in the wide variability in returns.

Nissi *et al* (2018) studied the performance of low- and high-income real estate investments in south-eastern Nigeria between 2000 and 2013. Their study examined the performance in tenement properties in the study area. Return and risk were considered in the study and the result indicated that Owerri had 20.2% return with 13.1% risk. The study also showed that Enugu had 18.6% return with 9.60% risk, Onitsha had 12.86% return with 7.87% risk. Other locations like Abakaliki had 11.3% return with 6.26% risk and Aba 10.4% return and 6.14% risk. The study concluded that Enugu is the best performed city followed by Abakaliki, Onitsha, Aba and lastly Owerri. Awa and Anih (2018) investigated the performance of residential and commercial real estate investments in Aba and its neighborhoods. Their study revealed that the difference in neighborhood characteristics also caused the variation in the rental and capital values real estate investments in the city and that commercial real estate investment in the study area performed better when compared to residential property investments.

Igwe-Kalu and Akpan (2019) assessed residential and commercial property investment return in Kaduna metropolis from 2003 to 2015. A population of 70 registered estate surveyors and valuers were engaged and only 35 were in

operation during the time of the study. The result of the study revealed that commercial property investments performed better in terms of rental value returns with 8.9 and 4.95 as against 8.52 and 4.0. Diala *et al* (2019) examined the performance of commercial and residential real property investments in Enugu urban. The study was focused on comparison between commercial properties (shops and offices) and residential properties in Achara layout, New Haven and Ogui road. Purposive sampling technique was adopted for the study and 40 units of commercial and residential properties were selected for the study. Data were collected from real estate firms for a period of 8 years. Arithmetic mean return, standard deviation and coefficient of variation were the data analysis techniques adopted for the study. The study found that residential properties were more secured in New Haven than at Achara layout with a return of 7.19%, 2.83% risk . The study indicated that commercial property investments performed better than residential property investments in the study areas.

## Research Methodology

### Research Design, Sample Size and Method of Data Collection

The research design adopted for this study is descriptive design. Data for the study were collected through field survey using multi-stage sampling technique. This involved the selection of estate surveying and valuation firms which are active in the residential property market in Minna through purposive sampling technique and thereafter, residential investment properties managed by these firms were selected using simple random sampling technique. In order to select a sample that is a good representation of the population, the sample size model adopted by Smith and Strattek (2010) was used as follows:

$$n = \frac{Z^2 \times \delta^2 \times \left(\frac{N}{N-1}\right)}{ME^2 + \left(\frac{Z^2 \times \delta^2}{N-1}\right)} \quad 1$$

Where; n= sample size,

Z = standardised normal value of 95% confidence level which is 1.96

$\delta$  = standard deviation put at 0.5 (depicting a safe decision enhancing large enough sample)

ME = marginal error put at  $\pm 5\%$

N = total number of properties under review which is 1213

Thus, a total of 382 residential investment properties were selected from the property portfolio of estate surveying and valuation firms in the city for the study.

Structured questionnaire was administered to the managers of these properties for data collection. Data collected for the study include the capital value, annual expenses in form of taxes, rates, repairs etc. and annual rental value of one bedroom, two bedroom and three-bedroom apartments for the period, 2009 – 2022.

### **Data Analysis Techniques**

Total return was determined for all residential investment property types selected for the study. This was computed as the sum of the income and capital returns given no further expenditure of capital on the property investment during the measurement period as follows:

$$\begin{aligned} \text{Total Return (TR)} \\ &= \frac{(CV_t - CV_{t-1}) + NI_t}{CV_t} \end{aligned} \quad 2$$

Where:

$CV_t$  = Current market value of the property

$CV_{t-1}$  = Previous market value of the property in last period

$NI_t$  = Current net income of the property

The trend in total return for the residential investment properties under study was measured through total return index (TRI) analysis, using 2009 as the base year. Statistical techniques such as mean, standard variation, coefficient of variation and analysis of variance (ANOVA) were used to analyse the data accordingly.

### **Results and Discussion**

Data collected for the study comprise data on capital values, rental values and operating expenses for residential investment properties selected for the study for the period, 2009 – 2021. These were used to compute the total return for the properties using Equation 2 and the results are presented in Tables 1, 2 and 3 for all the residential neighbourhoods delineated for the study. Due to the lockdown of economic and social activities in Minna for the significant part of 2020 due to the COVID 19 pandemic, the property market was inactive during the period. This affected the availability of property market data for the year. Consequently, Year 2020 was excluded from the study period.



**Table 1: Total Return on Residential Property Investments in Tunga, Bosso and Dutsen Kura Areas, 2009 - 2021**

Year	Residential Neighbourhood, Property Type and Total Return (%)								
	Tunga			Bosso			Dutsen Kura		
	1BR	2 BR	3 BR	1BR	2 BR	3 BR	1BR	2 BR	3 BR
2009	8.4	3.1	2.5	5.6	6.0	3.1	11.1	6.4	4.5
2010	8.4	16.1	2.5	5.6	6.0	3.1	11.1	6.4	4.5
2011	15.4	28.62	26.5	6.4	26.0	18.1	11.1	8.68	17.2
2012	30.4	23.36	15.26	6.0	21.9	19.0	22.0	17.7	15.8
2013	17.0	19.63	13.5	11.7	18.8	15.1	11.0	6.2	10.54
2014	15.4	16.82	12.2	12.0	19.6	13.55	11.1	14.8	10.1
2015	15.3	14.82	14.32	17.36	17.1	11.0	21.05	15.8	11.71
2016	20.06	18.91	10.10	15.8	17.8	13.5	10.0	14.2	9.60
2017	12.0	16.29	12.0	14.6	5.6	13.0	19.7	13.1	15.6
2018	21.7	14.35	13.34	25.6	15.6	10.29	21.2	18.92	11.6
2019	14.72	16.52	12.08	21.5	12.6	9.2	5.95	16.4	11.0
2021	13.23	15.50	13.0	18.42	19.5	17.2	13.8	8.6	16.77

Source: Field Survey (2022)

**Table 2: Total Return on Residential Property Investments in Maikunkele, Maitumbi and Kpagungu Areas, 2009 - 2021**

Year	Residential Neighbourhood, Property Type and Total Return (%)								
	Maikunkele			Maitumbi			Kpagungu		
	1BR	2 BR	3 BR	1BR	2 BR	3 BR	1BR	2 BR	3 BR
2009	6.5	6.0	5.6	5.37	10.0	20.0	6.14	10.22	9.85
2010	6.5	6.0	6.5	5.37	10.0	20.0	6.14	10.22	9.85
2011	6.2	9.6	13.2	9.0	23.11	15.15	5.37	10.22	9.6
2012	7.7	8.7	23.9	9.0	20.8	19.76	6.5	10.7	5.0
2013	9.0	9.4	20.5	12.3	11.18	14.47	7.51	11.3	15.5
2014	7.7	16,83	13.22	7.03	9.0	16.18	7.1	10.9	11.45
2015	13.0	15.9	5.44	7.03	15.4	12.5	6.8	15.44	11.9
2016	8.9	15.92	5.6	27.7	22.05	19.8	5.8	13.92	16.2
2017	14.47	14.78	5.6	10.33	15.0	8.9	15.6	13.33	11.34
2018	18.36	8.35	7.89	10.8	13.6	14.9	5.8	18.0	12.2
2019	17.59	17.1	6.49	11.5	12.7	10.6	12.8	16.8	11.64
2021	15.0	15.21	4.0	6.07	13.9	10.6	12	18.37	10.9

Source: Field Survey (2022)

**Table 3: Total Return on Residential Property Investments in Barkin Sale and Sauka Kahuta Areas, 2009 - 2021**

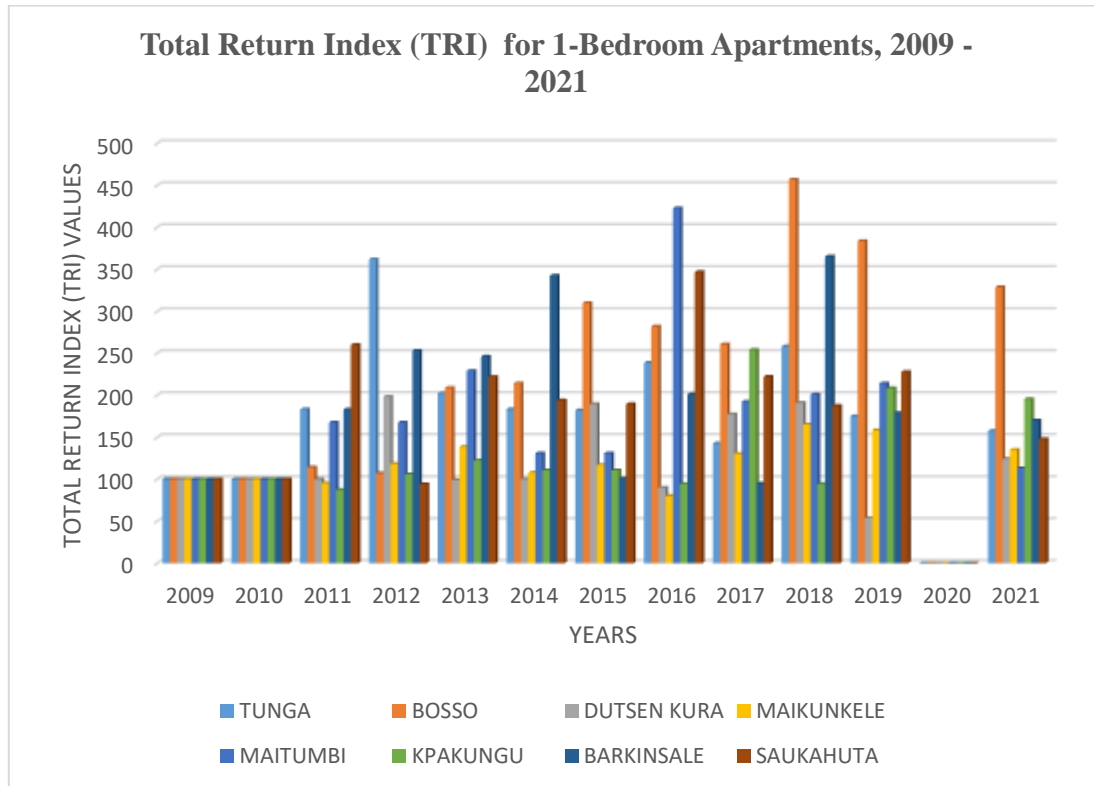
Year	Residential Neighbourhood, Property Type and Average Total Return					
	Barkin Sale			Sauka Kahuta		
	1BR	2 BR	3 BR	1BR	2 BR	3 BR
2009	7.15	10.0	5.6	6.8	7.0	4.25
2010	7.15	10.0	5.6	6.8	7.2	16.75
2011	13.1	9.0	22.3	17.7	11.18	26.75
2012	18.1	20.2	19.8	6.41	20.2	22.0
2013	17.6	11.8	30.05	15.1	23.26	11.0
2014	24.5	23.4	14.04	13.2	23.9	17.90
2015	7.2	8.88	22.2	12.9	10.6	15.76
2016	14.4	15.3	11.35	23.6	12.7	6.2
2017	6.8	14.0	11.97	15.1	22.3	4.92
2018	26.13	17.85	14.2	12.76	8.0	13.2
2019	12.8	22.7	6.1	15.5	20.7	5.4
2021	12.16	19.4	4.95	10.06	12.18	9.0

Source: Field Survey (2022)

High total return for one-bedroom apartments across the study areas were observed in 2012, 2018, 2014, 2013 and 2015 and their returns were 20.4%, 26.13%, 25.6%, 21.2%, 18.36% and 24.5% respectively. Evidently, this indicates that there was a massive boom in one-bedroom residential property investment during the identified periods. Therefore, in terms of the sub-markets, Tunga property market outperformed others having an average rate of return of 16.0% followed by Dutsen Kura property market (14.09%), Barkin Sale, Bosso, Sahukakahuta, Maikunkele and Maitumbi with the average returns of 13.92%, 13.38%, 13.03%, 10.91% and 8.13% respectively.

Also, for two (2) bedroom apartments, Tunga Property dominated and outperformed others having an average total return of 17.09% when compared with Bosso (15.54%), Barkin Sale (15.22%), Dutsen Kura (12.27%) and Maikunkele (11.98%). In the market for three-bedroom apartments, Maitumbi property market dominated and outperformed other property markets having 15.23% followed by Barkin Sale with 14.01%. Sahukakahuta had average total return of 12.76% followed by Tunga with 12.28, Bosso (12.1%), Dutsen Kura (11.57%), Kpakungu (11.23%) and Maikunkele (9.82%). Using 2009 as the base

year, total return index (TRI) was developed for all the residential property types under study and the outcomes are presented in Fig 1 (1 BR), Fig. 2 (2 BR) and Fig 3 (3 BR).

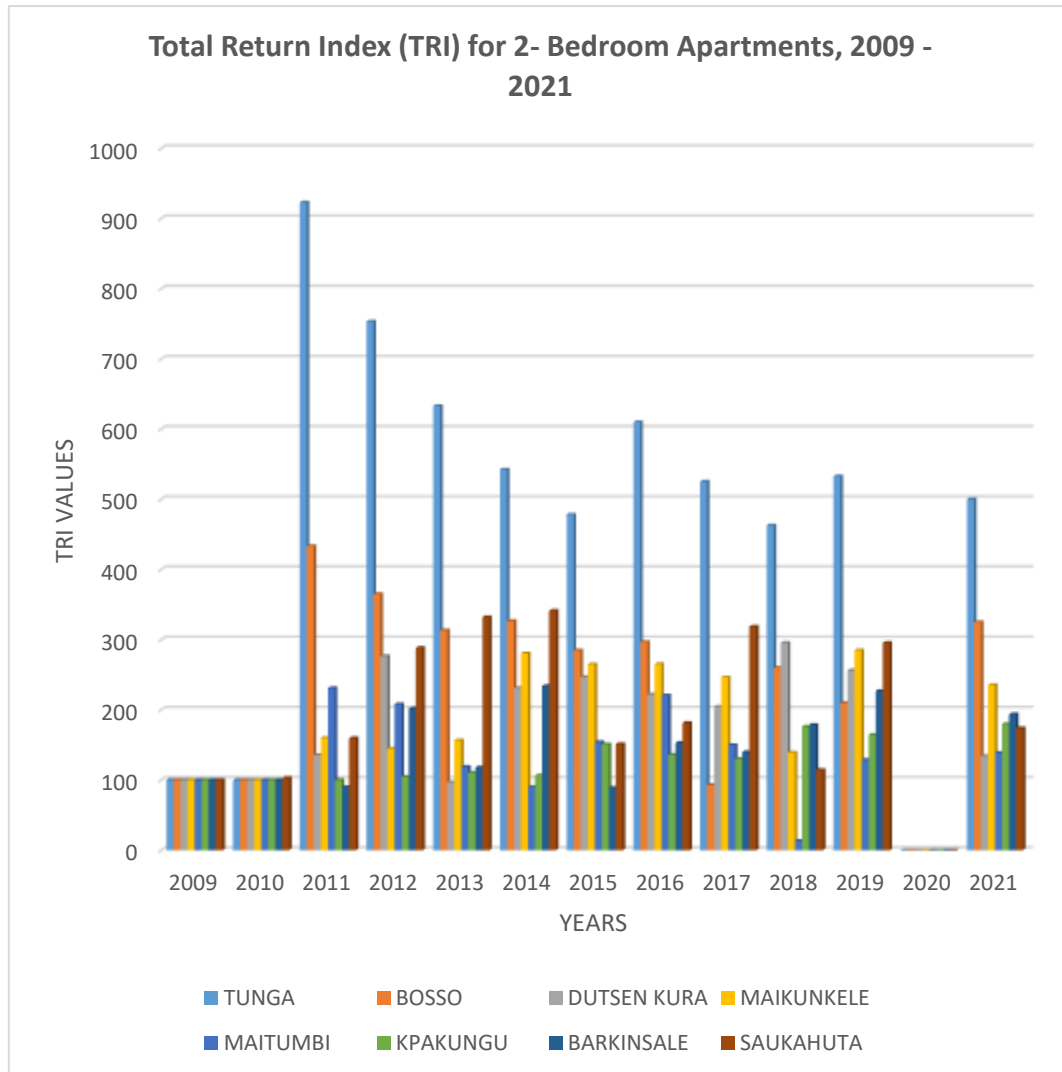


**Figure 1: Trend of Total Return Index (TRI) for 1- Bedroom Apartments in the Study Areas**

Base year = 2009= 100

Source: Field Survey (2022)

Figure 1 indicates the trend of total return for one-bedroom apartments in the study area across the study period in a graphical form. According to the graph, the trend shows that from 2009-2021 there has been a fluctuation of returns. The graph which represented the trend started on a 100% in 2009 and also remained stable at 100% in 2010 across the study area it then moved to 2011 which indicates a fluctuation across the study area through 2021. The graph indicated that the highest trend was in 2018 in Bossso area and the Lowest was in Dutsen Kura in 2019. These fluctuations may be attributed to unstable nature of the Nigerian economy during the period.

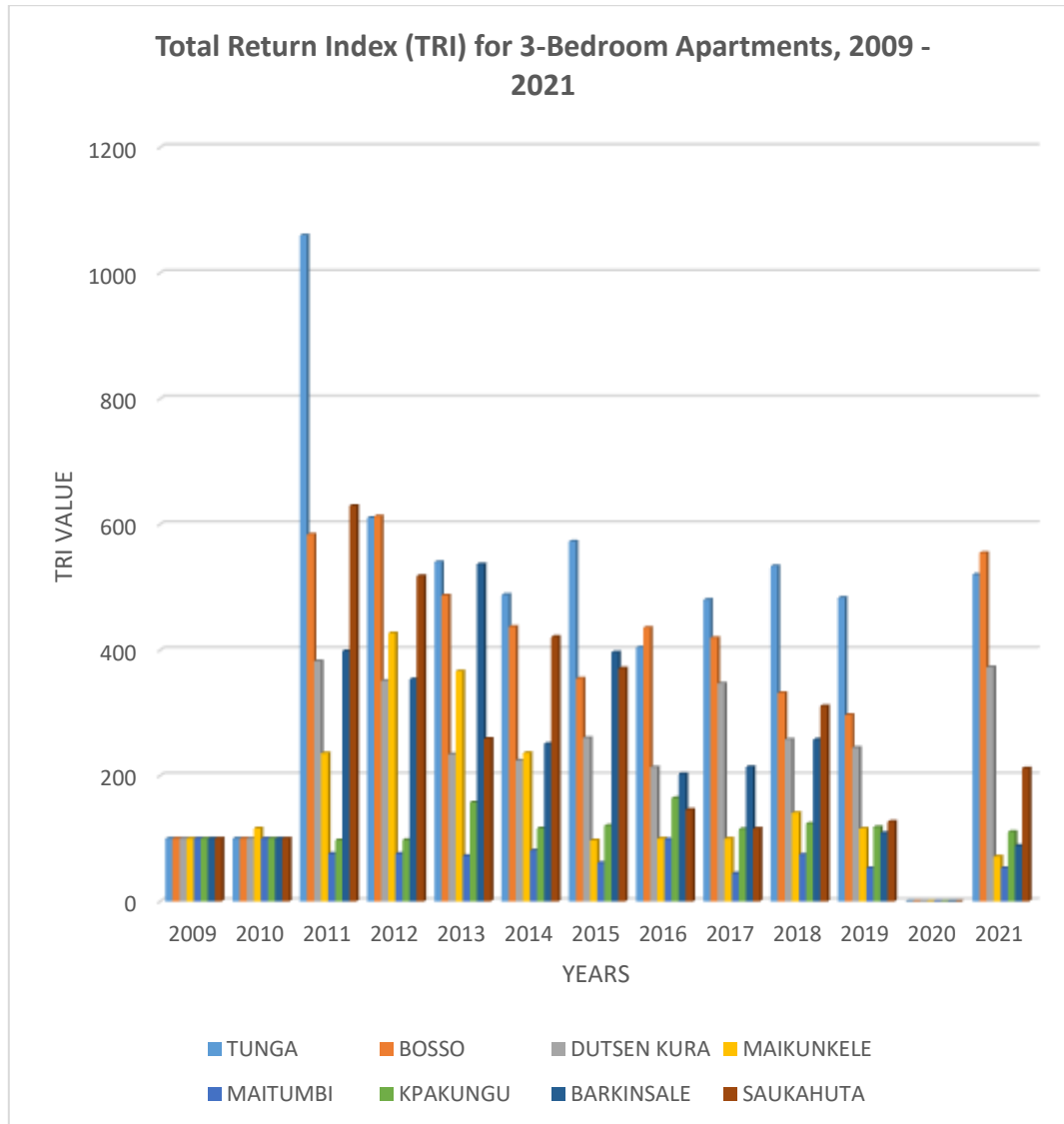


**Figure 2: Trend of Total Return Index for 2-Bedroom Apartments in the Study Areas**

Base year = 2009= 100

Source: Field Survey (2022)

Figure 2. shows the trend of total return for 2-bedroom apartments across the study period from 2009 to 2021 in various study areas. The graph indicated that there was a stable trend across the study area in 2009 and 2010 with indices of 100%. Furthermore, there has been fluctuations from 2011 to 2021. This indicates that there was a rise and fall across the return indices as the year progressed across the study areas. The trend further indicates that Tunga had the highest return index in 2011 as the trend maintained a downward movement up till 2021.



**Figure 3: Trend of Total Return Index for 3-Bedroom Apartments**

Base year = 2009= 100

Source: Field Survey (2022)

Figure 3 clearly indicates the trend of total return for 3-bedroom apartments for the study period across the various study areas. However, the graph shows that there was a dwindling movement from 2009 down to 2021. From the graph, the highest trend occurred in 2011 in Tunga which performed better amongst other locations and the least from the graph was Barkin Sale. The extent of variance in total return for each residential property type across all the study locations was

measured through a single factor analysis of variance. The result is presented in Table 4.

**Table 4: Analysis of Variance (ANOVA) of Total Return for Residential Property Investments across all locations in the Study Areas**

Residential Property Type	Source of Variation	Sum of Squares	Degree of freedom	Mean Square	F	P-Value	F Crit $\alpha = 0.05$
1 BR	Between Groups	713.6943	12	59.47453	2.139636	0.024543	1.891216
	Within Groups	1973.556	71	27.79656			
	Total	2687.25	83				
2 BR	Between Groups	749.5237	12	62.46031	2.928597	0.002378	1.891216
	Within Groups	1514.268	71	21.32772			
	Total	2263.792	83				
3 BR	Between Groups	923.3057	12	76.94214	2.941148	0.002291	1.891216
	Within Groups	1857.402	71	26.16059			
	Total	2780.707	83				

**Source:** Field Survey (2022)

As presented in Table 4, the calculated F-values are 2.139636, 2.928597 and 2.941148 for 1-bedroom, 2-bedroom and 3-bedroom apartments respectively with  $p \leq 0.05$ . This indicates that the variance in total return for all residential investment property types across all the study locations is statistically significant. The implication of this is that total returns for residential investment properties in the city do not follow the same pattern and real estate investors in the city are likely to get varying levels of total return for similar type of residential property investments at different locations in the city. This affirms the findings of earlier studies that location plays a crucial influence on residential property investment performance in cities. The risk associated with the total return for

residential property investments considered in the study was measured through the coefficient of variation and the result is presented in Table 5.

**Table 5: Risk associated with Residential Property Investment Return in the Study Areas**

Location	Coefficient of Variation		
	1 BR	2 BR	3BR
Tunga	0.38	0.35	0.50
Bosso	0.50	0.43	0.43
Dutsen Kura	0.38	0.36	0.37
Maikunkele	0.41	0.33	0.66
Maitumbi	0.59	0.34	0.33
Kpagungu	0.41	0.35	0.38
Barkin Sale	0.48	0.35	0.58
Sauka Kahuta	0.39	0.44	0.57

Source: Field Survey (2022)

The coefficient of variation indicted in Table 5 represents the level of risk associated the residential property investments under study. For 1- bedroom apartments, Tunga had 0.38 or 38%, Bosso ( 0.50 or 50%), Dutsen Kura (0.38 or 38%) and Maitumbi (0.59 or 59%) risk. However, areas like Kpakungu, Barkinsale and Saukakahuta had a risk of 0.41, 0.48 and 0.39 which represents 41%, 48% and 39% respectively. For 2-bedroom apartments, the coefficient of variation shows that risk in Tunga is 0.35 (35%), Bosso (0.43 or 43%) Dutsen Kura (0.36 or 36%), Maikunkele (0.33 or 33%), Maitumbi (0.34 or 34%), Kpakungu ( 0.35 or 35%), Barkinsale (0.35 or 35%) and Sahukakahuta (0.44 or 44%). However, for 3-bedroom apartments, Tunga had 50%, Bosso (43%), Dutsen Kura (37%), Maikunkele (66%), Maitumbi (33%), Kpakungu (38%), Barkinsale and Sahukakahuta had 0.58 and 0.57 which represents 58% and 57% respectively.

### Conclusion and Recommendation

The variance in total return for all residential investment property types across all the study locations in Minna is statistically significant. The calculated F-values (2.139636, 2.928597 and 2.941148) for 1-bedroom, 2-bedroom and 3-bedroom apartments respectively with  $p \leq 0.05$  implies that total returns for residential investment properties in the city do not follow the same pattern and real estate

investors in the city are likely to get varying levels of total return for similar type of residential property investments at different locations in the city. The risk associated with this return also varies according to the residential property investment type across all the locations considered in the study. Conclusively, the findings of this study will guide prospective real estate investors to make worthwhile decisions concerning residential property investments in the locality. Based on the results of the coefficient of variation, real estate investors in the city that are risk averse should precisely consider investing in Tunga ( 1-bedroom and 2-bedroom apartments), Dutsen Kura (1-bedroom and 2-bedroom apartments) and Maitumbi ( 2-bedroom and 3-bedroom apartments). Others that are not risk averse could invest in other types of residential property investment at other locations in the city.

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