ANALYSIS OF THE PERFORMANCE OF COMMERCIAL AND RESIDENTIAL PROPERTY INVESTMENTS IN ONITSHA METROPOLIS, ANAMBRA STATE, NIGERIA

UDOBI, A. N. & ONYEJIAKA, J. C., NWOZUZU, G. C.
Department Estate Management, Nnamdi Azikiwe University Awka
cj.onyejiaka@unizik.edu.ng

ABSTRACT
Real estate investment in urban areas in Nigeria like Onitsha are done mostly by private investors; and this group of investors put considerable sums of money into real estate investments annually without investor's knowledge and understanding of the performance of the sectors to provide basis for better investment decision and risk management for real estate investors in Onitsha and in other comparable location in Nigeria. This article therefore examined the performance of commercial property investments and residential property investment in Onitsha, Anambra State, Nigeria. The comparative analysis of the performance of these two types of property investments within the period of nine (9) years (2007to 2016) was conducted, focusing on the annual returns, risk profile and risk-return profile. Data for the study consist of rental and capital values of commercial and residential property investments in the study area and were sourced from the Estate Surveying and Valuation firms practicing in the study area. Data collection was analyzed using Arithmetic Mean Return (AMRR), Geometric Mean Return (GMRR), Standard Deviation and Coefficient of Variation. The average rental values and capital of both residential and commercial property investment were assessed in order to arrive at the annual returns (Arithmetic mean rate of return and Geometric mean rate of return). The risk inherent (Standard Deviation) and the risk-return profile (Coefficient of Variation) of both residential and commercial property investments were equally ascertained and determined respectively. The results showed that commercial property investment performed better than residential property investment within the period studied with an annual return of 19% as against 17% for residential property investment. On the contrary, residential property investment performed better in terms of risk-return profiles within the period under study with 11.34% of risk and 0.67 risk-returns as against 15.88% of risk and 0.84% risk-return for commercial property investment. The performance indicators as shown by this parameter indicate that property investments in Onitsha are very viable but that commercial property investments perform better in return than residential property investment. The study concluded that a risk avert investor will prefer to invest in residential property properties than commercial properties, whereas, an investor who is a risk taker will choose to invest in commercial properties than residential properties not minding the higher risk involve as shown in this work. Investors in commercial properties are sure of their rents as at when due as tenants in commercial properties will prefer to protect their goodwill than vacating the premises; unlike tenants in residential properties who has no goodwill to protect in such premises and so become troublesome in paying their subsequent rents after the first rent has been collected. This article finally recommended that a periodic portfolio performance analysis be done from time to time to aid property portfolio managers or investors in selecting the investment return and reduction of the association risk.

Keywords:
Comparative Analysis, Commercial Property Investment, Residential Property Investment, Performance Evaluation, Onitsha, Anambra State.

INTRODUCTION

The study of performance of real estate investment, whether residential or commercial, is very important at this time when emphasis is on investment performance analysis in many parts of the world. This is even more important in Nigeria where only few studies have been carried out on the level of performance achieved by property investments. Moreover the impact of the ongoing changes in the global and local economy on the performance of real estate investment is serving to highlight the need for its careful consideration in the investment decision making process.

Since 1990, the demand for retail commercial outlets has risen astronomically in most urban centers in the country. This is as a result of the economic recession which compelled the unemployed and public servants to explore trading activities in addition to their normal jobs. The investors' reaction to this development has been to increase the number of commercial outlets at the expense of residential property development. Therefore in many towns and cities of Nigeria, open spaces within the vicinity of public institutions have been irrationally converted to accommodate shops and other commercial outlets. The situation is further compounded with the perceived notion among Nigerian property investors that commercial property performs better than residential property investment. However, the investors can no longer base their decision on intuitive grasp of the market which Ajayi and Fabian (1984) considered inadequate for success in property ventures.

In recent times, several studies that have relevance to performance analysis have been conducted in Nigeria by different scholars and researchers. Some of these works were done on the performance of real estate but not very many efforts have been made on performance evaluation of investment properties. Bello (2003) evaluated the relative performance of residential property and securities in Lagos, Oyewole (2013) examined the comparative performance of residential commercial property investments with emphasis in Ilorin and a study by Udobi (2014) examined the comparative performance of residential property investment and bank share in Anambra. The most recent research was conducted by Udobi & Kalu (2017) on the comparative analysis of residential real estate investment performance in selected urban areas of Anambra State within the period of 2000 to 2014. In essence, the researchers of these similar studies either consider the performance of property investment in general, residential property investment and securities/shares or lay emphasis on a study area outside the one of this study. None of these available indigenous studies has examined the disparities between the performances of residential and commercial property investments in the study area. This will provide for better investment decision and risk management for real estate investors in Onitsha and comparable locations in Nigeria.

Real estate investments in urban areas in Nigeria like Onitsha are done mostly by private investors. This group of investors together with the institutional investors such as banks, insurance companies, corporative bodies, is putting considerable sums of money into real estate investment annually without investors knowledge and understanding of the performance of these sectors (Udobi, Kalu etal, 2017). The investors base their investments mainly in commercial properties but there is no basis for their decision apart from the fact that many of the investors believe that tenant risk is lower in commercial property investment than in residential property while some merely focus on the rental trend of the properties. It is in view of this that the paper tend to fill that order to help investors or better still guild them in their property investment decision making. Onitsha has been a commercial area with many investors in the real estate sector especially in the residential and commercial segments.

Aim and Objectives

The aim of this research is to compare the performance of residential and commercial property investments in Onitsha, Anambra State, to guide investors on their investment

decisions in these segments. The objectives through which this aim is hoped to be achieved are the following:

i. To assess the rental and capital values of residential and commercial properties in Onitsha from 2007 to 2016.
ii. To ascertain the returns from both residential and commercial properties in Onitsha from 2007 to 2016.
iii. To determine the risk-return profile inherent in the property investments.
iv. To compare the investment performances of residential and commercial properties in Onitsha in order to determine the one that performs better than the other.

Literature Review

Peculiarities of Property Investment

According to Udechukwu (2006), peculiarities of property investment include:

i. It is long term in nature
ii. High cost of buying and selling
iii. Lengthy time in buying and selling
iv. Difficult ownership proof
v. High capital requirement in buying property
vi. Considerable management problem
vii. Government policy or legislation affects the property market and thereby affects value of an interest.
viii. Property ownership is associated with time hence it is said that property is usually a good hedge against inflation.
ix. The yield in property investment is high compared to other forms of investment

Yield from Landed Property

Yield is an income derived from the investment, usually expressed as a percentage of its current price or capital value. Yield is different from interest. A Yield also gives an indication of the degree of risk attached to an investment. Since some investments involve greater risk than others, it is natural that a higher return would have to be offered on more risky investment. Generally, investors consider a number of criteria when making a decision on an investment.

Price and income are two vital information used to provide a common market measure by which investments are compared. This is known as the initial Yield given by:

$$\frac{\text{Net current income}}{\text{Price}} \times \frac{100}{1}$$

This Yield reflects the investor's view about future risks attached to the investment he is considering. When this Yield is high, then the risk and problems attached to the investment will be high and vice versa.

Prospective property investors will look at the other forms of investment that are available and the Yield expected from them. Expected returns are judged against other investment alternatives. However, in making this judgment, he has to consider the distinct features of landed property as an investment. Yield are usually obtained from analysis of transaction in the market. Such analysis is yet to be done extensively in Nigeria. However, it has been discovered that Yield on landed property in Nigeria are quite low relative to advanced world.

Commercial Properties

Income from shops are relatively secured because the occupier whom might have built good will around the place, may not wish to go elsewhere and loose such good will. This will make him pay his rent regularly to avoid being asked to quit the premises. There is a wide range of returns from shops (Between 3%-12%). (Udechukwu, 2006).

Some of the factors that determine the rents includes:

i. Department shop type (single, multi-shopping etc).
ii. The location the shop/accessibility;
iii. The type of tenants;
iv. The terms of the lease (FRI or else)

Yield on shop in Nigeria can be summarized as follows;

a. Department shop: 3-8%
b. Shops in secondary location 4-10%
c. Shops in tertiary location 5-12%
a. Modern office block 4-8%
b. Office in secondary class position 5-10%
c. Converted offices 5-12%

Residential Properties

The yields on residential properties usually differ depending on the nature and location of such properties. The yield on properties in area such as government research areas (GRAs)is usually lower than in areas with higher densities due to the longer leases and higher rents prevalent in those areas. Flats and tenement houses are fraught with difficulties of multiple occupancy, with that, there are incessant multiple problems such as voids and multiple tenancy resulting in physical wear and tear of the property. Modern or luxury flats are different from ordinary flats in that the occupants may be more reluctant but there is higher risk in the uncertainty of the outgoings.

The indicated yield for residence in Nigeria is as GRA and equivalent areas:

a. Detached houses 3-8%
b. Semi-detached houses 3-5-8%
c. Blocks of flats 5-9%

Medium density and similar good class areas:

a. Detached houses 4-8%
b. Semi-detached houses 4-5-8%
c. Blocks of flats 5-10%

High density area:

a. Detached houses 5-9%
b. Semi-detached houses 5-5-9%
c. Blocks of flats 6-10%
d. Tenement house 6-5-12%

It should be noted that the rates are a general guide and should not be indiscriminately applied for all towns and states. The valuer should only see the trend in the locality and adopt the appropriate rate accordingly (Udechukwu, 2006).

Risk Elements in Real Esate Investment

Greer and Kolbe (2003) classified risk elements in real estate investment into three (3) according to their origins namely:

a) Financial risks,
b) Insurable risks
c) Business risks.

They explained that the risk inherent in the use of borrowed funds and thus determined by choice of financial arrangements is called financial risk.

Risk of loss from natural hazards such as fire, flood, storm etc can be transferred to insurance companies and so is characterized as insurable risk. While risk stemming from the possibility of making inappropriate business decisions or of misjudging the economic consequences of one's actions is labeled business risk.

Different investment options e.g. government securities, property, fixed deposit etc exhibit different risk-return characteristics. Investments that have high liquidity e.g. shares would exhibit a high-risk-high return profile. On the other hand, safe investments e.g. cash and fixed deposits would have a low risk low return diagram and would be the ideal investment choice while the least desirable is the "high return/low risk quadrant. Mfam and Kalu (2012) noted that there is a significant difference in total risk between the residential and commercial sectors, the total risk in the residential sector being significantly higher than that of the commercial sector. Based on the research they carried out on the return and risk in direct residential and commercial real estate investment Calabar, south eastern Nigeria, they stated that the research revealed the commercial sector as being comparatively better than the residential sector in terms of risk and return.

Sources of Property Risk

The sources of property risk are manifold, and many are unique to this investment form. Baum and Crosby (1988) have identified a number of possible risk, which could affect a property investment for insurance:

i. Tenant risk: it is the chance that the tenant will affect returns by his actions, the most serious concern of the investor will be chance of voids, that is, the possibility of the tenant vacating premises and paying no rent. Even where tenants sign long leases, the possibility of bankruptcy must be considered. Legal actions are expensive and ponderous where actions to recover rent are undertaken.
ii. Sector risk: it is the chance that the sectoral price movements affect the subject investment. Given the "lumpiness" of property investment, property is particularly prone to sector or regional risk. Performance different occur between sectors and regions caused by changes in the rent and capitalization rates.
iii. Structural risk: it is the chance of high repair cost, high maintenance costs or refurbishment becoming necessary and eventually rebuilding becoming necessary, either through structural failure or economic or functional obsolescence.
iv. Legislature risk: it is the chance of changes in law and status, which directly affect investment returns. Certain property investors have suffered in this respect in past decades by the introduction and extension of the rent act, that the leasehold reform act, VAT, the town and country planning Act etc.
v. Taxation risk: it is related to the above category and describes the chance of imposition of new taxes upon the investment type of alterations in current taxes. Property can be uniquely prone to taxation risk. Property is easily identified as a taxation target and is not electorally disastrous as long as home ownership is avoided.
vi. Planning risk: it is the risk that central or local government planning policies (in the broadest sense, including transport policy and so on), impinge negatively or positively upon property investment values.
vii. Legal risk: it is the chance that the title to an investment is unsatisfactory or that it is discovered that a right exists over the subject land, which affects its value. It is the risk that rent are not reviewed or notice not given or conversely that a request for an excessive rent is not challenged in time by a tenant. These possibilities are generally unique to property.
viii. Comparative risk: in addition to the concern that an investor may have about the actual performance of his investment against his target, he will also be aware of his

opportunities cost risk. By undertaking an investment, he has (presumably) turned down other opportunities and he will be consciously of the returns he could have obtained elsewhere.

ix. Timing risk: it is critical for an investor to time the purchase or sale of an investment correctly to obtain the optimum return. The element of risk is crucial in refurbishment and redeployment situations. Another aspect of timing risk is the length of time that may be involved in selling the property.

x. Holding period risk: this is related to timing risk; the longer the project life of an investment, in general, the greater the uncertainly attached to the likely income flows. For example, if an income is to be held for only twelve months, the prediction regarding income and value is more likely to be accurate than if the holding period is longer. Hence, the variance in actual return from expected is likely to increase commensurately with the holding period.

All these types of risk should concern the investor. The more he is able to qualify their levels, the more rational his investment choice decisions would be.

Measurement of Return

It is the capital appreciation plus rent received over a period under consideration expressed as the value of the original purchase price

$$Rt = \frac{Cvt-Cvt-1+Nit}{Cvt}$$

Where Rt = the return at period t

Cvt = capital value at the end of period t

Cvt-1 = capital value at t5he beginning

Nit = net income (rent) at the period t

This return could be an expected return based on the subjective probability distributions drawn up by the analyst or could be measured from available historical data to asses the performance of investment

Investment risk:

Risk is the uncertainly associated with the return on an investment or the probability that actual return may differ from the expected return from an investment. Risk can impact positively or negatively on all component of return.

Measurement of risk

The measurement of risk has root in probability theory of statistics. The step into measurement of risk includes the following (Udobi, 2010).

i. Assign probabilities status to the fraction of the fund invested
ii. Calculate the expected return (RP)
iii. Calculate the variance
iv. Calculate the standard deviation
v. Calculate the coefficient of variation

The expected return in given as:

a. $RP = \sum_{I=1}^{n} x \quad iRi$

$$\text{The } RP = \sum_{i=1}^{n} x\, iRi = \sum_{i=1}^{n} ri\, P\, i$$

Where ri = the return of the individual asset

Pi = probability assigned to the fraction of the fund invested in the asset

b. Variance = S^2 $\sum(r^2)- \sum (r)^2 = \sum ri^2pi - \sum(riPi)^2$
c. Standard deviation = s = $\sqrt{s^2} = \sqrt{\sum ri^2pi - \sum(ripi)^2}$
That is square root of variance.
d. The coefficient of variation is simply the standard deviation divided by the expected return ie

$$\frac{Ex = s}{RP}$$

Methodology

The data for the study was collected from a sample of forty firms of estate surveying and valuation at Onitsha.

Therefore, a total number of forty (40) questionnaire were administered on the target population in the study area, out of which thirty (30) were retrieved from the estate surveying and valuation firms, four from the commercial banks and one from the Nigeria stock exchange, representing a total of 66.67% response rate for both population.

The questionnaire administered in the registered firms were structured to gather information in capital values and annual rental values of properties. The data collected were analysis using the arithmetic mean return (AMRR), variance (s2) standard deviation (S), coefficient of variation and Geometric mean returns (Rg)

Data Presentation and Analysis

The aim of all rational investors is to achieve maximum return while trying to minimize risk; hence the assessment of the performance has been done as follows:

1. Performance on the basis of the average annual return
2. Performance on the basis of risk-return
3. Performance on the basis of risk to reward ratio (coefficient of the variation).

Table 1: Computation of Arithmetic Mean of Annual Return, Variance and Standard of Residential Properties.

S/N	Period	Rt (HRR)	Rt-Rt	$(Rt-Rt)^2$
0	2007	-	-	-
1	2008	0.0775	-0.0945	0.0089
2	2009	0.2175	0.0455	0.0097
3	2010	0.2705	0.0985	0.0097
4	2011	0.443	0.271	0.073
5	2012	0.086	-0.086	0.0074`
6	2013	0.109	-0.063	0.0046
7	2014	0.103	-0.069	0.0048
8	2015	0.104	-0.068	0.0046
9	2016	0.138	-0.034	0.0012
Total		**1.5485**		**0.1158**

Arithmetic mean return = $\frac{(1+Rt_1)+(1+Rt_2)+(1+Rt_3)+...+(1+Rt_9)-1}{9}$

= (1.5485÷9)-1 =0.17206

= 17.2%

Variance = 0.1158÷9 =0.0128867

Standard deviation =$\sqrt{}$0.012867 = 0.11343 =11.34%

Geometric mean (GMRR) = $[(1+Rt_1)(1+Rt_2)(1+Rt_3)\ldots+(1+Rt9)]^{1\div9}-1$

$=[(4.013982442)1\div 9]-1$

$=1.166981418-1 =0.1669 =17\%$

Coefficient of variation = standard deviation ÷ GMRR

$=11.34\div 17 =0.67$

Table2: Computation of Arithmetic Mean of Annual Returns, Variance, Standard Deviation of Commercial Properties in Onitsha

S/N	Period Rt (HRR)	Rt-Rt	$(Rt-Rt)^2$	
0	2007	-	-	-
1	2008	0.0645	-0.1255	0.0158
2	2009	0.0035	0.0035	0.0000123
3	2010	0.5300	0.3400	0.1156
4	2011	0.4191	0.2291	0.0525
5	2012	0.0770	-0.113	0.0128
6	2013	0.0980	-0.092	0.00846
7	2014	0.0975	-0.0925	0.00856
8	2015	0.0745	-0.1155	0.0133
9	2016	0.1892	-0.0008	0.00000064
Total		**1.7433**		**0.2270**

Arithmetic mean return (AMRR) $= \frac{(1+Rt_1)+(1+Rt_2)+(1+Rt_3)+...+(1+Rt_9)-1}{9}$

$= (10.7433\div 9)-1 =1.1937-1$

$= 0.1937 =19\%$

Variance $=0.2270\div 9 = 0.025226$

Standard deviation $= \sqrt{0.0255226}=0.15883$ 15.88%

Geometric mean (GMRR) $= [(1+Rt_1)(1+Rt_2)(1+Rt_3)\ldots+(1+Rt_9)]1\div^{9-1}-1$

$=[(4.57634624)^{1\div 9}]-1$

$=1.185-1 =0.185 =18.5\% = 19\%$

Coefficient of variation = standard deviation ÷ GMRR

$=15.88\div 19 =0.84$

Table3: Summary of Statistics of Performance Measure for Residential And Commercial Properties in Onitsha for the Period under Study.

Basis of commercial	Residential properties	Commercial properties
Arithmetic mean	17.2%	19%
Standard deviation	11.34%	15.88%
Coefficient of variation	0.67	0.84
Geometric mean	17%	19%

CONCLUSION

The study dealt with the assessment of comparative performance of investment in commercial and residential properties in Onitsha, Anambra State, Nigeria. It was carried out as a result of the observation that most investors are putting considerable sums of money into property investments in the study area annually. It was therefore desirable to assess performance in this sector. The study has shown that while both residential and commercial property investments perform well in Onitsha, commercial properties outperformed residential property in terms of rate of return. However the risks associated with investment in commercial property is higher than that of residential property investment in the study area.

A risk avert investor will therefore prefer to invest in residential properties than commercial properties; whereas an investor who is a risk taker will invest will invest in commercial properties than residential properties not minding the level of risk attached to it.

This could be justified on the ground that owners of residential properties are only sure of their first rent as collection of subsequent ones is usually not easy especially with troublesome tenants whereas commercial property owners are rest assured for their rent as at when due. This is because most tenants in commercial properties will prefer to protect their goodwill rather than vacating the premises.

Base on the findings from the study, the following recommendations are made:

i. The investing public should be enlightened on the need to employ the service of real estate consultants like estate investors and valuers in exchanging interests in property investments.
ii. It is recommended that the real estate investor be guided by the annual returns of their property investments as well as the risk attached to them to ensure proper analysis of their property investments performance.
iii. Firms of estate surveying and valuation should be further enlightened on the need to keep, update and maintain a property investment data bank culture. The secrecy attached to data and information emanating from property should be avoided.
iv. There should be a periodic portfolio performance analysis from time to time to aid property portfolio managers or investors in selecting investment propositions that promise a maximum improvement of investment return and reduction of the associated risk.

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